Babergh and Mid Suffolk District Councils

Intensive Livestock and Poultry Farming

Supplementary Planning Document

November 2024

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1. Introduction

1.1 Babergh and Mid Suffolk are predominately rural districts and therefore agriculture plays an important part in the area, both contributing to the economy and shaping the environment.

1.2 Over recent years there has been an increase in activity in the intensive livestock and poultry sector. For the purposes of Policy LP14 *'Intensive Livestock and Poultry Farming'* is defined as follows: The Environmental Permitting Regulations 6.09 Sector Guidance Note published by the Environment Agency in 2010 defines 'intensive' as an installation with more than: (i) 40,000 places for poultry; (ii) 2,000 places for production pigs (over 30kg) and/or (iii) 750 places for sows. (EPR Technical Guidance Note (2010) Regulatory Guidance Note No. 2 Understanding the meaning of regulated facility - Appendix 3 Interpretation of Intensive Farming Installations (publishing.service.gov.uk)).

1.3 Intensive livestock and poultry farming are important sectors within the agricultural industry in Babergh and Mid Suffolk, with an important role in food production as well as inputting into the economy and proving employment opportunities.

1.4 It is a specialist agricultural sector with specific issues which need to be considered when determining development proposals. Intensive agricultural units, particularly pig and poultry farms, can impact on both sensitive habitats and the local population. Such impacts arise largely through the release of pollutants, including ammonia; nutrients from manure; litter and slurry; effluent discharges; dust; odour; and noise as well as other impacts such as traffic generation and movements. Consequently, there is the need to exercise care when considering developments (along with this direct and in-combination impacts) which would bring livestock and poultry units within close proximity to sensitive land uses and sensitive environments. Sensitive land uses may be a part of the natural or built environment. Sensitive land uses and environments include, but are not limited to buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminant discharges generated by a nearby major facility. Examples include designated environmental areas; identified areas of ground water protection; drinking water abstraction points; residences; day care centres; educational and health facilities; and office development.

1.5 Policy LP14 of the Babergh and Mid Suffolk Joint Local Plan (JLP) Part 1 2018-2037 Development Plan Document (DPD) seeks to support the sustainable development of this agricultural sector, whilst ensuring appropriate consideration is given to environmental protection as well as the wellbeing of people and the impacts on natural resources.

1.6 The purpose of this Supplementary Planning Document (SPD) is to supplement JLP Policy LP14, by providing supplementary information on the issues and considerations that are of relevance to the determination of intensive livestock and poultry applications. It also provides detailed information and advice based on established good practice for assessing the impacts of new and/or expanded livestock and poultry uses.

1.7 Importantly, and in accordance with Policy LP14 requirements, the in-combination and cumulative impact of proposals must be assessed. Whilst an individual intensive livestock and/or poultry development may be acceptable, the cumulative impacts resulting from similar developments nearby must also be considered. Further guidance on this is provided within the SPD.

2. Structure of the document

2.1 The SPD structure is based upon (i) the wider planning context; (ii) statutory assessments (which may be necessary); and (iii) the considerations and requirements as set out in Policy LP14.

2.2 Policy LP14 is set out below. The structure of the SPD for section (iii) follows the order of the policy and the specific issues which are detailed within the guidance as highlighted below.

2.3 Policy LP14 states as follows:

1. *Proposals for both new, and extensions to existing, intensive livestock and poultry units and associated structures and facilities for the storage and disposal of waste will be permitted provided that the siting, design, materials used (including lighting) and methods of operation proposed address all of the below criteria so that they:*
    a. ***serve to protect the amenity of residential properties**, avoiding or effectively mitigating odour, light and other forms of pollution and disturbance, or in the case of extensions can demonstrate a positive improvement in existing conditions;*
    b. ***protect sensitive environmental receptors**, such as designated protected species, ecological sites and watercourses (including wet and dry ditches, groundwater and ponds) from air quality impacts identified through appropriate emission modelling and interpretation of the modelling results, and water quality impacts, using pollution prevention measures and demonstrable on-site contingency measures;*
    c. ***consider and address the impact on water resources and the capacity of the water supply infrastructure network**, taking account of the limitation particularly on the Hartismere supply network;*
    d. ***demonstrate that there will be no significant effects upon sensitive environmental receptors** from air pollutants, through submission of appropriate emission modelling;*
    e. ***demonstrate adequate provision has been made for the management and disposal of waste materials**, liquids, litter and manure for each production cycle which will not lead to pollution, particularly of surface and groundwater, by submission of an approved waste management plan;*
    f. ***serve to minimise visual and landscape impact** and incorporate suitable landscaping proposals; and*
    g. ***ensure the provision of safe and suitable access for all users**, including the proportionate mitigation of any unacceptable impacts on highway safety resulting from a significant increase in traffic movements. Proposals should demonstrate their impact on*

HGV movements over a production cycle taking account of the origin, destination and routing of goods within the processing chain.

2. *Where proposals for expanded or new units adjoin existing groups of agricultural buildings, or any new proposals which are in remote, isolated or detached locations outside settlement boundaries, they must provide appropriate justification and demonstrable evidence for the location.*

3. *Where an individual intensive livestock or poultry development is considered acceptable, the cumulative impacts resulting from similar developments nearby must also be taken into account.*

4. *Proposals for residential buildings or other sensitive land uses within 400m of established intensive livestock and/or poultry units will be subject to special consideration. Such proposals which would be subject to significant adverse environmental impact will not be permitted.*

3. The wider planning context

3.1 The Councils recognise that over recent years there have been numerous planning applications submitted for both new and for the expansion to existing intensive livestock and poultry units. It is important that careful consideration is given to all the potential impacts that may arise from any proposed development as part of the planning application process, particularly where they are in a sensitive location and/or with potentially significant impacts and either singularly or because of wider cumulative impacts. Due to the nature of intensive livestock and poultry operations and their geographical concentration within parts of the Districts, the Councils consider it appropriate to provide further guidance on the issues and assessments that may be relevant to such proposals.

3.2 The considerations and impacts of proposals may be unknown and therefore require assessment and consultation, often with specialist consultees as part of the planning process. Therefore, to ensure robust and comprehensive planning assessments to be made by the local authority when a planning application is submitted for consideration, it may be necessary for the applicant to supply additional information.

3.3 All technical information should be based upon the most up to date and relevant data and include links to all referenced source data. All planning applications will be reviewed and consulted upon to ensure all relevant information is available to the decision maker. The review will, where relevant, include the Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment (EIA) Checklist (as set out in Appendix 1).

3.4 Babergh & Mid Suffolk District Councils (B&MSDC) offer a pre-application service (Pre-application advice - Babergh District Council / Pre-application advice - Mid Suffolk District Council) which provides an opportunity for discussions to take place with the development management service to de-risk the planning issues associated with a proposal, anticipate critical planning considerations and provide initial advice on planning merit prior to submission of an application and to ascertain what additional documentation may be necessary to assist validation and consideration. It is also important to consider the necessary engagement with consultees to enable applicants to demonstrate that the relevant considerations as set out in Policy LP14 have been appropriately addressed. Dependent upon the scale and detail of any proposal it may be appropriate for the planning application process to be structured through a Planning Performance Agreement to manage the mutual programming of the application timetable in a transparent way. The Councils' Local Validation List (LVL) – sets out further details on the information required with planning applications to

demonstrate the information required through all of the relevant national and JLP policies.

