

Nitrogen Neutrality Note

Land East of Castle Avenue, Havant

Persimmon Homes Ltd

November 2019



1. Introduction

1.1 The site is located adjacent to the eastern edge of the Warblington area of Havant and is subject to a planning application for the erection of 69 dwellings with associated works.

1.2 It is understood that Natural England will be expecting this site to achieve Nitrogen Neutrality. It needs to be noted that the Company has reservations about the scale of the nitrogen issue and particular points within the guidance Natural England advice on how nitrogen neutrality is achieved (June 2019 version).

1.3 Setting that aside, however, Persimmon Homes are looking to work with this advice to demonstrate neutrality as it appears this is currently the only way of securing a consent. The following sections below explain the nature of the site, what the nitrogen budget is what mitigation is proposed.

2. The Application Site

2.1 The application site is approximately 1.8ha in area. The site, historically, was part of a wider holding and historic mapping suggests that the field which forms the site was separated off in the inter-war period. In recent years the site has been used for horse grazing. An agricultural access, beyond which runs the A27, forms the southern edge of the site, with a railway line to the north.

3. Nitrogen Budget

3.1 The nitrogen calculator within Appendix A concludes that the nitrogen load on the site, as a result of the proposed development is 58.04kg/N/yr, using formulae from the Natural England guidance. The guidance suggests that this nitrogen load, if unmitigated, would result in a nitrate surplus which will result in an adverse impact upon the Solent SPA's.

4. Proposed Mitigation Land

4.1 In order to mitigate for the nitrogen surplus shown in the Natural England calculator, Persimmon Homes proposes the use of an additional area of land for off-setting, in accordance with the latest guidance.

4.2 The proposed land is known as Hamble Airfield, located approximately 25km to the west of the application site, within the Borough of Eastleigh. It has been accepted in previous correspondence between Persimmon and Natural England that a degree of flexibility can be applied to the location of off-set land. The mitigation land is shown on the plan attached at Appendix B. The amount of land required to off-set the 66.85kg/N/yr resulting from the development equates to 8.36ha and this area is shown on the plan in blue.

4.3 Hamble Airfield closed operationally in the early 80s, when houses were built on most of the former hangers. The large area outlined in red (59.5ha) was used for horse grazing in the intervening 35-40 years, albeit this use stopped very recently due to fencing damage. Persimmon Homes were actively looking for new grazing tenants in early 2019, and will be in position to offer the land for grazing to potential tenants soon if the land is not used/required for nitrogen off-set land.

4.4 The field drains both East, directly into the River Hamble which is part of the Southampton Water SPA and West, directly into the Southampton Water SPA via Royal Victoria Country Park.

4.5 The mitigation land is currently allocated for Mineral Extraction under Policy 20 of the Hampshire Minerals and Waste Plan (October 2013).

4.6 Although owned by Persimmon Homes, the site is being brought forward for extraction by CEMEX, a major building materials company. CEMEX are currently working up a planning application, which is expected to be submitted late 2019/2020. By their estimate the extraction process will take 8-10 years with restoration of the wider site to be completed by 2030.

4.7 In practical terms, it is expected that the extraction will begin in the southern end of the field and move north. The land will be reinstated as works progress to a specification that can be defined and controlled.

4.8 The extraction itself will consist of the removal of the overburden and the creation of bunds around the site perimeter. The minerals will then be removed in a number of phases with the land backfilled with inert material. The bunds will then be used to restore the final surface and planted with grass, at which point the land will be left unmanaged in a nitrogen neutral manner, in perpetuity.

5. Mitigation Proposal

5.1 The Mitigation Proposal is to permanently remove the land from a use that results in nitrate deposition in a two staged manner:

5.1.1 *mineral extraction for 8-10 years, followed by agreed restoration scheme*

5.1.2 *in perpetuity controls over land to ensure it remains fallow, with no management nor nitrate intensification of any kind*

5.2 As to the mechanism by which the land can be secured as effective mitigation in perpetuity, this would be best dealt with by a S106 agreement. To that end, draft Definitions and Schedules are provided, for comment, within Appendix C.

