

Before the Independent Hearing Commissioners
Appointed by the Taranaki Regional Council

Under the Resource Management Act 1991

In the matter of a resource consent for air discharge relating to the poultry farm
operation at 58 Airport Drive, New Plymouth (5262-3.0)

Evidence of Edward John Whiting

28 January 2022

Applicant's solicitor:

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**anderson
lloyd.**

Introduction

- 1 My full name is Edward John Whiting.
- 2 I am the director of Airport Farm Trustee Limited (the **Applicant, AFTL**), and I manage the day to day operations of the poultry farm at 58 Airport Drive, New Plymouth (**Application Site**). I have been running operations at the Application Site for 8 years, since AFTL took over operations in August 2013.

Scope of evidence

- 3 My statement of evidence addresses the following matters:
 - (a) Background to the Application;
 - (b) Proposal;
 - (c) Site management;
 - (d) AFTL planning involvement;
 - (e) Response to submissions; and
 - (f) Conditions of consent.

Background

AFTL

- 4 Airport Farm Trustee Limited (**AFTL**) is a family run mixed farming operation consisting of a dairy farm and two poultry farms: the Airport Drive poultry farm (site of the application being heard), and a free range poultry farm in Midhirst.
- 5 AFTL strives to provide the best outcomes for our people, animal welfare, and the environment. We use smart technology and cloud based systems across all aspects of our farms, which provide for the entire poultry management system, daily auditing, monitoring of real-time conditions and for communications across our people. AFTL was the first in the Southern Hemisphere to introduce the DACS AS Ventilation System to achieve balanced pressure sheds, resulting in excellent animal welfare and comfortably achieving SPCA approval for the Midhirst Free Range poultry farm. This system is now being implemented at the Airport Drive poultry farm. The Midhirst Free Range poultry farm is SPCA blue tick approved, and the Applicant is currently working towards achieving the same standard for the Airport Drive poultry farm by 1st March 2022, a mandatory requirement to grow free range birds for Tegel Foods Limited (**Tegel**).

- 6 We have also been working alongside Taranaki Regional Council (**TRC**) for the last 12 months on a freshwater monitoring project, fully funded by the Applicant. The project involves installation of nitrate and perceived phosphate sensors in water ways across the Applicant's farms, to obtain real time results, 24 hours a day, 7 days a week. We are currently in the process of upgrading the nitrate sensors to optical versions to gain better accuracy and in turn gain real time continuous water quality compliance.
- 7 AFTL grows for Tegel but operates as an independent organisation from Tegel growers groups which enables AFTL flexibility to create and implement its own systems.

Site history

- 8 The poultry farm has been established for approximately 40 years. Our family began running the poultry farm in 2013.
- 9 During the time we have been operating the farm, the surrounding environment has gradually developed at an increased density, with additional rural-residential dwellings being established in proximity to the farm. This has been a constant consideration for us. Over the years we have invested in measures to control potential odour emissions to ensure there is no effects on neighbouring properties. These are discussed later in my evidence on site management. In my view, these measures have been effective in controlling odour emissions.
- 10 We have also been agreeable to property development in proximity to the Airport Farm on the basis that no-complaints or no-build covenants are agreed to in return.
- 11 I also found out recently that New Plymouth District Council (**NPDC**) had considered purchasing the farm prior to Airport Farm taking ownership. A Council Officer sought approval to purchase the farm for strategic purposes (on the basis that a poultry operation could delay the future rezoning of surrounding land) but this fell through in 2011¹.

Proposal

- 12 AFTL is seeking a new resource consent prior to the expiry of its existing air discharge consent for the purpose of maintaining supply contracts and commercial certainty. The Application Site was not proposed to be rezoned for urban activity in the recent proposed District Plan, it was just signalled by NPDC as being identified for future urban development with no guarantee of this happening.

¹Council meeting held 5 October 2011.

