SUPPORTING INFORMATION SECTION 2

SITE CONDITION REPORT

Executive Summary

The Dalton mill installation is to be located in an extension to Dalton airfield Industrial Estate. The site itself, although perhaps a brownfield redevelopment, the actual site where the new mill is to be constructed was never built on in any way and remained as grassland. The entire area which comprises the Dalton Industrial Estate served as an RAF airfield during WW2 and as a reserve station until 1956. The mill site therefore has until now been typical of the landscape of the 'Vale of York'. Throughout the Vale of York, the "solid geology" is extensively covered by superficial deposits, so much so indeed that its details are very largely a matter of conjecture, the Glacial deposits of the district having produced a surface configuration in all minor details quite independent of those of the underlying rocks, or, where conforming to them at all, doing so quite fortuitously.

The soil of this district is loam on a subsoil in part of Keuper Marls; alluvium also occurs. The area of the parish, with all the hamlets, is rather over 16,564 acres; 8,113 of these are arable and 414 wood. Historically the inhabitants were mainly engaged in agriculture, wheat, barley, oats, and turnips being the chief crops grown. The general elevation is undulating but low, seldom rising more than 100 ft. above the ordnance datum except in the west corner of the township of Marton-le-Moor, where it reaches 200 ft. in a few places. Some of the low ground sloping down to the Swale and Cod Beck is liable to floods.

This area has been farmed and managed in an environmentally sensitive manner for millennia. It is hard to imagine any environmental contamination would have occurred historically. In the previous several decades' nitrates run off, not used, or stored at the installation site, has become a growing threat to ground and surface water.

Historical maps confirm the rural nature and previous use of the site. The maps also demonstrate that the site of the new installation did not form part of the actual airfield or associated buildings. This can be confirmed by perusal of the historical maps which are included in **Section 1** of the supporting information.

In the future the ground and water courses will not suffer contamination because the installation site will be comprehensively metalled, and the water course will be protected by a full retention separator which prevents solids release or pollution of surface waters.

The condition of the land where the installation is sited has not really changed for millennia. The land is considered to be in a 'satisfactory state' and therefore a site investigation is not considered necessary. The future pollution risk from the continuing activities carried out at the installation is minimal. The only continuous discharge from the installation is organic in nature and readily biodegradable being the residue of crops. The quantity involved will be a fraction of the 20mg/m^3 maxima per cooler stack and 5mg/m^3 per grinder clean air outlet as the 8 tonne annual figure demonstrates. No substances used or stored on site will be considered to be 'of concern' as interpreted in the regulations.

The substances incorporated into animal feed products are non-hazardous and organic. The buildings will have an excellent quality over-site including the roadways and yard areas the surfacing will be from concrete. The principle incorporated substances involved are all held in specially purpose designed storage bins and silos. Minor ingredients will be compliantly stored in original packaging until

incorporation into the product. Liquids will be stored in purpose designed tanks which will be located in correctly sized bunds to be constructed according to PPG 2. The entire installation including storage bins, silos and tanks will be enclosed within the building envelope, this ensures protection from the elements, containment of any possible pollution including fugitive emissions of particulates and odour. Operations conducted at the site will be in line with a dedicated independently monitored 'Environmental Management Scheme', (EMS).

Site Condition Report

1.0 Site details

1.1. Name of applicant; I'Anson Bros Ltd

1.2. Activity address;
Waterloo House
Wellington Way
Dalton Airfield Industrial Estate
Dalton
Thirsk
North Yorkshire
YO7 3SS

1.3. National grid reference; SE 41811, 76298

1.4. Document references and dates for Site Condition Report

PPC Application reference No EPR/

1.5. Document references for site plans

Section 1 of the application supporting information pack

1.5.1-6. Site plans

Site plan 1.1.1 showing installation site boundary

Site plan 1.1.2 showing air emission points

Site plan 1.1.3 showing site drainage

Site plan 1.1.4 showing site surfacing

Site plan 1.1.5 showing waste storage areas.

Site plan 1.1.6 showing all emission points

1.5.2 1-10. Site location maps and maps showing receptors

Historical map legend

1.2.1. Map 1 Yorkshire 1:10,560 1856 Landmark Information Group Ltd

1.2.2. Map 2 Yorkshire 1:10,560 1892 Landmark Information Group Ltd

1.2.3. Map 3 Yorkshire 1:10,560 1912-1914 Landmark Information Group Ltd

1.2.4. Map 4 Yorkshire 1:10,000 1956 Ordnance Survey Plan

1.2.5. Map 5 Yorkshire 1:10,000 1972 Ordnance Survey Plan

1.2.6. Map 6 Yorkshire 1:10,000 1975 Ordnance Survey Plan

1.2.7. Map 7 Yorkshire 1:10,000 1980-1981 2015 Ordnance Survey Plan

1.2.8. Map 8 Yorkshire 1:10,000 1999 10K Raster Mapping

1.2.9. Map 9 Yorkshire 1:10,000 2019 Street View

1.2.10. Map 10 Yorkshire 1:10,000 1999 10K Raster Mapping (modified to include recent building and with receptors annotated).

(The site is centred on the above maps and is highlighted in green)

1.3 Site location plan

2.0 Condition of the land at permit issue

2.0.1 Introduction

The application applies to l'Anson Bros Ltd site at Waterloo House, Dalton. The site is located about 1km west of the village of Dalton, some 6 km South of Thirsk and about 14 km Northeast of Ripon.

2.0.2 Geographical location

The site is located in the nearly flat low lying Vale of York about 27km Northwest of York. The site is accessed from Dalton Lane which is accessed from the A168 Dishforth to Thirsk trunk road.

2.0.3 Location

Dalton is a village and civil parish in the Hambleton District of North Yorkshire, England. It is about 6 km south of Thirsk and near the A168 road. It mainly consists of farmland as well as an industrial estate. It has a population of over 500. Postcode district: YO7 3HE.

There are many places in Yorkshire called Dalton and the name means a village or homestead in a valley. This Dalton is recorded in the Domesday Book as Deltune and is situated on a tributary of the Cod beck.

For centuries the occupation of most of the inhabitants was farming but the years after the Second World War brought great change, when various industries became established in and around Dalton, including a turkey processing factory. The frozen poultry industry began in buildings erected for Dalton airfield. This airfield opened in 1941 and was occupied mainly by the Royal Canadian Air Force. It was closed eventually in 1956. However, still scattered throughout the village are a great variety of buildings which were constructed to serve the airfield.

DALTON (Deltune, xi cent.) was a berewick of Topcliffe in 1086, when it belonged to William de Percy, and the overlordship afterwards followed the descent of Topcliffe Manor (q.v.). In 1284–5, when Dalton consisted of 6 carucates of land, 10 oxgangs were held of John de Percy by Mauger le Vavasour, who had subinfeudated them to an unnamed tenant. The heir of Mauger appears as one of the holders in Dalton in 1368. Another tenant at that date, whose interest has survived, was Marmaduke Darell. When Dalton was first called a manor, in the 15th century, it was in the possession of his descendant Sir George Darell, kt., who was seized of it at his death in or before 1466. The descent of Dalton Manor has since followed that of Little Thirkleby, and it is now in the possession of Viscount Downe.

