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Lambert & Foster
PROPERTY PROFESSIONALS

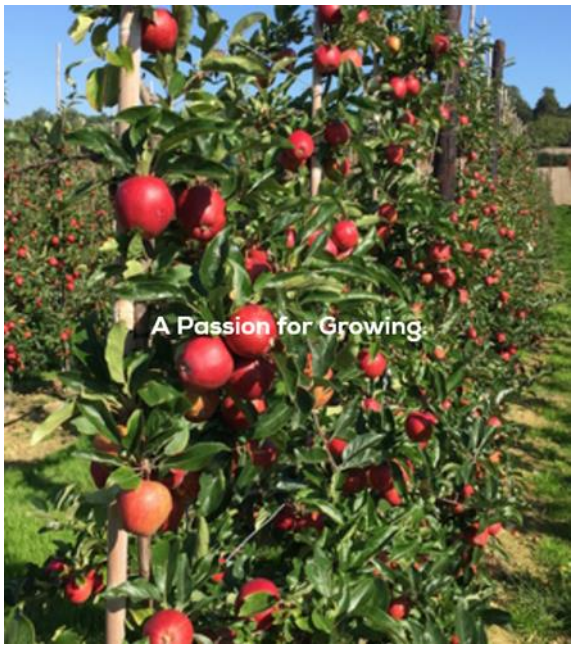
The Farm Business – Horticultural and Agricultural Issues and Constraints

at

Pump Farm, Lower Rainham

On behalf of

AC Goatham & Son



1. Introduction

1.1. Lambert and Foster, has been instructed by AC Goatham and Son to assess the horticultural and agricultural issues and constraints associated with the continued horticulture use of the land at Pump Farm, Lower Rainham.

1.2. Lambert & Foster have been actively involved with the agricultural community in Kent for over 100 years, advising farming and rural business clients on a wide range of issues, including, but not limited to, property and estate management, farm and land sales, grant and subsidy advice, compulsory purchase and compensation, rural planning matters and valuations. The company is understood to be the world's largest auctioneers of apples and pears on the tree and holds an annual sale every July. 2019 will be the 110th fruit sale. Lambert and Foster are a company regulated by the Royal Institution of Chartered Surveyors, members of the Central Association of Agricultural Valuers and have a team of RICS Registered Valuers.

1.3. For the benefit of this report, Pump Farm refers to two farming units owned by AC Goatham and Son and historically and locally known as Pump Farm and Bloors Farm. The indicative extent of the two farming units are shown at **Appendix 1**, with Pump Lane effectively dividing the two. The land at Pump Farm extends to approximately 63 acres (25.5 hectares) of freehold land located to the west of Pump Lane and Bloors Farm extends to 61.5 acres (24.9 hectares) of freehold land to the east of Pump Lane. Of this, circa 114 acres (46 hectares) are planted with orchards. Pump Farm was bought from a local topfruit grower, who is understood to have retired from growing topfruit given the growing pressures derived from modern commercial requirements, whilst Bloors Farm was purchased from Mansfields, who, together with Goatham's are one of the largest growers of topfruit in the country (discussed later). For the benefit of this report, herein the two units shall be referred to as "Pump Farm" or "the site".

1.4. Farming practices have changed over recent years in the topfruit industry, with demands placed on growers to improve economies of scale, reduce the cost of produce, plant at higher densities, increase yields, increase of quality of product being provided, make produce available sooner in the season, make produce available for later in the season and all whilst being done in an industry which is heavy reliant on a high seasonal workforce (an area itself which is currently under threat given the Brexit situation as most seasonal workers come from the EU).

1.5. This has meant that economies of scale of production have had to increase whilst investment in infrastructure, machinery, plant and equipment are kept to the bare minimum. Consequentially, small on farm 'self-serving' packhouse facilities have closed (replaced with large scale packhouses like that owned by the applicant at Flanders Farm), growers co-operatives and producer organisations have been established to sell fruit in bulk (and to benefit from EU grants that become available for Producer Organisations) and or individual growers like AC Goatham and Son have had to change the models they operate to produce a "hub farming system", a model which is discussed further in this report.

1.6. The agricultural need for certain sites has therefore become dependent on larger organisations serving these with hub farms or significant reinvestment in modern purpose-built facilities on site (such as cold store facilities, packhouses with grading and packing lines and modern accommodation facilities for seasonal workers).

1.7. This report therefore looks at Pump Farm in the context of such matters to assess its constraints and opportunities.

1.8. This report also gives general consideration to other farming opportunities that may arise in respect of Pump Farm, whilst having regard to the applicant's clear historic record for inward investment in the horticultural industry and advancement in associated technologies and growing methodologies.

2. Fruit industry Background

General Industry Overview

2.1. The vast majority of topfruit handled in Kent and the UK, perhaps in the order of 75%, is done so by a small number of companies. This could probably collectively be limited to AC Goatham and Son, Newmafruit (HQ at Howfield Farm, Nr Canterbury), Mansfields (HQ at Nickel Farm, Nr Canterbury), Adrian Scripps Limited (HQ at Moat Farm, Nr Tunbridge Wells) and Bardsleys (HQ at River Farm, Nr Maidstone).

2.2. These businesses have all had to adapt their growing techniques in recent years to replant orchards on new rootstocks at closer densities. This is to meet the demands of their customers (the supermarkets) who in turn are seeking to meet the demands of the general public (the consumer) for an increased volume of home-grown apples and pears, whilst maintaining an affordable pricing structure. As well as increasing volume by planting at higher densities, orchards are being replaced with higher yielding clones, whilst the introduction of wire networks encourages fruit growth upwards to better utilise space and allow fruit to be picked at two levels (top and bottom – the latter being done with specialist picking platforms). Again, increasing volume production per tree.

2.3. As a consequence, low yielding orchards (even if they are relatively young in the lifecycle of a fruit tree – which is circa 15 years) are quickly becoming unsuitable and require replacement with more modern, higher yielding stock.

2.4. Similarly, consumer trends in variety preference has meant planting different varieties such as Gala from those previously favoured e.g. Russets and Cox. This has seen growers replacing orchards that have again not necessarily served a full life cycle in order to maintain contracts and meet the changing needs of the consumer. A recent example would be the Braeburn apple, which 5 – 10 years ago was understood to make up circa 20% of the demand from supermarkets. Today, this is believed to have reduced to about 5%, as varieties such as Gala which have a sweeter but comparably crunchy bite are favourable. This then means there is a surplus requirement of Braeburn stock on the market which in turn drives the price of the product down and therefore its viability. So, growers are either faced with the decision of continuing to grow into a market which has an over surplus (which in reality means continuing in an unviable manner) or grubbing orchards and replacing them with varieties which are highly in demand and which are forecast to stay.