3.5 New and/or extensions to existing developments must include an overall design concept statement within the Design and Access Statement. This should be based on survey and analysis data to explain the detailed design of the scheme and the sequencing of the development. This will assist in assessing the application against all the stages of development and its accordance with the JLP and Neighbourhood Plan policies.

3.6 A design concept statement would typically include the following:

- design principles and design concept;
- how these are reflected in the layout, scale, visual appearance and landscape;
- how the design relates to its site and wider area, including how the development has been planned to minimise the effects on the environment;
- how odour management and waste management have been considered; and
- a summary of the above where this would be of value in public consultation. It is also considered useful for applicants to include a statement of consultation undertaken on proposals setting out key issues and outcomes from engaging with both statutory and non-statutory consultees.

4. Statutory assessments

4.1 Habitats Regulations process

4.1.1 A Habitats Regulations Assessment (HRA) may be required as part of the application process to determine whether the proposal could have a likely significant effect on a Ramsar Site, Special Protection Areas and Special Areas of Conservation. These sites are included in the National Network of Sites.

4.1.2 An HRA refers to the several distinct stages of Assessment which must be undertaken in accordance with the Conservation of Habitats and Species Regulations 2017 as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 to determine if a plan or project may affect the protected features of a national site before deciding whether to undertake, permit or authorise it. (Changes to legislation in 2019 now refers a national site network of protected sites instead of European sites.) If a proposed plan or project is considered likely to have a significant effect on a protected site (either individually or in combination with other plans or projects) then an Appropriate Assessment of the implications for the site, in view of the site's conservation objectives, must be undertaken. Further details on Habitats Site Mitigation can be viewed on the Babergh and Mid Suffolk websites.

4.1.3 The first step in the Habitats Regulations Assessment is a screening process. The screening process identifies any potential effect pathways by which the proposal might impact upon the relevant designated sites, excluding any potential measure to mitigate such effects. If any potential effect pathways are identified, then the proposal is deemed to potentially have a 'Likely Significant Effect'.

4.1.4 Where there is a 'Likely Significant Effect' the local planning authority (LPA) must carry out an 'Appropriate Assessment' in order to be able to determine, with scientific certainty, that there would be no Adverse Effect on the Integrity of the designated site, from the plan or project, either alone or in-combination with other plans and projects. The Councils are bound by the outcomes of the HRA process and the views of Natural England in determining whether planning permission can be granted. If it cannot be proven that an adverse effect on integrity can be avoided, including through any proposed mitigation measure, then planning permission cannot be granted without further stringent consideration under the Habitats Regulations.

4.1.5 Where an adverse effect on the site's integrity cannot be ruled out, a consideration of alternatives must be made, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured. This would be determined by the Secretary of State but is not a usual route to the granting of planning permission. It should also be recognised that the condition of sites could change over time and this needs to be taken into account when considering the impact on sites. It is important that consideration is also given to the potential impact on sites outside Babergh and Mid Suffolk. The location of protected sites in neighbouring authorities can be found using the MAGIC website managed by Natural England.

4.1.6 When carrying out an Appropriate Assessment, the Councils have a legal requirement to consult Natural England, the statutory nature conservation advisory body and to have regard to their advice.

4.1.7 The Councils will require sufficient detailed information to be provided by the applicant through the planning application submission, to be able to make the assessment. This will sometimes include specialist technical reports. The Councils must be able to consider the effects of the new development on its own merit as well as considering how the proposals could affect national sites 'in combination' with other developments that could have a similar effect on the site and are not yet able to be assessed as part of the existing baseline as for example, they may be within the planning system or are consented but not yet built or operational.

4.1.8 In the case where it is determined that planning permission is not required, and prior approval is granted there may be a requirement for a Habitats Regulations Assessment. Regulation 75 of the of the Conservation of Habitats and Species Regulations 2017, as amended by the Conservation of Habitats and Species 10 (Amendment) (EU Exit) Regulations 2019 states 'that it is a condition of any planning permission granted by a general development order made on or after 30th November 2017, that development which – (a) is likely to have a significant effect on a national site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of the site, must not be begun until the developer has received written notification of the approval of the local planning authority under Regulation 77 (approval of local planning authority).'

4.1.9 The applicant should therefore be satisfied before commencing works that the development will not have any likely effect on any national site. In addition, applicants are advised to apply to Natural England as the appropriate Nature Conservation body, under Regulation 76 of Regulations (as amended) prior to making any necessary application to the local

planning authority under Regulation 77. In addition, because Regulations 75-78 do not provide a power to impose conditions on the grant of regulation 77 approval, if the appropriate assessment identifies necessary mitigation measures are needed to ascertain no adverse effect these would need to be secured by way of a planning obligation or some other form of binding legal agreement. Further information on this process and the information required to be submitted with a planning application is included in the Councils' Guidance Note and Checklist for applicants/agents relating to HRA and planning applications. Further information on the requirements of HRA in Babergh and Mid Suffolk are available via Ecological Guidance.

Other Considerations

4.1.10 Whilst the Habitats Regulations do not apply to SSSIs, where a proposal could damage or destroy the interest features for which a SSSI has been notified, impacts need to be considered, either in a SSSI Impact Assessment or as part of an HRA.

4.2 Environmental Impact Assessment

4.2.1 Applications for major developments will be screened by the Councils to determine whether a proposed project is likely to have significant effects on the environment and whether an Environmental Impact Assessment (EIA) is required. Schedule 1 and Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 set out the circumstances when an EIA will be required for agricultural related development.

4.2.2 The National Planning Practice Guidance (PPG) states that an EIA will enable the local planning authority when determining a planning application to have full knowledge of the likely significant effects on the environment of the proposal and therefore it can take this into account in the decision-making process. It also aims to ensure that the public are given early and effective opportunities to participate in the decision-making procedures. There are five broad stages to EIA as follows:

I. screening
II. scoping
III. preparing an environmental statement
IV. planning application and consultation
V. decision-making

4.2.3 It should be noted that the Levelling-up and Regeneration Act 2023 enables Regulations to be created to replace Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments with new Environmental Outcomes Reports.

5. Joint Local Plan Policy LP14 Guidance

5.1 Introduction

5.1.1 Policy LP14 requires the comprehensive assessment of all policy criteria (a – g inclusively) to be undertaken to inform the determination of planning applications for proposals for both new, and extensions to existing, intensive livestock and poultry units and any associated structures and facilities for the storage and disposal of waste. Whilst it is noted that some of this information may also be required to satisfy other regulatory requirements, which could be met individually through planning conditions should a proposal be considered acceptable, to comply with the JLP policy requirements and enable the comprehensive impacts of proposals to be assessed at the appropriate stage prior to the determination of applications, all of the information detailed in the policy and this supporting guidance should be included within the planning application. Where relevant, assessment methodologies and findings should be agreed with the appropriate consultees prior to any assessments being undertaken.