The toponym is first recorded as *Deltone* in the Domesday Book of 1086. The name is derived from the Old English *dæl* "valley" and *tūn* "settlement", so means "valley settlement". It has been suggested that a stronghold was raised here in the time of the Conqueror. However this may be, it is known that in 1174 Geoffrey Bishop-elect of Lincoln fortified a castle here in support of his father, Henry II, and as a rival to Mowbray's fortress of Thirsk. Geoffrey gave the custody to William de Stutevill and in the time of the war time was spent building and strengthening it. Little is known of the history of this castle, but the earthworks now known as Maiden's Bower show that it was of the mount and bailey type. Edward III spent a few hours here in August 1333. The old castle, which probably never had any masonry defences, was superseded by a manor-place, called Cock Lodge, slightly to the north-west of the older site. It was here that Henry fourth Earl of Northumberland was killed.

The parish church of St John the Evangelist is a very interesting building and was part of a building programme instigated by the 7th Viscount Downe, whose Dawnay Estates at that time owned many of the farms in the village. The architect was William Butterfield, and the church has stained glass windows designed by the pre-Raphaelite artists, William Morris, Edward Burne-Jones, and Ford Madox Brown. The church was opened in 1868.

The Rev Sabine Baring-Gould author and hymn writer, married a Yorkshire mill-girl half his age who bore him five sons and nine daughters. His best-known hymn is Onward, Christian Soldiers, written in 1864. He came to Dalton in 1867 before the church was completed and when the congregation met for worship in a barn.

The London-Edinburgh railway line runs near the village, but the local station has been closed. As well

as being responsible for the building of the church, the Dawnay family also built the school, which was opened in 1873 to accommodate 70 pupils. It closed in 1966.

Dalton airfield (RAF Dalton) was an airfield 310 kilometers north of London. The airfield was built by laying concrete runways at what was originally a relief and dispersal ground of RAF Topcliffe. Although the new airfield was located much closer to the village of Topcliffe than RAF Topcliffe itself, it was named after the town of Dalton, east of the airfield. It featured 36 dispersals, 3 hangars and an encircling taxi track connecting all 3 runways.

In late 1941 the airfield became home to 102 Sqn., operating Whitley bombers. 102 Sqn. operated from the airfield until the summer of 1942, when they returned to RAF Topcliffe. The base was then briefly used by 1652 Heavy Conversion Unit (Halifaxes), before work began on lengthening the runways.

In late 1942 the base became a RCAF Unit when 428Sqn. became the new resident unit. It joined the bombing campaign against Germany at the end of January 1943. 424 Sqn's Wellingtons also briefly the base, until 1666HCU (Heavy Conversion Unit) came to the base. However, mixing operational and training flights proved not to be very successful, so 428 Sqn. moved out to Topcliffe at the end of spring. As airspace was getting very congested, 1666HCU was sent to RAF Wombleton in autumn 1943 to provide some relieve. This left Dalton with just a gunnery flight, although 420 Sqn also briefly operated from here to prepare for Halifaxes.

Until the end of 1943, RAF Dalton had lost 29 bombers during operations: two thirds of them Wellingtons, the remainder Whitleys and Halifaxes.

At the beginning of 1944 RAF Dalton was passed on to No. 7 Training Group. Although 7TG had no units of its own assigned until the summer of 1944, Dalton was not closed, but regularly used as a relief landing ground by operational training units. In August 1944 No.6 Group Aircrew School was set up at the airfield. Shortly after the war, in the summer of 1945, all units at the airfield were disbanded and the airfield was put on care and maintenance. Under maintenance unit control, the airfield hangars were used for surplus stores and in the early fifties old bombs laid stockpiled on the runways prior to disposal.

The airfield was disposed of in 1956. Since then, a number of businesses have set up on the former airfield. Part was converted back for agricultural use. Around 2010 a number of ex-British Rail railroad carriages were stored at the airfield.

It was in 1974 that Dalton became part of the new county of North Yorkshire.

2.04 Geology

Topography: The Vale of York is an area of flat land in the northeast of England. The vale is a major agricultural area and serves as the main north–south transport corridor for Northern England.

The Vale of York is often supposed to stretch from the River Tees in the north to the Humber Estuary in the south. More properly it is just the central part of this area which is truly the Vale of York, with the Vale of Mowbray to its north and the Humberhead Levels to its south. It is bounded by

the Howardian Hills and Yorkshire Wolds to the east and the Pennines to the west. The low-lying ridge of the Escrick moraine marks its southern boundary. York lies in the middle of the area.

The Vale of York: As part of Great Britain, the Vale of York generally has cool summers and relatively mild winters. Weather conditions vary from day to day as well as from season to season. The latitude of the area means that it is influenced by predominantly westerly winds with depressions and their associated fronts, bringing with them unsettled and windy weather, particularly in winter. Between depressions there are often small mobile anticyclones that bring periods of fair weather. In winter anticyclones bring cold dry weather. In summer the anticyclones tend to bring dry settled conditions which can lead to drought. For its latitude this area is mild in winter and cooler in summer due to the influence of the Gulf Stream in the North Atlantic. Air temperature varies on a daily and seasonal basis. The temperature is usually lower at night and January is the coldest time of the year. The vale is in the rain shadow of the Pennines so has a lower rainfall total than areas to the west. It is also subject to more fog and frosts in winter than other areas because of the tendency of cold air to drain into the vale from surrounding higher ground.

The soils: The solid geology of the Vale of York comprises Triassic sandstone and mudstone and Lower Jurassic mudstone and is completely cloaked by varied superficial deposits. The deposits include glacial till, which forms a marked bench in the east, and sand and gravel, as well as two moraines that curve eastwards across the NCA. The York Moraine forms a curving ridge that extends from York to Sand Hutton, while the Escrick Moraine is evident about 8 km to the south, formed at the point at which the ice met the large proglacial Humber Lake in the south of the NCA. Trapped between moraine ridges a series of (possibly contemporary) glacial lakes developed to the north of the Escrick Moraine as the ice sheet advanced and retreated. When the lakes drained, they left a sequence of lake clays, silts and sands over much of the NCA. Subsequent aeolian (dessert) reworking of these sands has led to the accumulation of thick sequences of wind-blown sand along the eastern margins of the NCA.

The landscape: The Vale of York forms a transitional landscape between the more varied topography and the mixed farming of the Vale of Mowbray to the north and the flat, open land of the Humberhead Levels to the south. The adjoining elevated areas feature an extensive network of major rivers, with the Derwent rising in the North York Moors and Cleveland Hills National Character Area (NCA) in the north; the Swale, Nidd and Ure in the Yorkshire Dales NCA; and the Wharfe in the Southern Pennines NCA to the west. These watercourses all ultimately flow into the Humber Estuary to the south-east. The Vale of York is an important convergence zone for the upland rivers; they converge into the River Ouse, which starts in the Vale of York. These rivers, and their associated flood plain habitats, provide important corridors for species movement between the Vale and surrounding NCAs. This could become increasingly important as habitats around the Humber are squeezed by the effects of climate change. The settlements in the Vale rely heavily on the water supplied by these rivers.

2.05 Landscape setting

Mixed agriculture has dominated the area since medieval times. Following the Norman conquest, King William undertook a number of campaigns to break future threats to the crown from the north, known as the ‘harrying of the north’. The destruction of towns, villages and agricultural assets and the reassignment of land to favourable nobles led to a strong trend of nucleated settlement in planned villages; manors and estates established within the wider landscape during the late 11th–13th centuries still exist today. Moated sites are a particular feature of this landscape, such as examples at Appleton Roebuck, Pocklington and Barmby Moor. Many survive today as earthworks, cropmarks and

soil marks, and the ditches associated with these sites are still waterlogged in places, providing essential information on past land use and activity. Some villages retain former ridge and furrow and hedges following lines of curved strips, and the area is characterised by a high proportion of planned enclosure by Parliamentary Act between the mid-18th century and 1815.

