

## SITE CONDITION REPORT

For full details, see H5 *SCR guide for applicants* v2.0 4 August 2008

**COMPLETE SECTIONS 1-3 AND SUBMIT WITH APPLICATION**

**DURING THE LIFE OF THE PERMIT: MAINTAIN SECTIONS 4-7**

**AT SURRENDER: ADD NEW DOC REFERENCE IN 1.0; COMPLETE SECTIONS 8-10; & SUBMIT WITH YOUR SURRENDER APPLICATION.**

1.0 SITE DETAILS	
Name of the applicant	Crown Chicken Ltd
Activity address	<b>Denham Feed Mill</b> Town Farm Denham Road Denham Eye Suffolk IP21 5DB
National grid reference	The site is centred on TM 19716 74709

Document reference and dates for Site Condition Report at permit application and surrender	1. Site reconnaissance visit on 3 <sup>rd</sup> September 2019 and desk top study to identify and examine in broad terms readily available information relating to the site without any intrusive investigation for Permit application.
--------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Document references for site plans (including location and boundaries)	2. Site Location Plan showing installation boundary and site surfacing and Site Drainage Plan provided with the Permit application.
------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------

**Note:**

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form, then you should submit the additional plan or plans with this site condition report.

## 2.0 Condition of the land at permit issue

Environmental setting including:

- geology
- hydrogeology
- surface waters

### Data sources:

1. British Geological Survey; (Sheet No 190, Eye, Solid and Drift Edition, 1:50,000 scale)
2. British Geological Survey; Borehole Scans
3. Cranfield Soil and Agrifood Institute; Soilscales
4. DEFRA; MAGIC map for Aquifer Designation, Groundwater Vulnerability, Source Protection Zones, Drinking Water Safeguard Zone (Surface water), Sites of Special Scientific Interest, Local Nature Reserves, Ancient Woodland, Nitrate Vulnerable Zone
5. Environment Agency; Main Rivers Consultation map, Risk of Flooding from Rivers and the Sea (RoFRas) map, Nature & Heritage Conservation Screening Report for Local Wildlife Sites
6. Information from various statutory sources has been summarised from the Enviro Insight report prepared specifically for this site by Groundsure Ltd and dated 10 September 2019
7. Natural England; National Character Area profiles; No83; South Norfolk and High Suffolk Claylands
8. Ordnance Survey mapping

### Location

9. Denham Feed Mill has been in use since the 1970s. Refurbishment in 2019 for processing pelleted animal feedstuffs also increased capacity to approximately 600 tonnes per day so must be operated with an environmental permit in accordance with the Environmental Permitting (England and Wales) Regulations 2016. Intensive poultry production is common in the area with poultry farms and processing plants nearby.
10. Site area approximately 0.5830 hectares.
11. The site is generally level with built structures including an access roadway off Denham Road into the site, weighbridge, grain silos, vessels for storing bulk liquids and mill building. Open concrete hardstanding covers all other areas. There is no unmade ground.
12. There are dwellings and agricultural premises in Denham Road to the west of the site with Town Farm house, farm offices and agricultural workshops closest, adjacent the site boundary and the weighbridge.
13. There are off-site farm buildings to the north, east and south, adjacent the site boundary but not associated with the permitted activity. They were being used for storing grain, farm machinery and farm workshops.
14. There is an off-site earth banked surface water storage lagoon close to the boundary which will be receiving roof water and surface water from the site.

### **Topography**

15. According to Natural England National Character Area Profile, the site is located on the South Norfolk and High Suffolk Claylands. Characterised by a large plateau area of chalky glacial till that is generally flat or only gently undulating. The edges of the plateau have been dissected by watercourses that form notable slopes, especially along the tributaries of the meandering River Waveney and the River Dove to the north and east of the site respectively. Fragmented areas of woodland, game copses, shelterbelts and carr woodland as well as hedgerow trees provide a treed landscape character throughout the High Suffolk Claylands.
16. The land off-site slopes down gently north-eastwards into open fields being used for arable agriculture – cereals, sugar beet and oilseed rape.

### **Geology**

17. According to the British Geological Survey (BGS) maps the natural superficial deposit underlying the site is Quaternary Lowestoft till (Chalky boulder clay), the solid strata (bedrock) is Quaternary Norwich Crag Formation, overlying Upper Chalk.
18. According to BGS Borehole Scans there are no recorded boreholes within the site. The closest drilled at East Anglian Fruit Farm in Church Road, Denham in 1978 approx. 580 metres to the west (NGR: 191747). The drilling report confirms relatively consistent geology with 60 feet (18m) of boulder clay overlying glacial sand and gravels to 132 feet (40m), then upper chalk.
19. Quaternary Lowestoft Formation Superficial Deposits are sedimentary deposits glacial in origin- undivided, chalky, pebbly, sandy clay. They are detrital formed by the action of ice and melt water and can form a wide range of deposits and geomorphologies associated with glacial and interglacial periods with low to moderate permeability.