5.2 LP14 (1) [a] – serve to protect the amenity of residential properties.

5.2.1 JLP Policy LP14 (1a) sets out a policy requirement to protect the amenity of residential properties, avoiding or effectively mitigating odour, light and other forms of pollution and disturbance, or in the case of extensions can demonstrate a positive improvement in existing conditions.

5.2.2 The amenity of those living or staying close to development may be adversely affected by negative general nuisance caused by odour emissions, light pollution and other forms of disturbance such as pests, dust, chemical fumes and noise, as well as potentially affecting those in a wider catchment. All these factors need to be carefully considered as part of the application process in order to protect the amenity of residential properties through avoidance or, where considered acceptable through a process of engagement with the relevant consultee and the LPA, effectively mitigating impacts. Impacts on residential amenity should include all operations and activities associated with the construction and operation of the facility across the production cycle including transport. If an extension is being proposed which requires planning permission, it may be possible to demonstrate whether current negative impacts can be improved through the development. This may be achieved despite their being an increase in size or operational capacity, for example through the extension improving the design, operational efficiency and/or enabling the application of new technology.

5.2.3 All these factors will need to be carefully considered as part of the planning application process and applicants will be encouraged to provide information within their application to enable them to be carefully considered in a timely way from the time consultation and publicity commence. This should help safeguard public confidence in the transparency of the planning process.

5.2.4 The following section sets out specific issues from intensive livestock and poultry operations which may adversely affect the amenity of those living or staying close to development, or within the wider catchment, by negative general nuisance which are detailed in this section of the SPD including:

- Ammonia and Air Pollutants
- Odour
- Pests
- Noise
- Light Pollution.

Ammonia and Air Pollutants

5.2.5 Different types of agricultural developments may have an impact on air quality with a range of pollutant gases and particulates, and especially nitrogen compounds emitted to the atmosphere. Ammonia is a key air pollutant which affects both human health and the environment. Further information on ammonia and nitrogen impacts on the environment is set out under the guidance on Policy LP14.

5.2.6 Where there is the potential to impact upon residential properties, air pollution can impact upon human health. In particular:

- Intensive poultry units can generate particulates from ventilation systems.
- Additionally, any development that includes a combustion process. For example, biomass plants used for heating poultry units, combined heat and power (CHP) units and bio-digesters for heating and energy production, depending on the size of the plant. Pollutants from these can include particulates, Nitrogen Oxides (NOx) and Carbon Monoxide (CO) as well as potentially volatile organic compounds in bio-digesters.

5.2.7 The following documents provide helpful guidance to local authority officers as well as developers and consultants in considering air pollutants:

- Land-Use Planning & Development Control: Planning for Air Quality – Institute of Air Quality Management 2017.
- Local Air Quality Management Technical Guidance (TG16) – DEFRA 2021.

- Ammonia Guidance – Shropshire Council (November 2023).
- The Government's Code of Good Agricultural Practice for reducing ammonia emissions (2018).
- Rothamsted Research's Inventory of Ammonia Emissions from UK Agriculture 2022 (May 2024), which is supported by Natural England and details mitigation measures in Appendix 2.

Air Quality reports / assessments

5.2.8 Some proposals will require an air quality screening assessment. This will apply where the proposal will house over 40,000 birds and there is a relevant receptor nearby. In cases where biomass and CHP are proposed an air quality assessment may be required.

5.2.9 Where a development is close to, or will generate significant traffic movements through, an Air Quality Management Area (AQMA), an air quality assessment may be required. Please see Suffolk County Council's website for up to date information on AQMAs in Suffolk.

Odour

5.2.10 Local planning authorities are required to take account of the effects of odour pollution on health, the natural environment and general amenity when considering planning applications for uses that may or are likely to generate odour. Intensive livestock and poultry units can generate strong odours which vary over the production cycle and can be affected by seasonal weather conditions. The impact of this on local residential amenity as well as on the general amenity of the area including the in-combination and cumulative effects, must be fully considered as part of the planning application process.

5.2.11 Any significant sources of odour should be separated as much as is possible from odour sensitive uses (i.e. residential properties and any other 'sensitive receptors' which include, day care centres, educational and health facilities, office development or sensitive environmental areas). Where a sufficient separation is not achievable, it may be possible to employ control and mitigation measures to make a proposed development acceptable from a land-use perspective. In accordance with Policy LP14, this must be convincingly demonstrated to the satisfaction of the local planning authority and relevant consultees through the planning application process.

5.2.12 The Institute of Air Quality Management (IAQM) publishes guidance and recommendations on air quality issues. Applicants should consider the Institute's Guidance on the assessment of odour for planning which sets

what the IAQM considers to be current best practice in relation to assessments in the UK.

5.2.13 If revised, applicants should ensure they are referring to the latest versions of these documents.

5.2.14 Policy LP15 (3a) of the JLP also sets out policy requirements for odour impact prevention and/or mitigation.

Odour reports / assessments

5.2.15 Proposals for new or extensions to intensive livestock and poultry developments are likely to require an odour impact assessment to be submitted, either as a stand-alone assessment or as part of an Environmental Statement, to accompany the planning application.

5.2.16 Different types of development will require different thresholds for requiring the odour assessment and therefore it is important to discuss the assessment requirements with the LPA and the relevant consultee(s). The threshold for this will be determined on a case-by-case basis.

5.2.17 Any assessment will require information regarding potential cumulative impact of other odour generating sources in the vicinity. The cumulative assessment should include consideration of any existing developments or those that have been granted planning permission or are currently applying for planning permission within the locality. The distance that the cumulative impact will be required to consider will vary according to the baseline environment and the type of application and should be agreed with the local planning authority through the pre-application process.

Pests

5.2.18 Pests, in particular flies and other insects, can transmit disease among livestock and poultry populations as well as causing nuisance to livestock and poultry and generate complaints from neighbours.

5.2.19 Good design needs to be considered early in the planning process to ensure the most appropriate and cost-effective solutions to prevent fly breeding and other pests are identified from the outset. This will include considerations such as drainage and slurry collection systems; flooring design and construction; manure and litter collection and removal systems; ventilation and thermal regulation systems; and drinking and feeding systems.

Pest reports / assessments

5.2.20 It is essential that good practices are implemented to maintain standards and ensure that conditions do not support fly breeding. A Fly and Manure Management Plan should be submitted with applications and will also form part of farm assurance standards. The measures to incorporate will depend on the individual circumstances but will be expected to consider the options based on balancing costs and environmental benefits. Appropriate measures to prevent or control flies include:

- regular monitoring and inspections;
- cleaning and waste management;
- manure management and removal from site;
- monitoring and servicing of plant and equipment e.g. for ventilation, thermal control, feeding and watering;
- dealing with fallen stock/carcasses;
- use of physical prevention methods, e.g. screens, traps, electric fly killers;
- seeding litter with predator species;
- use of pesticides;
- employing professional pest control contractors;
- measures to be taken in the event of infestation; and
- procedures for training and record keeping.