2.5. The size, shape and colour of apples is also increasingly important to consumers and specific "grading" demands are put on growers by the supermarkets to grow particular classes of fruit; with optimum classes (e.g. Class I) commanding higher prices. Again, this puts added pressure on growers to, as far as possible, control the growth of apples on the trees. One of the main ways of doing this, is by controlling the level of water that can be available to a tree at certain times of the year and to achieve this, modern orchards are provided with drip feed irrigation systems. Another way of doing this is to significantly increase labour levels in an orchard to thin trees more regularly and "train" fruit on the wires and to ensure orchards are harvested at optimum times. This improves the grading level of the end product but obviously comes with increased levels of cost on both accounts. Conversely those not giving such attention to their orchards are not being favoured by the supermarkets as the end product is not consistent (which is what ultimately sells with the consumer) and it therefore becomes increasingly difficult to service and maintain supply contracts.

2.6. The development of rootstocks, planting at closer densities and using wire networks all mean that yields per hectare are considerably higher than they used to be. However more trees not only mean there is more stock to plant, thin and harvest (which means more labour), harvest volumes per hectare increase which mean the need for infrastructure to support this consequentially increases. This applies to:

- workers accommodation (where the industry norm is the provision of accommodation for the seasonal period to attract workers);
- the number of fruit bins;
- the extent of buildings to store increased levels of equipment (as the number of fruit trains and other such equipment increase. In the case of the fruit trains this is derived from recent standards seeking to get fruit into cold storage sooner);
- the extend of cold storage;
- the extent of onsite water storage facilities and irrigation systems; and
- the extent of grading and packing facilities (and areas associated with storage of packaging).

2.7. Understandably increased levels of labour, infrastructure and equipment all comes at an increased level of cost for growers which, as far as possible, sees the pooling of resources on “hub farms” (discussed further below), increased economies of scale and dependence on securing longer term contracts to enable a degree of security for inward investment.

The Fruit Growing Season

2.8. The fruit growing season commences after harvest period - which is usually completed by the end of November - and will begin with the removal of old/dead or dying trees and their subsequent replacement with new stock through till early February.

2.9. The labour requirement during the planting season is high for a couple of months, especially during the early years when trees are being closely monitored to ascertain whether they are taking to their new environment.

2.10. Across the business, when new orchards are planted, the opportunity to incorporate the latest technology in drip feed irrigation is taken; whilst the trees are planted on a wire network to optimise growth and increase yields.

2.11. Pruning will occur post-harvest through to the end of March.

2.12. The main spraying cycle then commences from March through to the end of June as does the preparatory work in anticipation of the harvest period commencing in June and ending in November. This can include thinning but also the reinforcement and repair of wire networks.

2.13. The harvest period has the greatest labour requirement though the fruit season and it is during this time from June to the end of November that staffing levels will be at their highest both on the farms and in packhouses.

3. AC Goatham and Son's Existing Farm Business

Whole Business Overview

3.1. AC Goatham and Son farms over 2,400 acres of land all for top fruit (apples and pears). It is understood that 1 in 4.5 home grown apples and 1 in 3 conference pears sold in Britain is grown and supplied by one of AC Goatham & Son's farms or partner farms.

3.2. AC Goatham and Son have been trading for 67 years (currently spanning three generations of the Goatham family).

3.3. Over this time, they have focussed on extending the fruit growing season to substitute foreign fruit with home grown fruit and producing quality produce at affordable prices. To achieve this, the business has introduced new varieties of apples to allow harvest to start earlier, improved growing methodologies to increase yields and introduced cutting edge cold storage technology to allow for fruit to be stored longer through the year.

3.4. Retail customers are increasingly looking toward consolidated sites for distribution of fruit to them. Not only is this logistically easier to manage but it helps keep the overall cost of British fruit down so that it becomes affordable for the consumer. This allows it, from a price perspective, to compete with the imported fruit which is much cheaper to produce (even after factoring in import costs) due to differences in soil and climate conditions.

3.5. It is also identified that the consolidation of operations is becoming recognised across the industry as logical, and the consolidation of two packhouse sites run by Cottage Farms Limited in Tunbridge Wells Borough Council onto one site is an example of this. It is therefore important that A C Goatham and Son can not only adapt with the industry standards laid out by the supermarkets (being able to deliver on time, at suitable quantities and having modern clean facilities) but that they can continue to remain competitive with other suppliers across the south east.

3.6. It is envisaged that operational requirements will continue to be consolidated for the future. There is a discernible trend of considered future reinvestment in other, comparatively preferential sites. This has allowed AC Goatham and Son to embrace Flanders Farm as an 'agricultural hub' - as supported by Medway Council when they approved the move of the packhouse from Street Farm to Flanders Farm over 10 years ago.

3.7. In recognition for it being at the forefront of its industry the business has won a number of accolades in recent years, including, but not limited to:

- in February 2017, the business was once again awarded "Top fruit grower of the year" at the UK Grower awards. The business was also a finalist across categories open to the entire horticultural industry including, "*Best Production Manager*", "*Edible Grower of the year*" and for the "*Best Business Innovation*";
- in March 2017 AC Goatham & Son won the award for Kent Invicta "*Chamber of Commerce's Business of the Year*". In October 2017, AC Goatham & Son won the Farmers Weekly *Specialist "Crop Grower of the Year*" award for their work in reviving the fortunes for British Conference Pear; and
- AC Goatham & Son scooped top prize in the East Kent Fruit Society annual Top Fruit Competition, for "*Orchard of the Year"*, "Best Orchard under 1,000 trees", "*Most Commercial Orchard*" and for "Best Dessert apple".

3.8. Reinvestment in the business in the eight years ended 2018 has been £63.4 million through their whole business (not just Medway) to ensure they meet the future needs of their staff, growers, suppliers and customers. £10 million was expended on the first packhouse at Flanders Farm, Hoo. This reinvestment continued and following approval in 2015 another £10 million was spent in expanding the facility further.

3.9. The business was granted planning permission for a major development scheme at Swanton Farm in Maidstone for a storage facility capable of storing 20,000 fruit bins and adopting the latest technology. This project was recognised by Maidstone Borough Council as being of national importance. This scheme will see further investment of over £5 million to support the businesses growing operation.

3.10. Chavereys Accountants report that in 2018 actual GVA for the business was £26.8 million. This is forecast to rise to circa £39.9 million by 2028.