Conversion to free range farming

- 13 As part of replacing the existing consent, Airport Farm intends to convert the existing broiler operation to free-range, and reduce the stocking of birds to a maximum of 15 birds per square metre (or 61,020 birds).
- 14 The current farming operation operates on a 42 day cycle, running approximately six cycles over a year. The birds are housed in four sheds on the property (some 4068 square metres), all fitted with extractor fans along the walls. The sheds have concrete pads by the main doors; these are used by Osflo (contractor cleaners) when cleaning out the sheds. Mass density in any shed is not to exceed 38kg per square metre.
- 15 During the cycle, the birds are fed pellets and have water provided by nipple-feeders. Food and drink are available 24/7, in line with SPCA requirements. Three gas heaters are used for heating during the first half of the cycle (as the birds have not yet grown enough feathers to keep them warm). Gas heating keeps the air calm, and doesn't circulate the air and any odour present.
- 16 We have recently installed a windbreak along some boundaries to contain any dust. See **Attachment A**.
- 17 Following the 42 day cycle, the birds are caught (sometimes in stages near the end of a cycle). This process is directed by our contract requirements, and how many birds we are growing for Tegel at any given time. Therefore the amount of time spent catching birds varies, but is usually between 30 mins to 3 hours per visit for a catch per shed.
- 18 As part of our contract with Tegel, regular auditing of the farm is undertaken by a Tegel representative. SPCA also undertake audits, including unannounced audits at the Midhirst Free Range farm and the same will be for Airport Drive farm once SPCA approved. In addition to these mandatory audits, AFTL audits activities on site daily, to ensure all requirements are being adhered to, and to ensure the health and wellbeing of the birds. These practices will continue under the proposed conversion to free range. AFTL has invested in significant new technology to ensure monitoring is as effective as possible.
- 19 AFTL also has someone living on site and doing daily visual observations as a requirement of our contract with Tegel. Our family have lived onsite since August 2013.
- 20 The conversion to free range will involve:
 - (a) Installation of an additional 3m high windbreak along the northern boundary of the Site;

- (b) Installation of pop / hinge doors along one side of each shed, to be opened after 21 days of a cycle;
 - (c) Fenced range areas north of Shed 1, south of Shed 2 and east of Sheds 3 and 4;
 - (d) Installation of roof exhaust fans as follows:
 - (i) Shed 3: roof exhausts to be positioned over 100m from the property at 62 Airport Drive; and
 - (ii) Sheds 1, 2, and 4: roof exhausts will be spaced out so as to provide multiple options with varying wind conditions, enabling the Applicant to use fans at times when they will have the least effect on neighbours; See **Attachment B** for the location of the roof exhaust fans.
 - (e) Misting devices to be installed on each exhaust fan. For existing fans, this was completed in November last year, and for new ridgeline fans, this will be completed by 1 March 2022;
 - (f) Gas-fired direct flame / vapour heaters will be replaced with hot water boilers and DACS AddAir heaters by 1 March 2022; which will provide not only dry heat, but the ability to reduce humidity and dry existing air within the shed. Both of which are designed to keep the level of moisture in the shed lower and reduce odours. I have attached a DACS AddAir information sheet as **Attachment C**; and
 - (g) Devices to monitor carbon dioxide and ammonia concentrations inside each shed to supplement the existing monitoring of temperature and humidity (retaining a monitoring record for three month following each cycle) will be installed by 1 March 2022.
- 21 The free range areas will be available to birds from 21 to 42 days old between 6am-9pm summer and 8am-6pm winter time. The free range areas are available subject to favorable weather conditions. The free-range areas are currently being planted with 400 Feijoa trees and 15% shade cloth to provide shade and shelter for the birds.
- 22 The free range areas are not typically heavily populated by birds, based on experience from Midhirst free range and other Tegel free range farms. The birds are not fed in the free range areas. There is a 5-7 week period 6-7 times a year where no birds will be in the free range areas. That equates to somewhere between 30-49 weeks of the year free range areas without birds. This also allows any grass areas to regrow if been eaten by the birds on a regular basis. Any excrement from

the birds will be taken up organically by the soil and provide a light nutrients for the grass areas.

- 23 As a general practice, AFTL use of Glyphosate in the free range areas is kept to a bare minimum (if at all) and we are trialling at our other Midhirst Free Range farm no spraying and only mowing.
- 24 In my view the conversion to free range farming, reduction in the number and mass of birds, improvements undertaken and proposed, and odour management will substantially reduce the potential for adverse odour and dust effects.
- 25 A map of Airport Farm free range poultry farm with Shed's labelled and range areas is included as **Attachment D**.