20. The Quaternary Norwich Crag Formation are sedimentary rocks shallow marine in origin fine- to coarse-grained sands and silts, locally shelly or iron cemented, some clay. They are also detrital, ranging from coarse to fine- grained (locally with some carbonate content) forming interbedded sequences with high permeability.

### **Hydrogeology**

21. According to the MAGIC Aquifer Designation (Superficial Drift) map the underlying Superficial Deposits are classified as a Secondary (undifferentiated) Aquifer. Secondary (Undifferentiated) Aquifers have previously been designated as both minor and non-aquifers in different locations due to the variable characteristic of the rock types.

22. According to the MAGIC Aquifer Designation (Bedrock) map the underlying solid strata (the Crag Formation) is classified a Principal Aquifer. A Principal Aquifer is characterised as layers of rock or drift deposits with high intergranular and/or fracture permeability, where they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as a major aquifer.

23. According to the MAGIC Groundwater Vulnerability map the Principal Aquifer is categorised as having medium groundwater vulnerability. In an area that is providing protection to groundwater from pollution. They are likely to be characterised by low leaching soils and/or the presence of low permeability superficial deposits.

24. According to Enviro Insight Report there are two active groundwater abstraction licenses within the 2km influencing distance from site. Closest 580m west (NGR: 191747) a bore at East Anglian Fruit Fm in Church Road for direct spray irrigation. Next 1,100m south (NGR195736) a bore at Post Office Fm in Denham Rd for farming and domestic use.

25. According to the MAGIC Source Protection Zones map the site is not located in a Groundwater Source Protection Zone (SPZ). Environment Agency has defined SPZ for groundwater sources such as wells, boreholes and springs for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk.

#### **Soil Vulnerability Classification – Leaching Potential**

26. According to Cranfield Institute Soilscape map the soil around the site is characterised as No. 18 - slowly permeable seasonally wet slightly acid but base rich loamy and clayey soils with impeded drainage. Drains to stream network. Main risks are associated with overland flow from compacted or poached fields. Organic slurry, dirty water, fertiliser, pathogens and fine sediment can all move in suspension or solution with overland flow or drain water.

#### **Surface water**

27. Most roof water from the mill, silos, storage vessels and surface water off the open concrete hardstanding areas is conveyed off-site via grates and a solid underground pipe to and outfall into an off-site ditch approx. 190m north east of the site boundary. Next into an ordinary surface water course flowing northwest into Chickering Brook in 2.2km, next Gold Brook in 4.2km, next into the River Dove in 5.3km. The Environment Agency has designated the River Dove a main river.

28. The site is in a designated Nitrate Vulnerable Zone. The land is draining into nitrate polluted waters, or waters which could become polluted by nitrates if action is not taken.

29. Chickering Brook is generally of High/ Good chemical quality according to Agency Catchment Data Downloader.

30. Some roof water from the mill and surface water from open concrete hardstanding, mostly on the west side, is conveyed off site via grates and a solid underground pipe into an off-site sump and earth banked water storage lagoon.
31. The mills owners / landlord originally installed the lagoon before 1994 to prevent risk of pollution in the network of ditches from former pig housing, cleaning and refuelling agricultural vehicles and HGVs. Water is periodically removed from the lagoon for land spreading by the owner.
32. No surface water abstraction licenses within 2km.
33. Site elevation is approximately 45maOD. The Environment Agency map for Risk of Flooding from Rivers and the Sea (RoFRas) indicates the site is not in an area with risk of flooding.
34. BGS Groundwater Flooding Susceptibility Areas have been identified within 50m of the boundary of the site. Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded. Confidence rating of groundwater flooding here is low on a threefold scale – Low, Moderate and High.

