IAN PICK ASSOCIATES LTD.
SPECIALIST AGRICULTURAL AND RURAL PLANNING CONSULTANTS

ENVIRONMENTAL STATEMENT

ERECTION OF 4 NO. POULTRY BUILDINGS AND ASSOCIATED INFRASTRUCTURE AT LAND SOUTH OF THE A1066, DISS ROAD, GARBOLDISHAM, IP22 2HW

BJ & PM GOODERHAM

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Report Prepared By: Ian Pick BSc (Hons) MRICS
Ian Pick Associates Limited
Station Farm Offices
Wansford Road
Nafferton
Driffield
YO25 8NJ

Tel: 01377 253363
mail@ianpick.co.uk

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CHAPTER 1.

INTRODUCTION

1.1 This Environmental Statement has been commissioned by BJ & PM Gooderham to accompany a planning application for the development of a poultry unit extending to 4 No. poultry buildings and associated infrastructure on land south of the A1066, Diss Road, Garboldisham, Norfolk, IP22 2HW.

1.2 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 provide for the submission of an Environmental Statement for certain types of development. The regulations prescribe the types of development for which EIA is mandatory (Schedule 1 Development). Regulation 17a provides for mandatory EIA with all proposals which exceed 85,000 birds.

1.3 This report has been prepared by Ian Pick. Ian Pick is a specialist agricultural and rural planning consultant. He holds a Bachelor of Science with Honours Degree in Rural Enterprise and Land Management and is a Professional Member of the Royal Institution of Chartered Surveyors, being qualified in the Rural Practice Division of the Institution.

1.4 Ian Pick has 22 years experience specialising in agricultural and rural planning whilst employed by MAFF, ADAS, Acorus and most recently, Ian Pick Associates Limited.

1.5 Copies of this Environmental Statement are available from Ian Pick Associates Ltd for the sum of £50 for a paper copy, and £10 for a CD copy.

CHAPTER 2.

2. ENVIRONMENTAL IMPACT ASSESSMENT

Regulatory Context

2.1 The requirements of Environmental Impact Assessment are provided within the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. These are referred to as the EIA regulations within this document. The EIA regulations require that any development which is listed in Schedule 1 be subject to EIA.

2.2 The proposed development falls within the definition of Section 17 of Schedule 1, 'Installations for the intensive rearing of poultry or pigs' as it exceeds the threshold of 85,000 broilers as defined in Section 17 part (a).

Screening

2.3 The process of determination whether a proposed development requires an EIA is called 'screening'. The EIA Regulations permit for a developer to request a screening opinion from the Local Planning Authority (LPA) to determine whether the EIA process should be followed. In this instance, EIA is mandatory under Schedule 1 of the 2017 EIA regulations and therefore a screening opinion was not required.

Scoping

2.4 This Environmental Impact Assessment provides the following scope of assessment.

- Landscape and Visual Impact
- Highways and Transportation
- Noise, Odour and Dust
- Ecological Issues
- Drainage and Flood Risk

Assessment and Reporting Methodology

2.5 Following identification of potential environmental effects through the EIA scoping process, technical assessments were carried out in order to predict potential effects associated with the development and where necessary proposed measures to mitigate the effects. These assessments are contained within the Environmental Statement.

The Environmental Statement

2.6 The Environmental Statement has been prepared to accompany an application for planning permission for the erection of 4 No. poultry units and associated infrastructure at land south of the A1066, Diss Road, Garboldisham, Norfolk,

IP22 2HW. The application has been submitted to Breckland Council under the terms of the Town and County Planning Act 1990.

2.7 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Schedule 4, requires that an Environmental Statement should include at least the following information:

- A description of the development including:
  - A description of the location of the development
  - A description of the main characteristics of the whole development and the land use requirements during the construction and operational phases.
  - A description of the main characteristics of the operational phase of the development (in particular any production process)
  - An estimate by type and quantity, of expected residues and emissions.
- A description of the reasonable alternatives studied by the developer which are relevant to the proposed project and its specific characteristics, and an indication of the main reason for selecting the chosen option.
- A description of the current state of the environment (baseline scenario)
- A description of the factors likely to be significantly affected by the development.
- A description of the likely significant effects of the development on the environment resulting from
  - The construction and existence of the development
  - The use of natural resources, in particular land, soil, water and biodiversity.
  - The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste.
  - The risks to human health, cultural heritage or the environment
  - The accumulation of effects with other existing and / or approved projects.
  - The impact of the project on the climate and and vulnerability of the project to climate change
  - The technologies and substances used
- A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment including any difficulties encountered compiling the required information.
- A description of the measures envisaged to avoid, prevent, reduce or, if possible offset any identified significant adverse effects on the environment. That description should explain the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.
- A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and / or disasters which are relevant to the project concerned. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant

adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

- A non-technical summary of the above.

Contributors to the Environmental Statement

2.8 The team of consultants involved in the EIA are listed in table 2.1 below. Each was selected for their technical services and expertise in their respective fields.

Table 2.1

Chapter	**Consultants**
1. Introduction	IPA Ltd
2. EIA Process	IPA Ltd
3. Description of Development	IPA Ltd
4. Choice of Location	IPA Ltd
5. Planning Policy Context	IPA Ltd
6. Potential Environmental Effects	IPA Ltd
7. Landscape and Visual Impact	LVIA Ltd
8. Highway Impacts	IPA Ltd
9. Noise, Odour and Dust	Matrix Acoustics, AS Modelling and Data, IPA Ltd
10. Ecological Issues	Craig Emms, AS Modelling and Data, IPT
11. Drainage and Flood Risk	Plandecil
Non Technical Summary	IPA Ltd

CHAPTER 3.

3. DESCRIPTION OF DEVELOPMENT

Background Information

3.1 The applicants, BJ & PM Gooderham, propose to develop a poultry farm on land south of the A1066, Diss Road, Garboldisham, Norfolk, IP22 2HW.