Historically there has been a predominance of cattle rearing and dairying to the west, and horse breeding to the east, with livestock from the hills in surrounding NCAs brought to the lush vale grasslands for fattening. The rich grasslands of the flood plains supported sheep grazing and increased York's importance in the wool industry. Stud farms increased around York in the 18th and 19th centuries, probably as a result of the formalisation of a racetrack in York and the move to its current location. The racecourse continues to attract a large number of visitors to the area. In the 16th century the Vale began to feature extensive areas of parkland and designed landscapes, such as the deer parks at Sheriff Hutton and Beningbrough Hall. The dissolution of the monasteries and 'gifting' of land to nobles also saw the establishment of notable country houses and estates in the NCA. Until the 17th century the Royal Forest of Galtres contained some larger areas of woodland in the north of the Vale of York. The forest at this time extended further into North Yorkshire, although it had been declining since its peak in the 12th century.

2.1 Geology

Beneath the drift deposits of the Vale of York lie Triassic sandstone and mudstone, and lower Jurassic mudstone but these are completely masked by the surface deposits. These deposits include glacial till, sand and gravel and both terminal and recessional moraines left by receding ice sheets at the end of the last ice age. The Escrick moraine extends across the vale from west to east and the York moraine, 13 km miles further north, forms a similar curving ridge from York eastwards to Sand Hutton. To the north of these ridges are deposits of clay, sand and gravel left by a glacial lake. There are also areas of river alluvium consisting of clay, silt and sand deposited by the main rivers and streams.

The Vale of York is drained southwards by the River Ouse and its tributaries, the Ure, the Nidd and the Foss. To the east of the area the River Derwent drains southwards into the Ouse. There are also frequent stream courses and drainage channels which link with the main rivers crossing the vale. Many of these watercourses are maintained and managed by local internal drainage boards to ensure sustainable water levels are kept across the vale.

There are three distinct geological areas in Upper and Mid Swaledale. The upper reaches of the river flow over Carboniferous, Permian and Triassic rock, all of which are atop a layer of Lower Paleozoic beds. These rocks are rich in minerals and metalliferous sulfide ores such as galena, sphalerite, chalcopyrite and bravoite.

There are also deposits of fluorite, barite, witherite, calcite, dolomite and barytocalcite. Along the valley sides can be seen the typical Dales geology of Yoredale beds, alternating strata of limestone and gritstone. Small seams of coal, particularly around Tan Hill, have been found and worked. During the last Ice Age, the glacier that dominated the valley was responsible for broadening it and altering the course of the river around Keld and Round Howe. It was also responsible for cutting the Kisdon gorge. Retreat moraines lower in the river valley can be seen around Gunnerside and Grinton Bridge.

Upper Wensleydale is a high, open, and remote U-shaped valley overlying Yoredale Beds. The gradient is gentle to the north end of the valley, becoming steeper further south. Glacial drumlins lie either side

of the River Ure, which is shallow but fast flowing. The river is fed from many gills cutting through woodland and predominantly sheep farmsteads. The Settle to Carlisle railway runs along the western side of the valley here.

Mid Wensleydale is made of Great Scar limestone under Yoredale beds that make up the valley sides, which are marked with stepped limestone scars. The valley floor is made from glacial drift tails and moraine. The river here is broad and gently flowing in meanders in a stony channel. There are four tributary valleys that contribute to several waterfalls in this area.

Lower Wensleydale is a broader version of mid Wensleydale with the river gently meandering until it drops significantly at Aysgarth over the platformed waterfalls. The valley sides become increasingly wooded.

From Middleham onwards the river is a typical mid-age river and meanders in wider arcs as it flows south-east.

2.2 Economic Geology

The drier land in the Vale of York, away from the river valleys, would have been extensively cleared for pastoral farming and small scale cropping before the Roman era. The area around York was significantly influenced by the Romans who established their legionary fortress of Eboracum there. There is evidence of villas, forts, signal stations and roads constructed by them.

The vale suffered badly from the Harrying of the North when King William I devastated the northern counties of England to punish the population for their resistance to his conquest. Later, in the English Medieval period, manors and villages were established with open fields, some of which survived until the Enclosure Acts of the 18th century. During the English Civil War, between Royalists and Parliamentarians, the Battle of Marston Moor was fought on land to the west of York.

The soils, formed from glacial till, sand and gravel are generally fertile and nearly all the land is in arable use growing large areas of wheat, sugar beet and potatoes. There is a steady move away from livestock rearing and dairy farming.

The city of York tends to dominate the vale economically and is a centre for tourism, retail, commerce, light engineering and food processing. The University of York and its associated science park are also major economic assets.

2.3 Hydrology

The Vale of York provides a large amount of water for local communities and for those as far away as Sheffield, both from underground aquifers and from abstraction from the rivers running through the NCA, (National character Area). The western part of the NCA overlies a Permo-Triassic sandstone aquifer (the Sherwood Sandstone aquifer, which is a major source of drinking water for the region). Rainfall is low in the NCA, and due to existing high levels of demand on these aquifers they currently have no water available for additional abstraction (except for a small area in the south-eastern corner.

Groundwater quality in this NCA is good in the east but poor in the west. All the rivers that have been assessed are of good chemical quality, including the rivers Ure and Ouse in the west. The ecological quality of the rivers in the area is classed as good or moderate, although a small stretch of river in the south-western corner associated with tributaries of the River Wharfe is classed as poor, as is the River Foss. Much of the central and northern parts of the NCA fall within the Yorkshire Ouse, Nidd and Swale catchment sensitive farming priority catchment, while parts of the southeast fall within the Yorkshire

Derwent catchment sensitive farming priority catchment. (The catchment sensitive farming project offers advice and training to farmers and land managers in priority catchment areas to enable them to take voluntary action to reduce their high diffuse water pollution from agriculture to protect waterbodies and the environment).

2.4 Surface Waters

Cod Beck

Cod Beck is the nearest water course to the site and the water course into which storm water from the site drains. Cod Beck itself drains into the River Swale. Flood data shows that in the event of an extreme flooding event there is a risk of river flooding to the Northeast corner of the site from Cod Beck. The ground which could be affected is confined to the landscape strip, which is at least 5m lower than the oversite of the new mill. Recent work by the highways authority has improved the access by the provision of a new bridge which connects Dalton Lane with the nearby A168. Access to some of the airfield site has occasionally been cut off by high water levels near the site of the new bridge, there is an alternative access road in the very unlikely event of a reoccurrence.

River Swale

The River Ure, is a major tributary of the River Swale, which in turn becomes the River Ouse, that empties into the North Sea via the Humber Estuary. The river gives its name to **Swaledale**, the valley through which it flows.

The river and its valley are home to many types of flora and fauna typical to the **Yorkshire Dales**. Like similar rivers in the region, the river carves through several types of rock and has features typical of both river and glacial erosion. The River Swale has been a contributory factor in the settlements that have been recorded throughout its history. It has provided water to aid in the raising of crops and livestock, but also in the various mining activities that have occurred since Roman times and before.

The river is said to be the fastest flowing in England and its levels have been known to rise 10 feet (3 m) in 20 minutes. Annual rainfall figures average 1800 mm p.a. in the headwaters and 1300 mm p.a. in the lower waters over a drop of 148 m in 32 km.