3.11. The location of A C Goatham and Son farms (owned and rented) are shown in Figure 1 below.

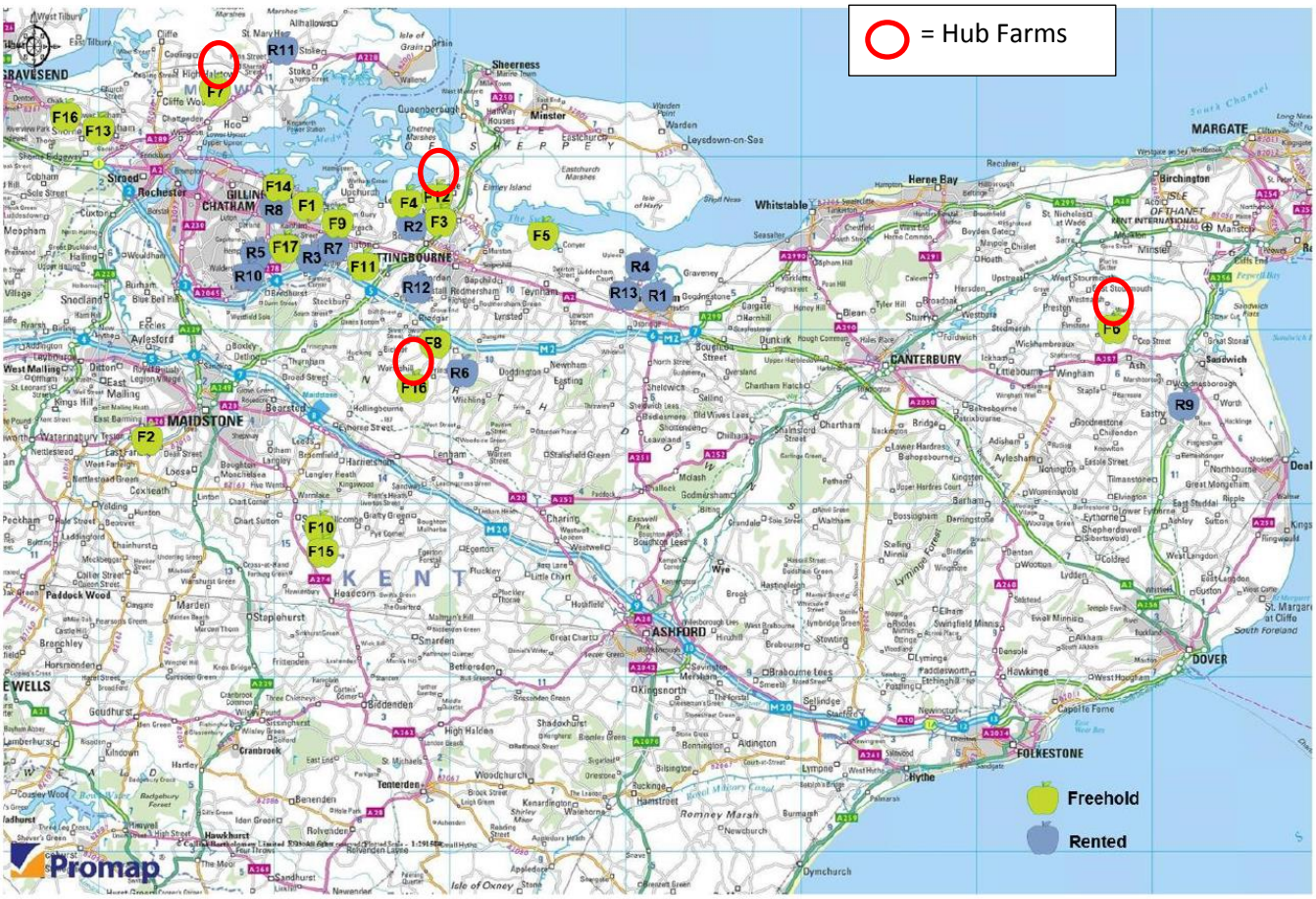


Figure 1 - Plan indicating location of AC Goatham Freehold and rented farms

3.12. In total AC Goatham and Son farms 16 freehold farms and rents 13 farms across the south east.

3.13. Irrespective of any perceived planning constraints on specific sites, it is not feasible or logistically possible to provide the infrastructure required to make each farm 'self-sufficient' in storage term needs, accommodation provision, machinery and equipment and/or buildings necessary to store such equipment and machinery. Lambert and Foster is not aware of any of the leading commercial topfruit farmers (as set out above at 2.1) operating like this. Instead, to remain competitive, topfruit farms are dependent on either limiting their farms to within a very close proximity to each other (such as Bardsleys and Newmafruit) or having a hub farm system to service the needs of a range of holdings in close proximity in order to make fruit growing commercially viable. The use of the hub farms also allows businesses to serve any rented farms they may have, which business and lenders are understandably reluctant to invest in or borrow against.

3.14. AC Goatham and Son is no different and it operates a hub farm system which allows it to concentrate cold stores, accommodation for labour and storage of machinery in central locations across the south east. This, as far as practically possible, allows labour and equipment to be pooled and shared. This reduces capital outlay and also limits the potential loss of orchard as a consequence of limiting infrastructure on every site. Such an approach allows the business to remain competitive using economies of scale, whilst also reducing capital investment in infrastructure to a need only basis.

3.15. The hub farms with key infrastructure serving the business are:

- Elmstone Court Farm, Canterbury (F6 on Figure 1 – Dover District Council);
- Howt Green Farm, Bobbing (F12 on Figure 1 – Swale Borough Council);
- Swanton Farm, Bicknor (F16 on Figure 1 – Maidstone Borough Council); and
- Flanders Farm, Hoo (F7 on Figure 1 – Medway Council)

3.16. Whilst having hub farms can solve some logistical issues in terms of pooling labour and equipment together (which in turn also offers security for equipment, plant, infrastructure and stored commodity), it equally generates the problem of increased movement levels between farms with machinery, bins, labour and commodity all having to be regularly moved at unsociable hours to work within weather patterns.

3.17. Last year the business dealt with a throughput of circa 130,000 bins of top fruit (equivalent to circa 43,300 tonnes). Based on forecast planting and increased yields, this is set to rise 171,396 bins by 2023.

3.18. The business anticipates by this spring, 220,000 new fruit trees will have been planted across the business in one season, with further plans for the next 5 years for in the order of 800,000 to 1,000,000 fruit trees to be planted.

3.19. This season, AC Goatham and Son are estimated to employ in the order of 900 - 1,000 staff. Of this there are some 450 full time equivalent staff across the business with the rest being made up of the seasonal labour required to plant and thin trees as well as harvest and pack the apple and pear crops grown across the business. Most of the staff are based at the key farm hubs which are considered above at paragraph 3.15.

4. Pump Farm Overview

4.1. The whole Pump Farm site extends to approximately 135 acres (54.8 hectares) of predominately apple orchard with a small area of grass in the east. Of the 135 acres, 12 acres is rented. There is no security of tenure on the rented land, with this only being rented on an annual basis.

4.2. The site is bounded to the north by Lower Rainham Road, to the east by Lower Bloors Lane, to the south by a railway line, and to the west by agricultural land and residential properties off Lower Twydall Lane. On Figure 1 above, it is represented by F1, F14 and R8.