Project Description

3.2 The applicants have submitted a planning application to Breckland Council for the erection of a poultry farm and associated infrastructure on land south of the A1066, Diss Road, Garboldisham. The detailed elements of the proposed development are shown in the table below. The location of the development is shown on the location plan at **Appendix 1**.

Table 3.1

Element	Description
Poultry Houses	4 No. poultry buildings, each measuring 97.79m x 24.256m with an eaves height of 2.457m and a ridge height of 5.111m. Each pair of poultry houses includes a link control room measuring 5.004m x 3.268m with an eaves height of 2.362m and a ridge height of 3.065m.
Feed Bins	The development includes 7 No. feed bins which are circular with a diameter of 3m and a height of 9.1m.
Concrete Apron	A concrete apron will be provided adjacent to the south elevations of the poultry buildings for access and loading purposes.
Dirty Water Tank	A SSAFO certified underground dirty water containment tank will be provided adjacent to the concrete apron on the south side.
Gate House	Gate House measuring 9.03m x 7m with an eaves height of 2.591m and a ridge height of 3.15m.
Store	Storage building measuring 7.5m x 6m with an eaves height of 3.523m and a ridge height of 4.37m

Plant Room	Plant Room Building measuring 7.275m x 3.190m with an eaves height of 2.591m and a ridge height of 3.018m.
Water Tanks	2 x Circular water tank with a diameter of 4.672m and a height of 3.6m.
Backup Generator	Generator measuring 4m x 2m with a height of 1.5m
Gas Tanks	Block of gas tanks, on a 15m x 6m base, containing 5 gas tanks, with a height of 2.3m.
Car Parking	3 No. car parking spaces
Access Road	An access road will be provided to link the development will be existing farm road which connects to the A1066.
Attenuation Pond	The attenuation pond will provide a Sustainable Drainage System

3.3 The proposed development involves the erection of a poultry farm together with associated infrastructure, as described in Table 3.1 above. The poultry buildings are to be used for the rearing of broilers from day old chicks through to finished table weight, with the additional infrastructure required, to facilitate the proposed use.

3.4 The proposed poultry buildings are identical and will have pan feeders, non drip nipple drinkers and indirect heating provided by a gas system. Ventilation within the buildings is based on high velocity chimneys with side inlet vents. The ventilation, heating and feeding systems are all fully automated and controlled by a computer system located within the control rooms which link each pair of poultry buildings. The systems are alarmed for high and low temperature, feeding system failure and power failure. The alarm system will be linked to an 'auto dial' computer system which alerts personnel via mobile phone to any system failures. The proposed poultry unit will produce standard birds, based on a 48 day growing cycle, including 10 days at the end of each cycle for cleanout and preparation of the buildings for the incoming flock. The unit will operate with 7.6 flocks per annum.

3.5 The chicks are placed within the building as day olds and reared within the building for 38 days, following which they are manually caught and transported live to the processers. During the growing cycle temperature is controlled within the buildings. The buildings are pre-warmed to a temperature of 32ºC on day 1 of the cycle reducing to 18ºC over the growing cycle. The temperature is controlled by heaters and the ventilation system. The development will operate on an all in all out basis, with all four proposed buildings stocked and de stocked at the same time.

3.6 At the end of each flock cycle, the buildings are cleaned out and the manure removed using agricultural loaders and removed from the site for disposal via biomass power stations. Following manure removal, the buildings will be washed out with high pressure hoses and prepared for the incoming flock. The inside of the poultry buildings is drained to a sealed dirty water tank which will be emptied following each cleanout of the building by vacuum tanker.

3.7 The additional infrastructure proposed on the site is essential to facilitate the proposed use for broiler rearing. The use of the various elements of the development is shown in the table below.

Table 3.2

Element	Description
Poultry Houses	To be used for the rearing of broiler chickens from day old chicks to finished table weight.
Feed Bins	To provide storage of feed for the poultry.
Concrete Apron	For parking and turning of delivery vehicles
Dirty Water Tank	To contain dirty water produced when the sheds are washed out.
Gate House	To provide office and staff facilities.
Store	To provide storage for equipment.
Plant Room	To house water and electric supply equipment.
Water Tanks	To provide 24 hours drinking water for the stock on site.
Backup Generator	To provide a backup power supply in periods of mains electric failure.
Gas Tanks	To provide fuel for the heating system.
Car Parking	For staff and visitor parking
Access Road	To link the development will the existing access road to the A1066.
Attenuation Pond	The attenuation pond will provide a Sustainable Drainage System for roof water.

External Lighting

3.8 The development does not require 24 hour external lighting. There are three days over each flock cycle, being days 30, 37 and 38 when night time catching operations will be undertaken and lighting on the site will be required in the form of directional flood lighting above the catching doors. Outside of the catching periods, 24 hour lighting is not required. Motion sensor trigger lighting will be provided for any staff needing to visit the site during hours of darkness.

Mitigation within the Project Design

3.9 Mitigation is inherent within the project design. The proposal is for the development of a poultry unit and requires an Environmental Permit in order to operate which is issued by the Environment Agency. The requirements of the EP insist on the site being designed to Best Available Techniques (BAT). This includes the provision of a high velocity roof mounted ventilation system, which is deemed to be BAT for the dispersal of odour and ammonia emitted from the proposed poultry buildings. The proposed buildings are also required by the Environmental Permit to be sealed and drained into a SSAFO certified dirty water containment system which essentially removes any potential for contaminated water escaping from the site. The concrete apron to the south of the poultry buildings must be fitted with a diverter valve (required by EP) to ensure that during periods where the apron can become contaminated (during cleanout), all contaminated water can be diverted to the sealed dirty water containment system. A copy of the dirty water tank specification is attached at **Appendix 2.**

3.10 The hydrological assessment identifies a requirement for surface water drainage to be attenuated to a greenfield runoff rate, and a Sustainable Urban Drainage System (SuDS) is incorporated into the design.