5.3 It is important to note that Section 106 of the Town and Country Planning Act 1990 (as amended) makes explicit provision to allow the restriction of “...development or use of the land in any specified way” and “...impose any restriction or requirement...either indefinitely or for such period or periods as may be specified.”

5.4 The proposed mitigation scheme meets the tests within para 122 of the CIL Regulations and, once bound by a S106, the obligations will run with, and be a charge upon, the land. Any material change of use that may potentially supersede or cause the obligations of the S106 to fall away would require planning permission. The terms of the S106 would be material to the consideration of any application and, therefore, in assessing that application, regard would need to be had upon the impact of that proposal upon the protected habitats within the Solent Coastal water body. It is considered, therefore, that adequate and well tested controls over the land are available to the LPA.

5.5 Although the mineral extraction will result in significant alterations being made to the topography of the site and the creation of bunds from the existing topsoil, neither activity will materially change the amount of nitrogen within the site. The rate at which nitrogen leeches from the site may be affected by the mineral extraction, however, this change is unlikely to be significant and this is accounted for within the 20% buffer mandated by the NE calculator.

5.6 The use of the land for the mineral extraction and the subsequent absence of any positive use on the land will remove any concerns in respect of in perpetuity monitoring the land and subsequent enforcement of the obligation. It will be immediately obvious if the land were to be put into a use contrary to the terms of the S106. Persimmon is happy to accept clauses requiring reasonable monitoring to be carried out by the Company or pay a contribution in lieu.

5.7 It is noted that Natural England's preference is for the land to be restored as woodland planting/forestry, land for a nature reserve or a change of ownership to a non-government organisation or local planning authority. In this instance, however, that will not be possible nor appropriate.

5.8 As discussed above, by virtue of the fact that agreements are in place for the land to be subject to much needed mineral extraction the next 10 years (and then restored), it is not possible for it to be transferred to a third party or public body.

5.9 With regard to any subsequent conversion of the land to woodland/nature reserve, the current proposal will have the same effects as that suggested. The key test is, after all, whether, and to what extent, the proposed land use will result in a deposition of nitrates above and beyond the previous situation. The submitted nitrate calculator clearly demonstrates that nitrate neutrality can be achieved through the conversion of grazing land to an unmanaged state. The same principle for converting agricultural land to Public Open Space/SANG applies here.

5.10 In terms of the land management regime, Persimmon is happy to commission and be bound by a management plan for the land to ensure that nitrate deposition is not undertaken on the mitigation land.

6. Implications of Mitigation Proposal

6.1 Restricting the use of grazing on this land (in line with para 4.43 of the Natural England guidance) would mean a nitrate drop from 13 kg/ha to 5 kg/ha, which would provide a potential nitrogen budget of 476 kg/N/yr (59.5ha x 8) to be used as mitigation. The site can therefore comfortably accommodate the required 8.36ha to be used as off-set.