The source of the Swale is at the confluence of the Birkdale Beck and the Great Sleddale Beck. The river flows past lead mines on its northern bank and the end of Whitsundale and meanders until it starts to pursue a more constant southerly flow it is joined by the River Wiske before passing Skipton-on-Swale, Catton**,** Topcliffe and Asenby. It then flows past Helperby and Myton-on-Swale before joining the River Ure.

River Ure

The River Ure into which the River Swale drains is approximately 74 miles (119 km) long from its source to the point where it becomes the River Ouse. It is the principal river of Wensleydale, which is the only major dale now named after a village rather than its river. The old name for the valley was Yoredale after the river that runs through it.

The Ure is one of many rivers and waterways that drain the Dales into the River Ouse. Tributaries of the Ure include the River Swale and the River Skell.

Ure probably means "the strong or swift river". This is on the assumption that the Brittonic name of the river was *Isurā*, because the Roman name for Aldborough was *Isurium*; intervocalic *s* is known to

have been lost in Brittonic at an early date. This explanation connects the river name with an Indo-European root *is-* meaning "strong" and the names of the Isar in Germany and the Isère in France.

The source of the river is Ure Head on Abbotside Common where it flows west south-west to the valley floor and then turns south. Where it reaches the A684 it turns east along Wensleydale as far as Wensley. From here it flows south-east to Jervaulx Abbey and shortly after south to Mickley. Here it returns east and then south to Ripon. A little way after Ripon it flows east again to Boroughbridge. The rivers elevation is 76 m at Masham falling to 24 m and 15 m respectively through Ripon and Boroughbridge at the foot of the

To the east of Boroughbridge, the Ure is joined by the River Swale. About 6 miles (9.7 km) downstream of this confluence, at Cuddy Shaw Reach near Linton-on-Ouse, the river changes its name to the River Ouse.

Navigation

The River Ure is navigable upstream as far as its junction with the Ripon Canal, 2 miles (3 km) south east of Ripon, a distance of 13.6 miles (21.9 km). There are locks at Milby, where a short cut bypasses the weir at Boroughbridge, and at Westwick.

Navigation to Swale Nab, at the confluence with the River Swale, was opened in January 1769 as part of the River Ouse Navigation. Navigation to the Ripon Canal was opened in January 1772.

The Leeds and Thirsk Railway bought the navigation in January 1846. The navigation was neglected, and the lack of dredging resulted in boats having to be loaded with less cargo. There was a brief upturn in trade in the 1860s, but the decline continued after that. By 1892, no traffic proceeded past Boroughbridge, and the North Eastern Railway took action to prevent the waterway above Boroughbridge being used.

Until 1999 the navigation authority to Swale Nab was the Linton Lock Navigation Commissioners. The Commissioners had insufficient income to maintain the navigation, and in 1999 it was transferred to British Waterways. The navigation authority for the whole navigation is now the Canal & River Trust.

2.5 Natural history

The River Swale and its valley support a range of habitats including broadleaved, mixed and conifer woodland as well as hay meadows and grasslands. Limestone scar, bracken, scrub, and heather moorland can also be found. Amongst the species of tree that can be found are ash, birch, rowan and bird cherry along with shrubs such as hawthorn, hazel and holly. There are smaller populations of yew and sycamore. Pine, larch and spruce occur mostly in plantations with alder and willow common along the river banks. The many hay meadows are filled with buttercup species and wood cranesbill. The differing habitats of the Ure valley area have their own populations of flora such as cranesbill, bistort, pignut and buttercup. Other species that can be seen in the area are wood anemones, violets, primroses, purple orchids, cowslips and herb paris. Some plants, such as spring sandwort, have managed to grow where the lead mining took place. There are large populations of badgers, roe deer, red foxes and rabbits in the valley. Among the variety of birds that can be seen in the valleys are golden plovers, curlews and oystercatchers. Fish populations along the rivers include: Brown Trout, Grayling, Barbel, Chub, Roach and Perch.

2.6 History

Evidence of occupation of the Swale river valley is with the discovery of flint tools and arrowheads, dated the Mesolithic and Neolithic Ages. Around Harkerside are some small stone circles that date to the Bronze Age and some Iron Age defensive earthworks. Evidence of lead mining has been traced back to Roman times with finds at the Hurst mine. This industry seemed to decline until after the Norse (Danish) invasions of the area. During the major ecclesiastical building of the 12th and 13th centuries, lead became a valuable commodity and mining once again increased in the valley. Evidence of the lead mining can still be seen from the remains of the 18th-century practice of 'hushing' that involved creating turf dams across gills that were then released to wash away topsoil to expose the ore veins. In the Ure valley examples of earthworks and other artifacts from the Bronze and Iron Ages can be seen in the Dales Countryside Museum in **Hawes** and the Romans built a fort at Bainbridge. Placenames in the valley denote the different types of settlers, such as Angles and Norse with typical suffixes like 'ton' and "sett".

During medieval times, much of the upper dale was sheep country belonging to Middleham Castle and Jervaulx Abbey. In 1751, the Richmond to Lancaster Turnpike was created and originally followed the Roman road from Bainbridge. In 1795 it was diverted along the valley to Hawes and took the Widdale route, now the B6255 to Ingleton.

More recently in 1990, Aysgarth Falls was used as a location in *Robin Hood, Prince of Thieves*, in the scene where Robin Hood fights Little John.[7] It also featured in the 1992 film of *Wuthering Heights* and the 1984 TV miniseries, *A Woman of Substance*.

2.7 Economy

Over the centuries, lead mining and cattle farming have been the main industries of the Swale valley, Farming (including dairying), tourism and quarrying are the mainstays of the modern economy of the Ure valley. The dairy at Hawes produces Wensleydale cheese. Brewing takes place in Masham at the Black Sheep and Theakston Breweries. Competition from the rest of the world saw mining decline by the end of the 19th century. Some crop farming also took place, most notably during the warm periods of the 13th century.

Tourism now plays a major role in the economy of the river valleys. The Coast to Coast Walk passes through Richmond to Reeth and is crossed at Keld by the Pennine Way, which goes through the upper valley from Buttertubs Pass to Muker. The Yorkshire Dales Cycle Way follows the valley between Fremington and Gunnerside. There are many waymarked footpaths and open countryside. The Pennine Way also passes through Hawes.

2.8 Pollution History

2.8.1. There have been no pollution incidents connected with the site. The site of the new installation is completely outside of the only development undertaken for millennium. The wartime airfield did not cover any part of the mill site.

2.8.2. There is no visual or olfactory evidence of any existing pollution on or surrounding the application site. However, as the installation is a new build an extensive site investigation, including a site contamination investigation was undertaken by Solmek Ltd. Extensive core drilling and soil samples confirm there is no evidence of any historical contamination. The conclusions are that there is no likelihood of future ground, groundwater or surface water contamination being caused by future

planned operations. The detailed soil analysis confirms that there is no historical contamination. The Solmek Ltd reports are included in appendix 1. There are no relevant assessments, remediation and verification reports associated with the application site.

2.8.3. There will be adequate anti-pollution containing measures and equipment such as bunds around tanks planned in the site inventory. All such measures will be correctly designed these will be new and in sound condition. The site has been designed with maintenance and environmental aspects in mind. Unusually for a compound mill the building envelope covers the complete storage inventory including the liquid tanks. A high standard of maintenance and environmental protection at the installation will be assured by the fact that an (EMS) Environmental Management System, which is independently audited and monitored will be put in place, see **Section 7.**

2.8.4. There being no evidence of historical contamination no historical site investigation has been carried out except for perusal of historical maps and historical records. The maps are referred to in Section 1 above.

