

B2.5c Non-technical summary

9. Denham Feed Mill is situated in a rural area approximately 300m east of the village of Denham and 5.0 kilometres east of Eye in Suffolk. The installation is centred approximately on National Grid Reference TM 19716 74709 and covers an area of 0.58 hectares.
10. The Denham Feed Mill has been operational as a feed mill since the 1970s producing meal for pigs. The facility was re-purposed and refurbished in 2019 to manufacture compound animal feedstuffs, mostly pellets for poultry. Improvements increased productivity, efficiency and financial viability of a broader integrated poultry business in the local area supplying chicken to supermarkets, wholesalers and food processors.
11. Treating and processing only vegetable raw materials with a production capacity greater than 300 tonnes per day so the facility must be operated with an environmental permit. Vegetable raw materials include grains, pulses, vitamins, minerals, oils, and fats formulated into nutritionally balanced feeding stuffs. Treatment and processing include receipt of raw materials via production of intermediaries to dispatch of finished products, including treating, handling and storage of all materials and wastes relating to the process.
12. Bulk solid raw materials (e.g. grains, processed pulses) are delivered to site in covered vehicles and tipped into reception hoppers prior to conveyance to silos or bulk bins for storage. Potential fugitive dust emission when tipping grain otherwise bag filters remove most dust for disposal during conveyance. Pulses tipped into a dedicated reception pit with pneumatic dust abatement unit and returned into the hopper. Other bulk powders (e.g. minerals) are delivered by road tankers and blown directly into dedicated storage silos. Bulk liquid raw materials (e.g. lecithin, methionine, lysine) are delivered by road tankers and are pumped into designated storage tanks (enclosed within bunds to limit the potential for fugitive losses). Packed raw materials (e.g. mineral and vitamin supplements, amino acids, enzymes, preservatives) are mostly stored internally.
13. Cereal raw materials are ground and sieved into a uniform particle size to ensure homogeneity in the finished product and the physical attributes required. Grinder operates within a sealed enclosure vented to atmosphere through a dust abatement unit. Once ground the cereal is conveyed into the processing plant by means of enclosed conveyors.
14. Raw materials are fed via load cells into a batch mixer producing homogenous batches to be conveyed to the pressing plant. Low-inclusion ingredients (e.g. minerals, amino acids, vitamin supplements, preservatives) are added into the mixer.
15. Steam is added directly into the mix 'conditioning', so all the energy is used in raising the temperature. Conditioning improves the physical characteristic of the mix for the extrusion process and destroys bacteria (e.g. Salmonella). A screw feed forces the hot mix into a press to be extruded through a rotating ring die to form a pellet product.
16. Hot product is passed through a counter flow air cooler to reduce its temperature, causing it to harden and become durable. Cooling involves air at ambient temperature passing directly over the pellets and released into atmosphere. Dust from cooling is abated with a

cyclone and returned into the flow of materials into the conditioner. Cooled pellets are sprayed with vegetable oil and enzymes. Finished product is conveyed into dedicated bulk bins.

17. Bulk product is out-loaded into dedicated delivery lorries for delivery in an enclosed bay to limit potential for fugitive airborne releases of dust and odour.
18. Storing raw materials in packaged silos, bulk bins, liquids in packaged vessels including kerosene for raising steam in a 2.835 MW boiler and transport fuel are directly associated.
19. Visible airborne releases of dust from intake tipping are abated. Point source emissions from stacks off a grinder and cooler are limited by a dust abatement unit and a cyclone. Emissions of nitrogen dioxide, sulphur dioxide and carbon monoxide from the boiler stack.
20. No liquid effluent from the process and no provision for vehicle washing within the facility. Most uncontaminated surface water from the site is conveyed through underground pipes then outfalls into an off-site ditch network flowing into Chickering Brook in 2.2km, next Gold Brook in 4.2km, next into the River Dove (classified as a main river) in 5.3km. Some uncontaminated/potentially lightly contaminated water conveyed into an off-site lagoon.
21. There are Sites of Scientific Interest (SSSI) and Local Nature Reserves (LNR) within 10km of the Denham Feed Mill - Hoxne Brick Pit SSSI is closest approximately 2.7km, next The Pennings, Eye LNR, Major Farm Braiseworh SSSI, Gypsy Camp Meadows SSSI and Chippenhall Green SSSI. There are eight Local wildlife sites (LWS) and ancient woodlands (AW) within 2km of the Denham Feed Mill - Hoxne Meadow LWS is closest approximately 0.5km, next Denham Churchyard LWS, Grove Wood LWS, Hoxne Wood AW & LWS, Coldham Wood AW & LWS, Deeperhaugh Wood AW & LWS, Redingfield Wood LWS, The Slades AW & LWS. There are no internationally designated wildlife sites within 10km.