

DC/20/02052 Castle Hill, Thorndon Planning Application

Calculation of Traffic Volumes

Response to Environmental Statement Addendum dated November 2020

The Environmental Statement Addendum (ESA) dated November 2020 updates the May 2020 Environmental Statement (ES) prepared by Parker Planning Services and reflects a reduction in the scale of the proposed development from 4no. to 3no. proposed poultry sheds.

S1.7 of the ESA states that “The number of proposed sheds has been reduced as a result of the Environment Agency (EA) comments received 3rd July 2020 and 15th September 2020”.

S1.4 of the ESA outlines that the original ES should be read in conjunction with, amongst other documents, the “Transport Statement – updated by Section 3 of this ESA November 2020”.

S3.1 of the ESA states: “The Highway Traffic & Transport Consultancy Ltd (The HTTC Ltd) produced the submitted Transport Statement considering the highway traffic and transport issues related to the proposal. The full report; *Transport Statement in respect of a proposal to erect four poultry houses with a capacity of up to 188,000 birds on land at Castle Hill Farm Occold, Suffolk IP23 7PU* was submitted at Appendix 8 of the original ES and Planning Application submission ((May 2020) for the attention of the relevant consultees.”

The revised proposal is now for an intensive poultry unit (IPU) consisting of 3 poultry sheds, each housing 47,000 broilers, totalling 141,000 broilers per cycle.

However, Stradbroke and Thorndon Parish Councils are of the view that the ‘updated’ traffic data presented in Section 3 of the ESA is, again, incorrect and misleading and does not provide a sound basis for decision making.

We have previously highlighted the fact that averaging vehicle flow to model the impact of a wholly cyclical industry is incorrect and misleading. The ESA perpetuates the use of flawed methodology and as a result does not represent the true nature of traffic flows to and from the proposed IPU site and its real impact.

The following summary provides reasons for this view in more detail and should be read in conjunction with the traffic report (dated 5th October 2020) and covering email concerning traffic volume and movements, submitted by Stradbroke and Thorndon Parish Councils to BMSDC on 6th October 2020.

1) Traffic Comparison

TABLE 1

The revised proposal is for an intensive poultry unit (IPU) consisting of 3 poultry sheds, each housing 47,000 broilers, totalling 141,000 broilers per cycle.

STPC = Stradbroke & Thorndon Parish Councils

ESA/HTTC = The Highway Traffic and Transport Consultancy (KAB Rev. for 3 sheds as tabled in ESA page 19)

Activity	STPC Vehicle Type*	STPC Vehicle No. per Crop**	STPC Vehicle No. per Year**	ESA/HTTC Vehicle No. per Crop***	ESA/HTTC Vehicle No. per year***	Difference - where ESA/HTTC Veh. No. per year is less/more than STPC
Gas deliveries	Tractor/ tanker	2	16	Gas & shavings	Gas & shavings	
Shavings deliveries ⁽¹⁾	44 tonne HGV	3	23	4	28	11
Feed deliveries ⁽²⁾	44 tonne HGV	20	154	14	98	56
Chick deliveries	7.5 tonne LGV	2	16	2	14	2
Bird removal ⁽³⁾	44 tonne HGV	19	152	20	140	12
Manure/Litter removal ⁽⁴⁾	16t Tractor/Trailer	43	338	9	63	275
Dead bird removal ⁽³⁾	7.5 tonne LGV	5	38	5	35	3
Waste water removal ⁽⁵⁾	Tractor/ tanker	3	24	3	21	3
Sub total	HGV/LGV/ tractor	97	761	57	399	362
+Staff vehicles ⁽⁶⁾	Car/van	86	654	49	343	
Catcher teams ⁽⁷⁾	Minibus	6	48	-	-	
Cleaning teams ⁽⁸⁾	Minibus	3	24	-	-	
Vet/inspectors	Car	5	31			
Engineer/maintenance	Van	4	30	-	-	
Management		7	52	6	42	
Management/staff non-crop					146	
Sub total	Car/van/ minibus	111	839	55	531	308
Total No. Vehicles	All vehicles	208	1600	112	930	670
Total No. Traffic Movements	All vehicles	416	3200	224	1860	1340
ESA/HTTC shortfall v STPC						41%

* Assumptions for vehicle types and size based on STPC research - HTTC Transport Statement does not provide a breakdown by size of vehicle.

