ENVIRONMENTAL REPORT
&
DESIGN AND ACCESS STATEMENT

WRIGHT EGGS LTD

PLANNING APPLICATION FOR ERECTION OF FREE RANGE EGG PRODUCTION POULTRY UNIT WITH ANCILLARY STRUCTURES AND HARDSTANDING UPON LAND AT POPLAR FARM, HAGNABY LANE, KEAL COTES, SPILSBY, PE23 4AH

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JHG PLANNING CONSULTANCY

Orchard House
Main Road (A607)
Welbourn
Lincoln LN5 0PA
Tel: 01400 273997
mail@jhgplanning.com
www.jhgplanning.com

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1.0 INTRODUCTION

1.1 This document comprises a combined Design & Access Statement (DAS) and Environmental Report (ER) produced in support of an application seeking full planning permission for erection of 1 No. free range egg production poultry unit (32,000 hens) with 2 No. ancillary feed silos and hardstanding at Poplar Farm, Hagnaby Lane, Keal Cotes, Spilsby PE23 4AH (Easting: 535377, Northing: 361394).

1.2 Under Schedule 1(17a) of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017, installations for poultry units (egg production) will only necessitate an Environmental Impact Assessment (EIA) if the proposed unit(s) will house in excess of 60,000 hens. A maximum of 32,000 hens will be accommodated by the proposed poultry house (producing free range eggs), which is significantly below this threshold. However, intensive livestock units with a floor area exceeding 500 square metres are classed as 'Schedule 2' development within the EIA Regulations. The National Planning Practice Guidance outlines criteria and thresholds for Schedule 2 agricultural development, which indicate that 'installations designed to house more than 50,000 layers' should be screened under Schedule 3 of the Regulations. The NPPG also emphasises that: '*…it should not be presumed that developments above the indicative thresholds should always be subject to assessment, or those falling below these thresholds could never give rise to significant effects, especially where the development is in an environmentally sensitive location. Each development will need to be considered on its merits*.' In this context, particular consideration must be given to the characteristics of the development including its impact in terms of odour, traffic and waste handling. As expanded upon within this document, the proposed free range poultry unit, when examined in cumulation with the established poultry farm, will evidently not give rise to significant environmental effects and, accordingly, an Environmental Impact Assessment is not required under Schedule 3 of the EIA regulations.

1.3 Nevertheless, this Environmental Report (ER), which differs from an EIA Environmental Statement, examines the potential environmental effects of the development/operation in relation to: water quality/flood risk; air quality; ecology/biodiversity; noise; heritage impact; fly nuisance; traffic movements; and landscape/visual impact. The following should be read in conjunction with the accompanying submitted documents:

- Proposed site location, layout, elevation, floor plan and BNG landscaping scheme drawings F3169-01 and F3169-02.

- AS Modelling & Data Ltd, 2023, A Dispersion Modelling Study of the Impact of Odour from the Existing and Proposed Free Range Egg-Laying Chicken Houses at Poplar Farm, Keal Cotes, near Spilsby in Lincolnshire.

- As Modelling & Data Ltd, 2023, A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Free Range Egg-Laying Chicken Houses at Poplar Farm, Keal Cotes, near Spilsby in Lincolnshire.

- Archer Ecology Ltd, 2024, Preliminary Ecological Appraisal.

- Archer Ecology Ltd, 2024, Biodiversity Assessment (with appended statutory biodiversity metric calculation tool spread sheets).

2.0 DEVELOPMENT CONTEXT

The Site

2.1 The application site, as delineated in red on site location plan F3169-01, comprises land in agricultural use situated amidst the central and eastern confines of a wider 20.0 hectare arable field. The site's western boundary, which effectively bisects the field, is not yet physically delineated by terrain features. Mature hedgerows interspersed with trees and the periphery of a copse define the application site's eastern boundary. The northern boundary is denoted by the applicant's existing free range poultry farm, which includes a 32,000 bird free range unit with ancillary structures and 16.2 hectare ranging area (evident on aerial photograph included below).

Aerial photograph depicting proposed unit and associated landscaped ranging area relative to existing free range poultry farm and neighbouring land uses.

2.2 The application site's southern boundary is denoted by a drainage ditch and recently planted hedgerow. It can be observed that the southern boundary runs a course adjoining the verge of Hagnaby Lane (public highway). It is via this public carriageway that access to the field/application site is presently gained. A crushed stone private carriageway extends approximately 550 metres eastwards from Hagnaby Lane along the sites northern boundary before terminating at concrete hardstanding adjoining the existing poultry unit. The proposed unit will be sited adjoining this hardstanding, thus allowing use of the established access. Electricity lines supported by timber pylons follow an east to west course through the site and between the existing and proposed units. Plans have already been made with National Grid to transition to a subterranean arrangement in order to facilitate the proposed development. The route of the buried power lines is accordingly marked on proposed site layout plan F3169-01.

2.3 All land to the immediate north, northeast, west and south of the application site is in agricultural use. Paddock land in equestrian use and dwellings located within/adjoining

the periphery of Stickford are situated adjacent to the site's south-eastern boundary. The most proximate dwelling (Willoughby House) is located of Hagnaby Lane circa 330 metres to the south of the proposed unit. The village of Keal Cotes is located just over 1 kilometre to the east of the proposed unit.

2.4 The proposed site and wider surrounding landscape exhibits a relatively flat landform devoid of significant variations in gradient. The Environment Agency flood hazard map depicts the proposed site within Flood Zone 1, which indicates a low risk of fluvial and sea flooding. Given the site's historic agricultural use, there is no reason to believe that the land is contaminated. The application site is not situated within or adjoining a Conservation Area or area of habitat/landscape importance (such as an AONB, AGLV, SSSI, LWS etc). There are no designated heritage assets within or adjacent to the proposed site. Figures 1 and 3 of the Lincolnshire Minerals & Waste Local Plan 2016 indicate that the site is not within a 'Minerals Safeguarding Area'

The Development/Operation

2.5 Demand for UK produced free range eggs has rapidly increased in recent years. The need to further increase free range egg supplies has been heightened following announcements by the country's leading supermarkets that enriched colony cage produced eggs will no longer be sold (Tesco will switch to free range only by 2025 and other supermarkets have already transitioned). UK based egg producers must now diversify into higher welfare poultry farming systems. Furthermore, a combination of growing concern over the impact of climate change, the outbreak of war in Ukraine and growing geopolitical instability has highlighted the importance of UK food security. The market is thus increasingly prioritising domestic produce with a small supply chain and environmental footprint.

2.6 The proposed development will allow Wright Eggs Ltd to secure a new supply contract with L. J. Fairburn & Son Ltd (being one of the UK's larger egg producers and suppliers, operating a portfolio of free range poultry farms and packaging facilities primarily within East Lindsey), thereby expanding their established free range egg production operation. The development/operation will be associated with 'RSPCA Freedom Foods', which seeks to promote the highest animal welfare standards. Accordingly, the 32,000 bird poultry house will be complemented by an extensive 16+ hectare poultry roaming area (identified on site layout plan F3169-02), which will be planted with over 1000 trees of native species complemented by new hedgerows and enriched grassland. This arrangement enables production of the finest quality hens' eggs with the collateral benefit of enhancing habitat value and biodiversity.

2.7 Once stocked, hens will remain within the poultry unit/associated ranging area for approximately 56 weeks. The 32,000 bird unit will technically accommodate eight 4000 bird colonies. Each colony will be spatially separated from one another by subdivisions within the unit and moveable livestock fencing that divides the ranging area into 16 zones each measuring 2+ hectares. The new poultry unit therefore functions in a manner akin to eight small poultry houses. This enhances biosecurity and enables careful monitoring of the hens for welfare purposes. The hens will leave the unit through 'pop holes' in the sides allowing them to range across the adjacent woodland and meadows. The unit will be empty for 3 weeks between cycles for cleaning/maintenance before restocking takes place. This gives a 59 week cycle in total. The proposed unit will

operate in synchronicity with the existing adjacent 32,000 bird free range unit (which is of similar specification). In cumulation, the poultry farm will therefore support a total of 64,000 hens.

2.8 The new free range poultry unit will be engineered to achieve high levels of energy efficiency and environmental compatibility. Eggs will be collected from each nest box and transferred to the existing unit's store room via an 'anaconda' conveyor. The unit will primarily rely upon powered ventilation, which will be achieved via side inlets with roof ridge mounted high velocity extraction fans. The proposed unit will also incorporate 8 No. ventilation fans within the south-eastern gable end. These are however only used on rare occasions for emergency cooling during periods of extreme hot weather under circumstances where hens are confined to the unit. The ventilation system in combination with frequent manure removal assists in creating a dry internal environment with litter moisture content below 40%, thereby ensuring low odour/ammonia emissions and conditions unsuitable for fly breeding. It is emphasised that the poultry farm will operate in accordance with an Environment Agency IPPC permit, which provides a framework to regulate activities and ensure that environmental protection measures are adhered to.

2.9 The new unit will measure approximately 110.23 metres by 24.9 metres plus control room (combined 2784.7 m^2) with an eaves height of 3.65 metres and roof ridge height of 7.2 metres. Both the elevations and roof will be clad in profiled steel sheeting coloured Olive Green. Two feed silos will be integrated with the structure, automatically distributing feed therein by a series of chutes. Poultry litter will be removed from within the proposed unit via conveyor belt systems and emptied into trailers outside the building twice per week. It will not be stored on-site. The litter comprises a valuable fertiliser and will therefore be spread upon arable land within the applicants' wider farm holding in accordance with the Code of Good Agricultural Practice (DEFRA, 2009).

2.10 The proposed scheme incorporates renewable energy technology comprising arrays of roof mounted photovoltaic panels with combined 100 kW electrical output. The PV panels essentially address two primary objectives: 1) Improving the long term commercial viability of the poultry farming enterprise by reducing overheads attributed to energy usage; and 2) facilitating a net reduction in CO_2 emissions associated with the farming operation in order to help combat global climate change (adverse environmental conditions will prove detrimental to the farm business in the long term).

2.11 With regard to external lighting, a low output lamp will be affixed to the poultry unit's north-western gable end. This will only be briefly activated if personnel are required on site during night time hours. The luminaire aiming angle of the lamp will be less than 70 degrees, the intensity of the light spill will therefore be very low beyond the immediate confines of the site.

2.12 The proposed unit will be managed by a full time stockman and labourer. It is therefore anticipated that 2 No. full time jobs will be created as a direct result of the proposal. It is also anticipated that additional off-site jobs will be created indirectly by virtue of the multiplier effect (i.e. jobs associated with haulage, construction/manufacturing, L. J. Fairburn & Son Ltd's egg packaging facility, administration etc, arising as a result of the poultry farm development).

3.0 PLANNING POLICY CONTEXT

3.1 The statutory Development Plan comprises the new East Lindsey Local Plan, which was formally adopted on 18th July 2018. This includes two key documents: the 'Core Strategy', which details strategic planning policy; and the 'Settlement Proposals Development Plan Document', which outlines spatial planning policies including site allocations within the district's various settlements. Only certain policies outlined within the Core Strategy are considered to be of particular applicability to the proposed development. Significant weight should also be given to the relevant provisions of the recently adopted National Planning Policy Framework (NPPF) 2023.

East Lindsey Local Plan Core Strategy 2018

3.2 **Strategic Policy 2** (SP2) emphasises the importance of promoting 'sustainable development'. It states: '*When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.*' In this context it is emphasised that the proposal seeks agricultural development upon an area of agricultural land primarily used for arable production. The proposed free range poultry farming operation, which requires a countryside location, has been carefully screened at the outset in order to ensure that significant adverse environmental effects will be avoided. As discussed within the latter sections of this statement, the new poultry house will not have any notable impact upon local air quality or levels of amenity afforded by outlying occupants. Though the development will operate in cumulation with the established poultry unit, the free range poultry farming operation is synonymous with relatively low levels of vehicular activity and impacts upon the local highway network will be negligible. The poultry house will utilise modern climate control systems with low decibel output ventilation and the building achieves a good level of separation from neighbouring occupants, thereby avoiding tangible noise pollution. The Juniper Green clad building will benefit from a close spatial relationship with the existing poultry unit and such will be well screened by extensive native tree planting. The development will thus integrate congruously within the site's agricultural landscape setting. On this basis, the application site is considered to be an appropriate location for the type of development proposed. The scheme responds to a growing market demand for UK produced free range eggs and the scheme will enhance the competitiveness of the farm business whilst further bolstering the local rural economy. This in turn helps to underpin the social fabric of the rural community. It is therefore reasonable to state that the proposal should be regarded as sustainable rural development that accords with the objectives of Strategic Policy 2.

3.3 **Strategic Policy 10** (SP10) concerns the design of new development. It emphasises that: '*The Council will support well-designed sustainable development, which maintains and enhances the character of the District's towns, villages and countryside…*' Paragraph 4.14 of the SP10 justification notes that: '*To help promote good quality design that is accessible for everyone in the District, all dwelling houses and any major development that does not lie within an existing industrial estate in the District will be encouraged to satisfy the Councils place-making checklist.*' However,

the appraisal criteria detailed within the checklist are considered to be of somewhat lesser applicability to the proposed free range poultry farm scheme. The most relevant checklist subject areas are effectively echoed by a series of criteria outlined within Policy SP10. These are discussed below:

1. Though it is sequentially preferable to site the proposed unit upon brownfield land, there are not realistically any suitable available sites of this nature. The application site and wider associated poultry ranging area occupies Grade 3a (good) agricultural land, the majority of which is currently in arable production. Land of higher Grade (2) is located to the west of the site. Though the site will occupy some of the most versatile arable land, it is emphasised that the proposal comprises agricultural development, thus the scheme will not technically move the site and associated field systems out of food production. Indeed, land of this nature is ideal to support the various trees and enriched grassland that allow free range hens to gain protein and nutrients from foraged flora and insects. Given that the proposal comprises livestock development, it would not be appropriate for the new poultry farm to be sited upon brownfield land within/adjoining an established urban area.