Noise

5.2.21 Noise is recognised by the World Health Organization (WHO, Environmental Noise Guidelines for the European Region 2018) as the second most harmful environmental stressor in Europe behind air pollution. Government guidance states that noise needs to be considered when development may create additional noise or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). The baseline for assessment should be agreed with the LPA and relevant consultee(s) as part of the pre-application process.

5.2.22 Noise can be created by machinery, power plants and vehicle movements at different times of day or crop cycle associated with intensive livestock and poultry operations and its impact on local residents, sensitive receptors and the general amenity of the area needs to be carefully considered as part of the planning application process.

5.2.23 Noise may arise from a variety of sources. As with other amenity impacts, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective

solutions are identified from the outset. Mitigation measures to reduce the noise impact should be included in the design as appropriate if a development is to represent good design and subject to full assessment as it is important that mitigation measures themselves do not create any other adverse impacts.

5.2.24 The local planning authority will consider the following factors:

- Whether or not a significant adverse effect is occurring or likely to occur;
- Whether or not an adverse effect is occurring or likely to occur; and
- Whether or not a good standard of amenity can be achieved.

Noise reports / assessments

5.2.25 Noise assessment is a complex technical issue and therefore it is appropriate to seek experienced specialist assistance and engage fully with consultees through the pre application and planning process. The BS4142 methodology assessment should be used to determine the likely impact on noise sensitive properties. The methods described in BS4142 use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident. This assessment determines the likely noise impact by comparing the rating noise level from the proposed development with the background noise levels of the locality.

5.2.26 A noise assessment is required for all proposals for intensive livestock and poultry units. The BS4142 methodology should be used for these and should include but not be limited to the assessment of vehicular noise on site, feedstock delivery, livestock, broiler catching and fan noise.

5.2.27 In accordance with BS4142 the noise survey should:

- Identify all nearby noise sensitive receptors;
- Determine the impact on any receptors with reference to noise standards; and
- Detail control measures when necessary to reduce noise to acceptable levels.

5.2.28 Policy LP15 (3a) of the JLP also sets out that policy requirements for noise impact avoidance and/or mitigation.

Light Pollution

5.2.29 Careful consideration should be given to any artificial lighting that is included as part of the development proposals. Artificial lighting can have a negative impact on residential amenity, any sensitive receptors, be harmful to wildlife and undermine enjoyment of the countryside or the night sky, especially in areas with intrinsically dark landscapes. Intrinsically dark landscapes are those entirely, or largely, uninterrupted by artificial light. As set out in the JLP, lighting needs to be appropriate for the design and scale of development and location. It is important that lighting is designed to illuminate the target only and not detract from the night sky's natural state and thereby avoid light pollution and its associated impact on wildlife.

5.2.30 Proposals that include lighting should consider the following pointers in relation to light design. Any artificial external lighting should have:

- a clear purpose;
- be directed to where needed;
- be no brighter than necessary for safe working,
- be used only when needed; and
- Include warmer colour lights where possible.

5.2.31 Policy LP15 of the JLP also sets out the policy considerations for lighting to ensure that it is appropriate for the design and scale of development and location. It is important that lighting is designed to illuminate the target only and not detract from the night sky's natural state and thereby avoid light pollution and its associated impact on wildlife.

5.2.32 Government guidance on how to consider light within the planning system provides useful information for applicants and planners about the various issues that need to be considered and how they can be mitigated. They also point to other sources of available information that could inform approaches to lighting and help reduce light pollution:

- Guidance notes available from the Institute of Lighting Professionals including the reduction of obtrusive light and Bats and artificial lighting in the UK.
- Information from the Bat Conservation Trust on artificial lighting, and Eurobats guidelines for consideration of bats in lighting projects.
  The Chartered Institution of Building Services Engineers (CIBSE) – Society of Light and Lighting (SLL) Code for Lighting.
  The Chartered Institution of Building Services Engineers (CIBSE) – Society of Light and Lighting (SLL) Lighting Guide 6: The Exterior Environment.

5.3 LP14 (1) [b] – protect sensitive environmental receptors.

5.3.1 JLP Policy LP14 (1b) sets a policy requirement to 'protect sensitive environmental receptors, such as designated protected species, ecological sites and watercourses (including wet and dry ditches, groundwater and ponds) from air quality impacts identified through appropriate emission modelling and interpretation of the modelling results, and water quality impacts, using pollution prevention measures and demonstrable on-site contingency measures.' This includes those sensitive environmental receptors potentially affected beyond the District boundaries.

5.3.2 It is important to ensure that proper consideration is given to biodiversity and geodiversity issues in addition to those related to nutrient impacts and subsequent air quality impacts for intensive livestock and poultry developments.

5.3.3 Policy provisions are also set out in other JLP policies, including SP09, LP15 and LP16. This also includes the need to meet biodiversity net gain (BNG) requirements.

5.3.4 Ammonia, nitrogen deposition, phosphates and particulate matter from intensive poultry and livestock units can impact negatively on sensitive receptors and therefore require full assessment through the planning application process. The considerations and assessments should include in-combination and cumulative impacts, as well as any anticipated changes to that environment from activities that are permitted but not yet commenced.

Ammonia and Nitrogen

5.3.5 Intensive livestock and poultry units are a substantive source of ammonia and nitrogen which has potential to impact upon the human and natural environment (through air pollutants and water course pathways). The deposition of nitrogen onto protected sites can impact upon their condition and therefore any activities which may increase the loading of nitrogen and contribute to critical levels and load exceedances impacting a designated site must be assessed. Impacts upon national sites are covered under the Habitats Regulations Assessment process. Impacts upon Sites of Special Scientific Interest (SSSIs), ancient woodlands, local wildlife sites and irreplaceable habitats must also be considered and are material considerations as set out in legislation, national planning policy and the JLP.

5.3.6 In particular, ammonia and the nitrogen deposition resulting from ammonia emissions can affect the diversity and composition of plant species and their ecosystem where fast-growing species adapted to high nutrient availability out-compete species which are more sensitive, smaller or rarer. It can also lead to soil acidification, direct toxic damage to leaves and by altering the susceptibility of plants to frost, drought and pathogens. This can be particularly significant for ancient woodlands and rivers and watercourses. It should also be noted that whilst a feature may not directly be affected by air quality its habitat may be, so there can also be indirect impacts.

Ammonia and Nitrogen reports / assessments

5.3.7 Applications for intensive livestock and poultry uses which are likely to result in emissions of ammonia and deposition of nitrogen must be supported by an assessment of those impacts in relation to locally, nationally and internationally designated sites and sensitive receptors. Assessments will need to be completed for extensions and/or changes to existing sites as well as new development. For existing sites, assessments should set out clearly current emissions, the proposed situation with no mitigation, and the proposed situation with mitigation measures.