4.3. Pump Farm has a modest range of old farm buildings and mobile units on site, most of which are in a poor condition. These buildings do not meet the modern demands on the business to improve the living quarters for attracting seasonal workers (in an unpredictable Brexit climate when national, let alone international competition for workers remains high) and in addition to ensuring the standards of storage facilities, equipment stores and accommodation meet the need of the supermarket auditors (commissioned by the client buying the fruit, so not just the standards and requirements set out by the business itself).These facilities are inadequate to service the holding.

Figure 2 – Images showing a range of old facilites at Pump Farm in need of upgrading

Figure 2 cont – Images showing a range of old facilites at Pump Farm in need of upgrading

4.4. The orchards at Pump Farm are established commercially planted root stock. Approximately half the farm was purchased off Mansfields, one of the other largest top fruit growers in the country (see figure 2.1 above) with the other half being purchased from a comparably very small local former topfruit grower.

4.5. A requirement for specialist machinery brings about the need to transport this equipment from the larger supporting hub farms. The type of machinery used at Pump Farm is standard mechanised machinery for planting, pruning, spraying, picking, hedge trimming and orchard mowing. This is predominantly tractor-driven machinery, other than at harvest, when self-propelled motorised elevated picking platforms are utilised. None of the machinery is stored at the farm, given the limited storage capacity and security issues. All the machinery is sent over from Howt Green Farm, near Bobbing, some 7 miles away. This in itself causes logistical problems as well as increased levels of traffic.

4.6. The logistics of transporting machinery to Pump Farm through the towns is becoming increasingly impractical. Farming top fruit close to an urban area has increasing limitations.

5. Issues and Constraints of Pump Farm

Agricultural Yield

5.1. 50% of Pump Farm is 4 / 5-year-old Braeburn rootstock. However, this Braeburn stock requires replacement due to it no longer being a favoured variety by the supermarkets as there is an oversupply of this being grown.

5.2. By way of an example, 3 to 4 years ago AC Goatham and Son had requests for 20,000 cases a week of Braeburn apples, now this request is for less than 7,000 cases a week, meaning there is a surplus of provision. It is no longer viable therefore to continue to grow this on circa 50% of the holding, which understandably has the knock-on effect of making the whole farm unviable.

5.3. Notwithstanding the above, yield has a big impact on profitability of an orchard. A high yield orchard would produce 75 tonnes per hectare, with AC Goatham and Son having to replace orchards that produce less than 60 tonnes per hectare as they are not considered viable for the business to meet the demands of the supermarkets.

5.4. Over the last 3 years Pump Farm has produced an average of 6,702 bins across the orchards, which at 330 kg per bin equates to 48 tonnes per hectare. The farm is no longer generating a commercial yield when compared to modern requirements at around 75 tonnes per hectare and as such, is not deemed suitable to be retained.

5.5. When the Braeburn crop is taken out, the 2018 figures alone would show that the rest of the orchards of other varieties (Conference / Gala / Discovery) only produced a yield of 49.39 tonnes per hectare. This is below the requirements of the business which requires 60 tonnes per hectare.

5.6. It is pertinent to note that prior to AC Goatham and Sons' ownership a local reputable grower (Mansfields) who operated and continue to do so at a commercial level with other farms of theirs in reasonable proximity to Pump Farm, saw fit to dispose of part of the site.

5.7. So, whilst 79% of the site represents land of very good agricultural grading, the type of the fruit trees and their respective ages makes the orchards at Pump Farm unsuitable and unviable. Both orchards will require grubbing and replanting within a relatively short period e.g next 4-5 years, if not sooner. This would apply not just to AC Goatham and Sons growing portfolio but to any other topfruit grower.

5.8. Notwithstanding locality (discussed below), in order to meet the yield standards required of a modern commercial orchard significant capital outlay will be required (a comparable example is the planting of 165 acres of land less than two miles from Flanders Farm two years ago which cost £2.1 million - equivalent to £12,730 per acre)). Such investment would include the provision of new root stocks planted in greater number on a modern wire frame network and with the insertion of a modern drip feed irrigation system (complete with associated storage facilities in the form of storage tanks or reservoirs). It would not be unreasonable to therefore set aside in the order of £1.5 million for the orchard to be replanted on an area of 46 hectares.

5.9. On top of the orchard re-planting costs and accommodation costs there are other obvious infrastructure costs to consider. This would include storage costs associated with a higher yielding orchard. For other topfruit growers, there will be the obvious consideration of further investment in cold storage facilities. If one were to work on the basis of replanting circa 46 hectares of area then at 60 tonnes per hectare (AC Goatham and Sons minimum point of viability), one would anticipate production to be at least 8,364 bins as a minimum across Pump Farm (each bin being 330kg). If working on the higher yield of say 75 tonnes per hectare one should expect in the order of 10,455 bins of fruit to be produced. It would therefore be reasonable to set aside a further infrastructure cost for modern cold storage of in the order of £2.1 million, which was the cost of a cold store erected in 2018 by AC Goatham and Son at their hub farm at Howt Green which was to store 9,500 bins for another orchard.

5.10. Based on accepted labour rates elsewhere (at Turkey Hall Farm, Swanton Farm and Howt Green Farm), it is reasonable to allocate a requirement for between 84 and 105 seasonal workers to manage between 8,364 and 10,455 bins of topfruit (based on anticipated yields from replanting and at 100 bins per person). Providing accommodation for between 84 and 105 workers would require the provision of 21 – 27 mobile units (based on Medway's preferred occupation of 4 persons per unit). Based on historic purchase costs in simple terms, it is not unreasonable to therefore set aside a minimum budget of £168,000 - £216,000 (based on £8k per unit to include a second-hand mobile unit and connection costs) to provide these units on site, or elsewhere within any business. This does not provide for any amenity facilities which, based on previous experience, are favoured by the LPA and the business (and are in any event now considered a requirement to attract seasonal workers). Such investment would be required as the existing accommodation units serving Pump Farm need replacing, irrespective of any orchard replacement.

5.11. Further allowance should be made for bin provision. Assuming AC Goatham and Son were to replant to achieve a minimum requirement of 60 tonnes per hectare they would need to buy somewhere in the region of 2,000 more bins to deal with the yield increase. At £35 per bin, there would be a further capital outlay of £70,000, notwithstanding the storage area to keep these and of course assuming that there is no depreciation of the existing bin stock and none of these needs replacing. For any other business, working on the current average yield over the last three years, there would be a requirement to invest in 6,700 fruit bins. A conservative cash flow allowance of £200,000 should be set aside for this (which is based on below £35 per bin). This is not insignificant for any business to have to find.

5.12. It would not be unreasonable to allow further costings at £210 square metre for a fully covered and enclosed barn to store equipment in to upgrade the existing on-site facilities. The existing buildings on site equate to over 1,000 square metres and it would not therefore be unreasonable to allow in the order of £100,000 for this, working on the conservative approach that the larger of the two sheds is retained and not replaced.

Residential Amenity

5.13. Pump Farm is located within the Rainham urban area, which has a population of 6,394 (2001 census) and is sited in close proximity to existing residential areas, with high density housing to the south.