3.0 Permitted activities

3.1 Details of the installation

The layout of the site and activities within the installation are shown on Site plan 1.1 in supporting information **Section 1** of the application. Detailed information relating to the installation activities is given in the supporting information **Section 5** of this application.
The reports regarding site reconnaissance visits are recorded in section 2.4 above.

The site comprises the main mill building, including bulk finished product and raw materials storage comprised of bins and silos, bulk oil, molasses, which incorporates the boiler house, separate office building and car parking areas. Site buildings also include a finished produce storage warehouse building. The majority of the site is covered by the buildings, or a purpose designed excellent quality concrete oversite. There will also areas of landscaping or soft cover with existing and planted trees and shrubs at the periphery.

3.2 Surrounding land uses

The site is located in an area which was for millennium a rural setting, however in recent times since world war two the area to the west of the site has been gradually developed as an industrial site within the confines of the 'Local Plan'. The current phase of development will see further development of the land to the east of the existing industrial complex which includes the new feed-mill.
In addition, the land north of Dalton Lane up to Cod Beck is the site of a number of industrial premises to the west of the village of Dalton. There are also a number of individual business premises developed/based on and around from former airfield buildings. These smaller units also boarder Dalton Lane and are situated to south side of the road. All these business are located to the west of the site, east of the village of Dalton. Dalton Lane passes East to immediately past the site entrance.

The site is not surrounded by any protected sites, areas, habitats or SSSIs. As is demonstrated by detailed modelling in section 4 of the supporting information, there is no realistic possibility that the installations activity has or will have any impact on air, water or land quality in the general vicinity of the site.

3.3 Activities to be operated within the installation

The overall operation of the site is the treating and processing of vegetable raw materials for animal food products from wheat, barley, and other natural ingredients. This section of the site report focuses on permitted activities that have the potential to lead to ground contamination. Detailed information on process activities are provided in the main part of the PPC application, supporting information **Section 5.**

An Environmental Management System (EMS) will be put in place at Dalton mill. The EMS has been fully operational elsewhere for a number of years, it includes staff training and refresher training requirements and reporting of pollution incidents, such as spills.

3.3.1. Raw Materials Storage

The range of raw materials used, and storage arrangements are described in this section. Further details are given in **Section 5.9** of the supporting information for this application.

3.3.2. Process Raw Materials

Raw materials used in the production of animal feeds at the installation are detailed in supporting information **Section 5** and below in tables 3.3.1 - 3.3.5 of this application and summarised as follows:

Cereal grain, grain products and grain by-products;

- By-products from the food industries;
- Minerals;
- Additives, including vitamins;
- Fats (vegetable oils)
- Molasses

Bulk solid materials are delivered to site by approved hauliers and either blown into ventilated storage bins or tipped into one of the raw material intake points and transferred into one of the blending bins. The bins consist of 6 X 70 m3 pneumatically filled mineral bins. There are also 4 X 35 m3, 2 X 100 m3, 20 X 70 m3 and 8 x 140 m3 capacity bins which are fed by a totally enclosed mechanical conveying system.

The bin configuration is shown below;

Blending bin number	Capacity m3	Contents
1	70	Minerals
2	70	Minerals
3	70	Minerals
4	70	Minerals
5	70	Minerals
6	70	Minerals
7	100	Macro Raw Material
8	100	Macro Raw Material
9	70	Macro Raw Material
10	70	Macro Raw Material
11	70	Macro Raw Material
12	70	Macro Raw Material
13	140	Major Macro Raw Materials
14	70	Macro Raw Material
15	70	Macro Raw Material
16	70	Macro Raw Material
17	70	Macro Raw Material
18	140	Major Macro Raw Materials
19	35	Slower Moving Macro Raw Material
20	35	Slower Moving Macro Raw Material
21	35	Slower Moving Macro Raw Material
22	35	Slower Moving Macro Raw Material
23	70	Macro Raw Material
24	70	Macro Raw Material
25	140	Major Macro Raw Materials
26	140	Major Macro Raw Materials
27	140	Major Macro Raw Materials
28	140	Major Macro Raw Materials
29	70	Macro Raw Material
30	70	Macro Raw Material
31	70	Macro Raw Material
32	70	Macro Raw Material
33	140	Major Macro Raw Materials
34	70	Macro Raw Material
35	70	Macro Raw Material
36	70	Macro Raw Material
37	70	Macro Raw Material
38	140	Major Macro Raw Materials
39	70	Macro Raw Material
40	70	Macro Raw Material
Nominal all-up capacity 3280 m3		

It is estimated that 120,000 tonnes of finished animal feed will be produced in the first full year of operation the constituent raw materials are listed on the next 5 pages.

Table 3.3.1 Annual assumed 2024 consumption of bulk solid raw materials in tonnes

Wheat	BULK	29024
Wheatfeed	BULK	14768
Barley	BULK	8743
Hipro Soya	BULK	9474
Rapemeal Ext.	BULK	8459
Maize Germ	BULK	1818
Dark Distillers Grains	BULK	6185
Acid treated whole wheat	BULK	1982
Palm Kernel Expeller	BULK	4633
Field Beans	BULK	4260
Sunflower Ext.	BULK	3908
Sugarbeet Pulp Pellets	BULK	3321
Micronized Mixed Flakes	BULK	3128
Pulse/Rape blend	BULK	933
Micronized Residuals	BULK	1478
Soya Hulls	BULK	1334
Oats or Rye	BULK	1000
Protected Rape / NovaPro etc.	BULK	1000
Maize	BULK	1110
Rolled Wheat	BULK	945
Micronized Flaked Wheat	BULK	812
Rolled Maize	BULK	500
Micronized Flaked Soyabeans	BULK	382
Oat feed Pellets	BULK	348
Veg Protein Concentrate	BULK	115
Cooked Flaked Barley	BULK	200
Micronized Flaked Maize	BULK	200
Micronized flaked Beans	BULK	20
Micronized flaked Peas	BULK	20

These macro raw materials some 110,00 tonnes represent about 92% of the raw materials required.

This is the proportion of raw material ingredients which are stored in internal blending bins. In addition a number of raw materials which are consumed in smaller quantities are stored in the carousel or in bag form for hand addition to the batches see the list below 3.3.2 & 3.

Many of the ingredients which are added by hand addition or the carousel or minor inclusion vital ingredients, specified feed ingredients. These additives etc., are stored in 5-25kg bags, on wooden pallets. and are stored as buffer stock in the storage warehouse.

Typically one month's stock of these ingredients will be held at any one time depending upon delivery lead times and seasonality factors, arounds 200 tonnes at one time.

There is a small requirement for specified feed ingredients, mineral supplements, and prescription drugs in certain animal feeds. These ingredients are either stored as minor bag additions and incorporated on a bag a batch basis or incorporated from the minor ingredient carousel as required by the formulation. Table 3.3.2 below lists the ingredients incorporated by 2 X 10 2m3 cell carousels.