5.3.8 Recent interim guidance has been issued by Natural England and the Environment Agency (May 2022 Air Quality Risk Assessment Interim Guidance) with regards to their assessment of air quality risk for planning applications and environmental permits respectively which could have a likely significant effect on international sites. This guidance should be considered along with Natural England Guidance on Agricultural Mitigation and Reduction Methods (as set out in Appendix 2).

5.3.9 For small scale intensive livestock and poultry extension applications, it may be appropriate to use the 'Simple Calculation of Atmospheric Impact Limits' (SCAIL) model to screen the proposal for air quality impacts to nearby sensitive receptors of designated sites. However, if this shows that there may be a potential impact, detailed emissions modelling should be carried out.

5.3.10 All other applications with potential to impact upon designated sites and/or sensitive receptors, should provide detailed emissions modelling carried out by a specialist consultant. The methodology and baseline for the assessment should be approved by the local planning authority through consultation with the relevant consultee(s), including Natural England, as part of the pre-application process. Any appropriate assessment should be able to demonstrate that mitigation measures are known to be effective, reliable, timely, guaranteed and of sufficient duration. As a result, the inclusion of such measures should be supported by evidence and

confidence that they will be effective and that they can be legally enforced to ensure they are strictly implemented by the plan/project proposer.

Biodiversity Net Gain

5.3.11 Biodiversity net gain (BNG) is defined by Natural England as an approach to development, and/or land management, which aims to leave the natural environment in a measurably better state than beforehand. BNG is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). The JLP Policy SP09 (Enhancement and Management of the Environment) and Policy LP16 (Biodiversity and Geodiversity) set out the Councils' strategic policy approach to BNG, prior to the introduction of the statutory requirement. The biodiversity metric tool which is a habitat-based approach used to assess an area's value to wildlife. The tool can be used or specified by any development project, consenting body or landowner that needs to calculate biodiversity losses and gains for terrestrial and/or intertidal habitats. For further information on BNG, see the Councils' *Biodiversity and Trees SPD* and the National Planning Practice Guidance regarding BNG.

5.4 LP14 (1) [c] – consider and address the impact on water resources and the capacity of the water supply infrastructure network.

5.4.1 LP14 (1c) sets out a policy requirement to consider and address the impact on water resources and the capacity of the water supply infrastructure network, taking account of the limitation particularly on the Hartismere supply network. The Babergh and Mid Suffolk Water Cycle Study (Oct 2020) identified both Districts as an area with limited water resources. The north east of Mid Suffolk is within the Hartismere Water Resource Zone which has particularly limited available supply headroom until 2033 at the earliest and will impact upon new and existing non-household developments according to Essex & Suffolk Water. Water Resource Zones within the Anglian Water region also have constraints in terms of available headroom for non-domestic water resource requests. In these areas, all the water supplied is sourced from groundwater abstracted from boreholes and could therefore be considered more vulnerable to the effects of drought. Consideration should also be given to the Suffolk Coastal District Council (now East Suffolk Council) and Ipswich Borough Council Cross Boundary Water Cycle Study (Jan 2019).

5.4.2 The limitations for non-household water across the Districts' water resource zones (managed by both Anglian Water, and Essex & Suffolk Water [Northumbrian Water]) are a key sensitivity in Babergh and Mid Suffolk, as identified in Policies SP08 and LP26. Accordingly, the availability of sufficient water resources to supply proposed intensive livestock and poultry units must be considered at an early stage. Where new water infrastructure

serving the development is required details should be provided to enable complete consideration of the scheme.

5.4.3 The consequences of unsustainable water usage in vulnerable groundwater areas can be significant, potentially causing rivers to dry up (and subsequently damaging biodiversity ecosystems). Furthermore, a lowering of groundwater levels can result in reduced water supply availability for local areas, forcing a need to manage demand or source water supply from other areas. Consequently, the regulation of abstraction licences intends to prevent increases in the level of abstraction in the short term and to reduce the level of abstraction over the long term in order to restore managed supply and restore biodiversity.

Reports / assessments

5.4.4 For circumstances identified in Policy LP14, a Water Supply Management Statement (also referred to as a Water Resource Assessment) must be carried out by a specialist geo/hydrological consultant. The methodology and baseline for the assessment should be approved by the local planning authority through consultation with the relevant consultee(s), including the Environment Agency and Water Company, as part of the pre-application process. The purpose of the assessment is to ensure water efficiency and integrated water management measures have been fully considered and included where feasible to reduce overall demand resulting in a reduction in non-domestic water demands to an acceptable level, determined in collaboration with the relevant water company.

5.4.5 The methodology must be undertaken to the level of best practice in water resource planning, in terms of water monitoring and efficiency measures, based upon a minimum period of 10 years and include consideration for a drought year (defined by the most severe drought on record – currently 1921) as well as taking account of evaporation rates and 'dead water' (i.e. the level of water required to remain in a reservoir to avoid cracking and keep pumps working). The calculations should demonstrate water neutrality (set out in a water neutrality position statement) based on daily water usage over the period from first animal placement, and include loss through evaporation, cooling etc. and demonstrate that once taken into account rainwater harvesting, any borehole, and direct rainfall there is water headroom. The modelling should also demonstrate the amount of water use per animal and the relevant industry standard this meets. All assessments should also robustly include cumulative and in combination effects, including any anticipated changes to that environment from activities that are permitted but not yet commenced. The baseline for assessment should be agreed with the local planning authority and relevant consultees (including the Environment Agency and the relevant water company), as part of the pre-application process.

5.4.6 Should the development proposal be reliant on the use of a private water supply (such as agricultural reservoirs and private boreholes), consideration should be given as to whether any increased abstraction will impact on the water supply network and the supplies to local residents and businesses. Additionally, information must provide detail to demonstrate that the private water supply has capacity to meet the demand of daily water usage over the production cycle. Where supply is being sourced from boreholes it should be monitored through an extraction meter. Where new water infrastructure is required, this should form part of the application package in order to ensure that the whole scheme package and its impacts can be properly assessed.

5.5 LP14 (1) [d] – demonstrate that there will be no significant effects upon sensitive environmental receptors from air pollutants.

5.5.1 Guidance on sources of air pollutants is set out in section 5.2.5 of this guidance. In accordance with the JLP (paragraph 14.13) the modelling of impacts on sensitive receptors must be considered appropriate through consultation with the relevant organisation and approved by the local planning authority. For natural environmental receptors Natural England and any other relevant consultees should be consulted at pre-application discussions to ensure the modelling methodology and approach is considered appropriate.

Reports / assessments

5.5.2 There are several guidance documents on the assessment of air quality impacts on the environment and nature conservation sites. These include:

- The Institute of Air Quality Management: A guide to the assessment of air quality impacts on designated nature conservation sites (June 2019).
- The Chartered Institute of Ecology and Environmental Management (CIEEM) published guidance on the Ecological Assessment of Air Quality Impacts.
- The Woodland Trust practical guidance: Assessing Ammonia Impacts on Ancient Woodland, which provides a decision-making process for assessing ammonia air pollution on ancient woodland sites. This assessment process ensures that developments do not result in deterioration of ancient woodland habitats and is designed to help local planning authorities in their decision making. This is therefore currently recommended as a useful tool for assessing ammonia impacts on ancient woodland.