5.14. The operation as commercial orchards have attracted many residential complaints over the years, which indicates commercial fruit production from these sites gives rise for local concerns, compared to more rurally located sites. Similar complaints associated with Street Farm (and which are on the Council's records) demonstrate this point. Street Farm has hence been taken out of topfruit production.

5.15. Average working hours at the farm are 6.00am – 8.00pm during harvest. Non harvest activities would be between 7.30am and 4.00pm. Irregular operations do have to be carried out, particularly to address climatic conditions when spraying. A recent example was the very hot weather during 2018, which prohibited spraying during the day as this would 'scorch' the fruits' skin. Most of the spraying had to be carried out in the very early morning (3am). This was not acceptable to adjacent residential properties, where during the hot weather, many people sleep with their windows open. This has been a source of much complaint. Indeed, similar complaints have arisen on other farms in the applicant's ownership which are even more rural – Swanton Farm, Bicknor being the most recent example. Given its proximity to the estuary, wind speeds and direction can be more of a problem when compared to other farms. This further increases the likelihood of the need for spraying at unsociable hours.

5.16. As Pump Farm is served by machinery, equipment and plant coming from other hub farms, this has the added and prolonged impact on local residents late at night and early in the morning as vehicles have to pass through the urban area and then unload prior to operation and then reload post operation. To prevent this problem from occurring significant investment would be needed in new machinery and infrastructure to then be able to store such equipment at Pump Farm. Such investment is just not realistic and would be unreasonable when the pooling of resources can occur. Notwithstanding the lack of storage space and security issues, whilst it may be argued that the existing equipment could be kept at Pump Farm the reality is this doesn't solve the disturbance to local residents as such pooled equipment would then be sent to other farms at unsociable hours to service these.

5.17. Pump Farm is not suitable for modern machinery and practice due to its locality. All fruit grown on the farm has to be transported through the urban area for storage, processing and onward distribution from Flanders Farm, Hoo which is 9 miles away. Not only does this become a source of frustration for AC Goatham and Son in congestion terms, but it equally frustrates local road users given the size of vehicles and equipment that need to be brought to site on a regular basis.

5.18. The nine-mile journey from Pump Farm to Flanders Farm is through the town centres of Gillingham, St Marys Island, Wainscott and Chattenden. An alternative route to the south, is not only inhibited by height restrictive bridges at the entrance of Pump Lane and Lower Bloors Lane, but also incorporates the Medway towns of Chatham, Rochester and Strood, which have a higher population density.

5.19. With no other alternatives available, all farm machinery, including Heavy Goods Vehicles must travel through these highly populated, urban areas, increasing traffic, pollution and noise in residential areas. As such, movement and growth is restricted at the farm. This prevents modernisation and investment.

Figure 3 - Google image showing the route through the urban areas from Bloors Farm to Flanders Farm in the north

6. Opportunities at Pump Farm

Orchard Replacement

6.1. As identified at Section 5 above, the orchards at Pump Farm will shortly reach the end of their lifecycle, whether it be as a consequence of age and or variety. To produce competitive modern-day high yielding stock will require significant investment and involve replanting the whole orchard either for AC Goatham and Son or another top fruit grower.

6.2. This would require new trees, a wire network, drip feed irrigation, water storage facilities and a general upgrade of farm buildings and accommodation. This would come at a significant capital cost (somewhere in the order of at least £1.75 million and working on the basis that adequate cold storage existed elsewhere – which in reality is unlikely give the recognised national, regional and local shortfall in modern cold storage facilities), irrespective of location and would put significant financial demands on any business. Let alone one which already owns the freehold and therefore arguably has borrowing leverage.

6.3. Any new growing system inserted would allow more light and air into the fruit which will give a better crop bud per acre, whilst it would be pruned in a modern method to optimise growth. This would increase the quantity of fruit being generated and therefore the associated movements by labourers and lorries well over that already occurring. This would not be favoured by locals or AC Goatham and Son.

6.4. Again, irrespective of location and lack of proximity to other cold store facilities and packhouses, it is reasonable to assume therefore the attractiveness of this orchard to other topfruit growers (let alone a market leader which has an established contract arrangement and its own route to market through its own packhouse) is limited to nothing. The point that Mansfields, a reputable commercial fruit grower disposed of the site to AC Goatham and Son would support this. Of course, this does not give due regard to any cost that would need to be invested in the freehold purchase of the site (as, like AC Goatham and Son, it is not unreasonable to assume that such significant capital outlay would not be undertaken by someone seeking to rent the site), this only emphasises further the reality that the site is not attractive for reinvestment as a commercial orchard.

6.5. When location of the site with its urban proximity is considered and due regard given to the local road network, it is even less likely that such a site would prove attractive to anyone wanting to invest in new orchard creation on this site. It is unrealistic to expect any small to medium grower to invest accordingly, whilst of the leading commercial topfruit growers (as identified at 2.1), one disposed of the site, whilst the others who already have an economy of scale operate some distance from the site. Therefore, serving the farm on a hub basis for them would be even more illogical and unviable.

6.6. A further consideration for any other grower will be the altitude of the site which is low. This has the effect of producing an early crop. For AC Goatham and Son this does not fit their growing model as they have surplus early crop already in the ground, which would mean that they would have to find further labour resource across their business rather than pooling the existing. For others, producing an early crop is a commercial gamble, especially if no modern storage facilities exist for the grower. This was seen to be the case in 2018 when the summer period was prolonged meaning the general public demand was for soft fruit for a longer period which displaced the demand for topfruit. In turn the supermarkets had excessive levels of foreign topfruit to use up before committing to British product, meaning the early market was flooded with surplus quantities of topfruit which understandably drove prices down. In reality therefore the safer investment for topfruit growers with modern storage facilities is sites at higher altitude which naturally delay the fruit being ready and therefore stretch the length of time British apples are available to displace where foreign fruit is otherwise waiting to fill a window.

6.7. Apples must be stored in order to make them available to the market for as long as possible and the industry demands have and are changing to reflect this. Historically, supermarkets have been able to displace foreign fruit with British fruit where the demand was for stretching the availability of produce for a few months in the year. Now however, displacement alone isn't good enough for a couple of stretched months, the drive is for all year-round displacement and retained quality in produce freshness at the same time. In order to achieve a greater degree of freshness, produce needs to get into modern cold storage without undue delay, whilst in order to improve the chances of longer period of storage the fruit also needs to be put into storage as quickly after picking as possible. Points supported in Apple Best Practice Guide document produced by the Agriculture and Horticulture Development Board (AHDB) working with DEFRA. Realistically therefore this means that anyone wanting to take this holding on will either have to have existing surplus storage capacity nearby (which is not apparent), invest in new cold storage facilities, or, sacrifice the quality of the product being produced by delaying the time in which it gets in to storage. By default, this would reduce the quality over that AC Goatham and Son achieve, which will mean it would command a lower sales price resulting in reduced viability than the status quo.