Climate Change

3.11 Schedule 4 of the 2017 requires at 5(f) requires the ES to include a description of the likely significant effects of the development on climate and the vulnerability of the project to climate change. Mitigation for climate change is factored into the sustainable drainage design of the proposals which includes the appropriate additional capacity for climate change within the designed system.

Construction Phase

3.12 The construction phase of the proposed development will extend to approximately 30 weeks. This phase involves the following elements.

- Stripping of the topsoil and levelling of the subsoil to create a level development area using a tracked dozer.
- Importation of stone, levelling and compacting to create a sub-base.
- Preparation of concrete foundation pads for steelwork

- Erection of steelwork and cladding
- Concreting of the building floors and concrete aprons.
- Fitting of the buildings and installation of equipment.

3.13 The construction materials will be delivered into the site using HGV vehicles. Stone will be delivered using 8 wheel rigid quarry lorries; Concrete using 6 wheel rigid ready mix concrete lorries; and steel framework and sheeting using articulated lorries with flatbed trailers.

3.14 The proposal is a permanent development and the estimated design life of the buildings is in excess of 50 years.

Characteristics and Production Processes

3.15 The use of the proposed buildings is for the rearing of day old broiler chickens through to finished table weight.

Expected Residues and Emissions

3.16 The proposed broiler farm requires a permit under the Environment Agencies Environmental Permitting regime.

3.17 Expected residues and emissions from the site are limited to:

- Airbourn emissions in the form of odour, ammonia and nitrogen
- Noise emission from mechanical plant and transport related activities.
- Production of waste in the form of poultry manure and dirty water.

Forecasting Methods

3.18 The forecasting methods used within this assessment are detailed within the individual chapters and assessments.

- Landscape and Visual Impacts are assessed using GLVIA3.
- The Highways and Transportation impacts of the development as assessed in accordance with paragraph 109 of the NPPF.
- Noise is forecast using BS4142:2014.
- Odour Assessment is forecast based on Environment Agency IPPC permitting guidance for odour modelling - Environment Agency H4 Odour Management Guidance 2011
- Dust is assessed based on DEFRA project AC0104.
- Ecology Issues are assessed using the methodology contained within Handbook for Phase 1 habitat survey: a technique for environmental audit (Joint Nature Conservation Committee, 2010) and the current guidance on survey methods from the Chartered Institute of Ecology and Environmental Management (Guidelines for Preliminary Ecological Appraisal. CIEEM, 2012). The Habitat Suitability Index was calculated following ARG UK advice note 5 (Amphibian and Reptile Groups of the United Kingdom, 2010).
- Ammonia is assessed based on guidance within Environment Agency H1 Risk Assessments.

- The Site Specific Flood Risk Assessment is based on the Guidance within paragraph 163 of the NPPF, and footnote 50.

Assessment of Significance of Environmental Effects

3.19 In terms of the potential environmental effects, these have been assessed in accordance with the significance criterion outlined below. The assessment of significance within each subject chapter of the Environmental Statement has been informed corresponding technical assessment within the Appendices.

None	**The development will not produce any effects beyond those which may be experienced within the current farming regime.**
Low	**There will be an effect, however this will be localised and will not impact on environmental and other features to their detriment when relating to existing uses (e.g. distance too far)**
Medium	**There will be an effect which will impact on environmental features, but not significantly.**
High	**A significant effect.**
Positive	**Has a benefit.**

CHAPTER 4.

4. CHOICE OF LOCATION / ALTERNATIVE SITES

4.1 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 require an Environmental Statement to cover alternatives **studied** by the applicants.

4.2 The location of the development at land south of the A1066, Diss Road, Garboldisham was selected due to the separation distance from neighbours, and direct access to the A1066, together with the existence of the mature woodland on the northern boundary and strong hedgerows on the east, west and southern boundaries for landscape mitigation purposes.

4.3 Following identification of the application site, pre application enquiries were conducted with the Local Planning Authority and Natural England to determine whether the proposed site was capable of meeting planning policy and legislative requirements. The indications from the initial feasibility study suggest that the proposal is acceptable in planning and environmental policy terms in the proposed location and a planning application was worked up for submission. Given the potential acceptability of the proposed location, detailed consideration of alternative locations has been made.

CHAPTER 5.

5. PLANNING AND POLICY FRAMEWORK

Introduction

5.1 This chapter identifies planning policy relevant to the proposed development and the application site, together with an assessment of the development proposal against the planning policy and guidance.

5.2 The proposed development has been prepared having regard to national and local policy and guidance.

National Planning Policy Framework

5.3 The National Planning Policy Framework confirms that the purpose of the planning system is to contribute towards the achievement of sustainable development. Paragraph 8 of the NPPF states "There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- **an economic role** – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

- **a social role** – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and

- **an environmental role** – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy"

5.4 Paragraph 80 and 81 set the Governments position on economic growth, as detailed below:

80. Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving with high levels of

productivity, which should be able to capitalise on their performance and potential.

81. Planning policies should:

a) set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration;

b) set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;

c) seek to address potential barriers to investment,such as inadequate infrastructure, services or housing, or a poor environment; and

d) be flexible enough to accommodate needs not anticipated in the plan, allow for new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances.

5.5 Paragraph 83 provides support for economic growth in rural areas, as detailed below:

83. Planning policies and decisions should enable:

a) the sustainable growth and expansion of all types of business in rural areas, both through conversion of existing buildings and well-designed new buildings;

b) the development and diversification of agricultural and other land-based rural businesses;

5.6 Paragraph 183 refers to developments where a separate Environmental Permit is required in terms of the operation of the site.