5.6 LP14 (1) [e] – demonstrate adequate provision has been made for the management and disposal of waste.

5.6.1 For large intensive pig and poultry farms, the Pollution Prevention and Control (PPC) Regulations 2000 apply. Guidance on Sustainable Agricultural Waste Management (Environment Agency 2001) is available.

5.6.2 Policy LP14 (1e) sets a policy requirement for applicants to demonstrate that provision has been made for the management and disposal of waste materials, wastewater and liquids, litter and manure for each production cycle which will not lead to pollution. This must be demonstrated through submission of waste management plan, to be agreed with the local planning authority and relevant consultees. The waste management plan should include:

- the daily volume of wate generated across a production cycle,
- an assessment of waste management impacts on surface water, groundwater (including groundwater source protection zones [SPZs]) and water abstraction points (including boreholes), with respect to contaminant ingress and the associated risk to water quality, and
- strategic consideration of where the waste could/will be disposed of from these sites at scale is required. If waste is proposed to be incinerated for energy, confirmation from the handling facility in compliance with the current permitted license is required that there is sufficient capacity to manage any waste generated at the local power stations.

5.6.3 For planning applications for extensions and/or intensification of existing facilities, the waste management plan must take account of the in-combination effects of both the existing and the proposed use. These considerations must be undertaken at the planning application stage, to ensure that cumulative impacts can adequately be assessed, regardless of whether there may be a separate requirement for Waste Management Permits, Bespoke Permits and/or Licences. If waste is proposed to be spread on land, the local planning authority and the Environment Agency may require conditions to ensure pollutants are monitored and mitigated.

5.6.4 Suffolk County Council (SCC) should be notified if waste proposed to be moved outside of landholdings, i.e., transfer of poultry litter or pig slurry to anaerobic digestion plant, as that is considered as removal and transfer of waste. Accordingly, SCC would need to be consulted as the waste authority in this matter.

Reports / assessments

5.6.5 Guidance on how to comply with environmental permits for Intensive Farming Use (Environment Agency 2010) describes the standards and measures we expect intensive pig and poultry farms to take in order to control the risk of pollution to air, land and water. This note accords with the JLP definition for 'intensive livestock and poultry units' and applies to Section 6.9 of Schedule 1 to the Environmental Permitting Regulations (EPR) Part A(1)(a) Rearing of poultry or pigs intensively in an installation with more than: (i) 40,000 places for poultry; (ii) 2,000 places for production pigs (over 30kg) and/or (iii) 750 places for sows. The assessments of the proposed management, operations, emissions and monitoring should be undertaken in accordance with the above published guidance.

5.7 LP14 (1) [f] – serve to minimise visual and landscape impacts.

5.7.1 Certain types of intensive livestock and poultry unit agricultural development have the potential to have a detrimental impact on the landscape, particularly industrial scale agriculture of large poultry units, silage covers, anaerobic digesters and storage buildings.

5.7.2 Applications for major agricultural development will be expected to fully address the landscape impacts of the proposal, both individually and in the context of other similar developments within visual proximity of the proposal site. The policies of the JLP, in particular Policy LP17, provide the guidance necessary to enable applicants to ensure that development proposals comply with landscape quality objectives. These support the use of landscape assessment as part of the development management process, both to increase awareness of the countryside's character and to ensure that future development is compatible with that character.

5.7.3 It is often inevitable that proposals for development in the countryside will alter the appearance of the landscape. However, the Councils' planning policies and associated text detail the importance of ensuring that change is appropriate to its setting and not be allowed to overwhelm the inherent character of the landscape. The landscape's ability to accept a proposed development without undue harm will be a prime consideration.

5.7.4 Potential impacts include:

- Increased scale of buildings and use of materials that are not characteristic of the rural landscape.
- Visual impact of development and infrastructure where there was previously open countryside.
- Loss of tranquillity and remoteness due to introduction of movement, light, sound.

- Reduction in quality of landscape character, through key feature removal (hedgerow, trees, alteration of the natural topography).
- Increased transport requiring road widening and visibility splays, therefore loss of characteristic rural lanes.
- The incremental effects of development, including extensions to existing sites, erode the landscape character.

Reports / assessments

5.7.5 The following paragraphs set out the reports and assessments required for all major agriculture development the following should be submitted. Where an application is for an extension and/or intensification of, but not classed as major development in itself, it may also require submission of this supporting information.

5.7.6 For larger or more sensitive developments and those requiring an Environmental Impact Assessment (EIA), a full Landscape and Visual Impact Assessment (LVIA) will be required as part of the Environmental Statement (ES), unless the Scoping Opinion concludes otherwise. Where an EIA is required, a number of photo montages from selected representative viewpoints should be agreed with the Local Planning Authority in advance.

5.7.7 Where a LVIA is not required, for smaller and less complex developments, a Landscape and Visual Appraisal (LVA) is recommended to demonstrate that the applicant has undertaken a rigorous investigation of the site, context, impacts and mitigation methods to achieve an optimum design proposal for planning consideration. The LVA should address both effects on the landscape as a resource in its own right and effects on views and visual amenity. This should consider cumulative impacts with other developments, together with impacts on historic settings. The LVA should be used to inform the siting and landscape scheme for the development.

5.7.8 A landscape scheme should be submitted with the planning application, and it is required to show how the proposed development will integrate into its surrounding. This should cross-reference any ecological and biodiversity enhancements that are required and show integrated drainage solutions.

5.7.9 The plan should include:

- Hard landscape details, such as levels, surfaces and boundary treatments.
- Soft landscape proposals showing existing and new planting, such as Tree shelter belts, buffer zones and other mitigative planting in an appropriate scale (such as 1:200) and providing clear specifications (species, sizes, densities, total numbers, provenance, soil preparation,

aftercare and management, including, but not limited to, watering and weed control). In the case of watercourses, it is recommended that mixed vegetative buffers are provided.

- Details of external materials, colours and finishes. These should be chosen with the surrounding landscape in mind and with reference to the local geology and seasonal changes.
- Details of any ecological and biodiversity enhancements that are required (BNG) and integrated drainage solutions. Integrated drainage solutions should follow the Sustainable Drainage Systems (SuDS) hierarchy with respect to surface and water flows, taking account of the potentially higher nutrient and/or contaminant levels in the water content.
- A separate lighting design should be submitted, that addresses landscape as well as ecology (wildlife) requirements.

5.7.10 A photo montage of the proposed development can be a very useful landscape tool for demonstrating impacts, as they can be easy to understand, compared to looking at plans. Therefore, photo montages of how the development will sit in the landscape when completed and when any new planting is well established, would be welcomed by the local planning authority to help its assessment of the impact on the landscape setting.