6.8. The status quo cannot be maintained by AC Goatham and Son as the orchard requires re-grubbing over the next 4 – 5 years given its age and variety. With such significant investment required at a number of levels by AC Goatham and Son this is unrealistic given the location of the farm and restrictive urban surroundings.

6.9. Investment by another grower is equally considered unlikely given the unfavourable location surround by an urban landscape and the significant levels of investment required above that which would be required by AC Goatham and Son who already have the freehold.

6.10. DEFRA's Farm Business Survey results for Horticultural production in 2017/18 in the South East (Business Output, Input and Income table) show a farm investment income (i.e. the return on all capital invested in the farm business whether borrowed or not, to risk and to entrepreneurship) of £873 per hectare. However, this works on the basis that the income is also derived from Agri-environmental payments, Basic Payment Scheme and Diversification schemes out of agriculture. If this is recalculated to only consider the agricultural element then the figures actually show a net loss of £161 per hectare.

6.11. Notwithstanding, the phasing out of direct subsidy payments over the next 7 years, if Agri-environmental payment and Basic Payment are added back in, there would only be a net gain of £24 per hectare. This shows that horticultural businesses are heavily reliant on diversification as a form of revenue to underpin the farm investment income, which in the case or horticultural farms in the south east is £849 per hectare.

6.12. Setting aside all other matters of investment in capital or practicality of the site as a suitable farming location (see Section 5 above) it is difficult to see how orchard replanting by a third party would stack up financially. Let alone when any third party would need to consider the cost of purchase on top of this - which, in this location close to an urban area would likely attract an increased level of hope value for the land.

Soft fruit farming

6.13. In order to be commercially viable modern soft fruit production requires polytunnels to optimise yield potential and regularise this as far as possible. This comes with a significant capital outlay in infrastructure and it is not unreasonable to allow in the order of £60,000 – £100,000 per hectare (£2,760,000 -£4,800,000) of establishment cost. When giving further due regard to infrastructure costs for accommodation and chilled fruit storage, this could be increase to somewhere in the order of £70,000 - £125,000 per hectare (£3,220,000 - £5,750.000). Such a large expanse of polytunnels would also substantially change the character of this landscape.

6.14. Notwithstanding the planning constraints associated with providing such an extensive area of polytunnels (including glare from tunnels and significant levels of water run-off and on local water supply), the proximity to an urban area (with associated loss of fruit from wondering local residents and security risks to tunnels) are very unlikely to be attractive to commercial soft fruit growers.

6.15. The requirement to get soft fruit into cold storage immediately is even more critical than topfruit, and the lack of local facilities would limit this. Whilst the lead soft fruit growers, e.g Clock House Farms (HQ at Clock House Farm, Coxheath), W.B.Chambers and Son (HQ at Oakdene Farm, Maidstone), Hugh Lowe Farms (HQ Mereworth) etc are not understood to have local farms capable of supporting this, even if there was a surplus in storage and labour.

6.16. AC Goatham and Son have no intention of venturing into soft fruit production, whilst the lack of soft fruit growers in the area demonstrate the unsuitability of the land for this farming system.

6.17. It is not therefore considered that the site would be attractive to any soft fruit grower, particularly when the location is unattractive to the commercial growers who dominate the market and who are able to offer production at an economy of scale.

Arable Farming

6.18. AC Goatham and Son clearly specialises in growing, packing and selling topfruit. The business would not diversify into arable farming operations.

6.19. Current arable production (save for the large farms in the Midlands, East Anglia or South Kent) has seen a significant reliance on the use of contract farmers and their farm equipment (due to the high capital outlay for specialist equipment e.g. large boom sprayers, large tractors and combines) for crop husbandry. This can be viewed in the same vain as the “hub farming” system adopted in topfruit growing. This would require the importation of even larger farm machinery to the site (over and above the smaller orchard tractors that are currently used), including grain lorries, large scale sprayers with large booms and combine harvesters. The local road network and proximity of the urban area on all sides to get to the farm would be increasingly frustrating for any contractor and more so for local residents than the status quo. Notwithstanding the limited size, it is unrealistic to therefore see the attraction for the nearest commercial arable farmer to take this unit on and contract farm it. To avoid the frustration of the local urban area one would need to have the equipment available to support the operation kept on site (estimated to be in the order of £400,000). Assuming this to the case, sufficient on-site facilities would be needed to safely store the machinery. As above, one could conservatively estimate this cost to be in the order of £100,000, and assuming the current facilities were sufficient.

6.20. The application of manures and spray cycles in such proximity to an urban area would not to be favoured by local residents. Unlike topfruit spraying, arable spraying is done on large horizontal booms which cover significant areas and have increased levels of drift. To ensure a duty of care, and again give the proximity of the estuary, increased levels of spraying would have to occur at unsociable hours, which is not favourable to local residents (or any farmer having to bring equipment to site through an urban area).

6.21. The application of manures in proximity to urban areas brings inevitable complaints in respect of smell and sometimes flies.

6.22. Cost could also be set aside for the provision of further infrastructure to store straw on site should this commodity be sold rather than ploughed in. Working on the basis of producing 161 tonnes over 46 hectares (based on 3.5 tonnes per hectare) at 19 m^3/t (the average for a large round bale wheat and barley straw) there would be a volume requirement for circa 3,059 cubic metres of storage. If working on the basis of stacking 4 bales high (ie to 6 metres) there would be a requirement for a suitable building with a floor area of 510 square metres. Based on a cost of £80 per square metre for an open sided barn, one should allow in the order of £40,800 for a suitable straw barn. Of course, an open sided barn is realistically vulnerable for such a flammable product near to an urban area.

6.23. The storage of machinery and hay on site would likely drive insurance premiums up for any farming operation with such proximity to an urban area and such expensive equipment (it is not unrealistic for a combine harvester to cost in excess of £100,000) and flammable produce.

6.24. Using a conservative average yield of say 7.7 tonnes per hectare (based on the medium barley and wheat average yields) there would be a derived storage requirement for in the order of 354 tonnes of grain. With capital storage costs for grain storage being between £240 per tonne (this assumes equipment is put into an existing building to offer storage) and £340 per tonne (working on a new building with equipment in) it is reasonable to allow a capital cost of between £85,000 and £120,000 to build storage facilities on site, or off site at another hub farm. Such buildings would have an impact on the character of this particular landscape.

6.25. Notwithstanding the above, cultivation of Pump Farm into arable production is unlikely to prove realistic on a holding of this size, especially when having to factor in the forecast rotation expectations and environmental factors anticipated as a consequence of the Agricultural Bill. This will see a phasing out of Direct subsidy payment over a 7-year period, to encourage farmers to be less dependent on subsidies and more commercially resilient. In place of the Direct payment subsidy, it is currently forecast that there will be payments made for improving wild habitats, air quality and land management (although at the time of writing no further details on this are known). In order to achieve this at Pump Farm, it would be forecast that further land would need to be taken out of cereal production, which only reduces the economy of scale of production further.