183. The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.

Local Planning Policy – *Breckland Local Plan 2019*

5.7 Local planning policies relevant to the proposed development are detailed below:

Policy COM 03 – Protection of Amenity, Policy EC04 – Employment Development Outside General Employment Areas, Policy ENV 02 – Biodiversity Protection and Enhancement, and policy ENV 05 – Protection and Enhancement of the Landscape.

CHAPTER 6.

6. POTENTIAL ENVIRONMENTAL AFFECTS

6.1 The bird numbers associated with the proposed development exceeds Schedule 1 threshold, and therefore an EIA is mandatory as part of the planning application process.

6.2 The scope of the Environmental Statement is detailed below:

- Landscape and Visual Impact
- Highways and Transportation
- Noise, Odour and Dust
- Ecological Issues
- Drainage and Flood Risk

Scope of the Assessments

Landscape and Visual Impact Assessment

6.3 Landscape and Visual Impact is assessed in Chapter 7, and the associated LVIA report at **Appendix 3**. The scope of the Landscape and Visual Impact Assessment was to provide an assessment of the entire development described in Chapter 3, in accordance with the Guidance set out in GLVIA 3.

Highway Impacts

6.4 Highway impacts are assessed in Chapter 8. The scope of the Transport Chapter is to provide an assessment of the highways and transportation impacts of the entire development described in Chapter 3. The Highways and Transportation impacts of the development as assessed in accordance with paragraph 109 of the NPPF.

Noise, Odour & Dust

6.5 Noise is assessed in Chapter 9, and within the Noise Impact Assessment at **Appendix 4**. The scope of the noise assessment includes all potential noise sources arising from the operation of the proposed development described in Chapter 3, including plant in the form of the mechanical ventilation systems and operational noise in the form of transport related activities. The assessment has been prepared in accordance with BS4142:2014.

6.6 Odour is assessed in Chapter 9, and within the Odour Impact Assessment at **Appendix 5**. The odour assessment is based on the impacts of the poultry buildings throughout the duration of the flock cycle, and during the cleanout process. The odour impact assessment has been prepared in accordance with the Environment Agency H4 Odour Management Guidance 2011.

6.7 Dust is assessed in Chapter 9 and the assessment is based on the guidance provided within DEFRA Project AC0104.

Ecology

6.8 Ecology is assessed within the Chapter 10, and the associated Phase 1 Habitat Survey at **Appendix 6.**

6.9 The scope of the ecological assessment relates to the full development described in Chapter 3. The site was surveyed following the methodology contained in the Handbook for Phase 1 habitat survey: a technique for environmental audit (Joint Nature Conservation Committee, 2010) and the current guidance on survey methods from the Chartered Institute of Ecology and Environmental Management (Guidelines for Preliminary Ecological Appraisal. CIEEM, 2012). The Habitat Suitability Index was calculated following ARG UK advice note 5 (Amphibian and Reptile Groups of the United Kingdom, 2010).

Ammonia Impacts

6.10 Ammonia Impacts are addressed within Chapter 10, and the associated Ammonia Impact Assessment at **Appendix 7**. The ammonia assessment is based on the impacts of the poultry buildings throughout the duration of the flock cycle, and during the cleanout process. The odour impact assessment has been prepared in accordance with the Environment Agency H1 Risk Assessments.

In Combination Ammonia Impacts

6.11 In combination ammonia impacts are addressed within Chapter 10 and the associated report at **Appendix 8**. The in combination assessment is required based on case law provided within the "Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017] EWHC 35 1".

Flood Risk and Drainage

6.12. Flood Risk and Drainage are considered within Chapter 11, and with the Flood Risk and Surface Water Management Report at **Appendix 9**. The Site Specific Flood Risk Assessment is based on the Guidance within paragraph 163 of the NPPF, and footnote 50.

CHAPTER 7.

7. LANDSCAPE AND VISUAL IMPACTS

Baseline Conditions

7.1 The site is currently a field in agricultural use which is defined by hedgerows with trees field boundaries that sits in a wider agricultural landscape with pockets of woodland. The site sits in a gently undulating landform.

7.2 The proposed development has been subject to a Landscape and Visual Impact Assessment. The full assessment is shown at **Appendix 3** to this report.

LVIA Summary

7.3 LVIA Ltd were instructed to undertake a landscape and visual impact assessment for four poultry units located at Land at A1066, Garboldisham by Ian Pick Associates Ltd in May 2020. The site and its surrounding landscape were assessed and a total of four viewpoints were selected to represent a variety of receptors in the surrounding area.

7.4 The aim of this report is to provide an assessment of the potential landscape and visual effects of a proposed development upon the receiving landscape, in line with current legislation and guidance. It comprises two main assessments, the first for landscape and the second for visual effects.

7.5 The assessment has been conducted in line with published best practice guidelines and includes a desk study; (review of local plan policies, published landscape character assessment and production of a computer generated Zone of Theoretical Visibility (ZTV)) and onsite observations.

7.6 The site is currently a field in agricultural use which is defined by hedgerows with trees field boundaries that sits in a wider agricultural landscape with pockets of woodland. The site sits in a gently undulating landform.

7.7 Due to the existing local area, the proposed scheme would not be out of character with its surroundings when considered as part of the wider landscape.

7.8 Mitigation measures have been suggested to aid the schemes visual blending with the existing environs.

7.9 Four viewpoints were considered and of these, one was considered to have material visual impacts; viewpoint 1 that sits close to the sites western boundary.

7.10 With the implementation of a successful mitigation strategy, the overall impact on the landscape is considered to have a minor overall effect on the surrounding landscape character and a moderate effect on the visual impact. It

should be considered that this type of development is not out of character within the receiving landscape.

Summary

7.11 The proposed development has been assessed as having a minor impact on landscape character and a moderate effect on visual impact.