** Based on duration of rearing cycle 38 days and turnaround between cycles 10 days (see spreadsheet) NB. There are inconsistencies between the HTTC Transport Statement (S1.06 'only some 7 cycles each year') and Parker Planning's Planning Statement S1.4 'approximately 7.2 flocks per annum'. Transport and Planning Statement estimates 7-10 days between cycles for clear out. However, if 7 day clear out (which would maximise the volumes of bird throughput) is adopted/achieved, then it would result in 8.1 cycles/year, which would increase traffic volume. Note: the Scoping Request submitted by Parker Planning Services on 26th July 2019 details "approximately 8 cycles of birds/year" in the Proposal.

*** Based on 7 cycles per year (HTTC Transport Statement) but see ** above for inconsistency in data reports.

For sources of evidence and assumptions see Appendix 1. For overview of the key stages of the IPU cycle see Appendix 2.

As before, Stradbroke and Thorndon Parish Councils (STPC) have calculated vehicle numbers using data obtained from published legal sources and industry standards and where evidence is unavailable, assumptions have been made based on wide ranging market research.

The outcome of STPC traffic analysis indicates that the actual number of vehicle movements likely to be generated by the proposal for an intensive poultry unit, consisting of 3 poultry sheds (each housing 47,000 broilers, totalling 141,000 broilers per cycle and over 1 million birds per year) is nearer 3,200 vehicle movements per year, as opposed to 1,860 vehicle movements per year outlined in the ESA, which represents a 41% shortfall in reported vehicle numbers/movements.

2) Further Comments on ESA Section 3

The traffic report submitted to BMSDC on 6th October 2020 jointly by STPC contended that the HTTC Transport Statement concerning the transportation dynamics of IPUs was vague and in parts, misleading; the report also contained errors and omissions.

The updated version of the KAB7 table included on page 19 of the ESA also contains arithmetical errors: vehicles have been excluded from totals or the number of days has been incorrectly calculated; it also contains omissions.

2.1 Staff Transport

Staff transport numbers in ESA Section 3 remain unchanged from Table KAB 7 of the HTTC Transport Statement, which sets out: *Staff: light van/car 49 per crop plus 126 non-crop time and Management: light van/car 8 per crop plus total of 20 non-crop time.* This equates to 545 staff vehicles per year.

This analysis is incorrect.

The staff vehicle numbers in the HTTC Transport Statement are based on one visit per day during the crop growing cycle, whereas DEFRA guidelines⁽⁶⁾ recommend two visits per day (a detail that HTTC did, in fact, accurately reflect in staff vehicle numbers in the Shadingfield DC/19/2195 Transport Statement).

The number of vehicles for 'management' in ESA Section 3 remain unchanged from Table KAB7 of the HTTC Transport Statement but again, the ESA fails to provide a further breakdown of staff vehicle numbers.

2.2 Peak Vehicle Flows

Section 3.7 of the ESA states: *"the peak vehicle flows take place only over a period of a couple of days, during each chicken production "cycle", with only some seven cycles each year i.e. peak vehicle flows on only some fourteen days of the year, and at a level of only some 20 vehicles per day (10 vehs in + 10 vehs out)."*

This statement is misleading.

Like the HTTC Transport Statement, the ESA only provides vehicle numbers for the *whole* cycle and does not provide a *weekly breakdown*.

The busiest traffic flow periods are during the last two weeks of the growth cycle and the days in between the cycles when the site is cleared and cleaned and prepared for the next crop of birds. The number of feed deliveries per week increases as the birds grow.

The peak vehicle flows will take place during week 5, week 6 and week 7 and will include multiple feed deliveries during weeks 5 and 6, bird collection HGVs and contract catching teams' LGVs on day 32/33 and day 38/39 (which begin in the early hours but due to the volume of birds to be collected may continue into late morning) and once empty of birds, vehicle movements associated with clearing, cleaning, preparing and restocking the site over a number of consecutive days including removal of litter, contract cleaning teams and

equipment, maintenance vehicles, the removal of waste water by specialist companies, delivery of new bedding for the next crop of birds and gas tanker deliveries to heat the sheds to the required temperature before the chicks are delivered.