Additional benefits of the conversion

- 26 In addition, the conversion will have the following benefits:
- (a) Airport Farm employs eleven staff across its farms and is required to staff Tegel contracted farms with suitably trained personnel. The renewal of consents will provide commercial certainty and secure future employment for employees beyond 2026;
 - (b) Adapting and improving the existing sheds will provide an efficient use of existing rural infrastructure; and
 - (c) Free range farming itself will provide increased wellbeing for the birds and better environmental outcomes. Utilising the same methods currently employed at the Midhirst Free Range poultry farm, Airport Drive farm will be SPCA certified.

Site management

- 27 We employ a variety of methods to control odour, both at the source to decrease likelihood of emissions, and around the site to control any emissions from the operation. The Applicant has invested approximately \$500,000.00 in equipment in the last 8 years to ensure the site is performing at best practice and to minimise the risk of odours which are offensive and objectionable.

During a run cycle

- 28 Measures already implemented and undertaken include:
- (a) Use of iAuditor to regularly monitor and audit the site, including:

- (i) DACS ACS6 computerised climate control to maintain shed temperature and humidity, including an alarm system, enabling swift response to atmospheric changes as this affects the risk of odour;
 - (ii) Onsite and remote access to controllers, reports and live information on the production, climate and resources running on each shed and the farm;
 - (iii) Camera network in all sheds and free range areas to monitor birds and conditions in real time;
 - (iv) Visual assessment and recording of bird welfare including feet and hock assessment for infections or lesions, feather cleanliness, bird weight, and enrichment (for mental wellbeing); and
 - (v) Assessment of shed hygiene, bio security risks, lighting, and litter condition. The daily litter condition scoring provides a good indication of potential odour trends;
- (b) Additional insulation and indirect dry heating system to effectively control humidity (as opposed to providing direct gas fired heat which increases water vapour and higher humidity and as a result potential for odours). This process changes throughout a cycle, as heating is required while birds are young, and more ventilation once birds are 3-4 weeks old;
 - (c) Improved seals on all shed doors and general water-tightness of the sheds, to avoid any additional moisture being added;
 - (d) General practice of good litter management is to maintain a dry litter at all times. The litter is provided by Tegel as untreated wood shavings and is spread evenly across the sealed concrete floor. Any leaks resulting in wet litter is removed and fresh shavings introduced replacing the wet areas. There is typically a few bales of wood shavings on farm and new bales provided within a few hours via Tegel / Osflo. This is a welfare code obligation which also helps towards lower odours;
 - (e) Ammonia and CO2 levels in the sheds are already being monitored 24/7 by the DACS controllers and records kept. This enables us to carefully watch the ammonia and CO2 levels and make any adjustments necessary to keeping both low. It is a requirement of the SPCA Blue tick certification that ammonia levels are kept under 15ppm at all times and the records are available to audits as evidence. In the event of any spikes in levels then any adjustments to the ventilation systems are also recorded in the events logs;

- (f) The newly installed DACS controllers (which we have been operating at Midhirst for the past 3 years) are a superior production management and climate control system. It has extensive logging of data and stores records of all actions, bird performance and climate conditions inside and outside the sheds. It uses many sensors to do this. In addition, it is one of the only controllers that is able to run a shed based on air quality such as CO₂, humidity, temperature and ammonia levels in contrast to other controllers that rely on temperature, humidity only and rely on set calculations based on average bird numbers to estimated CO₂ levels;
- (g) The AddAir heaters being installed in the sheds at Airport Farm have been proven at our Midhirst farm for the past 3 years. They have the unique ability to not only warm the existing air in the shed, but also to dry the existing air in the shed, thus reducing humidity. Additionally if more fresh air needs to be introduced into the shed, then the heater can bring in more fresh air and reduce moisture from the fresh air before it gets into the shed. This is a really important feature in maintaining dryer litter in the shed and in-turn a very good tool for reducing the opportunity for odour to be created;
- (h) The balanced air pressure which is being installed by the 1st of March 2022 is possible with roof inlets which use variable speed fans to push air into the shed and mix the existing air within the shed. The roof exhausts remove air from the sheds and a good practice is to balance the air going in with the air going out. This is important for the following reasons:
 - (i) The shed isn't running on a negative vacuum (which most sheds in NZ are and Airport Farm has done to date) which has the tendency to drag in air from outside through any small gaps in the inlets, doors and when the pop holes are open;
 - (ii) when in free range mode and the pop holes are open on the shed then the outside air is not dragged in through the pop holes and on higher humidity days, a lot more moisture is not being introduced to the litter resulting in greater chance of odours; and
 - (iii) It has less wear on the building as the air is balanced and seals are not put under pressure continuously;
- (i) Water consumption is alarmed, so that any irregularities in water usage is automatically flagged up to on duty staff;
- (j) Use of nipple drinkers to avoid water falling on litter. Constant monitoring of water usage to avoid leakage or overflow, and audits 4-5 times daily to detect unintentional leakage, are carried out to minimise this risk; and