7.12 The assessment level provided within the LVIA is based on the guidance within GLVIA 3 with a resulting minor impact on landscape character and moderate effect on visual impact. This is a permanent effect as the assessment relates to the presence of the development within the landscape.

CHAPTER 8.

8. HIGHWAY IMPACTS

Baseline Conditions

8.1 The application site is currently a field in agricultural use. The site is accessed via and existing track from the A1066.

Highway Improvements

8.2 The proposed poultry farm will be accessed from the A1066 Diss Road via the existing entrance which will be upgraded to facilitate HGV traffic as part of the proposed development.

8.3 Drawing Number IP/GG/06 attached shows the proposed improvements to the access, which include increasing the radii to 15m, increasing the width, and construction and surfacing to Norfolk County Council highway specification. The existing access point provides existing visibility splays meeting national standards for a 60mph road (2.4m x 215m).

Traffic Generation

8.4 The proposed development of the new poultry farm will generate additional traffic to service the development. The estimated commercial traffic generation is detailed in the table below.

Day	Activity	Vehicle Size	Proposed Frequency
1	Chick Delivery	16.5m HGV	3
2			
3			
4			
5			
6	Feed Delivery	16.5m HGV	1
7	Carcass Collection	Box Van	1
8	Feed Delivery	16.5m HGV	1
9			
10	Feed Delivery	16.5m HGV	1
11			
12	Feed Delivery Gas Delivery	16.5m HGV Tanker	1 1
13			
14	Carcass Collection Feed Delivery	Box Van 16.5m HGV	1 1
15			
16	Feed Delivery	16.5m HGV	1
17			

18	Feed Delivery	16.5m HGV	1
19			
20	Feed Delivery	16.5m HGV	1
21	Carcass Collection Feed Delivery	Box Van 16.5m HGV	1 1
22	Feed Delivery	16.5m HGV	1
23	Feed Delivery	16.5m HGV	1
24	Feed Delivery Gas Delivery	16.5m HGV Tanker	1 1
25	Feed Delivery	16.5m HGV	1
26	Feed Delivery	16.5m HGV	1
27	Feed Delivery	16.5m HGV	1
28	Carcass Collection Feed Delivery	16.5m HGV	1 1
29	Feed Delivery	16.5m HGV	1
30	Catching Gang Bird Removal (Thinning)	Mini Bus 16.5m HGV	1 10
31	Feed Delivery	16.5m HGV	1
32	Feed Delivery	16.5m HGV	1
33	Feed Delivery	16.5m HGV	1
34	Feed Delivery	16.5m HGV	1
35	Feed Delivery	16.5m HGV	1
36	Feed Delivery	16.5m HGV	1
37	Catching Gang Bird Removal (final clearance)	Mini Bus 16.5m HGV	1 10
38	Catching Gang Bird Removal (final clearance)	Mini Bus 16.5m HGV	1 10
39	Carcass Collection	Box Van	1
40	Manure Removal	16.5m HGV	9
41	Washing Gang	Mini Bus	1
42	Washing Gang Gas Delivery	Mini Bus Tanker	1 1
43	Shavings Delivery	16.5m HGV	1
44	Dirty Water Removal	Tanker	4
45			
46			
47			
48	Chick Crumb	16.5m HGV	2

Total			85 per flock (170 movements)
Total per Annum (7.6 flocks)			646 per annum (1292 movements)

Pattern of Vehicle Movements

8.5 The above table details the anticipated daily movement for commercial vehicles for an individual flock of birds. As is shown in the table, on most of the days of the flock cycle, commercial traffic generation is minimal with the site generating 1 x HGV visit (2 movements) per day. Peaks are generated at the beginning of the flock for chick delivery, and at the end of the flock for bird removal and the removal of manure and dirty water. Over the 48 day cycle, there are only 7 days where the estimated traffic is more than 1 HGV per day.

Vehicle Routing

8.6 Feed deliveries will originate at the Crown Feed Mill at Edge Green which is located around 5 miles from the application site.

8.7 Birds will be processed at the Cranswick County Foods processing plant at Eye, near Diss. Traffic will follow the A1066, A140 and B1077. The application site is located approximately 12 miles from the factory.

8.8 Manure will be disposed of through Thetford Power Station, following the A1066 westwards, and the A134.

Highways Summary

8.9 The proposed development has direct access to the A1066 via an existing agricultural entrance. Mitigation is proposed in the form of widening of the entrance, improvement to the radii, and surfacing of the junction with the A1066. The access location provides existing visibility splays which conform with national standards.

8.10 The development is a low traffic generating use, create 2 HGV movements per day for majority of the time. Peaks are generated as certain times of the flock cycle, however, at its peak, these movements to not exceed 1 visit (2 movements) per hour. Based on the guidance within paragraph 109 of the NPPF, the highway impacts of the development are not severe.

CHAPTER 9.

9. NOISE, ODOUR & DUST

Noise

Scope of the Assessment

9.1 A detailed noise assessment has been prepared by Matrix Acoustic Design Consultants to review plant and operational noise generated from the proposed development. The assessment includes the proposed ventilation systems together with transport related noise. The full detailed analysis, which includes the results of a noise survey and acoustic calculations, are provided at **Appendix 4**. The Acoustic Assessment has been undertaken to BS4142:2014.

Baseline Conditions

9.2 A noise survey has been conducted to determine the typical background noise levels at the nearest dwellings to the proposed broiler units.

Assessment Summary

9.3 A noise survey has been conducted to determine the typical background noise levels at the nearest dwellings (Dwellings A - D, Figure 1) to the proposed broiler units at land north of the A1066, Garboldisham, Norfolk.

9.4 The extract fan and transport noise (HGV movements and loading/unloading using an electric forklift within the concrete apron) as a result of the proposed development have been assessed in accordance with BS4142:2014.