All of this activity takes place within a concentrated period of one to two weeks over a number of consecutive days but this detail of this intensity is omitted from the HTTC Transport Statement and is again omitted from the ESA.

2.3 Traffic Flows Outside Peak Hours

Section 3.14 of the ESA, states that “Only on fourteen days of the year will the maximum hgv flows be achieved, and outside network peak hours. These maximum flows will be only some 20 vpd two way flow (10 in + 10 out), on only two days every seven weeks, which is also a flow of a low order. Thus, there will not be any material increase in vehicle flows along Castle Hill, B1077, or on the wider highway network, including roads through Eye, and local villages.

This statement is incorrect.

A traffic report submitted as part of a retrospective planning application for the Cranswick plc meat processing factory at Eye Airfield (DC/19/03907) states that “live birds are received on site between 6am and 5pm” (Trundley Design Services: Transport Generation Report April 2017).

In addition, an email from Ian Trundley, dated 8th August 2019 relating to the discharge of conditions application DC/19/03103 (Cranswick factory on Eye Airfield) states that: “Chicken could start arriving as early as 2.30am and cease at 11pm”.

2.4 Baseline/Existing Conditions

Section 3.11 of the ESA sets out traffic volume associated with the existing three poultry units, located near the proposed site.

Section 3.12 of the ESA states: “These birds are removed on a monthly basis (more often than the current proposal) as they are then put outside as free-range chickens, to mature to harvesting time. Hence the removal of these three existing units will lead to the removal of these existing vehicle flows at the site. As such there will be a reduction in the net increase in vehicle flows at the farm and on the highway network.”

This statement is misleading. There will, in fact, be a significant increase in vehicle flows as a result of the proposed IPU site.

The current poultry business operates on a ‘monthly’ cycle ie 30 - 31 days and not 38 days as detailed in the proposal for the new site (note that the current business produces birds to be transferred to another farm to finish growing in a free range environment). Most IPUs allow 7-10 days to empty and clean the sheds once birds have been removed and before restocking and as the current operation is significantly smaller than that of the proposal, it would be reasonable to assume that the turnaround time is likely to be nearer 7 days than 10 days. On that basis the cycle equates to 38 days, which represents a 5 week cycle, compared to a 7 week cycle.

Section 3.11 of the ESA illustrates that, at present, the existing facility produces 22 HGVs (44 movements) per cycle. There are 9 growing cycles per year, which equates to 198 HGV (398 movements) per annum.

Table KAB7, as revised in the ESA, illustrates a total of 930 vehicles (1,860 movements) per annum generated by the proposed IPU site consisting of three poultry sheds.

According to the ESA traffic volume data there will be almost a fivefold increase in vehicle flows at the farm.

According to Stradbroke and Thorndon Parish Council's estimates, there will be an eightfold increase in vehicle flows at the farm.

The most severe impact will be in the period of 10 days or so at the end of and in between cycles.

2.5 Assessment of Impacts – Local and Wider Highway Network

Section 3.7 of the ESA states: "The development proposal will not result in any material increase in vehicle flows along Castle Hill, B1077, or on the wider highway network, including through Eye."

This statement is incorrect.

See Traffic Report dated 5th October 2020 (produced by Stradbroke & Thorndon Parish Councils) – sections 2.6 and 2.7 for details, in which we refute this statement.

In an email dated 11th September 2020, the agent for the applicant outlined the routes to be employed for transport to and from the proposed IPU site, including:

- Feed from Kenninghall via the A140, Thornham Magna, Thorndon and then Castle Hill to site.
- Eggs would similarly come from Crown Chicken at Kenninghall along the same route.
- Washing lorries would also come from Kenninghall.
- All other routes detailed in the email are via 'local' or 'B roads'.

It must be re-iterated that there is a **long standing weight restriction in Thorndon** and it cannot be justified to allocate HGV traffic to this route.

2.6 Assessment of Impacts - Accident/Collision Data

Section 3.10 of the ESA states that "There is no relevant accident/collision data over a significant 20 years record period for the existing substandard commercial access to the B1077, and the wider local highway network." This assertion is taken from the HTTC Transport Statement.