#### **Designated Environmentally Sensitive Sites**

35. According to Environment Agency Nature & Heritage Conservation Screening Report provided for the permit application there are 8 Local wildlife sites (LWS), 4 ancient woodlands (AW) within the screening distance of 2km:

Hoxne Meadow LWS	~0.5km
Denham Churchyard LWS	~0.7km
Grove Wood LWS	~0.9km
Hoxne Wood AW & LWS	~0.9km
Coldham Wood AW & LWS	~1.2km
Deeperhaugh Wood AW & LWS	~1.2km
Redingfield Wood LWS	~1.7km
The Slades AW & LWS	~2.0km

	<p>36. According to the MAGIC land-based designations map there are no Sites of Special Scientific Interest (SSSI) within the screening distance of 2km. There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramasar sites within the screening distance of 10km.</p> <p>37. Nitrogen dioxide and sulphur dioxide in the air from the site can impact on protected conservation sites by exerting direct effects on the vegetation, or indirectly affecting the ecosystems through deposition which causes both hyper-eutrophication (excess nitrogen enrichment) and acidification of soils.</p> <p>38. A risk assessment during the permit application process will determine if emissions are insignificant and can be screened out, or whether detailed computer modelling will be required for the permit determination.</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> <li>• pollution incidents that may have affected land</li> <li>• historical land-uses and associated contaminants</li> <li>• any visual/olfactory evidence of existing contamination</li> <li>• evidence of damage to pollution prevention measures</li> </ul> <p><b>Data source:</b></p> <p>1. Groundsure: Information from various statutory sources has been summarised from a bespoke Enviro Insight report commissioned from Groundsure Ltd, dated 10 September 2019</p>	<p><b>Historical Pollution Incidents</b></p> <p>39. Employees spoken to during the reconnaissance on 3<sup>rd</sup> September 2019 had no records or recollections of any pollution incidents that may have affected land on site.</p> <p><b>Historical Land-uses and Associated Contaminants</b></p> <p>40. Historic maps 1884-1952 shows a small group of buildings on the site labelled as Town Barn and surrounded by agricultural land. Buildings were erected in approximately less than one tenth of the site today and in same location as the mill building.</p> <p>41. Map for 1982 shows extensive development on site into approximately the site / buildings seen today with the mill, adjacent off-site farm offices, workshops and storage buildings associated with agriculture. Site is labelled as Town Farm with no evidence of any pre-existing buildings associated with Town Barn having survived development.</p>

	<p>42. Records of 12 potentially infilled features from mapping within 500m of the site, the closest is 180m north and was marked as a pond in 1983.</p> <p>43. The National Incidents Recording System records one off-site incident within 56m of the site in Denham Road in 2003. Pollutant description is gas and fuel oils which caused minor impact on land and no impact on water. No evidence this was associated with any activity at Town Farm.</p> <p>44. Records of 10 Licensed Discharge Consents within 500m of the site for final treated sewage effluent. Receiving water is the tributary of the River Dove. Closest is 78m west of site in Church Lane.</p> <p>45. Dwellings in Denham Road south of the site entrance discharge into the drainage ditch here, next into a solid underground pipe alongside the site access roadway conveying treated effluent and field drainage into the site drainage system. It will mix with the uncontaminated roof water and surface water and outfalls into an off-site ditch.</p> <p>46. Records of a Part A (1) and IPPC Authorised Activity within 500m of the site for the poultry unit in Denham Road 213m from the site.</p> <p>47. <b>Potential polluting substances</b> on site:</p> <ul style="list-style-type: none"><li>• Liquid feed ingredients e.g. vegetable fats, EC authorised amino acids and feed additives, etc</li><li>• Kerosene for the boiler</li><li>• Boiler water treatment chemicals</li><li>• Hydrocarbon losses from HGVs on site.</li></ul> <p>48. <b>Pollution prevention measures</b> had been detailed in H1 Environmental Impact Assessment prepared for the Permit application. No evidence any pollution prevention structures were damaged.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