2. The proposed scheme seeks erection of a free range poultry unit that essentially comprises the integration of two 16,000 bird poultry houses into an internally subdivided single building. This design solution is nucleated and efficient. The development's materials, layout, massing, height, scale and density is comparable to numerous established poultry farms within the surrounding local landscape area. Much akin to the existing adjacent free range unit, the new building will be clearly agricultural in appearance, inconspicuously clad in Juniper Green and of low height (7.2 metre apex). These attributes will promote integration of the development into the site's agricultural setting.

3. Given the nature of the proposed use, access to the public highway (Hagnaby Lane and A16) is a primary requirement. It is emphasised that the scheme concerns private property and such will neither create nor incorporate public rights of way.

4. In order to address contractual requirements, the proposed development must be accompanied by a comprehensive woodland planting scheme. The new poultry unit will accordingly be supported by formation of expansive copse areas incorporating over 1000 new native trees. These will include a high proportion of habitat enhancing trees such as Oak and shelter specimens including Holly. Recently planted hedgerow to the south of the poultry ranging area will be complemented by new native hedgerow planted around the poultry farm access. The poultry unit will be effectively encapsulated by existing and proposed landscaping thus enabling it to be successfully screened from view of outlying visual receptors in the medium to long term. The proposed landscaping measures will also provide in excess of 10% biodiversity net gain, thus meeting Central Government's ecological objectives introduced through amendments to the Town & Country Planning Act.

5. The development has been designed and orientated to minimise glare and light spillage, thereby avoiding unacceptable harm to the predominantly rural/dark-sky character of the local landscape and levels of residential amenity afforded by neighbouring occupants. The new poultry unit will not ordinarily operate during night time hours (this would disturb the hens' sleep cycle and compromise egg

production). Only low output motion activated lamps will be fitted to the new unit's entrance/north-western elevation.

6. As far as is reasonably practicable, the design, layout and siting of the proposed free range poultry unit takes into account the safety and security of the users of the premises both during the day and at night. The development/farming operation will also safeguard neighbouring occupants through achieving good spatial separation from sensitive receptors such as land in residential use. The development follows the principles of 'designing out crime' and will incorporate security systems.

7. Through necessity, the poultry unit is of a bespoke design that addresses functional requirements specific to the proposed egg production operation. However, the building could theoretically be adapted for a limited number of alternative agricultural uses in the future. The proposed scheme incorporates renewable technology comprising inclusion of photovoltaic panels. Options for incorporation of ground or air source heat pump systems are also being examined, though this would be addressed via a separate planning application.

8. The proposal will inevitably have an embodied carbon content and utilise some finite resources. However, the scheme is designed for longevity and efficiency. It will not place strain on water utilities/resources.

9. It is emphasised that the development will not give rise to surface or ground water pollution. The proposed unit will incorporate a surface water drainage scheme. This will discharge clean roof and surface water into a subterranean PVC crate soakaway system. All water used for washing out the proposed unit will however be discharged into a sealed drainage system. The foul water will be periodically collected and removed from the farm via a specialist contractor then processed and used as manure for spreading upon farmland in accordance with the Code of Good Agricultural Practice (DEFRA, 2009). The site will be regulated by an Environment Agency IPPC permit and the proposed development/operation will not give rise to contamination of groundwater.

10. The application site is not situated in proximity to any hazardous land uses/operations. Safeguarding/mitigation measures are accordingly unnecessary.

11. The proposal does not concern: a gateway site into a settlement; a retail application over 0.25 hectares; an application over 0.5 hectares within a designated town centre or an development on a site over 4 hectares (the wider poultry ranging area and recently required BNG landscaping included within the site area is considered to be outside the original intended scope of criterion 11). A site specific design brief is not therefore required in support of this planning application.

3.4 In context of the above, the proposed development is considered to achieve a good level of compliance with the relevant criteria of Strategic Policy 10.

3.5 **Strategic Policy 13** (SP13) relates to 'Inland Employment'. SP13 does not specifically refer to the employment opportunities created by farm businesses/agricultural development. Nevertheless, of some relevance, criterion 5 notes that the Council will promote growth and diversification of the rural economy by: '*Supporting farm*

diversification schemes where they are subordinate to the farm use and do not jeopardise the farm business.' The proposed development represents partial diversification from arable production to allow expansion of the applicants' free range egg production enterprise, which comprises a core element of the farm business. In so doing, the proposal will enhance the commercial viability of Wright Eggs Ltd whilst safeguarding existing jobs and creating new employment opportunities. The poultry farm is necessary to augment the wider free range egg supply chain operated L. J. Fairburn & Son Ltd, who make a significant contribution to the local rural economy and comprise one of the District's largest employers. Developments such as that in question are essential to the prosperity of the rural economy. The proposed development is therefore considered to accord with the strategic direction of SP13.

3.6 **Strategic Policy 23** (SP23) concerns the impact of new development upon the District's landscape. Of broad relevance to the proposed development, Criterion 1 states that: '*The District`s landscapes will be protected, enhanced, used and managed to provide an attractive and healthy working and living environment. Development will be guided by the District`s Landscape Character Assessment and landscapes defined as highly sensitive will be afforded the greatest protection.*' In this context, it is emphasised that the proposed scheme will result in expansion of an established poultry farm through development of a new poultry house clad in profiled steel sheeting coloured Olive Green and complemented by an extensive woodland planting scheme. This inconspicuous cladding selection combined with a low profile design and screening landscaping will minimise the impact of the scheme upon the setting of the surrounding countryside. Indeed, once the woodland planting reaches maturity, it is reasonable to anticipate that the development will have a neutral landscape and visual impact. Such is discussed in greater detail within the latter 'Landscape & Visual Impact' section of this statement. The proposed development does not conflict with the objectives outlined within Strategic Policy 23.

3.7 **Strategic Policy 27** (SP27) concerns renewable and low carbon energy development. As previously noted, the proposed unit will include roof mounted photovoltaic (solar) panels capable of generating an estimated 60,000 kW/yr electrical, thus allowing the building to utilise self-generated renewable energy. 'Criterion 4' is therefore of particular relevance to this application. It states that: '*Small scale and micro renewable energy development will be supported where their individual or cumulative impact, when weighed against the benefits, is not considered to have an unacceptable impact on residential amenity; the context and setting of any areas of cultural or historic importance or heritage assets; and local landscape character and visual qualities.*' In light of this provision, it is emphasised that the application site is remote from other renewable energy development. The roof mounted photovoltaic panel arrays will not therefore give rise to any cumulative adverse effects. The renewable energy technology will not result in noise disturbance or the release of any gaseous/odorous emissions. Levels of residential amenity afforded by outlying occupants will remain unaffected.

3.8 It is emphasised that the proposed PV panels will be integrated with the free range poultry unit's roof. Their appearance will effectively be akin to dark tinted glass set amidst the wider Olive Green coloured profiled steel sheeting clad shallow pitched roof. The PV panels will not therefore prove unduly conspicuous. In contrast to free standing PV arrays, the roof mounted panels will also avoid contributing towards a sense of development proliferating the countryside setting. In the medium to long term, the

development will also be near entirely screened by the woodland landscaping scheme associated with the free range poultry farm. For this reason, the proposal is not anticipated to have any significant landscape or visual impact. It should be noted that there are no designated heritage assets within the locality of the PV panels/development. The small scale integrated renewable energy technology will not adversely impact upon areas of historic importance. On this basis it is considered that the proposal achieves full compliance with the relevant provisions of SP27 and inclusion of the roof mounted PV panels should be supported accordingly.

National Planning Policy Framework 2023

3.9 The National Planning Policy Framework (NPPF) was formally adopted in December 2023. This updated document now replaces the previous National Planning Policy Framework adopted in September 2023 and the preceding NPPF of July 2021.

3.10 **Paragraph 8** expands upon the term 'sustainable development' in light of its economic, social and environmental components: '*Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives)*:

a) *an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure*;

b) *a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being*; and

c) *an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.*'

3.11 The proposed scheme is considered to address the economic, social and environmental dimensions of 'sustainable development' for reason that it will allow an established poultry farm business to expand, thereby maximising its long term functional and financial viability. This in turn enables Wright Eggs Ltd to remain competitive, continue to support a number of employees and create new job opportunities. The application site primarily comprises an area of intensive arable land adjacent to an existing poultry unit. It is not considered to be an environmentally sensitive location. The proposal will not have any adverse impact upon land of notable habitat or biodiversity value. The Olive Green coloured profiled steel sheeting clad poultry unit will appear visually congruous against the backdrop of the existing farm and adjacent woodland planting. One would typically expect to see poultry farm development in a rural location such as that in question and the proposal will not substantially affect the character and appearance of the surrounding landscape. The development is arguably

sustainable for reason that it will meet the social and economic demands of the present without compromising the ability of future generations to meet their own needs. On this basis the proposed scheme should be considered to accord with the strategic emphasis of Paragraph 8.

3.12 **Paragraph 88** outlines objectives for 'supporting a prosperous rural economy' and, of particular relevance to the proposed scheme, states that: '*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, beautiful new buildings;
b) the development and diversification of agricultural and other land-based rural businesses;'

3.13 The proposed development will allow the applicants' to expand their established free range egg production enterprise. The scheme will bolster the local economy by creating new jobs, both directly (jobs associated with the poultry operation) and indirectly (jobs associated with egg packaging/distribution, construction, haulage requirements, equipment manufacture, poultry feed production etc). It is important to emphasise that the UK farming industry has come under increasing pressure to remain commercially viable in recent years. Specialist farming operations such as that in question are crucial in sustaining many agricultural enterprises, including that of Wright Eggs Ltd. Farm businesses help to underpin the social and economic fabric of local communities whilst acting as custodians of the countryside. The proposal is considered to achieve strong alignment with the intention of paragraph 88.

4.0 ENVIRONMENTAL EFFECTS

4.1 The following sections provide analysis of the various environmental effects of the proposed free range poultry unit development/operation in cumulation with the established poultry farm. Details of any mitigation measures considered necessary to avoid identified adverse impacts are also included where relevant.

Landscape & Visual Impact

4.2 This section considers the physical and visual impact of the proposed development, in cumulation with the established poultry farm, upon the landscape and outlying receptors. The assessment process adheres to general principles outlined by the Landscape Institute and Institute of Environment Management publication '*Guidelines for Visual and Landscape Impact Assessment*' (2013) (GLVIA3) and The Countryside Agency's '*Landscape Character Assessment - Guidance for England & Scotland*' (2002) publication. However, it is not considered necessary for the following appraisal to provide the level of detail one would typically associate with a full Environmental Impact Assessment.

4.3 The GLVIA notes that landscape and visual assessment are technically separate procedures. However, the assessment of how a development might impact upon the landscape inevitably forms a baseline for visual assessment. The 'landscape' is regarded as an environmental resource and the 'effect' of a development upon it is primarily

assessed in light of physical changes and the manner in which these alter established attributes/characteristics. 'Visual impact' is essentially a term used to describe the aesthetic consequences of changes to the landscape, i.e. how people might perceive changes to a view or the visual amenity/value of a site and its surroundings.

Landscape Baseline & Characteristics

4.4 The European Landscape Convention (ELC) defines the term 'landscape' as: '*...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*' (Council of Europe, 2000). To understand the application site within its wider landscape context, consideration was given to the East Lindsey Landscape Character Assessment, which was adopted in 2011. The application site is identified as being within the '*H1 Mareham to Little Steeping Fenside Woodland and Farmland*' Landscape Character Sub Area. The key characteristics of this area have been identified as:

- '*A rolling landscape at the foot of the Lincolnshire Wolds rising gently to the Wolds from Stickney to Sibsey Reclaimed Fen.*
- *Views to the Borough of Boston and to Boston Stump to the south and to closer church spires and towers within settlements in and out of the area.*
- *Patchwork of arable fields with some ancient and semi natural and ancient replanted mixed woodland and grazed parkland.*
- *Streams, ditches and dykes drain towards the fens, becoming more geometric in layout towards the southern boundary.*
- *Settled with small traditional villages and estate farmsteads sheltered and set amongst mature trees.*
- *Heritage features include WWII Aircraft Museum, disused airfield and Scrivelsby and Revesby historic parks with an arcadian style parkland entrance avenue.*
- *It lies within an Area of Great Landscape Value.*
- *It has a busy transport corridor with the east-west A155 passing through, skirting both the lower wet fenlands and higher land of the Wolds and includes the crossroads with the southbound A16 Boston Road.*
- *In between is a sparse network of minor roads.*
- *Away from the busy A115 it is a very tranquil and idyllic rural landscape.*'

4.5 Clearly only certain elements of the above character summary are applicable to the proposed site's immediate landscape context. As illustrated by the aerial photograph included below, the application site's surroundings are defined by a patchwork of pasture and arable field systems interspersed with farm complexes (typically poultry

units) and isolated dwellings, small villages and the remains for former RAF East Kirkby (evident to north/top of image).

Aerial photograph based Image depicting existing and proposed poultry units situated amidst wider surrounding landscape.

4.6 Fields retaining historic boundaries, such as those to the immediate south of the application site, are typically delineated by drainage ditches combined with mature deciduous hedgerows sporadically interspersed with trees. Some field boundaries have been eroded over time resultant in the loss of hedgerow/ditches in order to create larger areas of arable land suitable for modern agricultural machinery. Such is evident in the immediate locality of the application site and across fields located to the north and southwest. Areas of copse and woodland are more prevalent within the outlying landscape to the west and northwest of the application site.