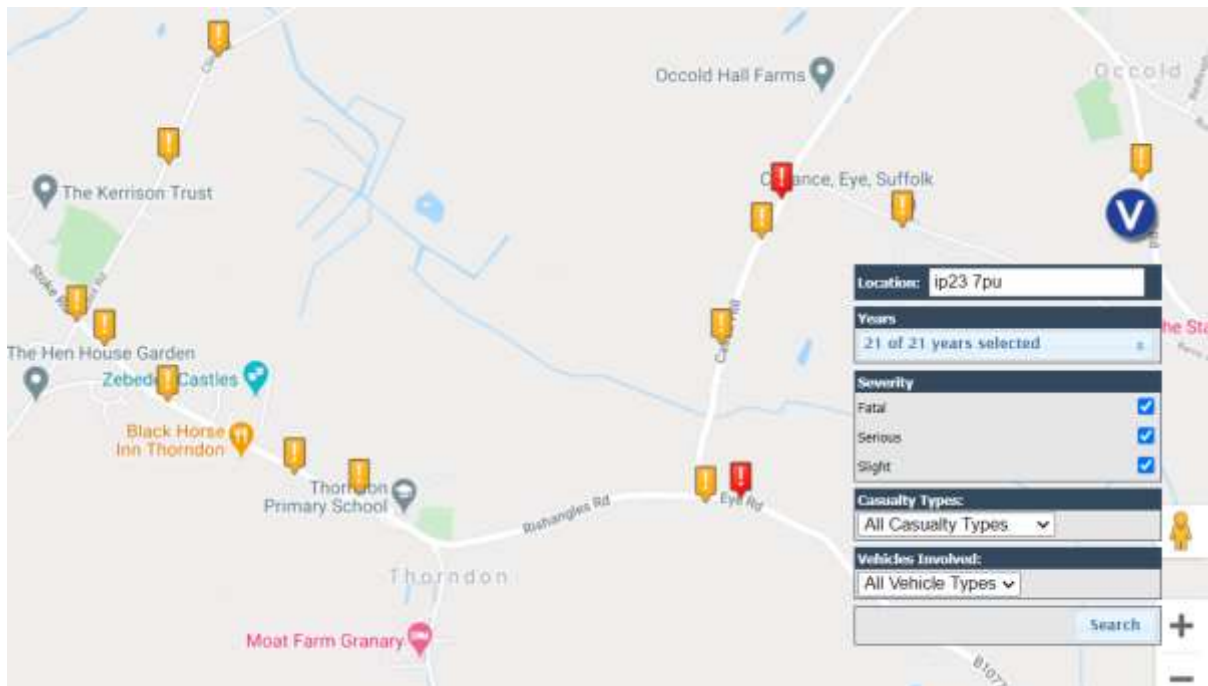
This assertion is incorrect.

As previously stated in the Traffic Report dated 5th October 2020 produced by Stradbroke & Thorndon Parish Councils the statement made by HTTC within the Transport Statement on pages 6 and 17 are not supported by the evidence submitted - Page 6 para 1.11, Page 10 para 2.03 and Page 17 para 3.01 of the HTTC Transport Statement, quotes data over a 20 year period and refers to KAB 12, however KAB 12 shows maps that are taken from a **5 year period only** with no indication which 5 year period has been selected.