9.5 For the assessment the mitigation measure of attenuators fitted to each roof extract fan on Sheds 1 – 3 (Figure 5) that meet the insertion losses given in Table 2 have been included.

9.6 Via calculation (Appendix B) it has been demonstrated that the aggregate BS4142 noise impact of the extract fans (with attenuators fitted to the ridge units of Sheds 1 - 3) and transport activities during the day and evening will be **low**.

9.7 Due to the very low Rating Levels and typical background noise levels during the night the absolute noise emission levels have been assessed to review acceptability; this is in accordance with guidance given in BS4142.

9.8 During the night the ambient noise ingress via an open window of both the extract fan and transport activities have been established to be below the existing underlying noise environment and >10dB below BS8233's noise ingress limits for bedrooms (note the limits are applicable to road traffic and continuous operating plant).

9.9 The individual maximum noise events generated by the HGVs loading/unloading will result in noise ingress levels via an open window below LAmax,F 45dB. In accordance with ProPG (2017) this indicates a negligible noise impact with regard to sleep disturbance.

9.10 We therefore conclude that during the night the absolute noise levels will result in a **low** noise impact.

9.11 Site management with regard to minimising noise emissions has been discussed.

9.12 On the basis that the proposed development (with attenuators fitted to the roof fans as detailed in the report) will not result in an adverse noise impact at the nearest dwellings, we conclude that on noise grounds it is acceptable.

Noise Summary

9.13 The proposed development will result in a permanent effect, as the noise impacts of the development arise from the operation of plant and transport throughout the lifespan of the development. The noise assessment is based on BS4142: 2014 and the associated rating levels in accordance with BS4142:2014 for plant and transport noise is **low**.

Air Quality Assessment

Baseline Conditions

9.14 The application site currently comprises an agricultural field which is in arable production. The application site is located around 320m from the closest residential neighbour which is located to the south west.

Scope of the Assessment

9.15 AS Modelling and Data were instructed to undertake an Odour Impact Assessment relating to the proposed poultry unit development described in Chapter 3.

9.16 The full Odour Impact Assessment is shown at **Appendix 5** and summarised below.

9.17 Odour emission rates from the proposed poultry houses have been assessed and quantified based upon an emissions model that takes into account the internal odour concentrations and ventilation rates of the poultry houses. The odour emission rates so obtained have then been used as inputs to an atmospheric dispersion model which calculates odour exposure levels in the surrounding area.

Odour Summary

9.18 The modelling predicts that at all nearby residences, the predicted 98th percentile odour concentrations would be below the Environment Agency's benchmark for moderately offensive odours, a maximum annual 98th percentile hourly mean concentration of 3.0 ou_E/m. The maximum predicted odour exposure is 1.64 ou_E/m, at nearby receptors.

9.19 The odour impacts of the development relate to its operation for the design life of the project, and therefore represent a permanent effect.

Dust

9.20 The assessment of dust from poultry farms formed part of a DEFRA research project. DEFRA project AC0104. The summary of the DEFRA research project is shown in the text below.

"This work represents one of the most comprehensive studies to quantify PM emissions from poultry housing to date, comparing a total of eight farms. Large variations between farm management practises, lighting regimes, litter conditions, and meteorology contributed to variability in emissions, even for the same type of farm. However, the measurements undertaken as part of this study were also able to identify differences in concentrations and emissions of particles between different farm types. The broiler installations were associated with the largest indoor air $PM_{2.5}$ and PM_{10} concentrations (655 $\mu g\ m^{-3}$ and 2990 $\mu g\ m^{-3}$, respectively) and the highest bacterial fungal counts. Concentrations for particulate matter and bioaerosols were the lowest at battery farms. In general, indoor particle concentrations increased during winter time and light periods, reflecting ventilation rate and bird activity as the dominant influences. On the other hand, emission factors increased slightly during light-time in the summer months, due to the increase in ventilation rate.
Chemical speciation measurements indicated that (i) NH_4NO_4 was not forming within the shed, (ii) the dominant inorganic species sourced from poultry material are Ca^{2+}, K^+ and Mg^{2+}, and (iii) the key metals in the poultry sheds include Al, As, Ba, Cu (light only), Cr, Mn, Rb, Sr and Ti. We here derived, to our knowledge for the first time, poultry emission factors for aerosol chemical components (metals and major inorganic ions) and when compared against the NAEI suggest that between 0.1 – 4% (depending on compound) of the UK metal and inorganic ion emissions are derived from poultry house emissions.
Bioaerosol concentrations in the building represent a risk to poultry workers in terms of respiratory allergy or disease, but the levels emitted are sufficiently diluted over a short distance from the building so as not to pose a risk to those living in the vicinity of poultry operations. PM10 particulate levels were reduced to background levels by 100m downwind of even the highest emitting poultry houses, therefore are unlikely to pose a risk to those living in the vicinity of poultry operations."

9.21 The results of the DEFRA research project demonstrated that emissions from poultry units in terms of particulate matter reduced to background levels by

100m downwind of the even the highest emitting poultry houses. The research shows that levels of particulate matter are sufficiently diluted over a short distance so as not to pose a risk to those living in the vicinity of poultry operations. The application site is 320m from the closest residential receptor and therefore beyond the distance where dust issues can occur.

Public Health Issues

9.22 With reference to dust and public health issues, the Environment Agency's IPPC section was consulted regarding the legislative position on dust emissions from poultry units. The following response was issued by the Environment Agency on 7th March 2016.

"In an agreement with Public Health England we now ask for a qualitative dust (including bioaerosols) risk assessment for any instances where there is a sensitive receptor within 100m of the installation boundary – for substantial and new applications.

We also consult with PHE on the applications".

Dust Summary

9.23 The application site is located 320m from the closest sensitive receptor. The results of DEFRA project AC0104 confirmed with research that dust was diluted over short distances of 100m to normal background levels and therefore the proposal does not pose a risk of public health issues.