4.7 It should be noted that the application site and its surroundings are not located within an area of designated landscape importance (i.e. Lincolnshire Wolds Area of Outstanding Natural Beauty, a national park, conservation area etc). The local landscape features are relatively robust and ubiquitous. The locality of the application site does nevertheless exhibit positive aesthetic qualities and GLVIA3 criteria indicate that it accordingly has a moderate sensitivity to change. This indicates some vulnerability to unsympathetic development.

Landscape Impact

4.8 The impact of a development upon the fabric of the landscape is effectively appraised in light of the degree to which the resultant changes will alter the perceived landscape character and landform.

4.9 The proposed agricultural building with ancillary feed silos will occupy a relatively small area (significantly less than 1 hectare) and the site's development will not result in notable loss of farmland or key landscape features. The fabric of the local landscape will nevertheless be changed as a result of the proposal. This is inevitable given that the undeveloped application site will be occupied by a 2784.7 m^2 poultry house with ancillary structures. However, GLVIA3 assessment criteria indicate that the application site and surrounding landscape should be regarded as exhibiting moderate sensitivity to

change and one would typically expect to see contemporary agricultural buildings in a location such as that in question, not least given that the proposal is spatially/operationally integrated with an established poultry farm. The local landscape features are generally aesthetically pleasing, though also relatively ubiquitous and robust. The development scheme will not therefore significantly erode the established local landscape character.

4.10 The geographic extent of the development's landscape impact is effectively limited to the immediate setting of the site. The impact of the scheme, even in cumulation with the existing poultry unit, will not be experienced across the wider surrounding landscape character area. It is appropriate to consider the landscape impact of the proposed poultry house in combination with the intrinsically linked landscaping scheme. This introduces a temporal element to the assessment for reason that, in the short term, the poultry house will be more visible within the setting of the landscape because the proposed surrounding woodland planting will be in a state of immaturity (thereby providing limited screening). However, in the medium to long term, tree growth will act to obscure the poultry house resultant in the setting of the site being defined by woodland. The landscaping scheme will see the reintroduction of tree bounded pastures and a smaller enclosed field system to otherwise intensively farmed arable land, thus echoing elements of the historic agricultural landscape (note Archaeology & Heritage section of this report). On this basis, it is reasonable to state that the proposed woodland and pasture landscaping scheme will make a positive contribution to the environmental quality of the wider landscape character area. It should also be noted that the low profile poultry house will be clad in materials designed to avoid the building appearing conspicuous within its woodland/farmland setting.

4.11 On balance, it is considered that the proposed development, in cumulation with the existing poultry farm, will have a minor negative impact upon the setting of the site and the local landscape character in the short term. However, in the medium to long term, the development will make a positive contribution to the character of the landscape by introducing extensive native woodland and meadow habitat that will be of visual amenity value. In light of GLVIA3 criteria, the overall landscape impact of the proposed development is therefore considered to be of **small magnitude**.

Visual Context & Receptors

4.12 The visual influence of a development is assessed by identifying its connection with the surrounding environment and range of intervisibility. Such is referred to as the Zone of Visual Influence (ZVI). The ZVI is determined by the presence of screening features (be they terrain, buildings or established vegetation) and the manner by which these serve to restrict the line of sight potentially gained from the surrounding area. Theoretically the ZVI perimeter will demarcate the furthest possible views of a site/development.

4.13 However, in reality the ZVI frequently varies according to climatic conditions and both minor and major changes to the built environment and wider landscape. For example, the felling of a tree belt could potentially increase the ZVI of a building from several metres to several kilometres in a given direction. Equally, a prominent feature with a large ZVI could be almost entirely obscured by the erection of a large building or tree planting on adjacent land.

4.14 A distinction has been made between 'obscured' and predominantly 'unobscured' views of the new building and structures. Viewpoints from where 25% or more of any given building/structure elevation is clearly visible (unobscured) are encompassed by the first zone of visual influence (ZVI1). Viewpoints from where less than 25% of a building/structure elevation is visible (obscured) typically fall within the second zone of visual influence (ZVI2). This distinction avoids particularly obscured views of new development being misrepresented as 'readily visible' from the surrounding landscape. Views that fall within ZVI2 are typically long range, predominantly obscured and/or very 'fleeting' in nature, i.e. limited views of the site gained from a distant elevated vantage point or through small gaps in otherwise dense foliage cover. Intervisibility achieved within ZVI2 is usually considered to be of low significance.

4.15 The following diagram illustrates the indicative boundary for ZVI1. Unobscured views of the proposed building with ancillary structures can be gained from (with a few localised exceptions) any point within the blue delineated perimeter during the months of winter. However, during spring, summer and early autumn, foliage cover provided by trees and hedgerows acts to significantly reduce the ZVI1 area.

Diagram depicting ZVI1 (perimeter outlined blue) and location of identified visual receptors (1 – 7).

4.16 Views within ZVI1 were considered in light of sensitive visual receptors and the identified landscape character. Regard was given to the potential dominance and screening effect the proposal might impart upon views of and from residential and recreational areas, the public highway, public footpaths and sites of visual amenity and/or historic value such as conservation areas and listed buildings. However, the area only proved host to relatively few sensitive visual receptors:

1. *Hagnaby Lane & Back Lane*: located 240+ metres to the south of the proposed development. Approximately 1 kilometre of Hagnaby Lane and Back Lane is within/adjoining ZVI1. Vistas including the poultry farm will typically be oblique to the main angle of view and transient for reason that people will be travelling along the highway. Views including the application site obtained from this receptor are considered to be of some aesthetic merit, though transient. Attainable views are only likely to be valued locally and do not include elements considered to be of local cultural importance (such as designated heritage assets or distinctive

landscape features). The proposed unit will be viewed in cumulation with the established poultry farm. However, the close spatial relationship between the existing and proposed units will result in changes to visual baseline conditions being less apparent from certain aspects. For these reasons, vistas including the application site available from these receptors are considered to exhibit a low to moderate susceptibility and low to moderate sensitivity to change.

2. *Magers Farm*: comprises a two-storey dwelling located approximately 770 metres to the southwest of the proposed unit. The static medium range north-eastward views gained from this property are considered to be of higher susceptibility to change. However, the nature of the available vista has no officially recognised value (i.e. it is not part of an area of designated landscape character such as an AGLV or AONB) and is only likely to be of moderate visual amenity value. Due to existing screening tree/hedgerow vegetation, partially obscured views of the proposed unit will be gained from principal elevation first floor windows. The development in cumulation with the existing poultry unit will not appear prominent within attainable vistas. For these reasons, the Magers Farm receptor is considered to exhibit a moderate sensitivity to change.

3. *Dwelling off Back Lane*: is a two-storey house located approximately 0.76 kilometres to the south of the proposed unit. Views available from residential receptors are considered to have a higher susceptibility to change. However, it can be observed that medium range views (0.4 to 1.0 kilometres) of the site are only attainable from this receptor at ground level and outlying field boundary trees/hedgerows provide a reasonable degree of visual obscuration/screening. Views including the application site are not readily available from dwelling windows (windowless gable end faces toward application site) and, regardless, the new poultry unit will not appear dominant within the wider available vista. The proposed unit will also somewhat screen the existing unit when viewed from this receptor, thus limiting cumulative visual effects. Change sensitivity is thus considered to be moderate.

4. *Willoughby House*: comprising a two-storey dwelling situated approximately 330+ metres to the south of the proposed unit. Short range views (0 – 400 metres) of the proposed unit gable end will theoretically be visible form the curtilage of this property. It can however be noted that the dwelling does not front towards the application site and no windows directly outlook towards the development. An established mature hedgerow located along the southern verge of the adjacent public highway (Hagnaby Lane) also acts to significantly obscure vistas including the application site. Views attained from dwellings/residential receptors are considered to have a high susceptibility to change under GLVIA3 assessment criteria. Nevertheless, the partially obscured views including the application site obtained from this receptor, though not unattractive, are relatively bland and ubiquitous. Views obtained from this receptor are therefore considered to exhibit a moderate sensitivity to change.

5. *Stickford*: comprising a short ribbon of residential development extending to the north of the settlement. The rear curtilages of four dwellings have been identified within ZVI1 with the most proximate being 0.74 kilometres to the southeast of the proposed unit. Medium range (0.4 to 1.0 kilometres) static primary angle views will

theoretically be available from the rear gardens of the properties. However, in reality, the level of screening garden boundary foliage combined with the oblique angle of view means that vistas including the development will not be readily attainable from these receptors. Dwellings are considered to exhibit a high susceptibility to changing visual conditions. However, for the reasons noted above, under GLVIA criteria, the views from these receptors are considered to have a low to moderate sensitivity to change.

6. *Keal Cotes*: A number of dwelling rear curtilages situated along the settlement periphery are theoretically within ZVI1. However, mature boundary treatments and an undulating landform will result in partially obscured long range views (1+ kilometre) of the new poultry unit gable end from these residential receptors. The development will however be viewed in cumulation with the existing poultry unit, thus marginally increasing the prominence of the farm complex within the available vista. As noted above, views from residential receptors are considered to exhibit a high susceptibility to change. However, views of the application site are not readily gained from these receptors and are thus unlikely to be key to the receptor experience. Change sensitivity is accordingly regarded as moderate.

7. *Limes Farm*: is a two-storey farmhouse located over 490 metres to the northeast of the proposed unit. The static medium range (defined as 0.4 to 1.0 km) views of the site gained from this property are considered to be of higher susceptibility to change under GLVIA3 criteria. It can be noted that the vista including the application site has no officially recognised value (i.e. it is not part of an area of designated landscape character such as an AGLV or AONB) and includes the existing poultry farm. Views from the dwelling will also be partially obscured by the presence of domestic ancillary buildings. Nevertheless, attainable vistas are likely to be regarded by occupants as being of visual amenity value. Views obtained from this receptor are generally attractive though lacking in distinctive features. The Limes Farm receptor is considered to exhibit a moderate to high sensitivity to change.

4.17 Intervisibility within the second zone of visual influence (ZVI2) is variable, of lesser significance and difficult to accurately calculate on a theoretical basis. It is reasonable to predict that elements of the proposed development, particularly roof sections of the poultry house, will be visible to a minor degree from remote vantage points/gaps in otherwise dense foliage etc located within the surrounding countryside beyond the confines of ZVI1. ZVI2 views from the north of the site are very limited due to the screening nature of the existing marginally larger poultry unit. Partially obscured ZVI2 long range views of the proposed unit will be more readily available from some longer distance vantage points on private farmland and the grounds of former RAF East Kirkby to the northeast, though such is considered to be of low significance.

Visual Impact

4.18 Visual impact is assessed in light of the degree to which a view from identified receptors will change. The contrast of this change is in turn appraised against the significance of these receptors and backdrop of the existing environment. The geographic extent of the development's zone of visual influence and the duration of the identified impacts are also taken into consideration.

4.19 The proposed poultry house and ancillary structures are clearly agricultural in character and one would typically expect to see buildings of this nature within a farmland setting already characterised by an established poultry farm. Indeed, a number of poultry farms are evident in the surrounding landscape. The appearance of the proposed development is therefore arguably consistent with its land use context. The balance of features within vistas including the site will change as a result of the development. The composition of the view would not however significantly change when experienced from the majority of nearby receptors. Though the development will be viewed in cumulation within the existing marginally larger poultry house, the proposed layout and close spatial relationship will minimise adverse effects. Changes to visual baseline conditions will be less apparent from a number of receptors to the south (i.e. the new unit will effectively screen the existing unit, which is of similar appearance). The development will not intrude within any key local vistas or dominate views from any particular receptor.

4.20 On balance, the scale of the visual effect is considered to be small. Though changes to the composition of views will be obvious when experienced from some receptors, the development will typically occupy the middle ground or small element within the background of a view or otherwise prove subordinate to other landscape features. The geographic relationship between the proposed development and identified receptors indicates that changes to views will not typically be experienced within the main angle available from most receptors. In light of GLVIA criteria, the geographic extent of the proposed development's visual impact is therefore considered to be small to medium.

4.21 The appearance and character of the site will also change over time. As previously noted, an extensive woodland planting scheme is an intrinsic functional element of the proposed development. The depth and expanse of tree planting will have a limited screening effect in the short term but, in the medium (4-9 years) to long term (10+ years), the associated woodland planting scheme is expected to substantially mitigate any adverse visual impact resultant from development of the poultry unit. Similarly, landscaping measures implemented in association with the existing poultry units will serve to further obscure views of the farm over the coming years. Screening landscaping measures aside, the proposed unit roof and elevations will be clad in Olive Green coloured profiled steel sheeting, which is designed to promote visual integration with the site's countryside surroundings. The proposed unit also has a low roof ridge height, which makes it easier to screen and less prominent within most attainable vistas. It should also be noted that the proposed unit will not include any notable external lighting and such will not ordinarily be activated (free range egg production units do not usually incur night time operations). Adverse visual effects resultant from radiance/light pollution will therefore be avoided. On this basis, it is reasonable to state that adverse visual impacts can be broadly mitigated.

4.22 It is therefore concluded that, based on GLVIA3 assessment criteria, the proposed development's cumulative visual impact will be of **small to medium magnitude**. Though this level of magnitude is a consideration material to the determination of the planning application, it would not ordinarily be regarded as sufficient to justify the refusal of planning permission.

Transportation

4.23 This section concerns the means of access to the application site and levels of vehicular activity generated by the proposed poultry unit both in isolation and cumulation with the established free range poultry farm.