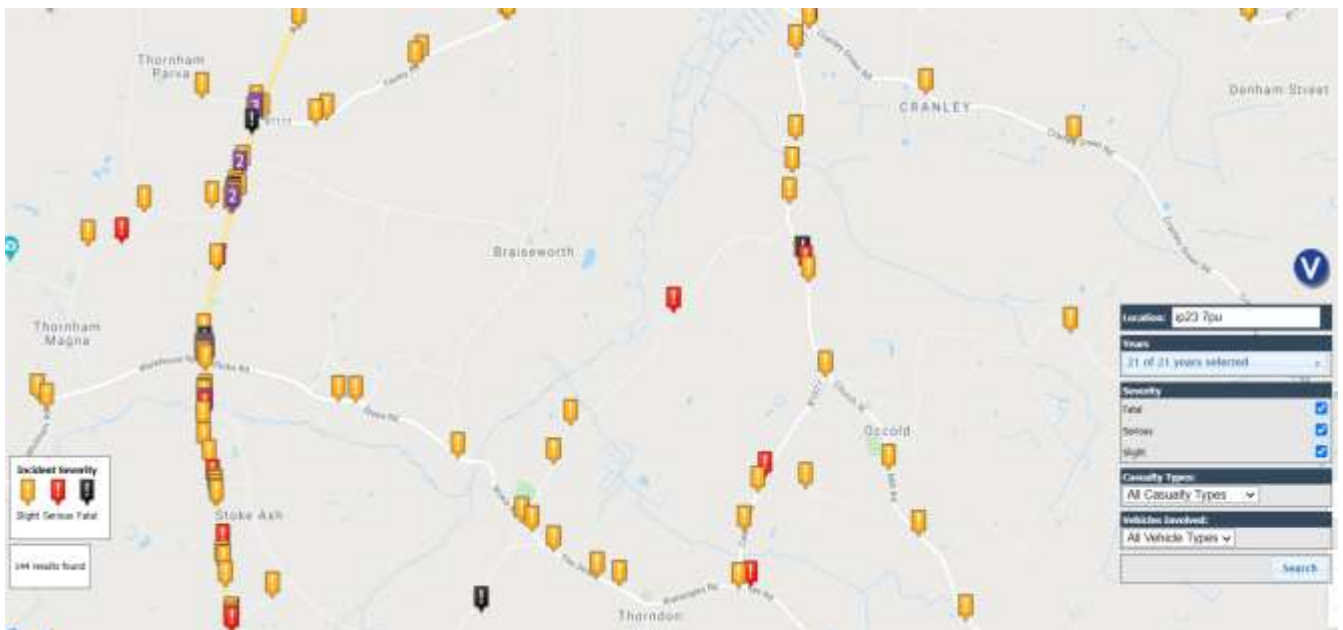
The summary in Section 3.15 of the ESA, dated November 2020 states: "*Collision data confirms that no relevant collision have taken place on Castle Hill, at the existing access, or on the nearby highways network over the most recent 20 years record period. Hence, the B1077 in this vicinity has an excellent accident record.*"

This statement is NOT supported by the maps below.

CRASHMAP UK – the full 21 year record shows the following collisions/accidents:



CRASHMAP UK – the full 21 year record of the wider higher network is shown below:



Section 3.14 of the ESA states: “Only on fourteen days of the year will the maximum hgv flows be achieved, and outside network peak hours. These maximum flows will be only some 20 vpd two way flow (10 in + 10 out), on only two days every seven weeks, which is also a flow of a low order. Thus, there will not be any material increase in vehicle flows along Castle Hill, B1077, or on the wider highway network, including roads through Eye, and local villages.

Taken from HTTC Transport Statement: *A material increase is one which will have an adverse effect on the junction capacity, or link capacity of the highway network, or highway safety. The addition of a few vehicles per hour (as with this proposal) cannot have any noticeable effect on the results of junction capacity calculation, nor can it have any perceptible effect on link flow capacity. Additionally, flows at such levels cannot have any potential adverse effects on highway safety.”

As highlighted in the Traffic Report, dated 5th October 2020, produced by Stradbroke and Thorndon Parish Councils (S3.2 and S3.3) the peak vehicle flows will more likely take place over some 70 days or so throughout the year.

The lack of recognition of this fact, together with the use of erroneous accident data in the HTTC and now the ESA report means that the real impact on the highways network has still not been correctly modelled.

2.7 Waste litter/manure Removal

The ESA has failed to consider the potential impact of the removal of over 2,500 tonnes of waste from the IPU, despite the fact that the Scoping Decision states “Application documents should include an assessment of expected waste generation from the construction and lifetime phases of the development” .. “This assessment should provide details of the location and capacity of waste management facilities, both on and off-site, and the associated noise and traffic impacts arising from the arrangements.”

Likewise, the HTTC Transport Statement does not detail vehicle movements in relation to waste litter removal. It is unclear, from all of the documentation submitted with the planning application, exactly what the destination is, the only reference to waste/litter removal is in the Planning Statement, towards the end of the document: “At the end of each 6 – 8 week growing period, broilers will be removed from the houses with used litter taken away from the farm in covered trailers”. The Scoping Request by Parker Planning Services in July 2019 made no mention of waste litter either - it may be destined for use elsewhere on land at the farm or another farm (note the implications of this in relation to the Court of Appeal case R. (on the application of Squire) v Shropshire Council 19th March 2019 but if not and it is ‘destined for a local biodigester’ it could potentially be transported to Barley Brigg at Stradbroke or possibly Eye Power Station. There is currently no evidence to suggest that either of these waste facilities has the capacity to utilise the waste from the proposed IPU but if this changes then the potential for severe impact on rural routes for both of these destinations is very real.