CHAPTER 10.

10. ECOLOGICAL ASSESSMENT

Baseline Conditions

10.1 A phase 1 Habitat Survey has been undertaken on the site to determine baseline ecological conditions on the site. The Phase 1 Habitat Survey relates to the full development as described in Chapter 3. The full Phase 1 assessment is contained at **Appendix 6**. The application site is an intensively farmed arable field producing combinable crops.

10.2 The site was surveyed following the methodology contained in the Handbook for Phase 1 habitat survey (Joint Nature Conservation Committee. 2010. *Handbook for Phase 1 habitat survey: a technique for environmental audit*. JNCC, Peterborough, UK) and the current guidance on survey methods from the Chartered Institute of Ecology and Environmental Management (CIEEM. 2012. *Guidelines for Preliminary Ecological Appraisal*. CIEEM, Winchester, UK). The Habitat Suitability Index for great crested newts was calculated following ARG UK advice note 5 (Amphibian and Reptile Groups of the United Kingdom, 2010).

10.3 The Phase 1 Habitat Survey provides evidence that the site is not as a whole of sufficient ecological value to warrant whole-scale protection from the development. The sites habitats which will be affected by the works are common and widespread and are considered to be of low intrinsic biodiversity value.

The Development Proposal

10.4 The development proposal will introduce an intensive poultry farming operation onto the site. The ecological assessment provided at **Appendix 6** confirms that the application site itself is of low intrinsic biodiversity value.

10.5 Intensive poultry farming enterprises have the potential to create increased levels of ammonia and nitrogen within the atmosphere in the locality, which can in turn create negative impacts on sites of nature conservation importance, for example, Special Areas of Conservation (SAC's), Sites of Special Scientific Interest (SSSI), Ancient Woodlands and Local Wildlife Sites. A detailed ammonia assessment is provided at **Appendix 7**.

10.6 There are three areas designated as County Wildlife Sites (CWSs) within 2 km of the proposed poultry houses. There are six areas designated as Sites of Special Scientific Interest (SSSIs), namely: Blo Norton And Thelnetham Fens SSSI; Bugg Hole Fen, Thelnetham SSSI; Hopton Fen SSSI; Middle Harling Fen SSSI; Weston Fen SSSI and Redgrave and Lopham Fens SSSI, within 5 km of the site. In addition, parts of Blo Norton And Thelnetham Fens SSSI Redgrace and Lopham Fens SSSI and Weston Fen SSSI are designated as part of Waveney And Little Ouse Valley Fens Special Area of Conservation (SAC), which is also a Ramsar site in part and there are areas of Breckland SAC and Special Protection Area (SPA) within 10 km of the site.

10.7 The detailed ammonia impact assessment shows that the development has a process contribution in excess of 1% to Blo Norton and Thelnetham Fens SSSI and the Waveney and Little Ouse Valley SAC . If process contributions to a SSSI or SAC site exceed 1%, further assessments of in combination impacts with other plans and projects is required by Natural England in order for the proposals to comply with the caselaw requirements of the "Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017] EWHC 35 1".

10.8 Assessment of 'in combination' impacts of the proposed development is set out in the attached report at **Appendix 8**. The in combination ammonia impact assessment provides the following conclusions.

"In view of the above, and providing the development is carried out according to the details submitted, the proposal will not lead to significantly increased concentrations of ammonia and nitrogen deposition at Waveney And Little Ouse Velley Fens SAC/Blo' Norton and Thelnetham Fens SSSI. There will be no adverse effect on the integrity of Waveney and Little Ouse Valley Fens SAC/Blo' Norton and Thelnetham Fens SSSI through this development, either alone or in combination".

Summary

10.9 The Phase 1 Habitat Survey provides evidence that the site is not as a whole of sufficient ecological value to warrant whole-scale protection from the development. The sites habitats which will be affected by the works are common and widespread and are considered to be of low intrinsic biodiversity value.

10.10 The Ammonia screening confirms that the proposal screens in for in combination assessment. The in combination assessment confirms that the development will have no adverse effect on the integrity of the Waveney and Little Ouse Valley Fens SAC / Blo' North and Thelnetham Fenss SSSI, either alone of in combination.

CHAPTER 11

11. DRAINAGE AND FLOOD RISK

Baseline Conditions

11.1 The application site comprises an existing arable field. The site is noted on the Environment Agency flood maps as Flood Zone 1 i.e. outside of the flood plain.

11.2 Surface water drainage from the field is therefore currently limited to a greenfield runoff rate. A detailed Flood Risk Assessment and Surface Water Management Strategy for the proposed development has been provided by Plandecil and the full report is shown at **Appendix 9** of this statement.

Assessment

Drainage and Flood Risk

11.3 The surface water management design proposes SuDS that will limit the total site runoff from the proposed development to a greenfield runoff rate. Attenuation is proposed in the form an attenuation pond which will be located to the south of the proposed poultry sheds. The attenuation pond will outfall into the drain to the south of the attenuation pond through a restricted orifice which will limit discharge to the appropriate greenfield rate. The purpose of the attenuated system is to store clean water on site during peak rainfall events and release into the drainage system at a normal greenfield runoff rate. The use of this type of system prevents surges during high rainfall and provides benefits in terms of downstream flooding consequences.

11.4 The design of the sustainable drainage system includes design provisions for climate change within the designed system.

11.5 Foul and surface water drainage on the site will be separated to prevent discharge of dirty water to watercourses. The inside of the proposed building will be sealed and drained to a sealed underground dirty water containment tank. The proposed dirty water tanks will collect contaminated water produced in the washing out process. The concrete aprons have the potential to become contaminated during the manure removal process of the cleanout operate. The concrete apron will be enclosed by a catchment drainage with a switch system. During the cleanout process, the concrete apron will be drained into the dirty water containment system. Outside the cleanout period, when the apron is clean and uncontaminated, the apron will drain into the attenuation pond. The separate drainage systems are a requirement for the Environmental Permit.