4.24 The application site will gain access to the public highway via existing private carriageway constructed in association with the established free range poultry unit to the north. This already features a point of juncture with Hagnaby Lane designed for agricultural vehicle/HGV use. Hagnaby Lane comprises a rural carriageway that is subject to low levels of vehicular activity. Though it has a 60 mph speed limit, vehicles travelling along the carriageway are typically progressing at significantly lower speeds. Delivery vehicles servicing the site (such as egg collections, poultry feed etc) are routed to the farm via the northern section of Hagnaby Lane that connects directly with the A155, allowing eggs to be efficiently transported to L. J. Fairburn & Son Ltd's packaging and distribution centre at Burgh le Marsh. The route minimises the need for HGV's to pass through villages/by land in residential use.

4.25 The following table outlines the amount and frequency of vehicular activity over the duration of a typical 59 week egg production cycle. It should be noted that activity is focused within the first 56 weeks of each cycle. The poultry house is left empty for three weeks thereafter prior to commencement of restocking. On average, there are accordingly 0.9 production cycles per annum. The data includes cumulative vehicular activity arising from operation of both the existing 32,000 bird poultry unit and the proposed unit (i.e. combined 64,000 birds).

OPERATION	VEHICLE TYPE	FREQUENCY OF ACTIVITY	VEHICLE NUMBERS PER CROP CYCLE (single unit)	AV VEHICLE TRIPS PER ANNUM (Access & Egress)	CUMULATIVE VEHICLE TRIPS PER ANNUM (Access & Egress)
Delivery of birds	38 tonne HGV	2 vehicles in week 1	2	1.8 (3.6)	3.6 (7.2)
Removal of birds	38 tonne HGV	2 vehicles in week 56	2	1.8 (3.6)	3.6 (7.2)
Delivery of feed	Artic, 38 tonne HGV	1 vehicle per week	56	50.4 (100.8)	100.8 (201.6)
Egg Collection	Fixed wheel 15 tonne HGV	2 vehicles per week	112	100.8 (201.6)	100.8 (201.6)*
Removal of poultry litter	tractor and trailer	2 vehicles per week	112	100.8 (201.6)	201.6 (403.2)
TOTAL	n/a	n/a	**284**	**255.6 (511.2)**	**410.4 (820.8)**

Table detailing type and frequency of vehicular activity.
* indicates efficiency through spare cargo capacity

4.26 As evident above, the proposed development/operation generates relatively low levels of vehicular activity. In isolation, the proposed unit would need to be serviced by an average of 284 Heavy Goods Vehicles (HGV's) and tractors with trailers over any given 14 month total crop cycle (568 trips accounting for return journeys). In cumulation with the existing poultry unit, the proposed development will increase the total number of hens to 64,000. This intensification can be accommodated with only a 60.5% increase in levels of vehicular activity for reason that HGV's already accessing the site for egg collection have sufficient spare cargo capacity to address the increase in stocking/bird numbers (the vehicles are already designed to service larger 64,000 bird poultry units and thus presently only carry half loads). This is reflected in the 'cumulative vehicular activity' column of the above table, which highlights that the proposal will only result in an additional average of 309.2 vehicle trips (accounting for return journeys) per annum. The maximisation of existing spare cargo capacity to serve the proposed development will present a logistic efficiency, thereby reducing overheads/increasing profitability. This is a prime example of the benefit presented by 'economies of scale'.

4.27 It should be noted that the units will be left empty for cleaning and maintenance for 3 weeks at the end of the egg production phase. The complete cleaning and maintenance cycle is therefore 59 weeks. In terms of average cumulative trips per annum (typical 52 week period), the existing and proposed units will give rise to 820 HGV/agricultural vehicle trips (accounting for access and egress). Realistically, this equates marginally over 1 No. HGV/tractor with trailer accessing the poultry farm each day.

4.28 The proposal will result in the arable use of the field proposed for use as poultry ranging area ceasing in order to facilitate transition to free range egg production. The current arable operation within this part of the field system (40 acres) currently generates 120 vehicle trips per annum (dependent upon crop rotation), though much of this is focussed around harvest. The proposed change of use thus represents a minor intensification of agricultural use.

4.29 The vehicle trip data included in Table 1 does not account for employee derived commuter traffic. It should be noted that the proposed operation will require 2 No. full time employees working on-site. This will inevitably give rise to low levels of commuter activity (by private car, LCV or bicycle dependent upon proximity of future employee residency). The operational trip generation data does not take into account the proposed development's construction phase. This will be a short term event (less than 6 months). Trip data is currently unavailable.

4.30 The development will result in a relatively low intensity of vehicular activity and such will not have any tangible impact upon the capacity of the local highway network or the quiet enjoyment of the countryside. It is considered that the public highway can amply accommodate the increase in trip generation outlined above without adverse effects upon highway safety or traffic congestion.

Noise

4.31 The operation of the proposed free range poultry unit will give rise to various potential sources of noise. These include: vehicular activity; climate control and ventilation fans; feed silo operation; and noise generated by the actual poultry.

4.32 The proposed poultry unit will include 16 No. roof mounted electrical fan housings, which have been engineered to generate very low levels of noise. The southeastern gable end will also include 8 No. emergency ventilation fans. However, these are only included to address circumstances where poultry might be confined to the unit during periods of extreme hot weather (i.e. birds not allowed to range due to Avian Influenza biosecurity measures and ambient temperatures over 35 Celsius). And they are not therefore ordinarily activated. This arrangement is essentially replicated by the existing poultry unit. The fans are on an automatic climate control system that regulates temperatures in the building. It is anticipated that the fans will emit a sound level of up to 55dBA at a distance of 7 metres when operating at maximum capacity. The most proximate residential receptor is located 330 metres to the south of the closest fan housing. Due to the unit's orientation, nearly half of the fan stacks will be situated over 400 metres to the north. Based upon experience with similar poultry farm schemes and acoustic data assessed by consultants' Sharps Redmore Ltd, under BS4142, climate control derived noise emissions are likely to be classed as of 'marginal significance' at this residential receptor.

4.33 Noise attributed to vehicles and operations such as egg collections, restocking, cleaning, loading of feed silos etc., will be relatively minor in nature. An average of 1 HGV/tractor and trailer will access the farm each day and traffic will be routed via the established poultry farm access. It is emphasised that operations at the farm will take place during conventional daylight hours. Disturbing the hens during the night time disrupts their sleep cycle and consequently reduces egg laying productivity. In this regard, changes to acoustic baseline conditions will not be readily perceived.

4.34 The actual poultry accommodated within the proposed unit and associated ranging areas will technically generate noise, though the typical decibel output of such is considered *de minimis* and thus of no significance. The existing poultry farm includes an emergency power supply comprising a diesel-electric generator. Plant of this nature typically features high levels of noise attenuation and the frequency of use is extremely low (only activated during mains power cuts). Such also has capacity to serve the proposed unit. The emergency backup generator is very seldom activated and, when operational, only for brief periods.

4.35 On the basis of the above, it is not therefore anticipated that the proposed scheme will give rise to cumulative noise emissions sufficient to have any tangible impact upon levels of residential amenity currently afforded by outlying occupants or the tranquillity of the surrounding countryside.

Air Quality

4.36 Adverse impacts upon air quality arise from gaseous, particulate and volatile organic compounds. All of these can result in foul odour and pollution. Odour, gaseous and particulate emissions from poultry units typically derive from a number of sources. Primarily, they are caused by the breakdown of faeces and urine in combination with waste food spilt onto floors, the scent glands of animals and the actual animal feed. The following factors also typically contribute to gaseous, odorous and particulate emissions from poultry units:

- Any build-up of manure on concrete areas around buildings;

- The removal and disposal of dead animals;
- The maintenance of drains;
- The cleanliness of bedding;
- The cleanliness of the poultry house;
- The management of drinking systems, with particular emphasis on frequently adjusting nipple and drip cups to birds eye level to avoid spillage and wet litter;
- The stocking density;
- The moisture content of the litter;
- The insulation of the buildings and the long-term maintenance of that insulation;
- The ventilation system;
- The composition of the feed, particularly its oil and fat content.

4.37 In light of the above, it can be noted that the floor of the proposed unit will be constructed of impermeable concrete, thus sealing the unit base. An aviary with manure conveyor belt removal systems will be installed thereon. The waste litter will be removed by the conveyor belt system twice per week and emptied into trailers outside the building then immediately covered and transported from the site. The litter is not stored on site once removed from the unit. It will be spread upon the applicants' outlying farmland as manure (thus avoiding the need to import manure fertiliser to the farm). The unit will be automatically temperature controlled via a series of vents and roof mounted ventilation fans, which are designed to regulate air flow through the unit. The electrical fans integrated into roof mounted chimney stacks will facilitate high velocity extraction. This system reduces levels of odour and ammonia emissions by ensuring that the litter has low moisture content of approximately 35% to 40%.

4.38 DEFRA guidance on local air quality indicates that, given the scale of the proposed development/operation and the application site's remoteness from sensitive receptors, adverse effects arising from release of particulate matter are considered to be highly improbable. Dust/particulate modelling is not therefore considered necessary. Low intensity free range farming of this nature is not synonymous with dust arisings.

Odour Impact

4.39 Air quality specialists AS Modelling & Data Ltd were commissioned at the scheme's inception in order to assess the potential odour impact of the proposed development/operation in cumulation with the established poultry farm upon outlying sensitive receptors, thereby clarifying the suitability of the application site. The following should be read in conjunction with the accompanying report: *AS Modelling & Data Ltd, 2023, A Dispersion Modelling Study of the Impact of Odour from the Existing and Proposed Free Range Egg-Laying Chicken Houses at Poplar Farm, Keal Cotes, near Spilsby in Lincolnshire*.

4.40 The proposed free range unit will accommodate up to 32,000 hens. These will forage over 40+ acres of woodland and meadow ranging area. The application site adjoins an established poultry unit of comparable specification that also accommodates 32,000 hens. Consideration is therefore given to the odour impact of both the proposed unit in isolation and combination with the existing unit (i.e. 64,000 bird places). With regard to the source of emissions from free range units of this nature, section 3.5 of the submitted odour impact assessment report notes: '*The main source of odours from the*

existing and proposed houses would be from the chimneys of the uncapped high speed ridge fans. Some fugitive emissions from open pop holes are/would be possible, but because the houses would be under negative pressure, these emissions would be expected to be minimal. In order to prevent odours building up within the proposed houses and provide negative pressure to prevent fugitive emissions, the modelling assumes that a minimum ventilation rate is maintained. The chickens would have access to daytime ranging areas outside of the houses and some odours would arise from the manure deposited on these ranging areas. The modelling assumes that good practices for farm cleanliness are followed and that other sources of odour may be considered negligible.' It should be noted that, though he proposed unit will include gable end fans, these are only used for emergency cooling and are not therefore ordinarily operational (they might only be briefly activated less than a handful of times a year). These were not therefore included within the ADMS model for reason that gable end fan emission source points would be misrepresentative.

4.41 In relation to thresholds for tangible adverse environmental effects arising from odour, section 3.4 of the submitted report notes that odours from poultry houses are usually placed in the moderately offensive category. Therefore, for this study, the Environment Agency's benchmark for moderately offensive odours, a 98$_{th}$ percentile hourly mean of 3.0 ou$_E$/m$_3$ over a one year period, is used to assess the impact of odour emissions from the proposed poultry unit at potentially sensitive receptors (such as land in residential and recreational use) in the surrounding area.

4.42 Cumulative odour emissions anticipated to arise from the poultry farm development/operation were applied to an Atmospheric Dispersion Modelling System (ADMS 5 - which utilises the latest generation Gaussian plume modelling system) in order to accurately predict distribution and concentrations around the locality of the application site. As noted within section 4.4 of the appended report, sixteen discrete receptors have been defined at a selection of nearby residences and commercial properties. The receptors are defined at 1.5 m above ground level within ADMS and their positions may be seen below (where they are marked by enumerated pink rectangles).

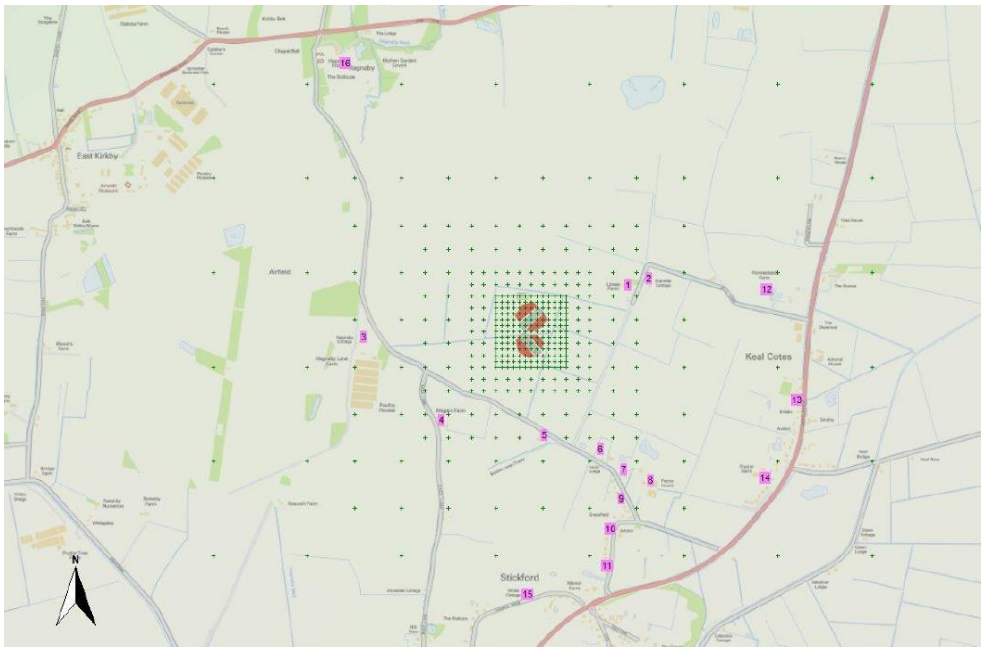


Diagram indicating locations of 16 identified odour receptors.