3) Conclusion

Section 3 of the ESA concerning the transportation dynamics of IPU is vague, misleading and contains errors and omissions and as a consequence will lead to misinterpretation. It is not a sound document for decision making purposes.

Averaging vehicle flow to model the impact of a wholly cyclical industry is incorrect and misleading. The ESA perpetuates the use of flawed methodology and as a result does not represent the true nature of traffic flows to and from the proposed IPU site and its real impact. The most intense vehicle flows will be in a concentrated period towards the end of and in between production cycles, amounting to some 70 days or so throughout the year.

Section 3.19 quotes the response from Suffolk County Highways to the original application, however as this report has evidence the response was based on flawed data and misleading statements, STPC request that Suffolk County Highways review any response in light of the matters raised in this report and the report dated 5th October 2020.

Submitted by: Stradbroke Parish Council and Thorndon Parish Council

09 December 2020

Appendix 1

Sources of evidence and assumptions for Table 1

- (1) RSPCA Welfare Standards for Chickens (Nov 2013)
<https://www.berspcaassured.org.uk/media/1086/rspca-standards-chickens-nov2013.pdf>
5(e) (bedding) to be an average minimum depth of 5cm to allow for the dilution of faeces. Chapmans UK Ltd <https://www.chapmansqualitybedding.co.uk/poultry> Extract: Each 230kg maxi bale will cover 1,000sqft of floor space to 1". 36 bale HGV capacity (DC/19/2195/FUL Parker Planning letter dated 13th August 2020).
- (2) National Statistics (Indicator 7: Poultry Sector Feed Conversion Ratio derived from DEFRA Hatcheries and Poultry Slaughter House Surveys)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/835758/ghgindicator-7poultrysector-02oct19.pdf January 2019 data for broiler production, records a moving average feed conversion ratio (FCR) of 2.6kg feed per kg of meat produced, on a slight downward trend. However, the volume of feed required for the Shadingfield planning application has been calculated using a report produced for the RSPCA:
<https://www.rspca.org.uk/documents/1494939/7712578/Everyone%27s+a+winner+chicken+report+%28PDF+590KB%29.pdf/d7079dbf-30a5-f240-285e-1086668f02e9?t=1554205296757> which specifically refers to broilers reared to Red Tractor Standards (the same growth cycle as that proposed). Birds reared to this standard require 1.8kg feed to produce 1kg meat. The average live weight of birds at point of slaughter is based on DEFRA United Kingdom Poultry and Poultry Meat Statistics July 2020, UK Poultry Slaughtering, Weights and Poultry Meat Production:
<https://www.gov.uk/government/statistics/poultry-and-poultry-meat-statistics> providing an average of 2.23kg for the year July 2019 to July 2020.
- (3) Everyone's a Winner - Broiler Analysis (Report for RSPCA) by Agra CEAS Consulting, 2006. Page 11, Table 2.
<https://www.rspca.org.uk/documents/1494939/7712578/Everyone%27s+a+winner+chicken+report+%28PDF+590KB%29.pdf/d7079dbf-30a5-f240-285e-1086668f02e9?t=1554205296757>
Average level (%) of mortality for birds reared to ACP (labelled Red Tractor) standards = 5.1% (Approximate range 2.0 – 8.8%).
- (4) (DEFRA) The Nitrate Pollution Prevention Regulations 2015, Schedule 1, Manure, nitrogen and phosphate produced by livestock:
<https://www.legislation.gov.uk/uksi/2015/668/schedule/1/made> states chickens raised for meat are categorised as producing 0.06kg manure daily. Poultry litter itself is the mixture of bird manure, chicken feed, feathers, sawdust and bedding material that accumulates at the bottom of chicken sheds, therefore the calculation is also based on the weight of bedding removed from the sheds, assuming adherence to industry welfare recommendations: RSPCA Welfare Standards for Chickens (Nov 2013)
<https://www.berspcaassured.org.uk/media/1086/rspca-standards-chickens-nov2013.pdf>
whereby "the floor of the house must be completely covered in litter" and "be an average minimum depth of 5cm to allow for the dilution of faeces".