Table 3.3.2 Annual consumption of minor ingredients in the carousel system in tonnes

The actual minor ingredients are not allocated to specific carousel cells as yet

Sheep Supplement NOV 20 15KG	CAROUSEL	216
Dairy Supplement 2020	CAROUSEL	203
Lamb Fattening Premix (405_19)	CAROUSEL	194
Intensive Lamb Supplement	CAROUSEL	125
Poult Finisher Vit & Min Supplement	CAROUSEL	45
Threonine	CAROUSEL	28
Protected Fat	CAROUSEL	88
Beef Supplement	CAROUSEL	72
Sodium Bicarbonate	CAROUSEL	0
Equaliser Meal	CAROUSEL	60
Poult Starter/Grower Vit & Min supplement	CAROUSEL	21
Pig Finisher Vit & Min Supplement	CAROUSEL	0
Pig Weaner Vit & Min Supplement	CAROUSEL	0
Butterfat C16	CAROUSEL	40
Poult Starter Vit & Min supplement	CAROUSEL	18
Magnesium Phosphate	CAROUSEL	10
Lucerne Nuts	CAROUSEL	139
Linseed Expeller	CAROUSEL	105

Carousel No 1

Carousel cell no	Capacity m3	Contents
1	**2**	Mineral supplement or bulk premix
2	**2**	Mineral supplement or bulk premix
3	**2**	Mineral supplement or bulk premix
4	**2**	Mineral supplement or bulk premix
5	**2**	Mineral supplement or bulk premix
6	**2**	Mineral supplement or bulk premix
7	**2**	Mineral supplement or bulk premix
8	**2**	Mineral supplement or bulk premix
9	**2**	Mineral supplement or bulk premix
10	**2**	Mineral supplement or bulk premix
Nominal capacity 20 m3[1]		

[1] a backup supply will be held in the warehouse to replenish these vital ingredients

Carousel No 2

Carousel cell no	Capacity m3	Contents
1	**2**	Mineral supplement or bulk premix
2	**2**	Mineral supplement or bulk premix
3	**2**	Mineral supplement or bulk premix
4	**2**	Mineral supplement or bulk premix
5	**2**	Mineral supplement or bulk premix
6	**2**	Mineral supplement or bulk premix
7	**2**	Mineral supplement or bulk premix
8	**2**	Mineral supplement or bulk premix
9	**2**	Mineral supplement or bulk premix
10	**2**	Mineral supplement or bulk premix
Nominal capacity 20 m3[1]		

[1] a backup supply will be held in the warehouse to replenish these vital ingredients

The raw materials which are likely to be incorporated as hand additions are listed in table 3.3.3 below

3.3.3 annual consumption of hand addition (HA) materials in tonnes

Mycotoxin binder	HA	10
Micronized Flaked Naked Oats	HA	176
Ammonium Chloride (4d7)	HA	95
Finisher Coccidiostat (Monteban G100)	HA	11
Starter/Grower Coccidiostat (Maxiban G 160)	HA	9
MetaSmart etc.	HA	10
Valine	HA	2
Choline Chloride	HA	10
Magnesium Chloride	HA	2
Xylanase 2 powder	HA	10
Tastetite Toffee Flavour FP642	HA	1
Tryptophan	HA	10
Amino Green	HA	44
Vitamin E 100	HA	10
Diamond V 'XP'	HA	16

Bulk liquids are delivered to site by road tankers and pumped into internal storage tanks or silos. Storage arrangements for these are summarised below. All fill points for the tanks are bunded in order to prevent spillages.

Table 3.3.4 Annual consumption of bulk liquid raw materials in tonnes

Molasses (1)	LIQUIDS	3334
Molasses (2)	LIQUIDS	3136
Soya Oil	LIQUIDS	738
Rum Veg Fat Coater	LIQUIDS	914
Lysine	LIQUIDS	127
Mono Veg fat blend	LIQUIDS	68
Anitox Maxi Mil	LIQUIDS	300
Methionine	LIQUIDS	74
Liquid Betaine	LIQUIDS	42
Rum Veg Fat Mixer	LIQUIDS	27
Phytase (Q Blue) liquid	LIQUIDS	8
Xylanase (Econase XT) liquid	LIQUIDS	3

The principle liquids (molasses x 2, ruminant fat, monogastric fat & soya oil) are to be stored in purpose designed tanks (5 x 60,000 litre tanks) within a common bund which is to be constructed inside the mill building. The fill points are located outside of the bund on the outside wall in an enclosed intake cabinet (example below).

The bund will be constructed in a compliant manner and shall have a capacity of 99.13m³ (6.435 x 11.850 x 1.300), well in excess of the largest tank (60m³). The minor liquids will be stored in fixed specialist integrated tanks within the mill building, these are complete with liquid delivery pipework direct to the incorporation point. An alternative arrangement for the most modest inclusion levels is bunded liquid IBCs, these can be positioned as required for products manufactured occasionally or seasonally.

Bag stock 3.3.5

The estimated raw material usage including minor additions for 2024 is 120,000 tonnes. The maximum amount stored, including palletised back-up tonnage will be about 4,040 tonnes with a maximum of 4,860 tonnes of finished product. This sums to 8,900 tonnes, however all materials will be compliantly stored and any back up materials, which are not very mobile, will be well away for any drain.

3.3.6. Chemical Inventory

Bulk chemicals used at the installation and storage arrangements are summarised in Table 3.3.5. These are not process materials

Table 3.3.5 Chemical Storage

Chemical	Maximum Capacity	Storage Method	Storage Location
Boiler chemicals	500 litres	25 litre containers	Stored within the boiler house

In order to ensure pollution prevention such chemicals will be located internally upon the concrete hard standing in good condition and will be provided with secondary containment.

In the event of spillage from boiler chemicals, these would be contained within their building location. Lubricating oils and greases will be situated in the vehicle wash building, upon the concrete hard standing in good condition and will be provided with secondary containment.

3.3.4 Process Activities

Process activities within the mill comprise weighing of materials, batch mixing with addition of steam, pressing, cooling, and coating to produce the final product. The majority of finished products are stored in dedicated bulk out-loading bins. The bulk products will be supplemented by bagged raw materials which will be stored in the warehouse, along with a small amount of bagged finished product, having been transferred from the company's site at Masham. There will also be small amounts of finished products stored in 1 tonne tote bags. These products are to be stored in the warehouse awaiting dispatch or collection by delivery vehicles.

All processing in the mill takes place within an enclosed system which is housed within a purpose-built building and as such these activities are not considered likely to pose any risk of releases to ground.

Finished products are either stored in bulk delivery bins or the bag warehouse awaiting delivery. The maximum storage capacity for finished products is nominally 4,780 tonnes in the final configuration. It is very unlikely, due to product range and customer ordering patterns that this holding capacity will ever be fully utilised. The bulk finished product holding capacity is comprised of;

The bulk delivery plant will comprise of two separate bin nests, made up of 36 X 40 m3 and 18 X 55 m3.

3.3.5 Site Drainage

Information on point source and fugitive emissions to surface water and private sewer are given in Section 1.1.3 above.

Storm water

Storm water runoff from all the buildings and roofs of the installation is directed to the watercourse via a flow control valve and an emergency stop valve. Hard standing areas are drained by 2 systems, basically to the west and east of the principle buildings. These systems are provided with attenuation tanks which are designed to provide run off attenuation for 1 in 30 years events. The water course is protected by 2 full retention class 1 SPEL PURACEPTOR type interceptors fitted with high level oil and silt alarms. These flows join the buildings storm water at the flow control and emergency stop valves mentioned above. The flow is directed to the water course via a field ditch after passing the sampling point W1.

Foul water

Foul from the site amenities is directed to a Klargester Biodisc BB type unit based on 25 staff without canteen (a daily loading of 1.25m^3). The unit will also process blow down water from the steam raising boiler and a trivial contribution from the site compressed air plant. This is passed through a proprietary oil/water separator prior to discharge. This effluent stream will be pumped to a nearby sewage drain under a trade effluent license. The flow passes a sampling point S1 as it leaves the site.