4.43 The results of the ADMS analysis are detailed within Section 5 of the appended odour impact assessment. For ease of reference a copy of Figure 7, which depicts the maximum spatial distribution/concentration of odour emissions in the locality of the new and existing poultry houses, is included below.

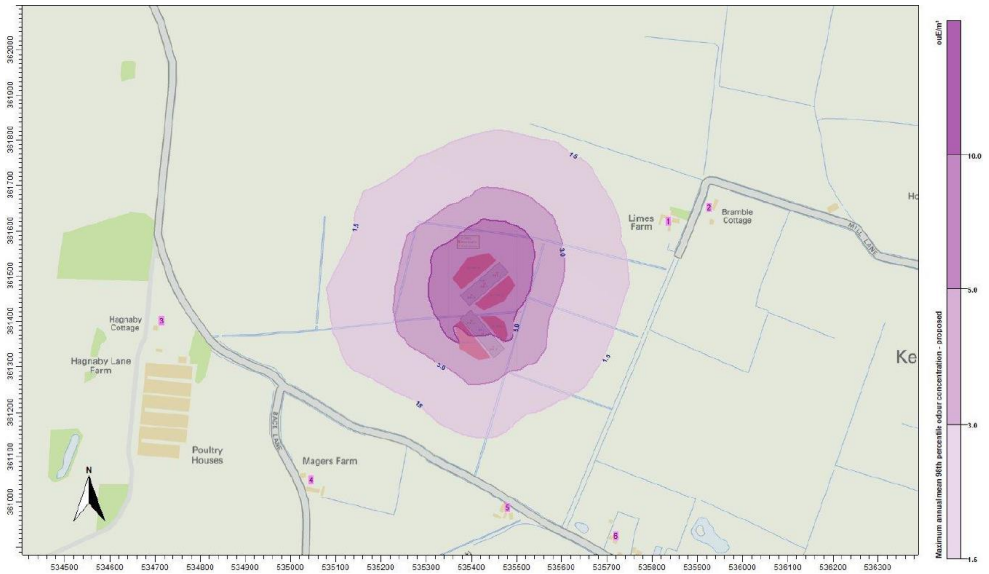


Figure 7 Extract: Predicted maximum annual 98th percentile hourly mean odour concentration in area surrounding poultry unit.

4.44 In context of the above, section 6 of the odour impact assessment concludes that: '*At all of the discrete receptors, the predicted odour concentrations would be well below the Environment Agency benchmark for moderately offensive odours, which is an annual 98th percentile hourly mean of 3.0 ouE/m³.*'

4.45 It is therefore evident that predicted cumulative odour emissions are highly unlikely to give rise to adverse environmental effects. Indeed, when compared to baseline conditions (existing poultry unit), the proposed development will not result in a perceptible change to levels of odour impact at any outlying receptor. **Levels of amenity afforded by neighbouring occupants will not be compromised as a result of the proposed poultry farm development/operation in the short, medium or long term**. In context of the above, it is emphasised that the minimisation of odour production is addressed by DEFRA in Section 4 of its Code of Good Agricultural Practice (DEFRA, 2009) and the applicants' will operate the unit in accordance with this Code.

Ammonia Impact

4.46 The release of ammonia (NH_3) is a well-known by-product of poultry farming. Concentrations of gaseous ammonia are hazardous to both human health and the welfare of flora/fauna habitats. Factors leading to the production of ammonia are noted to comprise: the amount of degradable nitrogen in the litter which is influenced by the rate of conversion of feed based nitrogen to muscle; and the conditions within the litter to facilitate microbial activity, which is influenced by the moisture content of the litter as well as temperature.

4.47 Ammonia emissions have the potential to adversely affect areas of ecological/habitat value. There is one area that has been designated as a Local Wildlife Site (LWS) within 2 km (the normal screening distance for a non-statutory wildlife site) of the existing and proposed poultry houses at Poplar Farm. There are two areas that have been designated as Sites of Special Scientific Interest (SSSIs) within 5 km (the normal screening distance for a SSSI) and a further six SSSIs within 10 km of the site. There are no internationally designated sites within 10 km (the normal screening distance for an internationally designated wildlife site) of the existing and proposed poultry houses. Air quality specialists AS Modelling & Data Ltd were accordingly commissioned to investigate whether ammonia emissions arising from the proposed unit in cumulation with the established poultry farm would give rise to adverse environmental effects. The following should be read in conjunction with the accompanying report: *As Modelling & Data Ltd, 2023, A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Free Range Egg-Laying Chicken Houses at Poplar Farm, Keal Cotes, near Spilsby in Lincolnshire*.

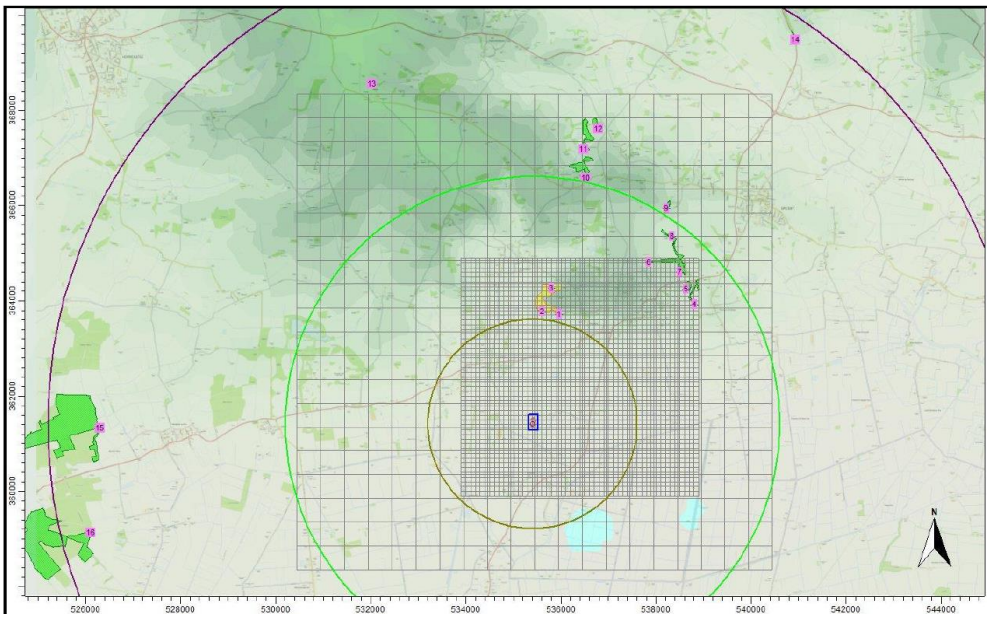
4.48 With reference to the quantification of ammonia emissions, Section 3.5 of the ammonia impact assessment report states that: '*Ammonia emission rates from poultry houses, ranging areas and manure spreading depend on many factors and are likely to be highly variable. However, the benchmarks for assessing impacts of ammonia and nitrogen deposition are framed in terms of an annual mean ammonia concentration and annual nitrogen deposition rates. To obtain relatively robust figures for these statistics it is not necessary to model short term temporal variations and a steady continuous emission rate can be assumed. In fact, modelling short term temporal variations might introduce rather more uncertainty than modelling continuous emissions.*'

4.49 In order to assess the dispersal and deposition of ammonia, it is first necessary to ascertain the theoretical level of ammonia emissions attributed to each hen. In relation to conditions within the proposed poultry house, section 3.5.1 of the submitted report notes that: '*For free-range egg laying chickens, in an aviary system, where manure is removed frequently using a belt system, the Environment Agency standard emission factor is 0.08 kg-NH3/bird place/y. This figure is used for the existing and proposed poultry houses at Poplar Farm.*'

4.50 However, for reason that the poultry farming operation is free range, the hens will have access to over 16+ hectares of woodland and pasture surrounding the proposed unit. Some of the birds' droppings, which are the source of the ammonia, would therefore be deposited on these ranging areas. It is therefore necessary for the modelling of ammonia dispersion to account for both single (volume) source emissions (from the poultry units) and area source emissions (from the ranging area). In this context, section 3.5.2 of the submitted report states: '*As the birds have, or would have, access to outdoor ranging areas, some of the birds' droppings, which is the source of the ammonia, would be deposited on these ranging areas. In their pre-application screening report, the Environment Agency provide an emission factor or 0.225 kg-NH3/bird place/y (we assume this figure is based upon National Ammonia Emission Inventory figures for total N excreted, proportion of ammoniacal N and proportion of ammoniacal N released as ammonia and is for theoretical birds ranging 100% of the time). The Environment Agency also provide of estimate of 20% of birds ranging and 80% in the housing (we assume that this is an average figure when ranging is available and would note that*

this figure is at the high end of the range of observed range usage figures). Assuming average daily range availability of 8 hours per dayA the ammonia emission factor for the ranging is calculated to be 0.015 kg-NH3/bird place/y.'

4.51 As noted within section 4.4 of the submitted report, sixteen discrete receptors have been defined: three at the LWSs (1 to 3) and thirteen at the SSSIs (4 to 16). These receptors are defined at ground level within ADMS. The positions of the discrete receptors may be seen below, where they are marked by enumerated pink rectangles.



Extract from Figure 4 indicating geographic positions of 16 identified sensitive habitat receptors.

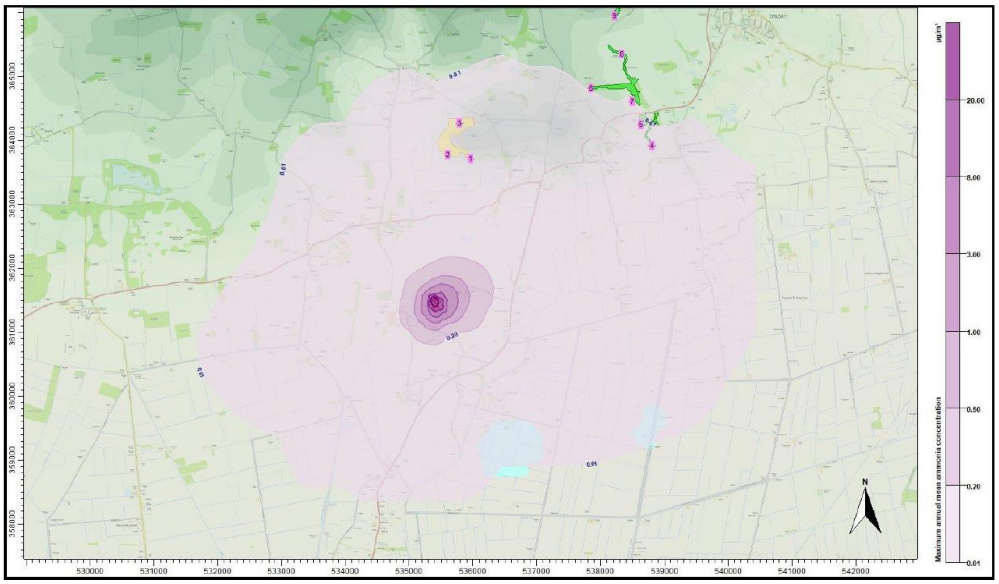
4.52 Section 5.1 of the submitted report concerns the preliminary modelling and modelling sensitivity tests. The ADMS software was run a total of sixteen times, once for each year in the meteorological record, in the following four modes:

- In basic mode without calms, or terrain - GFS data.
- With calms and without terrain - GFS data.
- Without calms and with terrain - GFS data.
- Without calms, with terrain and fixed deposition at 0.003 m/s - GFS data.

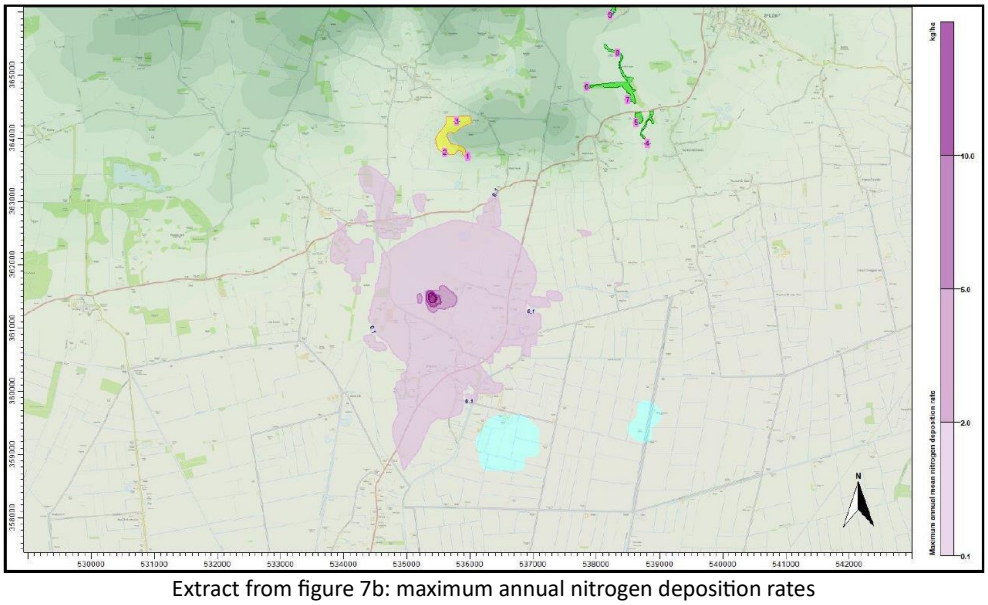
4.53 For each mode, statistics for the maximum annual mean ammonia concentration at each receptor were compiled.