Parker Planning – Planning Statement (Annex 2 - 14th July submission) dated May 2020 page 20 paragraph 6.21 states:
"At the end of each 6 – 8 week growing period, broilers will be removed from the houses with used litter taken away from the farm in covered trailers ..."
- (5) Northern Ireland Environment Agency Guidance for Operators on Preparing an Agricultural Water Audit for IPPC Farming Installations January 2011.
<https://www.daera-ni.gov.uk/sites/default/files/publications/doe/pollution-guidance-operators-preparing-an-agricultural-water-audit-ippc-farming-installations-2011.pdf>

Appendix 2 details the average broiler unit (housing birds 2-2.5kg) requires 6.8 litre/square metre during the cleanout process. Total internal floor area is 4,923m², which will create 271,531 litres waste water per year. Removal assumed by 11,000 litre tractor drawn tanker.

- (6) DEFRA Broiler (Meat) Chickens: Welfare Recommendations (updated 5th July 2019)
<https://www.gov.uk/government/publications/poultry-on-farm-welfare/broiler-meat-chickens-welfare-recommendations> S3. Inspecting your flock - Birds should be checked twice a day.
- (7) Review of the Poultry Catching Industry in England and Wales, report prepared for Department of Environment, Food and Rural Affairs and Food Standards Agency by ADAS Poultry Consultancy Group October 2006
<https://acss.food.gov.uk/sites/default/files/multimedia/pdfs/poultrycatchreview.pdf> Catchers are organised into teams which, in the poultry meat sector typically consist of 4-6 people working together in a single poultry house. Whilst depopulation is taking place, large farms may have more than one catching team on site at a particular time. Biosecurity awareness, interpretation and practice amongst poultry catchers Research Article in Preventative Veterinary Medicine 1/6/17 Authors: Caroline Millman, Rob Christley, Dan Rigby, Diana Dennis, Sarah J O'Brien and Nicola Williams
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5450931/> Working in teams, usually of around 4-6 people, catchers collect 5000 to 6000 birds per hour, placing them in crates or 'modules', and moving the modules on to trucks for transportation to the factory.
- (8) <https://www.pedersen-group.co.uk/pcs/mucking-out/>
Three or four contractors in each cleaning team. Cleanout fleet includes tractors and tankers, tractors with trailers, Bobcat skid steers (2 per shed for pushing the litter to the centre of the shed; also using brush attachment for final sweep of sheds) and telehandlers (compact telehandlers run down the centre of the shed to load the litter into waiting lorries or tractors and trailers).

Appendix 2

Overview of the Key Stages of the Intensive Poultry Unit (IPU) Cycle

Broiler IPUs operate on any number of cycles per year, whereby the more cycles completed, the more birds produced.

- Start (Installation)
 - Delivery of new bedding
 - Delivery of gas for heating of sheds
 - Delivery of feed for new crop
 - Delivery of day old chicks

- During (Growth)
 - Weekly deliveries of feed
 - Weekly collection of dead birds
 - Daily Staff visits
 - Ad hoc inspection visits (Environment Agency/APHA etc)
 - Ad hoc maintenance visits
 - Ad hoc management visits
 - Ad hoc vet visits

- End (Harvest)
 - Thinning (typically day 32 or 33). A proportion of smaller live weight birds are removed from the crop to be slaughtered and processed at the factory, leaving capacity in sheds for remaining birds to reach higher live weights.
 - Harvest (typically day 38 or 39). All remaining birds are caught, crated and transported to the factory.
 - Catching teams are brought in to the site by minibus to capture and load the birds into crates and onto lorries for transfer to the factory.
 - Dead birds are removed and transported to rendering facilities.
 - Staff and management visits.

- End (Clear out and preparation for next crop)
 - Cleaning teams are brought in to the site by minibus to clear out and load spent litter onto tractors and trailers/lorries to be removed from the site.
 - Shed maintenance is carried out.
 - Sheds and surrounds are washed down, disinfected and dried in preparation for the arrival of the next crop.
 - Dirty water is removed from holding tanks on the site.
 - Staff, inspection and management visits.