- (k) Any mortalities are removed on a daily basis, stored frozen, and disposed of off-site.
- 29 The farm consistently performs well in both our own auditing processes, and those run by Tegel. Audits are also run by Asure Quality Kaitiaki Kai to assess biosecurity risks, and AFTL meets the required standards.

Following a run cycle

- 30 The post-run cleanout is contracted to Osflo and Anglesey Waterblasting via Tegel. This process involves:
- (a) Removal of spent litter from the sheds using diggers directly onto enclosed containers on trucks;
 - (b) Spent litter is disposed of off-site with no delay; and
 - (c) Washing and sanitisation of sheds.
- 31 The litter cleanout process is efficient, with one shed taking no more than 2-3 hours. The entire process is complete within two days, and sometimes 1 day, depending on conditions. The washing of the sheds is typically 1-2 days also.
- 32 We have been in discussions with Osflo and they have confirmed they can be flexible with shed clean out times to ensure there is reduced risk for any odour and dust effects on neighbours during this time. For example, clean outs will be avoided when there is a South or South Westerly wind. If there is no change in the wind for days and clean out needs to happen, then the misting system will be used to minimise any dust and odours.

Dust

- 33 Dust is not likely to be an issue during the operation of the free range farm. We have received no formal complaints related to dust since taking ownership of the Application Site. There is potential for dust emissions when clean out occurs (discussed above). In addition to the measures undertaken by Osflo to manage dust during clean out, the misting system along the end of the sheds will further dust control during this process. The windbreaks around the property ensures dust is contained, as noted above. Trees and grass cover will be provided in the range areas and will also reduce potential for dust generation.
- 34 We are also installing the roof exhaust fans I describe above in all sheds, work which is currently in progress. The change to roof exhaust fans will make it harder for dust to be emitted from the sheds during the growing cycle and will also feature misting systems.

Compliance record

- 35 The Regional Council have recently undertaken regular assessments of odour levels at the site. I have encouraged this as I want to ensure the poultry farm has consistently high environmental performance. I am not aware of any issues arising from the assessments undertaken by the numerous officers and air quality experts that have attended the site over the last year or so.

Complaints management

- 36 Any complaints received by AFTL are logged into iAuditor, with a date and time. The issue is then investigated, and follow up actions identified. If the actions can be undertaken immediately, this is done so. If the event is historic, it is recorded as akin to an incident report, and mitigation measures are put in place to ensure it doesn't happen again.
- 37 Given our real time monitoring and auditing of our operations, any issues are responded to very quickly. It is rare for an operational issue to amount to a problem that could result in complaints.
- 38 I am aware of the TRC having two complaints recorded in 2015 but I have no knowledge of these and don't recall any TRC investigations. On one occasion more recently in 2020 I discussed odour from the property with my neighbour, who commented to me that at a time prior to our conversation, they had found the odour and dust unpleasant. Following this conversation, I investigated the potential source of this, and concluded that it was during the rare occasion of a month delay in cleaning the sheds (as a result of COVID and Level 4 Lockdown). I had left the shed doors open to air, which I will now not do again as a result of that feedback. Litter is typically removed within 3-5 working days of the last birds out, so this occurrence of a month period is unprecedented. I have been notified of complaints made since the Application was lodged and all of these complaints were investigated and logged. Investigations and monitoring were undertaken with the TRC who were present on site after I was notified. Ammonia levels were checked with a hand held device at the boundary and in front of fans where applicable and dust observations made. We were never provided the source of the complaint from the TRC, however we observed wind directions. Of those complaints when we had birds and or litter on the farm we found no obvious reasons for the complaints, no high ammonia readings, objectionable odours or high dust levels.