4.54 In relation to the detailed modelling of nitrogen deposition at outlying sensitive receptors, Section 5.2 of the submitted report states: '*In this case, detailed modelling has been carried out over a high resolution (100 m) domain that extends 5.0 km by 5.0 km. The primary purpose is to determine the magnitude of deposition of ammonia and consequent plume depletion close to the sources where it is of the greatest importance. Outside of this 5.0 km by 5.0 km domain, including across the grid receptors spaced at 500 m intervals over a 10.0 km by 10.0 km domain, a fixed deposition velocity of 0.005 m/s is assumed (with appropriate deposition velocities applied post-modelling at the discrete receptors).*' Section 5 of the submitted ammonia impact assessment includes full data for the model runs undertaken and subsequent ammonia concentration and nitrogen deposition results.

4.55 As a cautionary approach, AS Modelling & Data Ltd apply a '1% of Critical Level' to predicated ammonia concentrations and nitrogen deposition rates. Any concentrations exceeding this threshold at outlying statutory sites are considered to be of technical significance (though not necessarily tangibly harmful). The contour diagrams included below depict the dispersion of ammonia and nitrogen deposition rates (darker colour equating to higher concentration) across the landscape surrounding the existing and the proposed units.



Extract from figure 7a: maximum annual mean ammonia concentrations



Extract from figure 7b: maximum annual nitrogen deposition rates

4.56 In context of the above, it should also be noted that emissions arising from the existing adjoining poultry unit are technically accounted for within background pollution data on the APIS system. Ammonia emissions from the proposed development are below 1% of the strictest Critical Level of 1.0 µg/m³ at the most proximate SSSI and in-combination assessment with the existing unit is not technically required. Nevertheless,

in context of the above, Section 6 of the submitted report states that the atmospheric dispersion modelling predicts:

- '*The process contribution to annual mean ammonia concentrations and nitrogen deposition rates would not exceed the Environment Agency's lower threshold percentage of the relevant Critical Level or Critical Load at any of the wildlife sites included in this study*.

- *There are exceedances of 1% of the strictest Critical Level of 1.0 µg/m³ at Keal Carr SSSI. These exceedances are small and it should be noted that this threshold used as an indicator to determine whether further assessment is required and exceedance of the threshold does not imply harm*.

- *This existing poultry house has previously been the subject of a cumulative assessment as a matter of methodological rigour this report presents results for both the existing and proposed poultry houses. However, it should be emphasised that results for the proposed poultry house alone would be approximately half of those presented and therefore the process contributions for the proposed house alone would be below 1% of Critical Level or Critical Load. Results for individual components of the modelling are available upon request*.

- *There are no exceedances of 1% of the relevant Critical Levels or Critical Loads at any of the other SSSIs identified for this study*.'

4.57 On the basis of the above it can be concluded that **ammonia emissions arising from the proposed development/operation will have no significant environmental impact upon outlying habitat land in the short, medium or long term**. For this reason, mitigating measures are considered to be unnecessary.

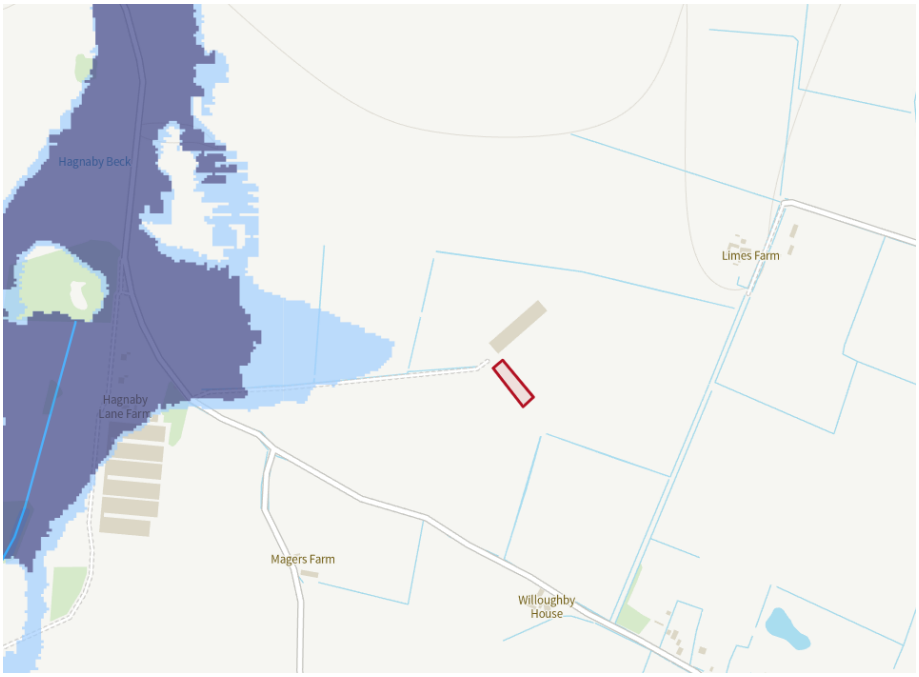
Flood Risk Assessment & Drainage

4.58 With regard to 'Planning and Flood Risk', paragraph 173 of the National Planning Policy Framework 2023 stipulates that: '*When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment [59]. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that*:

a) *within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location*;
b) *the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment*;
c) *it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate*;
d) *any residual risk can be safely managed*; and
e) *safe access and escape routes are included where appropriate, as part of an agreed emergency plan*.'

4.59 Expanding on the above, NPPF footnote 59 states: '*A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use*.'

4.60 The Environment Agency Flood Hazard Map identifies that the proposed unit will be constructed upon land within Flood Zone 1 (note EA flood map extract below). However, the existing site access (which is included within the application site boundary) is partially located in flood zones 2 and 3. In addition, the application site (as delineated in red upon Location Plan F3169-01) occupies an area of approximately 16.2 hectares. A flood risk assessment is therefore required in accordance with NPPF footnote 59.



Extract from EA Flood Map depicting location of proposed unit (red) in FZ1 (clear) and existing access in FZ2 (light blue) and FZ3 (dark blue).

4.61 The Environment Agency define 'Flood Zone 1' as 'low risk', which is described as: '*…in any year land has a less than 0.1% chance of flooding from rivers or the sea*.' Evidently, the proposed development (new poultry unit with ancillary structures and associated landscaping) are located within an area that has a low probability of sea or river flooding. The potential sources of flood risk to the proposed scheme are summarised below:

- Pluvial flooding from rising groundwater; and
- Flooding from failure of the site surface water drainage system.

4.62 The western section of the existing site access is however situated in Flood Zone 2 (medium risk) and Flood Zone 3 (high risk).This indicates a risk of flooding from the outlying 'Hagnaby Beck' and 'West Fen Catchwater Drain'. It should however be noted

that the proposed scheme will not entail any alterations to the existing site access, thus current surface water run-off and percolation rates will remain unaffected by the proposed scheme.

4.63 In light of the above, it is emphasised that the advent of a flood event capable of affecting the proposed development will only realistically arise from abnormal weather events (such as periods of extreme rainfall) or failure to adequately address site drainage resulting in compromised surface water discharge. The EA 'surface water' flood risk map does however highlight that the new unit is to be situated in an area at 'low risk', indicating a 0.1% to 1% probability of flooding per annum.

Surface water flood risk map identifying proposed unit location in low risk land. Medium to high risk is identified in light and dark blue respectively.

4.64 With regard to flood risk vulnerability, the agricultural land use is considered to fall under the 'less vulnerable' category within Annex 3 of the NPPF: '*Land and buildings used for agriculture and forestry.*' With reference to the National Planning Practice Guidance (2014), Table 3 (extract below), which identifies the flood risk vulnerability and potential compatibility of new development within flood zones 1 to 3b, it can be noted that 'less vulnerable' agricultural development (along with all other forms of development) is considered strategically acceptable within flood zones 1 to 3a.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	✗	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	✗	✗	✗	✓*

NPPG Table 3 extract outlining development vulnerability to flood risk classifications

4.65 Sequentially, the proposed siting of the poultry unit is considered to be a first choice location in light of the identified level and types of flood risk. There is no requirement to demonstrate compliance with the 'Exception Test'. Realistically, the only notable potential source of flood risk to the proposed development comprises surface water discharge from the poultry farm's roof and hardstanding areas. The proposal will therefore incorporate a surface water drainage system designed to prevent the development giving rise to drainage/flood risk problems within and beyond the application site.

4.66 With regard to surface water management, reference is made to the preferred hierarchy of drainage stated in Part H of the Building Regulations and The SuDS Manual. The following disposal routes have been considered:

a) Disposal via Infiltration
b) Disposal to a Watercourse
c) Disposal to Surface Water Sewer

4.67 Roof water will therefore be discharged into a sustainable drainage system (SUDS) in accordance with CIRIA document "SUDS - Hydraulic, Structural and Water Quality Advice C609 (2004)". This will incorporate a soakaway designed in accordance with BRE 365. Water will discharge from the poultry unit roof to the soakaway (constructed from subterranean PVC crate cells) via a system of guttering. The drainage system will be designed to address 1 in 100 + year storm events accounting for climate change. The hardstanding area outside the entrance to the poultry unit will be drained via gullies or channel drains and pipes to the soakaway. However, the hardstanding drains will have a diverter valve to direct the flow to a sealed drainage system tank when the unit is extensively cleaned out at the end of each production cycle.

4.68 The subterranean soakaway will include an emergency overflow to an outlying privately owned/managed drainage ditch located to the immediate east of the proposed unit. Any water discharged into the ditch system will be restricted to a flow rate of no more than 5.0 litres per second. The soakaway will therefore essentially function as a subterranean drainage and attenuation pond. It should be noted that the a detailed

drainage system design will be produced prior to commencement of development (this can be addressed via condition attached to the grant of planning consent if necessary).

4.69 With regard to water resource protection/pollution prevention measures, it should be noted that all water used for cleaning out the poultry unit will drain into a sealed 12,000 litre tank located beneath hardstanding adjoining the north-western elevation. The foul water will be collected and removed from the farm via a specialist contractor then disposed of or sold as manure for spreading upon farmland in accordance with the Code of Good Agricultural Practice (DEFRA, 2009). The proposed development will not give rise to contamination of groundwater. It is also emphasised that the site will be operated and regulated in accordance with an Environment Agency IPPC permit.

4.70 On this basis, it is concluded that the agricultural development can be accommodated without unacceptable exposure to flood risk and the proposal will not give rise to localised flooding/surface water drainage or groundwater pollution problems.

Ecology & Biodiversity Assessment

4.71 The area of the application that will be subject to new development (i.e. construction of poultry units, feed silos and poultry ranging area) occupies approximately 16.2 hectares. The site is currently primarily in arable agricultural use, though the site boundary does include a small area of hardstanding and the established private carriageway associated with an existing adjoining poultry unit.

4.72 As detailed within the 'Air Quality' section of this report, an ammonia impact assessment has been undertaken (*As Modelling & Data Ltd, 2023, A Report on the Modelling of the Dispersion and Deposition of Ammonia from the Existing and Proposed Free Range Egg-Laying Chicken Houses at Poplar Farm, Keal Cotes, near Spilsby in Lincolnshire*) in order to establish levels of nitrogen and acid deposition at a number of remote receptors including outlying SSSI's. Atmospheric dispersion modelling indicates that ammonia concentrations and resultant nitrogen deposition rates arising from the cumulative poultry farming operations will not be sufficient to cause any tangible adverse effects upon identified ecological receptors.

4.73 The proposed development will not result in the loss or harm to any significant habitats or sites of ecological importance. It is emphasised that the development will not entail the loss of any trees or hedgerows and the majority of the site is intensively cultivated, thus host to limited flora and fauna. Nevertheless, the recent update to Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021), introduces a nationwide legal requirement for new applicable development (such as that in question) to provide ecological enhancement delivering a minimum of 10% biodiversity net gain (BNG). In light of these legislative changes specialists Archer Ecology Ltd were commissioned to undertake an preliminary ecological appraisal and biodiversity assessment. The following should therefore be read in conjunction with the submitted reports:

- Archer Ecology Ltd, 2024, Preliminary Ecological Appraisal; and
- Archer Ecology Ltd, 2024, Biodiversity Assessment (with appended statutory biodiversity metric calculation tool spread sheets).

4.74 As detailed within section 3.1 of the Preliminary Ecological Appraisal report, the applied methodology followed guidance produced by the Chartered Institute of Ecology and Environment Management (CIEEM)2. The assessment included: A desk-based search for historic records of protected, notable and invasive non-native species on the site and local vicinity. Data for locally and nationally designated nature conservation sites were obtained; An ecological walkover survey of the proposed works area (i.e. the red outlined application site). The study area was extended beyond the works area, where appropriate, e.g., to undertake species-specific surveys; Identification of invasive non-native species; and Assessment of the potential impacts of the proposed works on habitat and floral/faunal receptors, as well as designated sites.

4.75 The PEA examined the application site's habitat/biodiversity and sought to identify the presence of fauna including birds, bats, badgers and other priority species. The conclusions and recommendations drawn within Section 5 of the summitted PEA report are summarised below:

Habitats & Biodiversity

4.76 Paragraph 5.1 observes that the majority of the habitats on-site are of low strategic significance and of very low to moderate distinctiveness. The most valuable habitats at the site are the newly planted scattered trees and the newly planted hedgerow along the southern and eastern site boundaries It is understood that a small amount of arable land will be removed to make way for the construction of the new egg production unit, and the remainder of the arable land will be used for chicken forage and habitat creation.