5.8 LP14 (1) [g] – highway and transport considerations

5.8.1 The primary cause for concern in relation to transport issues can be the increase in the number and frequency of large farm machinery and lorry movements on narrow rural lanes. This can lead to worries over highway safety, noise, damage to highway surfaces and their verges and small narrow bridges over time and the mud and dust in the roads causing hazardous driving conditions. The routing of such heavy goods vehicles (HGVs) and the frequency of movements vary across the production cycle. Policy LP14 (1g), therefore sets a requirement to ensure the provision of safe and suitable access for all users, including the proportionate mitigation of any unacceptable impacts on highway safety resulting from a significant increase in traffic movements. All proposals are required to demonstrate their impact on HGV movements over a production cycle taking account of the origin, destination and routing of goods and waste within the processing chain.

5.8.2 Pre-application consultation should take place with the local highways authority based on the origin and destination of all associated vehicle movements over the production cycle, taking account of the in-combination and cumulative movements, and at submission stage prior to the determination of a planning application to ensure that issues of highway safety are addressed. A Transport Assessment may be required and if not,

where appropriate, a Transport Statement should be submitted as part of the planning application process. Restrictions on associated traffic movements may be controlled through conditions or Section 106 obligations on the grant of planning permission.

Reports / assessments

5.8.3 A Transport Assessment, which may be required, or a Transport Statement, can be assessed as part of the planning considerations to ascertain the impact of HGV and other associated movements. Considerations may include limiting movements on routes and outside of certain hours to minimise impacts.

5.8.4 In all other instances applications should be accompanied by a Transport Statement addressing the amount and type of traffic to be generated from origin to destination across the production cycles and the adequacy of the local highway network. A Transport Statement is a shorter, simpler version of a Transport Assessment which can be used when transport impacts are considered to be limited. This must be done for all stages of the proposed development, including from construction to decommissioning (if appropriate). For the operational stage the assessment must encompass the origin and destination of the products (including waste) throughout the production cycle to cater with that traffic both in terms of design and capacity. Other matters such as the adequacy of the vehicular means of access to the application site and the adequacy or otherwise of visibility splays should be addressed as well as a review of injury accidents on the routes impacted by the proposal.

5.8.5 National Planning Practice Guidance is available for Travel Plans, Transport Assessments and Statements. The applicant will need to demonstrate that the vehicular means of access and the local highway network (in terms of both design and capacity) are adequate to cater with the traffic generation, addressing both numbers and types of vehicles. This must be based upon both the in combination and cumulative vehicle movements and associated impacts, taking into consideration the Suffolk Lorry Route Network.

5.8.6 It is unlikely that the proposals will require travel plans, due to the rural nature of the proposals, their staffing levels and hours of shift pattern working, unless it falls above the current travel plan thresholds. However, it is encouraged that a Transport Assessment or Transport Statement considers alternatives to the private vehicle, such as the provision of buses for staff, which could be secured through a Section 106 Agreement or conditions.

5.9 LP14 (2) – locational considerations

5.9.1 As set out in the policy where proposals for expanded or new units adjoin existing groups of agricultural buildings, or any new proposals in remote, isolated or detached locations outside settlement boundaries, they must provide appropriate justification and demonstrable evidence for the location. This must be done in accordance with JLP Policy SP03.

5.10 LP14 (3) – cumulative impacts

5.10.1 Where an individual intensive livestock or poultry development is considered acceptable, the cumulative impacts resulting from similar developments (including other similar uses or uses associated within part of the processing chain) nearby must also be taken into account. The proximity of such uses will vary, and it would not be appropriate to state a specific distance and the impacts of the other uses on the localities will vary. For the purposes of cumulative assessment, where the impacts of the established and proposed uses overlap (such as the area of noise dispersion/traffic movements/water abstraction and other such impacts) they should be subject to assessment.

5.11 LP14 (4) – sensitive land uses

5.11.1 Proposals for residential buildings or other sensitive land uses within 400m of established intensive livestock and/or poultry units will be subject to special consideration to ensure impacts are assessed. Dependent upon the sensitivity of the specific land use to the impacts the thresholds of acceptability may be reduced. In accordance with the policy and proposals which would have significant adverse environmental impact will not be permitted.

5.12 Other considerations

5.12.1 Policy LP14 details specific considerations to be taken into account in the determination of planning applications for intensive livestock and poultry unit proposals, however other matters may also be of relevance. Accordingly, any assessment should take account of all relevant policies in the JLP, Neighbourhood Plans and any other guidance and material considerations. For example, Policy LP19 when considering the setting of heritage assets and Policy LP23 (1) in terms of reducing a development's dependence on fossil fuels.

Appendix 1 – IEMA Environmental Impact Assessment Checklist

Environmental Statement (ES) Review Criteria	Pass / Fail or concern
1) Regulatory Compliance	
a) Does the ES, in the light of the project being assessed, identify, describe and assess effects on:	
Human Beings	
(explain)	
Fauna & Flora	
(explain)	
Soil	
(explain)	
Water	
(explain)	
Air	
(explain)	
Climate	
(explain)	
Landscape	
(explain)	
Cultural Heritage	
(explain)	
Material Assets	
(explain)	
b) Does the ES set out the interaction between the factors set out under criteria 1.a)?	
c) Does the ES contain a clear section, or sections, providing a description of the project comprising information on the site, design and size of the project?	

d) Does the ES contain a section, or sections, that describe the likely significant effects of the proposed project on the environment?	
e) Does the ES contain a clear section, or sections, that provide a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects?	
f) Does the ES contain a clear section, or sections, that provides the data required to identify and assess the main effects which the project is likely to have on the environment?	
g) Does the ES contain a section, or sections, that outline the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects?	
h) Has a Non-Technical Summary been produced containing an outline of the information mentioned in 1c) to 1h)?	
2) Environmental Impact Assessment (EIA) Context	
A) Scoping	
i) Has the ES clearly stated what effects will be addressed and how this decision was reached?	
ii) Are the main environmental concerns and their locations, where relevant, clearly identified with an explanation of the risks posed from the project? Including relevant environmental issues beyond the boundary of the proposal?	
iii) Does the ES identify the environmental issues that will not be assessed and explain why they are not being considered further?	

iv) Is the sub-topic scope undertaken in relation to each of the topics included in the EIA appropriate and focused	
B) Alternatives, including iterative design	
i) Does the ES set out the main alternatives that were considered at different points during the development of the proposal?	
ii) Are the main reasons for the selection of the proposal over distinct alternatives and design iterations easily identifiable?	
iii) Does the ES clearly indicate how the EIA process, environmental issues and consultee responses influenced the iterative design process that led to the proposed project?	
3) EIA Content	
A) Baseline	
i) Does the ES describe the current condition of those aspects of the environment that are likely to be significantly affected by the development?	
ii) Is the sensitivity / importance of the baseline environment clearly evaluated?	
iii) Are limitations in the baseline information identified and clearly set out?	
B) Assessment	
i) Are the methods for establishing the magnitude of impacts on the receiving environment clearly defined?	
ii) Does the ES set out a generic methodology for the assessment and evaluation of significance OR clearly explain and justify a specific method for each environmental issue?	
iii) Does the assessment of significance consider the impact's deviation from the established baseline condition? (e.g. the sensitivity of the environment, the extent to which the impact is reversible, etc.).	