	<p>49. Concrete hard standing installed across the whole site with open surface water grates and sealed underground pipes prevents soil &amp; groundwater pollution. Concrete periodically inspected and any construction joints and cracking sealed.</p> <p>50. Liquid amino acids and Leciol delivered by bulk road tankers and offloaded directly into packaged bulk storage vessels located on concrete hardstanding with a block wall bund. Offloading will be undertaken and supervised by trained persons. Using indicative BAT for the food and drink sector to prevent overfilling of liquid tanks - packaged automatic overflow protection systems installed on amino acid tanks. The bund will be regularly inspected and emptied by mill workers.</p> <p>51. Packaged bulk storage vessels for kerosene, vegetable oils and amino acids on concrete hardstanding and banded / integrally banded bulk oil tank for kerosene inside mill. Any kerosene leak / spillage will be contained in an off-site lagoon.</p> <p>52. Newly installed in 2019 during improvements to the mill - an underground drainage pipe for boiler blowdowns including for the chemicals to control pH, scaling, oxygen scavengers and corrosion inhibitors, etc into the surface water drainage system into an off-site lagoon.</p> <p>53. Storing IBCs inside the mill and providing proprietary spill decks where required.</p> <p>54. Using indicative BAT for the food and drink sector to prevent overfilling of soya bean and Extropro bins using automatic controls backed up by manual supervision. Instrumentation includes microprocessor control, trips, flow metering and high-level alarms</p> <p>55. Using indicative BAT for the food and drink sector by making sure suitable dry clean-up equipment is always readily available and providing convenient, secure receptacles for the collected waste</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>56. Using indicative BAT for the food and drink sector by ensuring spillages are immediately swept, shovelled or vacuumed up to prevent raw materials or feedstuffs getting into any grates and drains.</p> <p>57. General fire precautions being maintained. Keeping sealed the joints and leakage points around grain / powder handling systems and maintaining scrupulous cleanliness. Installed explosion relief vents on silos, bins, dust collectors, bucket elevators and cyclone and an explosion isolation device on the grinder.</p>
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	58. No records or any recollections of any pollution incident that may have affected land on site.
Baseline soil and groundwater reference data	59. No visual or olfactory evidence of any existing contamination in the site reconnaissance on 3 <sup>rd</sup> September 2019 but the site was entirely covered with buildings and open concrete hardstanding areas. Intrusive investigation was not considered necessary owing to the site having been used continuously for agriculture since 1884.
<b>Supporting information</b>	<p>60. Provided with the original permit application:</p> <p>Site Location Plan showing installation boundary and site surfacing</p> <p>Site Drainage Plan.</p>
<b>3.0 Permitted activities</b>	
Permitted activities	<p>61. The Environmental Permitting (England and Wales) Regulations 2016; Regulation 2(1); Schedule 1; Part 2; Section 6.8; The treatment of animal and vegetable matter and food industries; Part A(1)(d)(ii) Treatment and processing materials intended for the production of feed products from vegetable raw materials with a finished product production capacity greater than 300 tonnes per day.</p> <p>62. Raising steam with a kerosene fired boiler is a directly associated activity.</p>

Non-permitted activities undertaken	63. The open concrete hardstanding and surface water drainage systems in between the mill site and other farm buildings will be shared with the vehicular and storage activities of an unrelated agricultural business, especially alongside the eastern and southern site boundary.
Document references for: <ul style="list-style-type: none"> <li>• plan showing activity layout; and</li> <li>• environmental risk assessment.</li> </ul>	64. Provided with the permit application: <p>Site Location Plan showing installation boundary and site surfacing, Site Drainage Plan, H1 Environmental Impact Assessment.</p>

**Note:**

In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (*Environmental Risk Assessment - EPR H1*) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.

These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater, we may need to request further information from you or even refuse your permit application.

4.0 Changes to the activity	
Have there been any changes to the activity boundary?	If yes, provide a plan showing the changes to the activity boundary
Have there been any changes to the permitted activities?	If yes, provide a description of the changes to the permitted activities
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	If yes, list of them
<b>Checklist of supporting information</b>	<ul style="list-style-type: none"> <li>• Plan showing any changes to the boundary (where relevant)</li> <li>• Description of the changes to the permitted activities (where relevant)</li> <li>• List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)</li> </ul>

5.0 Measures taken to protect land	
Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
<b>Checklist of supporting information</b>	<ul style="list-style-type: none"> <li>• Inspection records and summary of findings of inspections for all pollution prevention measures</li> <li>• Records of maintenance, repair and replacement of pollution prevention measures</li> </ul>

6.0 Pollution incidents that may have had an impact on land, and their remediation	
Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.	
<b>Checklist of supporting information</b>	<ul style="list-style-type: none"> <li>• Records of pollution incidents that may have impacted on land</li> <li>• Records of their investigation and remediation</li> </ul>

## 7.0 Soil gas and water quality monitoring (where undertaken)

Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

### Checklist of supporting information

- Description of soil gas and/or water monitoring undertaken
- Monitoring results (including graphs)

## 8.0 Decommissioning and removal of pollution risk

Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.

### Checklist of supporting information

- Site closure plan
- List of potential sources of pollution risk
- Investigation and remediation reports (where relevant)

## 9.0 Reference data and remediation (where relevant)

Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated.

If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.

### Checklist of supporting information

- Land and/or groundwater data collected at application (if collected)
- Land and/or groundwater data collected at surrender (where needed)
- Assessment of satisfactory state
- Remediation and verification reports (where undertaken)

## 10.0 Statement of site condition

Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:

- the permitted activities have stopped
- decommissioning is complete, and the pollution risk has been removed
- the land is in a satisfactory condition.