4.77 It is thus recommended that the Statutory Biodiversity metric calculation tool should be used to appraise the impacts of the proposed works on the existing biodiversity of this site. In this context, paragraph 5.5 states: '*Using the latest DEFRA Biodiversity Statutory (official) Metrics calculator, the assessment would examine the changes in the pre-works and post-works biodiversity units scoring for each habitat established within the zone of influence and make realistic recommendations to achieve net gain by means of habitat creation, retention and/or succession, where practicable.*'

Birds

4.78 All nesting birds and active nests are protected under the Wildlife and Countryside Act (1981, as amended) which makes it an offence to take, damage or destroy the nest of any wild bird while it is in use or being built, and to take or destroy the egg of any wild bird. Certain birds, listed under Schedule 1 of the Act, are also protected against disturbance whilst building a nest, or when on or near a nest containing eggs/unfledged young. In this context, paragraph 5.2.2 notes that, whilst the site does not currently support any opportunities for nesting birds, when the crop establishes it may become suitable for them. Post-development the site is anticipated to increase in value for birds.

4.79 On this basis, paragraph 5.2.3 of the appended report recommends: '*Any ground vegetation removal works should be completed outside of the main nesting bird season (nesting season runs March-August, inclusive), where practicable. Should these works be scheduled during the main nesting bird season, all suitable habitats for nesting activity should be firstly checked by a suitably experienced ecologist in advance. If*

active nests are found, these must be fully safeguarded and left undisturbed until all chicks have fledged.'

Bats

4.80 A data search was undertaken to determine the potential presence and density of bat roosting areas in the application site's locality. Paragraph 4.3.7 notes that this revealed 63 recent records of bats from within 2km of the application site. These included records of unidentified bat species *Chiroptera*, Natterer's *Myotis nattereri*, common pipistrelle *Pipistrellus pipistrellus*, pipistrelle species Pipistrelle sp. and brown long-eared *Plecotus auritus*. Exact locations were not provided for any of the species' records, and the most recent records are from 2022. There are no trees or buildings suitable for roosting bats on the site, such that roosting bats are not considered to be a constraint at the site and are not considered further within the report.

4.81 The application site was however considered to comprise part of a wider bat foraging habitat. Paragraph 4.3.9 of the submitted PEA report observes that the surrounding drain networks offer good quality foraging opportunities for bats and provide connectivity to other good quality habitat for bats within the locality. Therefore, this area is considered to be of moderate suitability for foraging and commuting bats. The proposals are anticipated to increase the value of the site for foraging, commuting and roosting bats as new woodland and species-rich grassland planting are proposed

4.82 To this end, paragraph 5.3.2 of the PEA report recommends that: '*In order to avoid impacts upon nocturnal bat activity, dark and unlit corridors should be maintained around and across the site, allowing bats to pass through and across the site unhindered by artificial light. Should any artificial lighting be introduced on the site, this should be directed away from potential foraging features*.' In this context, paragraph 5.3.3 states: '*Introduced lighting should be positioned at a minimum of 7m from any existing and/or proposed, tree lines and hedgerows. Mercury or metal halide lamps must also be avoided. The hours of illumination could be restricted to provide a minimum of 8 hours of darkness per night. Introduced lighting should further comprise a maximum of 1 lux which is comparable to moonlight conditions*.'

Badgers

4.83 Badgers are protected and so are the setts (burrows) they live in under the Protection of Badgers Act 1992 making it is an offence to; wilfully kill, injure or take a badger (or attempt to do so), cruelly ill-treat a badger, dig for a badger, intentionally or recklessly damage or destroy a badger sett, or obstruct access to it, cause a dog to enter a badger sett or disturb a badger when it is occupying a sett. It is noted within paragraph 4.3.10 of the submitted PEA report that, during the site survey, no evidence of badger setts or other excavations was noted. Neither was there any evidence in the adjacent drainage ditches. Nevertheless, in absence of mitigation, any badger that ventures onto the site to forage could become injured, killed or entrapped during construction works.

4.84 Paragraph 5.4.2 of the PEA report accordingly recommends that: '*No open trenches, pits, holes or any other excavation which has the capacity to entrap badgers or other wildlife will be left open overnight. Excavations will be backfilled or completely covered at the end of each day*.' In addition, paragraph 5.4.2 states: '*If it is not possible*

to backfill or cover any excavations and they must be left open, a means of escape must be provided to allow any animals which may fall in to escape on their own. This can be achieved by placing a suitably sized plank of wood in the hole, ensuring that the top of the plank extends out of the hole, which will allow animals to climb out.'

Other Priority Species

4.85 As noted within paragraph 5.5.1 of the PEA report, Hedgehogs are listed on schedule 6 of the Wildlife and Countryside Act (1981) which makes it illegal to kill or capture wild hedgehogs, with certain methods listed. Both hedgehogs and brown hare are Species of Principle Importance in England under the Natural Environment and Rural Communities (NERC) Act 2006 Section 41. All wild mammals are protected from cruel treatment under the Wild Mammals Protection Act (1996). Hedgehogs and brown hare, which may utilise the habitats on, and adjacent to the site may become entrapped, be harmed or killed during the construction phase of the proposed works. Hedgehogs may also be harmed during refugia clearance works or works to remove the earth piles at the site.

4.86 Paragraph 5.5.3 of the PEA report thus recommends that: '*Excavations required as part of the works should be covered overnight to avoid the accidental trapping of terrestrial mammals*.'

Mitigation & Biodiversity Net Gain

4.87 It is confirmed that the recommendations detailed within the submitted PEA (and summarised above) will be adhered to during and subsequent to the proposed development's construction phase. It is emphasised that the proposed scheme includes a series of comprehensive landscaping measures that are designed to: address the requirements of RSPCA Freedom Foods accreditation (habitat rich poultry foraging area); provide visual screening; and deliver biodiversity net gain.

4.89 As detailed within the submitted report *Archer Ecology Ltd, 2024, Biodiversity Assessment*, The Biodiversity Assessment methodology involved a desk study and review of ecological data contained within a supporting Preliminary Ecological Appraisal (discussed above). This included ecological walkovers which were completed by Senior Ecologist Kiran Johal MZool (Hons) on 16th January 2024, and on 19th March 2024. In addition to the existing habitat condition, the walkover involved collating baseline data on the site's current habitat composition, condition, area and floral species, as well as the presence of any invasive non-native species, where observable.

4.90 The Statutory (official) Biodiversity Metric calculation tool (details submitted) was used to generate a pre-works and post-works comparison of biodiversity units. It is evident that the application site presently comprises 33.44 baseline habitat units. Provided that the proposed landscaping scheme is implemented, it will achieve a GAIN in **habitat (area) biodiversity units of +3.51 units (+10.49%change**) post-works and a GAIN in **habitat (linear) biodiversity units of +0.85 units (+14.72%change)** post-works. This exceeds the standard National biodiversity net gain expectations mandated as part of the Environment Act 2021 (i.e., +10%). This outcome assumes that areas of compensatory planting have successfully established and that a plan of adequate, long-

term management and monitoring is implemented to ensure longevity for a minimum of 30 years. The proposed landscaping measures, which have been factored into the above calculations, are detailed upon submitted 'Proposed BNG Landscaping Plan' F3169-02. Further details are included within the 'Landscaping' subsection of the Design & Access Statement included below.

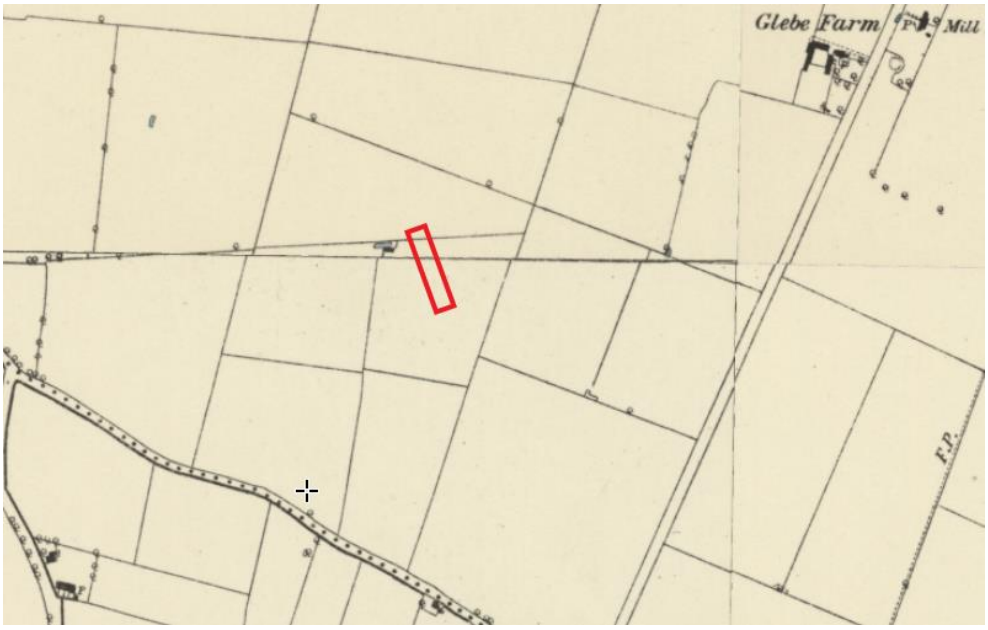
Archaeology & Heritage

4.91 The following comprises an appraisal of the proposed development's impact upon identified heritage assets. Such has been undertaken in accordance with paragraph 200 of the National Planning Policy Framework (2023), which stipulates that: '*In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.*'

4.92 A search of Historic England's database has indicated that the development will not be situated adjacent to or within the setting of any designated Heritage Asset. The most proximate Listed Building comprises the dwelling Pixie Dale (Grade II – LEN 1168237), which is located over 1 kilometre to the south of the proposed unit and beyond its zone of visual influence. The next most proximate designated heritage asset, comprising 'Westfield Farmhouse' (Grade II – LEN 1146816), is situated outlying the village of Keal Cotes over 1.2 kilometres to the northwest of the proposed unit. Again, intervisibility between the proposed development and Westfield Farmhouse will be extremely limited.

4.93 The Lincolnshire Historic Environment Record (HER) has not identified any recorded archaeological features within or immediately surrounding the land upon which the proposed unit will be sited. The most proximate site of archaeological interest is located marginally over 420 metres to the northwest of the proposed unit. This comprises the locality of a crashed Avro Lancaster Bomber. HER reference MLI125554 describes this as: '*An Avro Lancaster Mk I bomber aircraft crashed on land to the east of RAF East Kirkby on the 12th of February 1944. The aircraft was designated W4119 of 50 Squadron, and was based at RAF Skellingthorpe. It was taking part in a fighter affiliation training exercise and was carrying extra airgunner crew for practice firing. During the sortie, a fire broke out in the port outer engine and the order to bail out was given. Before all the crew could comply, part of the outer section of the port main-plane broke off, sending the aircraft into a spin. It crashed at 15:55, near to the incendiary fusing hanger at RAF East Kirkby. Four of the crew did not escape in time, and died in the crash.*' However, there is no evidence of this event/feature at ground level or within crop markings. The site is also situated a substantial distance away from the proposed development and such will not therefore have any impact by virtue of groundworks, landscaping or any other effect. There is no reason to suspect that the application site

(and locality of proposed construction works in particular) has any notable archaeological potential.



Extract from Victorian era OS plan of 1840-1880. Locality of proposed poultry unit indicated in red.

4.94 Historic cartographic resources comprising a Victorian era 'six inch' Ordnance Survey plan of 1840 to 1880 (note extract above) clearly identifies that the application site was undeveloped, though it would appear that a small structure/agricultural building and adjoining man-made pond was originally sited a short distance to the west of the proposed unit. This is no longer evident on the ground and historic mapping archives indicate that the feature was removed by the late 1930's. The existing private carriageway now passes over this location.

4.96 The enclosed pastures to the south and west of the application site are no longer evident within the landscape. These have been consolidated into a larger arable field system. It can however be noted that the new poultry ranging area's western boundary follows a lost historic field boundary. The proposed development will therefore essentially reinstate this element of historic enclosure.

4.97 In light of the above, it is concluded that the proposed development will not directly impact upon, or intrude within the setting of, any designated heritage asset. The application site is also considered to be of low archaeological potential and the development is not therefore anticipated to have any impact upon archaeological features/remains. On this basis, it is reasonable to state that mitigation measures (such as trial trenching, a programme of archaeological monitoring etc) are unnecessary.

Population

4.98 The application site is considered to exhibit preferential spatial attributes by virtue of its remote location. Only 1 No. dwelling is located within 400 metres of the proposed unit, comprising 'Willoughby House' (330+ metres to the south). The periphery of Stickford (village) is located approximately 0.5+ kilometres to the southeast of the

proposed unit. The village of Keal Cotes is situated over 1.0 Kilometre to the east of the site.

4.99 One of the common concerns associated with livestock units is their potential impact upon levels of residential amenity enjoyed by surrounding occupants. A detailed feasibility assessment, which included atmospheric dispersion modelling, was undertaken at the outset of the project. All evidence indicated that the existing poultry farm in cumulation within the proposed development/operation could be accommodated without any tangible impact upon neighbouring land users. The previous sections of this Environmental Report have identified that the proposed low intensity free range poultry farming operation will not have any significant impact upon levels of residential amenity through issues of noise, traffic, odour or dust.

4.100 Historically, poultry farming has been associated with concerns over possible nuisance arising from flies. However, this is not a problem that arises from modern poultry farming operations such as that in question. It is emphasised that the poultry house will be regularly cleaned (twice per week) and the litter will have a low moisture content which will reduce the ability of flies to breed. Flies require a source of food, water and an organic substrate to lay their eggs. This organic matter needs to have a moisture content of between 40% and 70% in order for their eggs to be viable and allow for metamorphosis from egg to larva, pupa and adult fly to progress normally. The mechanically ventilated poultry house will have a typical litter moisture content of less than 40%, which will not be conducive with conditions suitable for flies to breed. In addition it is emphasised that the waste litter will be frequently removed from site. This means that there will be inadequate time for flies to develop prior to removal of litter/cleaning. Poultry manure arising from roaming hens will be very sparsely distributed across the woodland/grassland ranging area. This low level of deposition will result in droppings quickly dissipating. Fly and odour nuisance will not therefore arise.

