

From: [steve raasch](#)
To: [SM-Defra-RESP-notifications \(DEFRA\)](#); [Una Chandler](#)
Subject: Fwd: Lower Barn NH3
Date: 09 September 2026 09:16:54
Attachments: [image001.png](#)
[260909_001.0325.001_Garboldisham NH3 v6.pdf](#)
[DLG_report_Lavamatic_Broiler.pdf](#)
[BREEZE NH3 for EA.zip](#)

----- Forwarded message -----

From: <mstoaling@isopleth.co.uk>
Date: Wed, 9 Sept 2026 at 08:50
Subject: RE: Lower Barn NH3
To: steve raasch <stephenraasch@gmail.com>

Steve,

Responses below and updated report attached.

Please provide a revised ammonia modelling report to address the following:

- Please clarify the height and efflux velocity of the high velocity (HV) ridge fans for existing and proposed housing.

Table 1: Modelling Inputs

Stack ID	Height (m)	Efflux Velocity (m/s)
Existing: Ridge	5.411	6.0
Proposed: Ridge	5.411	6.0
Proposed: Scrubber	5.2	4.15

The modelling has assumed that stacks would be 30cm higher than the ridge, which is the minimum that would typically be the case for poultry housing. Assuming this height therefore represents a 'worst case' approach for the dispersion modelling (i.e. greatest downwash influence). No changes are required.

Note: The modelling report states that the HV ridge fans have a height of 5.411 m, which is

lower than that specified in the current permit and pre-application assessment and falls within the medium velocity ventilation category. In addition, no fan efflux velocity has been provided. Technical standards document refers to HV roof fans with 5.5m release height.

- The modelling report was commissioned by Harrison Pitt Ltd on behalf of BJ & PM Gooderham. However, the permit was transferred from Gooderham Farms Limited to Crown Chicken Limited on 01/07/2022. Please clarify this discrepancy and confirm that the assessment relates to the current permit holder, Crown Chicken Limited.

Isopleth Ltd was commissioned by Harrison Pick Ltd, on behalf of BJ & PM Gooderham, to carry out the ammonia impacts. The name operator, for purposes of the Permit, is not relevant to the ammonia report which presents the impacts of the existing and proposed poultry house. The Permit application documents provide details of the operator, for purposes of the Permit. No changes are required.

- Ensure airflow through scrubber is accurate and consistent throughout the application and modelling and can be justified from DLG certification for Lavamatic unit for broilers.

The report has been updated to refer to a maximum of 110,000 m³/hour. No further changes are required.

Note: there appears to be inconsistency in the airflow m³/hour numbers in the DLG test report 7561 for broiler chickens (110,000 m³/h) compared to the modelling report (120,000 m³/h).

- Based on broiler air flow requirement of 4.5 m³/hr/kg live broiler weight, please clarify total max air flow required and justify the statement that 95% of the airflow passes through the scrubber and 5% through the bypass as stated on page 13 of the modelling report.

The report has been updated to refer to a maximum of 110,000 m³/hour with 5% bypass. This is considered to be a worst case for a broiler house with 34,350 birds per shed in this location.

- Please use actual emission concentration from DLG report with justification for value used and update modelling report for proposal with relevant input and revised output modelled PCs.

The DLG report states that:

In the test, the exhaust air purification system achieved "Lavamatic" achieved a minimum separation efficiency for total dust of 74.3 % in winter and 80.3 % in summer. Particulate matter PM10 was at least 72.5 % in winter and at least 72.8 % in summer. Chemical reactions (formation of ammonium sulphate) remove at least 85.1 % of ammonia in winter and at least 80.5% in summer. In summer, 84.8 % and 83.5 of the nitrogen was removed from the system via the wash water (N removal), and 83.2 in winter. The measurement of the aerosol discharge remained unremarkable and fulfilled the requirements of the DLG test framework. The results are summarised in Table 1.

The DLG report therefore shows a significantly greater abatement performance than is required for the DLG test framework, the certification requiring at least 70% mitigation. The modelling assumes that the system will meet the requirements of the DLG 70% target and therefore represents a 'worst case' approach. No changes are required.

- In accordance with the guidance, [Environmental permitting: air dispersion modelling reports - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/environmental-permitting-air-dispersion-modelling-reports), please submit the data input files for the ammonia modelling.

The data files have already been submitted, however are attached for reference.

Matt Stoaling

Director

Isopleth Ltd.

Mob: 07903 336625

www.isopleth.co.uk

Isopleth Ltd, Lower Ground Floor Office, [6 Gay Street, BATH, BA1 2PH](#)



Isopleth Ltd is Registered in England and Wales No. 9150373. This email and any attachments to it may be confidential and are intended solely for the use of the individual to whom it is addressed. Any views or opinions expressed are solely those of the author and do not necessarily represent those of Isopleth Ltd. Any advice or opinion is subject to the terms and conditions of any appointment to which it relates. Parties with whom Isopleth Ltd. is not in a contractual relationship in relation to the subject of the message should not use or place reliance on any information, advice, recommendations and opinions in this message and any attachment(s) for any purpose. Isopleth Ltd uses any information provided by you to fulfil your requested services and undertakes to never pass on your data without express permission, in line with its obligations under the General Data Protection Regulations (GDPR). Please do not rely on email notification of any changes to Isopleth Ltd bank account details without direct verbal confirmation from us. Please telephone Isopleth Ltd on a trusted number if you receive such an email. We accept no responsibility for funds being sent to the wrong account should you make a payment to Isopleth Ltd in reliance on such an email.