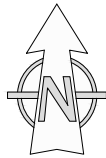
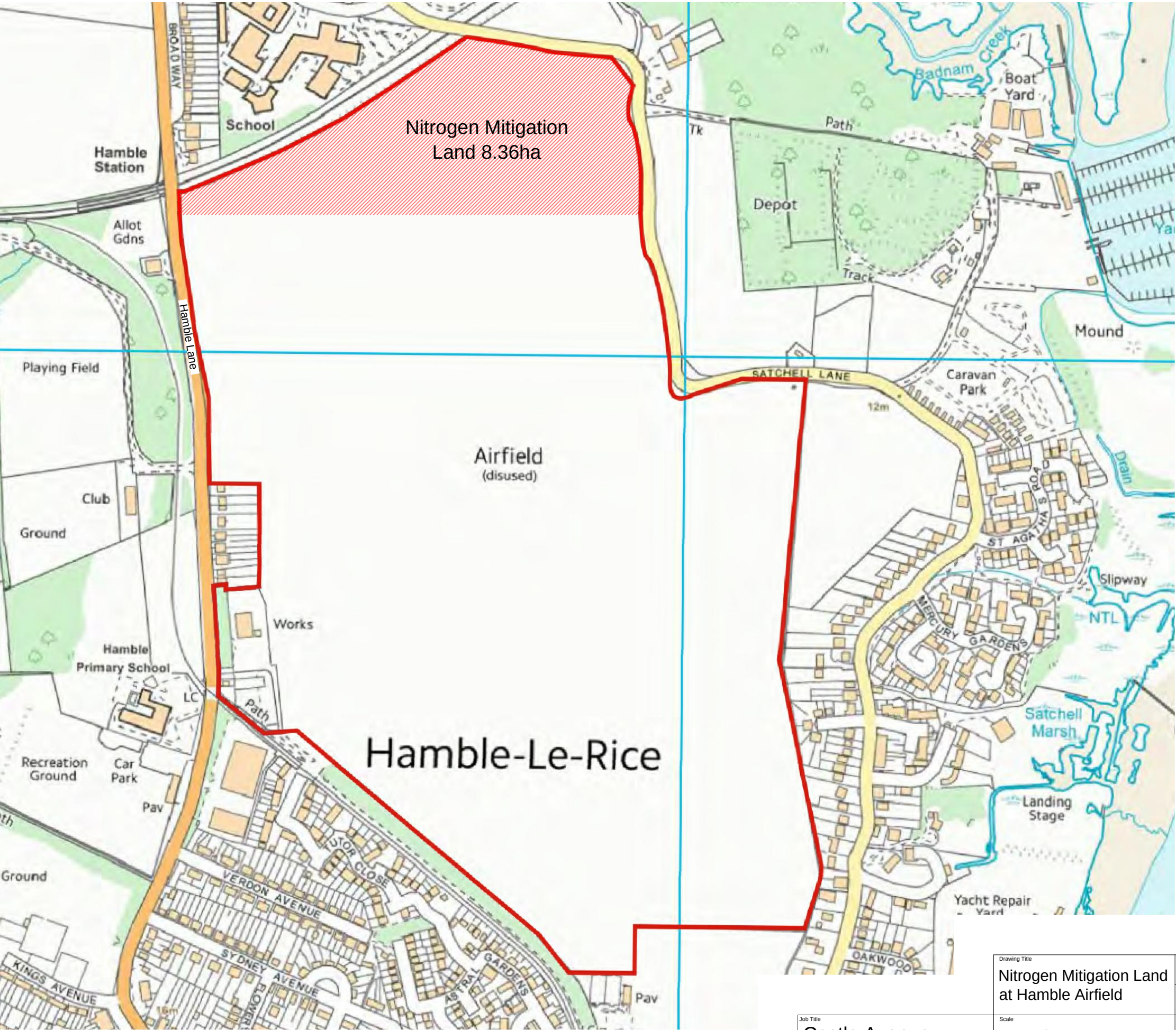
6.2 As this site discharges into the Southampton Water SPA, which is an important part of the wider Solent Coastal Water Body. It is considered that this site is closer to the Solent SPAs than the outfall point at Budds Farm and is within the 'lower catchment'.

6.3 The removal of the land from active use will mitigate for the nitrogen increase resulting from the Land at Castle Avenue development and the offered S106 clauses give the LPA the controls it requires to ensure that the land use remains as proposed.