6.26. DEFRA's Farm Business Survey results for Cereal production in 2017/18 in the South East (Business Output, Input and Income table) show the farm investment income (i.e. the return on all capital invested in the farm business whether borrowed or not, to risk and to entrepreneurship) of £172 per hectare. However, this works on the basis that the income is also derived from Agri-environmental payments, Basic Payment Scheme and Diversification schemes out of agriculture. If this is recalculated to only consider the agricultural element then the figures actually show a net loss of £194 per hectare. What the DEFRA figures therefore show is that an arable farming system in this region is dependent on the Basic Payment Scheme which derives a farm investment income of £189 per hectare with diversification making up an average of £155 per hectare.

6.27. It is not anticipated therefore that Pump Farm would be an attractive option to any potential arable farmer especially in light of the fact that the Basic Payment Scheme is due to come to an end in 2020 with payments being reduced on a phased out basis for the next 5 years and that further revenue would need to be found to purchase the farm and or grub orchards and prepare the land accordingly. This of course gives no recognition to the unfavourable location itself in an urban area

Livestock Farming

6.28. As per the arable situation, this is not a farming system the applicant would adopt.

6.29. Irrespective of AC Gotham and Sons' own desire, or not, to establish a livestock enterprise, it is considered unlikely that the site would be attractive to any third-party livestock farmer or business.

6.30. The urban location of the site would not be attractive to livestock farmers. Increased levels of dog walkers in the area, trespass and other disturbances are all a significant concern to livestock owners. Whilst there are the obvious direct threat of dogs and people unsettling and attacking livestock (which can result in miscarriages, injured stock and obviously stock loss), there is also the concern derived from increased levels of dog faeces in pastures which is poisonous to cattle and sheep if ingested. In 2018 several complaints were made about local people using Pump Farm without permission for motocross bikes which are another good example of a significant threat to animal welfare derived from keeping livestock surrounded by an urban environment. Similarly, levels of hare coursing adjacent to urban areas in north Kent is not uncommon, which prevents sites such as Pump Farm, surrounded by urban areas being attractive for third party livestock farming.

6.31. Livestock farming systems are understandably also associated with higher levels of disturbance to residential areas with animal noises (weaning being a good example) and smells often being a source of complaint. Again, large modern farm vehicles associate with bedding and feed importation; together with trailer movements with livestock in (as shepherding stock down roads here would not be possible), are unlikely to be favoured by local residents or any perspective farmer.

6.32. Given its further proximity to the urban area, it is unlikely that Pump Farm would be an attractive investment for any livestock enterprise as this farming sector is already coming under significant pressure due to changes in trends such as veganism and the limitation on livestock movements.

6.33. Any incoming livestock farmer would be very mindful of the capital outlay associated with having to fence the perimeter of the farm. In minimalistic terms, livestock fencing would need to be provided around the 6,720-metre perimeter. With the cost of traditional 7 wire stock fencing being £8.50 a metre it is not unreasonable that there would be an immediate capital outlay at Pump Farm of circa £57,000. This has no regard to the formation of individual stock fields, which would obviously be required and further significant fencing cost should therefore be allowed for.

6.34. The lack of suitable on-site infrastructure for livestock farming would require a high level of investment in modern suitable farm buildings for the respective livestock concerned. None of the buildings on site are suitable for housing livestock so it would not be unreasonable to set aside circa £200,000 in building and equipment costs. Further allowance should then be made for silage/manure clamps over and above any capital outlay for purchasing the farm together with the cost of disposing of manure and soiled bedding.

Pigs

6.35. Given the agricultural grade of the land being good, it would be unrealistic that this site would be attractive to a pig farmer who would be able to find cheaper farm land elsewhere as pigs are not dependent on higher grade land. Of course this does not have regard to the fact that such a site in close proximity to an urban area is very unlikely to be favoured by a third party interested in keeping pigs or by local residents. This is because pigs are notoriously messy and noisy, whilst such livestock enterprises are not favoured by local residents given odour generation.

6.36. DEFRA's Farm Business Survey results for Pig farming in 2017/18 in the South East (Business Output, Input and Income table) show the farm investment income (i.e. the return on all capital invested in the farm business whether borrowed or not, to risk and to entrepreneurship) as £221 per hectare. However, this works on the basis that the income is also derived from Agri-environmental payments, Basic Payment Scheme and Diversification schemes out of agriculture. If this is recalculated to only consider the agricultural element then the figures actually show a net loss of £35 per hectare for pig farming. What the DEFRA figures show is that such a livestock enterprise is again largely dependent on the Basic Payment Scheme which derives a farm investment income of £161 per hectare and a small amount of diversification (£65 per hectare) and Agri-environmental Schemes (£30 per hectare).

6.37. The development of any pig farming enterprise at Pump Farm would therefore be built upon the dependence of the Basic Payment Scheme which is due to come to an end in 2020 with payments diminishing over the next 5 years. It is not realistic to consider that Pump Farm would therefore be attractive for such an enterprise, irrespective of the other constraints identified.

Poultry Farming

6.38. Given the agricultural grade of the land being good, it would again be unrealistic that Pump Farm would be attractive to a poultry farmer who it is anticipated would be able to find cheaper farm land elsewhere as poultry is not dependent on higher grade land.

6.39. DEFRA's Farm Business Survey results for Poultry farming in 2017/18 in the South East (Business Output, Input and Income table) show the farm investment income (i.e. the return on all capital invested in the farm business whether borrowed or not, to risk and to entrepreneurship) of £1,300 per hectare. However, this works on the basis that the income is also derived from Agri-environmental payments, Basic Payment Scheme and Diversification schemes out of agriculture. If recalculated to only consider the agricultural element then the figures only shows a net gain of £773 per hectare, with a large dependence being put on supplemented income from farm diversification (£379 per hectare) and Basic Payment Scheme revenue (£128 per hectare).

6.40. Poultry farming is arguably the most contentious livestock enterprise to run adjacent to an urban area and is very unlikely to be favoured by a third party interested in keeping chickens. Poultry farms commonly raise complaints about odours generated by them and the proximity to the urban area would only attract increasing attention.

6.41. Irrespective of the subsequent planning constraints, income per hectare or capital outlay for specialist buildings, fencing (even higher for poultry than the traditional livestock fencing) and equipment that would be associated with trying to develop a poultry enterprise here, it is not realistic to consider that Pump Farm would be attractive to a third party or for local residents given its proximity to the built environment and when factoring in the farm purchase cost.