Planning history

- 39 Airport Farm has been involved in planning for the Application Site, including:

Plan Change 15: Future Urban Development Overlay

- 40 This plan change added a Future Urban Development to Area Q (an area of land adjacent to the Site, on the opposite side of Airport Drive). The Future Urban Development Overlay identified the land as an area to be developed for urban use in the future, but to retain its underlying zoning until that time comes.

Plan Change 20: Rezoning of Bell Block Area Q Rural Environmental Area to Residential A Environment Area and Application of Future Urban Development Overlay to Area R

- 41 This plan change rezoned Bell Block Area Q from Rural Environmental Area to Residential A Environment Area and created the Future Urban Development Overlay over Area R. As noted above, Area Q is the area of land adjacent to the Application Site, on the opposite side of Airport Drive. Area R includes the Application Site.
- 42 The Overlay Rules and Structure Plan applicable to Area Q provide staged restrictions on development. Plan Change 20 introduced the following rules relating to subdivision and development of Area Q:
- (a) Stage 3E (Stage 3E is a portion of land in Area Q closest to Application Site): urban residential type subdivision and development is a prohibited activity until Area R (Area R includes the Application Site) is rezoned to an urban zoning through a statutory plan change process and released upon completion of the realignment of Airport Drive; and
 - (b) all other activities shall be regulated through the Rural Environment Area rules and any other relevant Overlays (including the Future Urban Development Overlay which applies to Stage 3E) in the interim before the release of Stage 3E.
- 43 Airport Farm was a submitter on Plan Change 20, and supported the restriction on urban residential type subdivision and development as noted above.

Proposed New Plymouth District Plan

- 44 New Plymouth District Council (**NPDC**) are currently undertaking a review of the New Plymouth District Plan (**Operative Plan**). The Proposed New Plymouth District Plan (**Proposed Plan**) continues to include the Application Site as Future Urban Zone, and maintains restrictions on residential development until an appropriate plan change takes place. Airport Farm did not submit and is not involved in this process.

Response to submissions

- 45 I respond below to specific submitter concerns, and comments generally made by submitters. The submission by Kevin and Glenis McDonald is largely

representative of the other submissions, therefore taking TRC's lead I have used their submission as a basis for responding to all the submitters. However in paragraphs 49-50 I have addressed the other two issues raised outside of the representative submission contents.

Submission by Kevin and Glenis McDonald

- 46 Kevin and Glenis McDonald have opposed the granting of the consent, on the basis that AFTL has poor compliance, and on the expectation that the consent would not be renewed beyond 2026.
- 47 We run the farm to a high standard and it has a strong level of compliance with the Regional Council consent conditions. The potential effects of the change to free range farming are thoroughly assessed by Mr Jason Pene in his evidence, and I refer to that in response to the concern regarding the lack of assessment of the change.
- 48 As part of the change to free range, the roof exhausts are being added. These will largely replace the side vents which the submitter has expressed concern with. A wall fan will be left in the event of an emergency such as a sudden heat spike or bird welfare due to equipment failure. In any case, use of the side fan exhausts will be for emergencies only and in the event that a side fan is being used more frequently, then AFTL will install additional chimney roof fans. Those fans being retained are over 100m from the McDonald house and a screen is in place to deflect any dust.
- 49 In relation to the understanding that consent would not be renewed, AFTL was not aware of this understanding of submitters until recently, was not party to these discussions and has lawfully applied for resource consent. AFTL will continue to operate a poultry farm to the permitted activity standard of 30,000 birds if this resource consent application is not successful.

Airport Farm Applicant's existing control measures

- 50 The submitters have questioned the effectiveness of Airport Farm Applicant's existing control measures, and whether compliance is being achieved. I have discussed this in the Site Management section above, and also refer to the complaints management process described above.

Complaints record

- 51 AFTL's site management processes are in place to ensure compliance with existing resource consents. The submitters seek that the Applicant keeps a record of written complaints for longer than six months, and that these are provided to Taranaki Regional Council at review dates, and additionally that the Applicant

provide any complainant with a copy of a record of their complaint. This is included as a proposed condition of consent in the Officer's Report, and the Applicant fully supports this condition. I have already discussed the system we use for complaints.