The storm water run-off is discharged into Cod Beck which is located beyond the northern perimeter of the site. Cod Beck is a tributary to the River Swale.

The drainage systems are documented on the site drainage plan which is **1.1.3** in Supporting information section 1. Discharge consent has been obtained see section 10 and form B6.

The drainage systems will be cleaned when required and inspected as stipulated in the EMS.

3.3.6 Waste Management

Waste materials within the installation are detailed below. Further information is given in **Section 1** of the supporting information ref **Site Plan 1.1.5** and in supporting information **Section 4** of this application.

Wastes generated on site include production wastes, general waste (office wastes, wooden pallets, glass, and packaging), and waste oil and scrap metal.

No disposal of waste is carried out within the installation.

3.3.7 Electrical Transformer and Sub-station

There will be 2 2KVA transformer(s) housed within the electrical sub-station present on the site. The equipment will be new, so the presence of PCBs (polychlorinated biphenyls) is discounted.

3.3.8 Steam raising

There will be 2 packaged steam boilers rated at 3,000 kg steam per hour with a maximum energy input 0f 2.14 MW each.

3.4 Environmental Data and Regulatory Information

The environmental setting of the site was determined through reference to the following: • Envirocheck Report (including historical map extracts) • British Geological Survey (BGS): 1:50 000 geological map series sheet 52 Thirsk Solid and Drift (1992) • BRE Publication BR211 Radon: Guidance on Protective Measures for New Dwellings. The conclusions are set out below;
There are no Landfills or any other facilities handling or managing waste located within 500m of the site.
There are two active Contemporary Trade Directory Entries located within 250m of the site. There are six records of Integrated Pollution controls located within 500m of the site. All entries relate to Gallows Green Services Ltd., Cod Beck Industrial Estate, Dalton Lane, located 182m north-east of the site. The description is '4.5 A (D) Inorganic Chemical processes within the Chemical Industry.
There are seven records of Integrated Pollution Prevention and Control entries located within 500m of the site, and there is one effective record within 200m of the site.
There are two Local Authority Pollution Prevention and Control sites located within 500m of the site, with only one permitted entry located within 500m of the site.
There are no sites dealing with Hazardous, Explosive or Radioactive Substances located within 500m of the site.
There are no Substantiated Pollution Incidents located within 500m of the site.
There are no Sites Determined as Contaminated Land under Part 2A EPA 1990 entries located within 500m of the site.
There are fifteen Water Abstractions located within 1km of the site. The nearest of these is located 255m southwest of the site with the water used for General Farming and Domestic.
There are six Licensed Discharge Consents entries within 500m of the site. The nearest of these is located 17m north of the site with Trade Discharge – Process Water being discharged into a freshwater stream, which is an unnamed tributary of Cod Beck.
There are no Records of Water Industry Act Referrals (potentially harmful discharges to the public sewer) located within 500m of the site.
The site is not at risk of Flooding from Rivers and the Seas without defenses; however, it is at risk of Extreme Flooding from Rivers and the Seas without defenses, whilst land 6m to the northwest is shown to be at risk of Flooding from Rivers and the Seas without defenses.

3.5 Previous investigations

There are no records available detailing any intrusive environmental investigations on site prior to the work undertaken by Solmek Ltd.

4.0 Site history

The site is shown to be underlain by solid geology of Mercia Mudstone Group Formation consisting of reddish-brown mudstone with subordinate siltstone and sandstone. BGS mapping indicates that there are three possible types of superficial deposits located beneath the site. the majority of the site is expected to consist of Breighton Sand Formation which is made up of silty sand and gravel. However, the northeast of the site is mapped as the Alne Glaciolacustrine Formation consisting of clay and silt. An area of alluvium associated with Cod Beck is mapped immediately north of the site.
Mining & Quarrying The site is not located within a Coal Mining Affected Area; therefore, no further investigation is required to mitigate against risks from Coal Mining.
The Envirocheck Report indicates that there are no BGS recorded Mineral Sites located within 1km of the site.
The site history has been determined through a review of historical Ordnance Survey (OS) maps provided by Landmark Information Group in **Section 1.5.2 1 - 10** above.

4.1 Published Information

4.1.1 On Site

The most recent detailed map 1999 shows Dalton Airfield which is labelled as disused, and details are not shown. A runway is located approx. 100m west and 100m south of the site. Cod Beck Mill is located approx. 100m north-east of the site. Silos and a pond are noted to be present within Cod Beck Mill. Buildings and a roadway are located immediately east of the site. Poultry Houses are located approx. 150m south-west of the site, adjacent to the runway. The village of Dalton is just less than 1 km to the east of the site, whilst a number of dwellings and a static caravan site are located between 580-750 m to the west of the site.

The current map of the landscape around the site shows that the local communities have been very stable for many years. However, the village of Dalton has seen some recent development and there are some residential properties in-filling the western fringe of the village.

4.1.2 Off Site

The earliest map extract of 1856 shows the area of the site consisted of flat open fields. The installation site is an open field. Several individual dwellings mentioned above were even then in existence. The village of Dalton can be seen, but there are many fewer dwellings present.
The 1892 map of the area records no changes to the installation site. The village of Dalton having grown slightly.
The map of 1912–1913 records no changes to the installation site. The village of Dalton again having grown slightly and seeming more organised.
The map of 1956 records no perceivable changes to the installation site. The map refers to ‘The Airfield’, but no details are recorded.

The map of 1972 again records little change to the area. The map refers to 'The Airfield', but no details are recorded.
The map of 1975 shows a scene virtually unchanged when compared to the previous map 3 years year previous.
The map of 1980-81 shows the installation site unchanged, however the disused airfield runways and associated building are recorded, this shows that the airfields complex did not form part of the installation site. Some of the disused airfield buildings, which remain today, have been converted for business uses to the east of the site. The Cod Beck blenders development has been established and the village of Dalton has extended. There is a poultry farm occupying a site at the end of one of the former runways to the west of the site The recent history regarding the site is described in section 2.0.5 above 'Landscape Setting'.
The latest map 1999 whilst a little out of date, the changes to the current time are connected with the existing industrial complex to the west of the installation site. As such these establishments have no impact on the installation site.

4.2 Additional information

4.2.1 Area of PPC Installation

The installation site itself, although perhaps a brownfield redevelopment, the actual site where the new mill is to be constructed was never built on in any way and remained grassland. The entire area which comprises the Dalton Industrial Estate served as an RAF airfield during WW2 and as a reserve station until 1956. The mill site therefore has until now been typical of the landscape of the 'Vale of York'. Throughout the Vale of York, the "solid geology" is extensively covered by superficial deposits, so much so indeed that its details are very largely a matter of conjecture, the Glacial deposits of the district having produced a surface configuration in all minor details quite independent of those of the underlying rocks, or, where conforming to them at all, doing so quite fortuitously.

The soil of this district is loam on a subsoil in part of Keuper Marls; alluvium also occurs. The area of the parish, with all the hamlets, is rather over 16,564 acres; 8,113 of these are arable and 414 wood. Historically the inhabitants were mainly engaged in agriculture, wheat, barley, oats, and turnips being the chief crops grown. The general elevation is undulating but low, seldom rising more than 100 ft. above the ordnance datum except in the west corner of the township of Marton-le-Moor, where it reaches 200 ft. in a few places. Some of the low ground sloping down to the Swale and Cod Beck is liable to floods. No pollutants have been allowed to enter the ground, ground, or surface waters, so no physical investigation work is proposed. However many soil core samples have been taken as part of the pre-construction this confirm the absence of any contamination.