iv) Does the ES identify the significance of impacts that would be anticipated to remain following the successful implementation of any mitigation set out in the ES?	
vii) Does the ES give appropriate prominence to both positive and negative effects relative to their significance?	
C) Environmental Management	
i) Does the ES describe the measures proposed to be implemented to avoid, reduce, and if possible, remedy significant adverse impacts of the proposed development?	
ii) Is an indication of the effectiveness of the stated mitigation measures provided?	
iii) Are details provided related to any management plans that the ES indicates should be implemented to deliver the mitigation measures and/or monitor the environmental impact of the project?	
If so, is clear justification set out as to why the issue has been scoped out?	
4) Communication	
A) Consultation	
(detail)	
B) ES Quality	
i) Does the ES provide appropriate illustrations through the use of maps and/or diagrams? In particular this should cover:	
• the location of the site, site layout and boundary,	
• operational appearance,	
• main environmental receptors and	
• impacts are displayed in a visual format where appropriate.	
ii) Is the area of proposed land clearly described and indicated on an appropriate map or diagram?	

iii) Are the anticipated timescales of construction, operation and (where appropriate) decommissioning of the proposal clearly set out in the main text?	
iv) Is the information in the ES presented in a manner in which a non-specialist would be able to logically identify information they were seeking?	
v) Are technical terms kept to a minimum, with a glossary provided?	
C) Non-Technical Summary (NTS)	
i) Does the NTS provide sufficient information for the non-specialist reader to understand the main environmental impacts of the proposal without reference to the main ES?	
ii) Are maps and diagrams included in the NTS that, at a minimum, illustrate the location of the application site, the footprint of the proposed development, and the location of relevant key features?	
iii) Is it clear that the NTS was made available as a separate, stand-alone document to facilitate a wider readership?	

See EIA Quality Mark at www.iema.net.

Appendix 2 – Natural England, Reducing Agricultural Emissions

Reducing Agricultural Emissions

The following are emission mitigation and reduction methods to improve air quality:

Mitigation and Reduction Method	Details	Additional benefits	Emission Reduction % (figures from Code of Good Agricultural Practice unless otherwise stated)
Fertiliser application – meeting crop need	Ensuring only the fertiliser required for the crop is applied – refer to RB209 nutrient management guide. Take into account nutrients supplied in pig slurry, poultry manure, anaerobic digestate etc. as well as the time of year and application method. Consider different types, quantity, and quality of fertiliser carefully e.g. urea and others	Financial savings and reduction in loss of nutrients to air and water	See guidance in COGAP link above
Correct protein content in cattle and pig diet	Selecting the correct protein content of the ration will help to minimize the overfeeding of crude protein and will reduce the amount of nitrogen excreted in manure.	Financial savings and reduction loss of nitrogen to air and water. Improved animal performance.	A decrease of 1% in dietary crude protein in the diet of finishing pigs results in 10% lower ammonia emissions. See guidance in COGAP link above for more detail.
Slurry/digestate application methods	This includes application via trailing hose, trailing shoe or injection	Reduces the amount that slurry/digestate comes into contact with the air, therefore reducing nitrogen and ammonia loss. Financial savings due to reduced nutrient losses during spreading.	Surface broadcast – 0% Trailing hose – 30-35% Trailing shoe – 30-60% Shallow injector – 70-80% Deep injector – 90% Ammonia emissions almost double for every 5°C increase in temperature so factor in temperature when applying.
Re-gen agriculture	This includes practices such as; cover crops, no till, direct drilling, mob grazing etc.	Improvements in soil structure and ability to hold nutrients - Subsequently, there will be air quality benefits through retention of nutrients including nitrogen and ammonium in the soil which reduces the amount of emitted excess pollutants escaping from the soil into the atmosphere.	Dependant on practices implemented
Tree shelter belts and buffer zones	These can be (but are not limited to being) located down wind of livestock housing, particularly pig and poultry units – you can use wind rose diagrams to determine the best location. They can also be used in ranging areas for free range poultry. Areas of tree planting are most effective at capturing ammonia if they designed specifically for this purpose https://farmtreestoair.ceh.ac.uk/	Reduces the impact of emissions on protected sites. They capture pollutants, dust and particulate matter, benefiting the environment and human health.	See specific case studies for % reductions in this Guidance Documentation
Covering slurry stores	These covers can permeable or impermeable - Refer to SIG Slurry Infrastructure grant: guidance for applicants - GOV.UK (www.gov.uk)	Financial savings due to retention of ammonia and nitrogen. Impermeable covers will maintain original volume of slurry.	Approx. % reductions: Impermeable cover – 80% Floating cover – 60% Floating clay balls/headplates – 60%

			Slurry bags – up to 100%
Slurry acidification	This process involves adding sulphuric acid slurry to reduce the pH to between 5-6pH. This process due to the chemicals involved can be costly.	When the pH value is lowered, the ammonia does not evaporate and instead stays within the slurry.	See guidance in COGAP link above
Covering manure heaps	Covering manure heaps can involve a roofed area or plastic sheeting.	Reducing nutrient loss to air and water. Reducing water content in the manure from precipitation which reduces the evaporation of ammonia. Please note, there are draw backs to sheeting including creating waste plastic and the H&S risks associated with climbing onto heaped manure.	See guidance in COGAP link above
Automatic slurry scrapers	To reduce ammonia emissions from slurry produced by housed livestock by frequent removal. AQ1: Automatic slurry scraper - GOV.UK (www.gov.uk)	Improved animal welfare and health due to cleaner housing, better management of slurry and enhanced working environment for staff.	See guidance in COGAP link above, section 5.2 Studies have demonstrated that washing with water post scraping can result in a reduction of up to 70% of emissions compared to scraping alone.
Air scrubber	Removes dust particles and acts as a cooling and ventilation system for livestock housing.	These can reduce emissions and odour. However, they are costly and usually must be designed specifically for the house. Unlikely to be fitted unless required under a permit.	Approx. % reduction: 90%
Low emission flooring	This includes slatted flooring – refer to: AQ2: Low ammonia emission flooring for livestock buildings - GOV.UK (www.gov.uk)	Improved animal welfare and health due to cleaner housing and better management of slurry. Regular scraping is important to ensure that the benefits of this flooring are achieved.	25-46% as stated in this AHDB report
Increase bedding material	The more bedding implemented, the better the absorption of urine and water. Consider different types of bedding material.	Improved animal welfare and health.	25% as stated in this AHDB report
Bokashi	Anaerobic fermentation of manure and compostable materials into an organic fertiliser, this involves applying microorganisms to the manure initially to increase microbial turnover.	Improved soil structure and health post application and reduction in emissions. At present this is quite experimental due to this process being a new concept in the UK. Results may differ depending on how you manage the process.	Please refer to the guidance. See Bokashi recipe below as recommended by Agriton: 1m3 Organic Matter C:N ratio of 20:1 Moisture % of 35-65 2L Actiferm (Effective Microorganisms) 10kgs Ægir Seashell (pH regulator) 10kgs Edasil Clay Minerals (nutrient binder)