4.101 In context of the above, it is reasonable to state that the proposed development will not give rise to any environmental effects that might prove detrimental to levels of residential amenity or human health. It should also be noted that the site will be operated in accordance with an Environment Agency IPPC permit.

5.0 DESIGN & ACCESS

Use

5.1 The application site presently comprises arable land situated within Wright Eggs Ltd's farm holding. The proposed scheme seeks development of a 32,000 bird capacity poultry house (for free range egg production) with ancillary structures, thus doubling the production capacity of the established adjoining poultry farm. The proposal therefore represents a diversification and intensification of the site's established agricultural use. As demonstrated within the above chapters of this report, the development/operation will not give rise to significant cumulative adverse environmental effects. Levels of amenity afforded by neighbouring land users will not be compromised as a result of the development/operation. The new poultry unit will achieve high levels of compatibility with surrounding agricultural land uses. It is therefore considered to be appropriate within a countryside location.

5.2 As demonstrated within the Planning Policy Context section of this statement, the proposed agricultural use/operation is considered strategically acceptable in light of the Development Plan, national planning policy and other material considerations.

Amount

5.3 The application site occupies an area of approximately 16.3 hectares (including the existing poultry farm access). However, it should be noted that the area to be occupied by the proposed unit, ancillary feed silos and hardstanding only measures approximately 0.37 hectares. The development scheme will allow the poultry farm to accommodate an additional 32,000 free range hens, thereby bringing the cumulative number of bird places to 64,000. This will be supported by the formation of a new ranging area resultant in the farm being supported by an additional 40 acres of meadow and woodland habitat. Details and specifications of the various buildings/structures requiring planning consent are outlined below:

- Free Range Poultry Unit: comprising a steel portal framed structure that will measure 24.9 metres by 110.232 metres plus a 16.0 by 2.5 metre store/control room (combined gross external area of 2784.7 m^2) with a roof apex height of 7.2 metres. The roof and elevations will be clad in profiled steel sheeting coloured Olive Green. It should also be noted that the roof will be fitted with 16 No. roof mounted ventilation stacks and photovoltaic (PV) panels capable of generating up to 100 kW of electrical output. The south-eastern elevation will feature a series of 8 No. ventilation fans (for emergency use during periods of extreme hot weather). The side elevations will include a series of 'pop holes', which allow hens to move between the unit and adjoining ranging area. An internal conveyor belt floor system will allow poultry manure to be transferred via a muck elevator to a waiting tractor with trailer. Eggs will be transferred from the proposed unit via a small covered external conveyor to the existing unit's egg store (as depicted upon proposed site plan inset F3161-01).

- 2 No. Feed Silos: Comprising cylindrical structures measuring 7.0 metres high and 3.0 metres in diameter supported by a steel frame mounted on a concrete plinth. The silos will be coloured Olive Green, sited adjacent to the farm's existing silos and integrated with the new poultry house via small augers that automatically release food therein as required.

- Ancillary Hardstanding: new hardstanding will be formed adjoining the proposed unit's north-western elevation. This will integrate with the existing access and provide sufficient space for agricultural vehicle/HGV turning.

Layout

5.4 The layout of the proposed development seeks to achieve: efficient use of land; visual/landscape integration; good accessibility; high levels of functionality/integration with the established unit; and environmental compatibility. The siting of the proposed free range unit accounts for the contractual need to allow poultry ease of access to a minimum 16.2 hectares of surrounding woodland/pasture ranging area. For this reason the application site encompasses a block of suitable arable land (also under the

applicant's ownership) that occupies ground to the immediate south, east and west. Hens will be able to readily gain access to this via side elevation pop holes by virtue of the new unit being orientated at 90 degrees to the existing unit. The layout therefore allows good access around the proposed unit whilst also providing a nucleated layout. It can be observed that the proposed biodiversity enhancing landscaping scheme will deliver maximum screening benefit from outlying visual receptors due to adoption of a layout that results in woodland planting essentially surrounding the proposed unit. The positioning of the new poultry unit enables direct connection to an existing access, thereby avoiding the need for the construction of extensive private carriageway/concrete hardstanding, which would present an inefficient use of land.

Scale

5.5 Considerations of scale are multifaceted for reason that they relate both to the proportions of the various buildings/structures proposed and the overall size of the development scheme. In addition, scale is a relative term. The perceived scale of a development is usually appraised against the baseline of existing built surroundings. The proposed 2785 m^2 poultry house will have a 7.2 metre roof apex height. The existing poultry house has a marginally larger floor area of 2895 m^2 for reason that it includes an egg storage room, though width and height are identical to that of the proposed unit. The proposed development is therefore technically slightly subordinate in scale to the existing unit, though in cumulation, it will increase the scale of the established unit/farm complex by approximately 96%. However, when viewed within context of the site's surroundings, the cumulative size/scale of the development is smaller than that of Hagnaby Farm (broiler poultry units), which is situated just under 0.6 kilometres to the west. The scale of the proposed unit is not therefore unprecedented or out of character with the site's wider agricultural landscape context.

Landscaping

5.6 It should be noted that all outlying sections of hedgerow/established tree planting will be safeguarded by the proposed development. The new poultry unit will also be complemented by a comprehensive landscaping scheme. This seeks to achieve three primary objectives:

1. Addressing contractual requirements by providing 40 acres of poultry ranging area including meadows and a minimum of 1000 tree specimens;

2. Allow visual assimilation of the development into the setting of the surrounding countryside; and

3. Deliver at least 10% biodiversity net gain in accordance with the recent update to Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021).

5.7 As detailed upon the submitted 'Proposed BNG Landscaping Plan' F3169-02, this proposed scheme includes two blocks of woodland planting occupying a combined area of 3.7 hectares. This has been arranged in a manner that promotes poultry ranging whilst obscuring views of the proposed unit from outlying visual receptors. Trees will be native species (such as Oak and Rowan) selected to promote biodiversity and screening.

The remaining poultry ranging area will comprise enriched grassland/meadow. The landscaping scheme will be retained and managed for a minimum period of 30 years. Planting specifications are included below:

Tree & Hedge Planting

5.8 Comprising two block of woodland with the northern most occupying at least 1.95 hectares and the southern tree belt measuring a minimum of 1.75 hectares. All planting operations carried out by the appointed contractor shall be in accordance with British Standard 4428:1989 Code of Practice for General Landscape Operations.

%	Common Name	Species	Bare Root - Size
15	COMMOM OAK	QUERCUS ROBUR	45-60 1+1 Transplant
15	SCOTS PINE	PINUS SYLVESTRIS	45-60 1+1 Transplant
15	GEAN CHERRY	PRUNUS AVIUM	45-60 1+1 Transplant
10	BEECH	FAGUS SYLVATICA	45-60 1+1 Transplant
15	FIELD MAPLE	ACER CAMPESTRE	45-60 1+1 Transplant
10	HOLLY	IIEX AQUIFOLIUM	45-60 1+1 Transplant
10	BIRD CHERRY	PRUNUS PADUS	45-60 1+1 Transplant
5	HAZEL	CORYLUS AVELLANA	45-60 1+1 Transplant
5	YEW	TAXUS BACCATA	45-60 1+1 Transplant

Table detailing proposed mix of tree species

5.9 All plants will be bare-root stock of 80-100cm in height. All trees will need support and protection from browsing in the first few years of establishment to establish an upright growth formation. Trees will be guarded by a sufficient 1.2m tube style tree guard and supported by a stake driven into the ground and attached to the guard by cable ties. The stakes will be in place when the trees are first planted.

5.10 Trees will be planted during the dormant season between November and March when ground conditions and weather are most favourable. The appointed contractor shall be responsible for calculating the exact number of tree plants based on the specified density mixture. It will be the contractor's responsibility to organise plant materials along with stakes, canes, tree shelters, ties, spirals etc.

5.11 Trees will be planted with a spacing of 3.0 metres. Plants can be notch planted, providing a slit sufficient in size to avoid trimming of roots and unnecessary force when planting. All trees should be planted to the root collar level. Plants should be firmed in, to the point whereby a gentle tug will not remove them from the soil.

5.12 For the establishment of young trees, the first 5 years are most important. The young tree plants will be protected in the first instance with the use of appropriate shelters. These are ideal for small irregular shaped areas and will protect the plants from rabbit, hare and vole damage. This will also provide a micro climate condition for more favourable plant growth. The shelters will also provide the support plants need in the first few years of establishment. It is essential that the shelters are checked twice a year or following high winds to ensure they are stable and in an upright position.

5.13 Young plants will have to compete for water, nutrients, light and soil when growing in competition with grasses and weeds. The use of herbicides is the most cost effective

way of practicing weed/grass control. April/May are the crucial months to prevent competing weed/grass from growing. At this time, contact herbicides should be applied to control weed/grass growth. Depending on conditions it may be necessary to apply further treatment in July. The herbicide treatment should be applied with the use of a knapsack sprayer, typically a 15ltr reservoir carried on the operators back. To achieve fast early plant growth the competing weed/grass growth can be eliminated with a spot spray around each young plant, until established, typically 5 years. Following planting, for the first 2 years additional maintenance will be required for beating up. Beating up is the process of replacing failed plants so that the planting density can be maintained.

5.14 The proposal includes the planting of a new mixed native hedgerow measuring approximately 110 metres adjacent to the existing site access. This will include blackthorn *Prunus spinosa*, common *Crataegus monogyna*, hazel *Corylus avellana*, field maple *Acer campestre*, dogwood *Cornus sanguinea*, wild cherry *Prunus avium* and elder *Sambucus nigra*. To ensure that the hedgerow is considered to be 'species-rich', there should be at least 5 woody species per 30m of hedgerow. The hedge planting will inevitably be of higher density than the above, the same principles of aftercare, replacement of failed specimens etc noted above will be applied accordingly.

Enriched Grassland/Meadow

5.15 The application site includes approximately 12.5 hectares of grassland. This is to be enhanced with 'meadow mix' planting in order to form a biodiverse wildflower meadow habitat. As detailed within section 3.5 of the submitted report *Archer Ecology Ltd, 2024, Biodiversity Assessment*, The proposed area of chicken forage should incorporate a diverse poultry pasture mix such as 'PP2' produced by The Grass Seed Store. This mix comprises hard wearing grasses, as well as legumes and herbs which will attract invertebrates. To increase the diversity of this area, the pasture mix could be combined with a native wildflower seed mix such as 'Bees and Butterfly Wildflower Seed BSBP' produced by Boston Seeds, which will further enhance the value of the pasture for invertebrates.

5.16 To prepare for sowing, the ground will be scarified in the spring or autumn in dry conditions. Following this, the soil will be allowed to rest for 48 hours before being aerated. The seeds will thereafter be sown in accordance with the manufacturer's instructions.

Appearance

5.17 The appearance of the new poultry house can be described as 'contemporary agricultural'. The elevations and roof of the building will be clad in profiled steel sheeting coloured 'Olive Green' (BS: 12B27), thereby ensuring that the building matches the finish and appearance of the existing unit. As illustrated by the photograph of the existing poultry unit included below, the low profile design and external cladding colour will allow the new poultry unit to integrate congruously into the setting of the surrounding countryside.

Photograph depicting existing poultry unit when view from Hagnaby Lane to the south.

5.18 The side elevations will include a series of 'pop holes', which are used to allow poultry access to the outlying ranging areas. Two low profile feed silos, which will also be coloured Olive Green, are to be positioned adjoining the existing silos, thus creating a nucleate cluster of four. The existing and proposed units will benefit from a close spatial relationship, thus minimising landscape and visual impact (as expanded upon within the corresponding section of this report). In the medium to long term, the poultry farm will be substantially screened by the proposed woodland landscaping scheme. The development's agricultural appearance is considered to be entirely commensurate with the farmland setting of the local landscape.

Access

5.19 The established poultry farm gains access to the public highway (Hagnaby Lane) via a crushed stone private carriageway. This extends approximately 550 metres eastwards from Hagnaby Lane along the sites northern boundary before terminating at concrete hardstanding adjoining the existing poultry unit. The proposed unit will be sited adjoining this hardstanding, thus allowing use of the established access. Only a modest extension of the existing hardstanding will be required. The existing point of juncture features geometry suitable for HGV/agricultural vehicle turning and good X and Y dimension visibility. As detailed within the 'Transportation' section of this report, the proposal benefits from logistic economies of scale and will not give rise to significant levels of vehicular activity. For this reason, upgrading of the existing access is considered unnecessary.

6.0 CONCLUSION

6.1 The development will allow the applicants' to expand their established poultry farm business in order to address increased demand within the market for premium quality higher welfare free range eggs. This will allow the business to become increasingly economically viable and competitive whilst helping to underpin UK food security (a significant proportion of eggs are currently imported from abroad). The development will also offer the collateral benefit of creating new employment opportunities whilst safeguarding existing jobs, thereby strengthening the local rural economy. The application site, being sufficiently remote from land in residential use yet close to suitable highway infrastructure, is considered to be a prime location for the scheme. The new poultry house will be subject to visually unobtrusive cladding and accompanied by an extensive tree planting scheme, thereby reducing its visual impact and complementing the setting of the surrounding countryside. The proposed agricultural development/operation will not give rise to any significant cumulative adverse environmental effects. The granting of planning permission would strongly

accord with the provisions of the Development Plan and national planning policy. The proposal will cause no demonstrable harm.