4.2.2 Activities Operated on Site, outside the Installation

The historical agricultural activities around the site have no potential contamination risk. The airfield although adjacent, did not extend within the new installation site so, has no potential for contamination of the site.

4.2.3 Neighbouring Sites

The neighbouring sites consist of domestic dwellings, farms, and industrial buildings. However, due to their distance from the installation site it is not thought likely that any of these will have had any detrimental impact upon the environment of the site. This is confirmed by the surveys undertaken by Solmek Ltd, the Landmark Information Group, and Envirocheck. These reports are included in appendix 1.

4.3 Emergency Response Records and Previous Pollution Incidents

None recorded.

4.3.1 Pollution Incidents to Controlled Waters

There has been 1 recorded pollution incidents to surface waters within 250m, and 9 between 500 – 2km of the centre of the site

A procedure will exist within the Environmental Management System for recording environmental incidents and an Incident Form will be generated for site records in the event that further investigation is required.

4.4. Potential for Historical (pre-permit) Contamination

Table 4.4.1 presents a summary of potential sources of contamination from historical (pre-permit activities) in the vicinity of the site based on the information provided in previous chapters.

Table 4.4.1

Installation Area			
Date	On site features	Off site features	Potential contamination
Historical Activities			
Map1	**Historical mapping legends**		
1856 1:10,560 Map2	The site is in an agricultural setting with field boundaries located running north to south in the centre of the site and running east to west in the northern part of the site. A track and a possible fence line are located running across the northern portion of the site.	The area surrounding the site consists of agricultural fields. Dalton Lane runs along the northern boundary of the site. Cod Beck located approx. 200m north of the site.	None identified which could impact the installation site
1892 1:10,560 Map3	No apparent changes.	No significant changes.	None identified which could impact the installation site

1912-1914 1:10,560 Map4	No apparent changes.	No significant changes.	None identified which could impact the installation site
1956 1:10,000 Map5	No apparent changes.	Area to the south labelled as Airfield, the area is blank, information is likely to have been omitted.	None identified which could impact the installation site
1972 1:10,000 Map6	No apparent changes.	Area to the south labelled as Airfield, the area is blank, information is likely to have been omitted.	None identified which could impact the installation site
1975 1:10,000 map7	No apparent changes.	Airfield is labelled as disused, and details are now shown. A runway is located approx. 100m west and 100m south of the site. Cod Beck Mill is located approx. 100m north-east of the site. Silos and a pond are noted to be present within Cod Beck Mill. Buildings and a roadway are located immediately east of the site. Poultry Houses are located approx. 150m south-west of the site, adjacent to the runway.	None identified which could impact the installation site
1980-1981 1:10,000 Map8	No apparent changes.	No significant changes.	None identified which could impact the installation site
1999 1:10,000 Map9	No apparent changes.	Significant development within Dalton Industrial Estate approx. 500m south of the site.	None identified which could impact the installation site
2019 1:10,000 Map10	No significant change	No significant changes	None identified which could impact the installation site

Potential Contamination Sources Identified via Historical Plans include contamination from historical land uses within a 250m radius of the site have been identified; however, these are expected to be minimal if present at all:

5.0 Environmental setting

This section provides an assessment of the site sensitivity in terms of the underlying geology, the groundwater resources, and the hydrological context of the site.

5.1 Topography

The site lies at an elevation of approximately 20m above Ordnance Datum (aOD) and is generally flat.

5.2 Geology

The site is shown to be underlain by solid geology of Mercia Mudstone Group Formation consisting of reddish-brown mudstone with subordinate siltstone and sandstone.
BGS mapping indicates that there are three possible types of superficial deposits located beneath the site.
The majority of the site is expected to consist of Breighton Sand Formation which is made up of silty sand and gravel. However, the northeast of the site is mapped as the Alne Glaciolacustrine Formation consisting of clay and silt.
An area of alluvium associated with Cod Beck is mapped immediately north of the site.
The site is not located within a Coal Mining Affected Area; therefore, no further investigation is required to mitigate against risks from Coal Mining.

5.3 Hydrogeology

The Envirocheck Report states there are no Records of Water Industry Act Referrals (potentially harmful discharges to the public sewer) located within 500m of the site.
Using the Environment Agency's Policy and Practice for the Protection of Groundwater the solid geology beneath the site is classified as a Secondary Aquifer – B. The overlying drift is classified as an Unproductive Strata.
The site does not lie within a source protection zone. There are fifteen Ground Water Abstractions located within 1km of the site.

5.4 Hydrology

The nearest surface water feature is Cod Beck, located 142m north-west of the site. The Envirocheck Report states there are six Licensed Discharge Consents entries within 500m of the site. The nearest of these is located 17m north of the site with Trade Discharge – Process Water being discharged into a freshwater stream, which is an unnamed tributary of Cod Beck.

5.5 Ecology

There are no sensitive habitats designated by English Nature, such as Sites of Special Scientific Interest, Special Protection areas or Special Areas of Conservation within 1km of the site.

5.6 Vulnerability of site to contamination

The sensitivity of receptors in the vicinity of the site to contamination is summarised in Table 5.6.1.

Table 5.6.1. Sensitivity of Receptors in the Vicinity of the Site.

Receptor Type	Receptor(s)	Sensitivity	Reasoning
Ground water	Minor Aquifer	Low	Solid geology of Mercia Mudstone Group Formation consisting of reddish-brown mudstone with subordinate siltstone and sandstone. The majority of the site is expected to consist of Breighton Sand Formation which is made up of silty sand and gravel. The northeast of the site is mapped as the Alne Glaciolacustrine

			Formation consisting of clay and silt. An area of alluvium associated with Cod Beck is mapped immediately north of the site.
Surface water	Cod Beck	Low	As Cod Beck flows towards the river Swale through agricultural land the greatest concern is nitrates run off. The minor controlled emission from the mill is well distributed as the particulate modelling confirms. The actual pollutant is organic residue from crops and as such does not pose an environmental hazard.
Farming and forestry	Sensitive farming catchment & English woodland grant scheme	Very low	The operations at the installation will have no impact on these areas indeed the installation supports agriculture. The particulate emissions are organic residue from crops and as such do not pose a hazard.
Ecological	None	Very low	There are no sensitive habitats designated within 1km of the site.

6.0 Assessment of land pollution potential

6.1 Identification of Potentially Polluting Substances

A list of the major substances used, manufactured, and stored within the installation (or waste by-products from the manufacturing process) is contained in this section of the supporting information together with **Section 5,** elsewhere in this application. An assessment of their pollution potential has been made based upon their properties, toxicity and the volume stored. This information is recorded in detail in the Aspects Register of the Environmental Management System (EMS). The materials and substances used within the installation are also assessed in the environmental risk assessments in supporting information **Section 4** and the accident management in supporting information **Section 9.**

The future pollution risk from activities to be carried out at the installation is minimal. No substances used or stored on site will be considered to be of concern as interpreted in the appropriate regulations.

The substances incorporated into animal feed products are non-hazardous and organic. The substances involved are all held in specially purpose designed metal bins and silos. Liquids are stored in purpose designed tanks which are located in a bund constructed according to PPG 2 and which are protected from the elements and is sized according to the capacity of the largest tank contents. Operations conducted at the site will be in line with an independently audited EMS. The EMS will be put in place and in operation during the permit determination period.

7.0 Solmek Report Appendix 1 (incorporates Site contamination, Phase 1 desk study & site investigation of Dalton) with contributions from Landmark/Envirocheck.

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