Appendix A. Nitrate Budget

Stage 1: CALCULATE TOTAL NITROGEN (TN) LOAD FROM DEVELOPMENT WASTEWATER				
	Measurement	Value	Unit	Explanation
	Development Proposal	69.00	Residential Units	
Step 1	Additional Population	165.60	Persons	Uses an average household size of 2.4
Step 2	Wastewater volume generated by development	18216.00	litres/day	persons x 110 litres
Step 3	Receiving WwTW environmental permit limit for TN	9.70	mg/l TN	Budds Farm
Step 4	TN discharged after WwTW treatment	159025.68	mg/TN/day	90% of the consent limit- 8.73
Step 5	Convert mg/TN to kg/TN per day	0.16	Kg/TN/day	Divide by 1,000,000
Step 6	Convert kg/TN per day to kg/TN per year	58.04	Kg/TN/yr	X 365 days
Wastewater total nitrogen load	58.04			
Stage 2: CALCULATE NITROGEN LOAD FROM CURRENT LAND USE				
	Measurement	Value	Unit	Explanation
Step 1	Total area of existing agricultural land	1.80	Hectares	Red line site area
Step 2	Identify farm type and confirm nitrate loss.	13.00	Kg/ha/yr	Grazing land @ 13
Step 3	Multiply area by nitrate loss	23.40	Kg/N/yr	
Nitrogen load - current land use	23.4			
Stage 3: CALCULATE NITROGEN LOAD FROM FUTURE LAND USES				
	Measurement	Value	Unit	Explanation
Step 1	New urban area	1.80	Hectares	Urban Area
Step 2	Nitrogen Load from future urban area	25.74	Kg/N/yr	x 14.3
Step 3	New SANG / open space	0.00	Hectares	on site POS
Step 4	Nitrogen load from SANG / open space	0.00	Kg/N/yr	x 5
Step 5	Combine Nitrogen load from future land uses	25.74	Kg/N/yr	
Nitrogen Load - future land uses	25.74			
Stage 4; CALCULATE THE NET CHANGE IN NITROGEN LOAD FROM THE DEVELOPMENT				
	Measurement	Value	Unit	Explanation
Step 1	Identify Nitrogen load from wastewater (stage 1)	58.04	Kg/N/yr	
Step 2	Calculate the net change in Nitrogen from land use change	2.34	Kg/N/yr	
Step 3	Determine Nitrogen Budget	55.70	Kg/N/yr	
Step 4	Nitrogen Budget without buffer	55.70	Kg/N/yr	
Step 5	Divide Nitrogen Budget without buffer by 5	11.14	Kg/N /yr	
Step 6	Identify Nitrogen Buffer with 20% buffer	66.85	Kg/N /yr	
Nitrogen Budget with 20% buffer	66.85			
Stage 5: CALCULATE AMOUNT OF LAND REQUIRED AS OFF-SET				
	Measurement	Value	Unit	Explanation
Step 1	Mitigation Land to used as off set	8.36	Hectares	see Nitrate Note
Step 2	Nitrogen Load from existing use of Mitigation Lane	108.63	Kg/N/yr	grazing land @ 13kg/N/jr
Step 3	Nitrogen Load from proposed use of Mitigation Lane	41.78	Kg/N/yr	converted to SANG / open space - 5kg/N/jr
Step 4	Determine Mitigation Land Nitrogen Budget	66.85	Kg/N/yr	
TOTAL	0.00			

Appendix B. Mitigation Land



Job Title
Castle Avenue,
Havant

Drawing Title
Nitrogen Mitigation Land
at Hamble Airfield

Scale
1:5000 @ A3
metres 50 100 150 200

Job No
507
Drawing No
NML02
Rev
a
Date
22.10.19

Status
INFORMATION

Rev	Date	Revision Details	ia	ga
a	15.11.19	Mitigation area adjusted		



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Appendix C. Draft Section 106 Definitions & Clauses

“Agricultural Use” means land used for agriculture as defined by section 336(1) of the Act

“Nitrate Management Plan” means a plan for the in perpetuity maintenance and management of the Nitrate Mitigation Land

“Nitrate Mitigation Land” means the part of the Land show coloured [●] on Plan [●] and registered at the Land Registry with title number [●] provided as land to be taken out of agricultural use to mitigate against the impact of the Development

NITRATE MITIGATION LAND

Not to occupy nor permit occupation of any dwelling on the Land or any part thereof unless and until measures to ensure that the Nitrate Mitigation Land, or other such Nitrate Mitigation land to be agreed with the Council, has been taken out of Agricultural Use for the lifetime of the development have been submitted to and approved in writing by the Local Planning Authority.

Not to occupy nor permit occupation of any dwelling on the Land or any part thereof unless and until the Nitrate Mitigation Plan has been approved by the Council in writing.