Lowland Grazing

6.42. Irrespective of capital costs for livestock buildings, silage clamps, manure clamps and other infrastructure for keeping machinery and hay/silage; and the proximity to the urban area, DEFRA's Farm Business Survey results for Lowland Livestock Grazing in 2017/18 in the South East (Business Output, Input and Income table) shows a farm investment income (i.e. the return on all capital invested in the farm business whether borrowed or not, to risk and to entrepreneurship) loss of £16 per hectare. If recalculated to only consider the agricultural element then the figures show a greater loss at £295 per hectare, with the income shown being derived from farm diversification (£60 per hectare), Agri-environmental scheme (£45 per hectare); but largely dependent on the Basic Payment Scheme revenue of £174 per hectare.

6.43. It is not therefore reasonable to assume it would be attractive for a third party to develop such an enterprise here, especially when giving due regard to the additional costs for purchasing the farm and the dependence on the diminishing Basic Payment Scheme contributions to increase the income.

Diversification

6.44. Diversification is when a farm branches out from traditional farming into other ways of generating money. This could be in many different forms; either by taking a part time job off the farm in the same or a totally different sector, or by creating a new enterprise on the farm such as a horse livery, a B&B, a farm shop, a processing facility, or; a tourist attraction etc.

6.45. Diversification on a farm can be for a range of reasons but is most commonly undertaken to supplement a farm income, make use of redundant farm buildings and/or to add value to a product. It is done to supplement the principle agricultural activity undertaken on a farm rather than being the dependant source of income. In most cases that we are aware of diversification is left to smaller enterprises wishing to spread risk and or supplement income.

6.46. For AC Goatham and Son there is no realistic prospect of utilising the existing farm buildings or land for a diversification scheme as the principle activity of the business is focussed on fruit growing and packing. Notwithstanding this, there is no intention for the business to venture into adding value to its apples and pears and in any event, any option for adding value e.g making apple juice, cider, crisps etc would best be explored at the businesses HQ where there is the ability to build an economy of scale after grading if such an enterprise took off. Of course, this assumes that the current orchard is, in any event viable (or such a diversification could subsequently warrant viability for replacing the orchard) in order to add value – which it is not.

6.47. Given the matters identified above in respect of "Orchard Replacement", there is no incentive for AC Goatham to invest in replanting, and any diversification scheme would almost certainly result in a redundant land use as the only asset with a realist prospect of being diversified would then be the farm buildings.

6.48. However, the existing farm buildings are not considered to be worthwhile farm buildings which could realistically offer a viable diversification project which would support greater consolidation and reinvestment in substantial commercial orchard planting.

6.49. For the same reason AC Goatham and Son are unlikely to propose some form of diversification at Pump. It is not unreasonable to conclude the same would be seen of other investors. Both for supporting a horticultural enterprise or to support the development of another farm enterprise such as an arable or livestock unit; especially when considering the capital outlay for establishing these other enterprises as identified above.

7. Benefits to AC Goatham and Son of Pump Farm becoming used for a residential purpose

7.1. In this instance, the release of Pump Farm for residential development as proposed, would generate additional funds that will enable AC Goatham and Son to continue to invest in farms that produce a higher yield of fruit while fulfilling the consolidation goals of the business which offer business protection to the primary activity undertaken by the business, namely; agriculture and the planting of more fruit trees.

7.2. Historic examples of how this has worked well in the past are shown in the table at Figure 5 below. This shows where release of land for residential purposes has offered clear business growth for AC Goatham and Son, reinvestment in orchards and increased levels of employment and fruit production. All of which benefits the business, local economy, communities and national fruit consumption.

Land released for residential	Street Farm (Part 1)	Street Farm (Part 2)
Year of site release for residential use with cash reinvestment in broader business	2007	2017
Area managed by whole business prior to release of Street Farm land (acres)	240	1,750
Area farmed by whole business following release of Street Farm land (acres)	1,750	2,400
Number of staff employed by the business prior to land release	60 Part time 10 FT Equivalent	180 Part time 350 FT Equivalent
Number of staff employed following land release	180 Part time 350 FT Equivalent	450 Part Time 450 FT Equivalent
Number of bins handled prior to land release	46,600	102,000
Number of bins handled or to be handled as a consequence of land release	102,000	170,000

Figure 5 – Table showing benefits derived as a consequence of AC Goatham and Son using residential development to supplement growth in their agricultural business generating greater employment, land management and production of British fruit.

7.3. The release of Pump Farm for residential development therefore allows AC Goatham and Son to invest elsewhere within Medway to provide for greater orchard planting and investment to the benefit of their business and the wider local economy.

8. Summary

8.1. Topfruit production has changed over recent years, as British growers have to find new ways to grow their fruit to compete globally. Varieties such as Royal British Gala have helped turnaround the British industry into one which sees an increase in annual market share here in the UK.

8.2. Quite simply, for AC Goatham and Son to keep growing as a business, as much fruit as possible needs to be grown on commercially viable root stocks. This isn't something you leave to chance and it takes a whole team effort, working together to create this level of quality and quantity. This means investing in orchards that have a high yield and are more suitable for reinvestment, as well as investing in staff and infrastructure.

8.3. With part of the existing orchard stock at Pump Farm being a variety that is surplus to consumer demand and the other part being at maturity, AC Goatham and Son would need to replant these orchards entirely in the next 4-5 years, if not sooner. Such orchard re-establishment is a major investment in terms of financial cost and time spent – for the trees themselves, the wire network, the drip feed irrigation system and relative reservoir/storage system, new bins, accommodation and associated cold storage.

8.4. Given the lack of modern and purposeful infrastructure on site and the difficulties of the logistics to support an urban location, it is not considered practical to continue to invest in orchards, like Pump Farm, close to urban areas.

8.5. This coincides with the drive for consolidating and optimising the use of better and preferentially rurally located sites that are more practically located to the hub farm operations and more readily integrate with traditional farming locations, particularly on the Peninsula. Such sites will provide for conspicuously better economic and agricultural benefits, in overall terms, when compared with the same level of reinvestment in Pump Farm. As such, what stands as clear economic and agricultural betterment to be derived from other sites is now being pursued in preference to Pump Farm. This is inevitably going to push future production to the more rural extremes of the county where food logistics link with quality fruit growing land.

8.6. This will also assist in protecting and enhancing agricultural land elsewhere which is more suitable for continued agricultural uses.

8.7. Notwithstanding the high-quality grading of the land, it is not considered economically viable or practical for AC Goatham and Son to reinvest in Pump Farm for continued horticultural operation. Nor is it considered likely that anyone else would invest in Pump Farm to try and develop a profitable agricultural business there. As supported by DEFRA's last available Farm Survey figures for the region.

8.8. The site should be considered for release to residential purposes. This, in turn, will assist in protecting and engaging agricultural lands which are more suitable for continued agricultural uses. It can facilitate the reinvestment opportunities available to AC Goatham and Son in other agricultural sites and topfruit development, as has proven to be the case with Street Farm in the past.

Appendix 1