Summary

11.6 The development area is located within Flood Zone 1. The built development is not at risk of flooding. In accordance with the NPPF, mitigation in the form of attenuated surface water drainage has been designed into the scheme through the provision of an attenuation pond. The purpose of the attenuated system is to store clean water on site during peak rainfall events and release into the drainage system at a greenfield runoff rate. The use of this type of system prevents surges during high rainfall and provides benefits in terms of downstream flooding consequences.

11.7 The drainage proposals are required for the design lifetime of the development and therefore the impacts should be regarded as permanent.

NON TECHNICAL SUMMARY

1.1 This non technical summary has been produced to summarise the issues, mitigation measures and effects relating to the proposed development of poultry buildings and associated infrastructure at land south of the A1066, Diss Road, Garboldisham. The full extent of the proposed development is shown in the table below.

Element	Description
Poultry Houses	4 No. poultry buildings, each measuring 97.79m x 24.256m with an eaves height of 2.457m and a ridge height of 5.111m. Each pair of poultry houses includes a link control room measuring 5.004m x 3.268m with an eaves height of 2.362m and a ridge height of 3.065m.
Feed Bins	The development includes 7 No. feed bins which are circular with a diameter of 3m and a height of 9.1m.
Concrete Apron	A concrete apron will be provided adjacent to the south elevations of the poultry buildings for access and loading purposes.
Dirty Water Tank	A SSAFO certified underground dirty water containment tank will be provided adjacent to the concrete apron on the south side.
Gate House	Gate House measuring 9.03m x 7m with an eaves height of 2.591m and a ridge height of 3.15m.
Store	Storage building measuring 7.5m x 6m with an eaves height of 3.523m and a ridge height of 4.37m
Plant Room	Plant Room Building measuring 7.275m x 3.190m with an eaves height of 2.591m and a ridge height of 3.018m.
Water Tanks	2 x Circular water tank with a diameter of 4.672m and a height of 3.6m.
Backup Generator	Generator measuring 4m x 2m with a height of 1.5m
Gas Tanks	Block of gas tanks, on a 15m x 6m base, containing 5 gas tanks, with a height of 2.3m.
Car Parking	3 No. car parking spaces

Access Road	An access road will be provided to link the development will be existing farm road which connects to the A1066.
Attenuation Pond	The attenuation pond will provide a Sustainable Drainage System

1.2 Each proposed poultry building will house 50,000 birds, with 200,000 birds proposed on the site in total.

Assessment of Significance of Environmental Effects

1.3 In terms of the potential environmental effects, these have been assessed in accordance with the significance criterion outlined below.

None **The development will not produce any effects beyond those which may be experienced within the current farming regime.**

Low **There will be an effect, however this will be localised and will not impact on environmental and other features to their detriment when relating to existing uses (e.g. distance too far)**

Medium **There will be an effect which will impact on environmental features, but not significantly.**

High **A significant effect.**

Positive **Has a benefit.**

1.4 The scheme has been designed to take into account the potential environmental effects, with mitigation inherent in the project design. The scope of assessment included within the Environmental Impact Assessment includes the following:

- Landscape and Visual Impact
- Highways and Transportation
- Noise, Odour and Dust
- Ecological Issues
- Drainage and Flood Risk

1.5 The impact relating to these issues is summarised in the following sections.

Environmental Impact

Issue	Mitigation Measures	Effect Assuming Mitigation
Landscape and Visual Impact.	Native tree and hedgerow planting to the site boundaries. Management and maintenance of existing surrounding hedgerow and trees; The use of materials for the external envelope of the buildings which minimise potential visual intrusion and follow the local vernacular to aid visual blending, for example olive green metal sheeting.	**Low (not significant)** The assessment level provided within the LVIA is based on the guidance within GLVIA 3 with a resulting minor impact on landscape character and moderate effect on visual impact. This is a permanent effect as the assessment relates to the presence of the development within the landscape.
Highway Impact	Upgrading of the site entrance through widening, increasing the radii and surfacing.	**Low (not significant)** The proposal is a low traffic generating use and the impacts of the development are not severe.
Noise		**Low (not significant)** The noise assessment concludes that the noise impacts of the development are low for plant and transport noise.
Odour	Use of high speed roof mounted fans.	**Low (not significant)** The proposal is compliant with the Environment Agency benchmark.
Dust	The site is located 320m from the closest residential neighbour.	**Low (not significant)** The site is beyond the distance where dust issues occur.

Ecology		**Low (not significant)** The sites habitats which will be affected by the works are common and widespread and are considered to be of low intrinsic biodiversity value.
Ammonia Deposition	Use of high speed roof mounted fans.	**Low (not significant)** The development will have no adverse effect on the integrity of the Waveney and Little Ouse Valley Fens SAC / Blo'Norton and Thelnetham Fens SSSI, either alone of in combination.
Flood Risk and Drainage	Use of an attenuated drainage system.	**Low (not significant)** The the development area is located within Flood Zone 1. The built development is not at risk of flooding. In accordance with the NPPF, mitigation in the form of attenuated surface water drainage has been designed into the scheme through the provision of an attenuation pond.

1.6 In conclusion, the proposed poultry unit development at south of the A1066, Diss Road, Garboldisham will not produce any significant Environmental Impacts. From the information appraised through the Environmental Impact Assessment process, it is clear that the proposed redevelopment will have low impact on the environment taking into account the migration measures proposed.

1.7 No technical difficulties were encountered in preparing this Environmental Statement or assessing the impacts of the proposed development. The preparation of the Environmental Assessment has taken into account the results of UK environmental assessments.

Ian Pick BSc (Hons) MRICS, June 2020.