Conditions of consent

52 I have reviewed the proposed conditions of consent provided in the Officer's Report and these are generally accepted, subject to the following comments:

(a) Condition 7 is acceptable, and I note that:

- (i) The misting devices required by Condition 7(ii) have already been installed; and
- (ii) The Applicant is currently in the process of installing the exhaust fans, hot water heaters, and atmospheric monitoring devices required by Condition 7 (1)9, (iii), and (iv). The atmospheric monitoring devices will measure CO₂, ammonia, temperature, and humidity. The DACS controllers have already been installed for this system, and the remaining components being installed currently are the roof inlets / exhausts and the heating system.

(b) The Applicant supports Conditions 11 in principle, and proposes the following amendment to clarify the screening required (referring to the plan included at **Appendix A** to my evidence):

11. The consent holder shall maintain a shelterbelt on the property's boundaries. The shelterbelt shall be in the form of:

(i) a dense row of trees, which reach a height of at least four metres; or

(ii) a windbreak to a height of 3.0 metres;

on the ~~northern and southern~~ boundaries marked in green and yellow on the plan titled XX in the absence of trees.

(c) Conditions 14 is acceptable, and the Applicant is supportive of a neighbourhood liaison group being convened.

Conclusion

53 Since purchasing the poultry farm in 2013, AFTL has consistently sought to be responsive and to improve the environmental performance of the farm through changes in methodology and investment in technology. Converting to free range is consistent with this approach. AFTL has remained active in local planning processes to ensure appropriate protection is provided for continuation of farming. AFTL accepts the 17 year term and conditions proposed by the TRC reporting

officer and considers this will provide commercial certainty for continued investment until such time as the land is rezoned which possibly might occur sometime in the medium to long term future.

Thank you for considering AFTL's application and I would be happy to answer any questions.

Edward John Whiting

28 January 2022

Attachment A: Windbreaks



Attachment B: Roof exhausts



58 Airport Drive,
Airport, New Plymouth...

● Roof Exhausts

100m

100m

Airport Dr

Airport Dr

Airport Dr

71

69

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66

62

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Attachment C: DACS Add/Air

Add air Heat exchanger



AddAir is a versatile and highly efficient heat exchanger, combining the simplicity of traditional heating systems with the efficient humidity control of heat exchangers – but at a fraction of the initial cost. Due to its supreme dehumidification capability AddAir quite simply is a game changer for the entire poultry industry.

Compared to other heat exchangers, AddAir has the following advantages:

- Better distribution of the air in the house
- Better litter condition
- Better integration with ventilation
- Significantly lower power consumption
- Significant saving in heating costs
- No cleaning and maintenance during production
- Open construction – easy to clean
- Much lower initial costs and running costs

System description

The AddAir unit is a water carried heat exchanger and connects to a conventional boiler.



When the roller door in the unit is closed, the unit serves as a traditional heater, recirculating room air over the heater and distributing it evenly throughout the building.



When the roller door is open, the unit serves as a heat exchanger and provides superior humidity control and ample supplies of preheated fresh air. The air entering the building passes through the heater and is warm and extremely dry when entering the house. This warm and dry air will absorb moisture quickly and efficiently. The fact that it is warm air leaving the AddAir unit also ensures against draft and condensation in the house.

TECHNICAL SPECIFICATIONS

Heat capacity:	60 kW at –10 Pa and 30 °C ambient, calculated at nominal fluid flow Calculate heat output using the following formula: $(T_{\text{fluid inlet}} - T_{\text{cooling air inlet}}) \times 1.2 \text{ kW}$ Example: $(80 - 30) \times 1.2 \text{ kW} = 60 \text{ kW}$
Air exchange capacity:	8000 m ³ /h at –10 Pa
Fluid supply requirement:	Nominal: 50 l/min per unit, 80 °C at inlet Long Life Antifreeze suitable for aluminium must be added (25–60% concentration depending on climate conditions; consult installer)
Fluid temperature drop:	Approximately 20 °C at nominal flow and 30 °C ambient air
Fan motor:	3×400 VAC 6-pole (950 RPM) 0.3 kW IP55 Insulation Class F

Attachment D: Farm map

