

6 BOYS HALL ROAD
ASHFORD

NUTRIENT NEUTRALITY ASSESSMENT AND MITIGATION STRATEGY

MR AND MRS M LUKER

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Authorisation and Version Control

Water Environment was commissioned by Mr and Mrs M Luker to investigate and mitigate against the concerns raised by Natural England regarding the nutrient neutrality of the proposed development at 6 Boys Hall Road in Ashford, and the potential adverse effects on downstream Habitats Sites.

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CONTENTS

Executive Summary	iv
Abbreviations	v
1 Introduction.....	1
Background	1
Scope of Study	2
2 Water Quality in the Stodmarsh	3
Stodmarsh Designated Sites	3
Water Quality	4
Strategic Approach	5
3 Site Description	6
Location	6
Proposed Development	6
4 Calculating the Nutrient Budget.....	7
Natural England Methodology	7
Additional Wastewater – Pre 2030	8
Existing Wastewater – Pre 2030	9
Wastewater Load – Post 2030	9
Development Nutrient Load from Surface Water	9
The Nutrient Budget	10
5 Part 2: Mitigation Strategy	11
Mitigation Through Purchase of Nutrient Credits	11
6 Conclusions.....	12
Appendix A : Drawings	
Appendix B : Calculations	
Appendix C : Supporting Documentation	

List of Figures

Figure 1: Site layout and context	6
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List of Tables

Table 1: Summary of proposed development nutrient budgets, pre- and post-2030	10
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EXECUTIVE SUMMARY

In 2018, the European Court of Justice refined the definition of plans and projects and ruled that mitigation needs to be in place to ensure that there will be no likely significant effect on the conservation status of designated sites. Additional nutrient loading to designated sites already in an unfavourable conservation status is necessarily limited unless mitigation is in place. This ruling has come to be known as 'The Dutch Case'.

In the Stour River catchment in East Kent, developments could adversely affect the designated site known as Stodmarsh. Several of the nature reserve lakes are in a state of eutrophication (an unfavourable conservation status) and therefore the ruling of the Dutch Case applies. All developments in the catchment must demonstrate 'nutrient neutrality' in order to ensure no adverse effect on the integrity of the designated site, meaning that the nutrients generated by the development must be less than or equal to the nutrients generated by the existing land use.

The application site is located in Ashford, west of Boys Hall Road and north of the railway line. The address is 6 Boys Hall Road, Willesborough, Ashford, Kent, TN24 0LA.

The site covers a total area of approximately 0.39 ha, and currently comprises two dwellings (a bungalow and a mobile home) and a hairdressing salon. The proposal is for the removal of the mobile home and the hairdressing salon, and the construction of five new 4-bedroom houses. The existing bungalow is to be retained.

An adverse effect on Stodmarsh cannot be ruled out from the development, in the absence of any mitigation.

It is proposed that the nutrient budget will be offset through the purchase of credits from an approved credit scheme within the catchment.

It is expected an appropriately worded Condition can be imposed upon any Consent requiring a scheme for nutrient neutrality to be approved prior to construction of any dwelling on any phase of the development.

ABBREVIATIONS

Acronym	Definition
AA	Appropriate Assessment
ABC	Ashford Borough Council
CCC	Canterbury City Council
EMC	Event Mean Concentrations
FCA	Environment Agency
FLMP	Fallowed Land Management Plan
HRA	Habitats Regulations Assessment
LURA	Levelling Up and Regeneration Act
NE	Natural England
NEGM	Natural England Generic Methodology
NN	Nutrient Neutrality
ONS	Office for National Statistics
PTP	Package Treatment Plant
SAAR	Standard Annual Average Rainfall
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
TAL	Technically Achievable Limits
TN	Total Nitrogen
TP	Total Phosphorus
WwTW	Wastewater Treatment Works

1 INTRODUCTION

- 1.1 The application site is located in Ashford, west of Boys Hall Road and north of the railway line. The address is 6 Boys Hall Road, Willesborough, Ashford, Kent, TN24 0LA.
- 1.2 The site covers a total area of approximately 0.39 ha, and currently comprises two dwellings (a bungalow and a mobile home) and a hairdressing salon. The proposal is for the removal of the mobile home and the hairdressing salon, and the construction of five new 4-bedroom houses. The existing bungalow is to be retained.

Background

- 1.3 As the site lies within the catchment of a European and internationally designated site – Stodmarsh – a Habitats Regulations Assessment (HRA) is required.
- 1.4 A HRA refers to the several distinct stages of assessment which must be undertaken in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) to determine if a plan or project may affect the protected features of a habitats site (any site which would be included within the definition at Regulation 8 of the Conservation of Habitats and Species Regulations 2017) before deciding whether to undertake, permit or authorise it.
- 1.5 A significant effect should be considered likely if it cannot be excluded on the basis of objective information and it might undermine a site's conservation objectives. A risk or a possibility of such an effect is enough to warrant the need for an Appropriate Assessment (AA) to be carried out by the competent authority. 'Appropriate' is not a technical term. It indicates that an assessment needs to be proportionate and sufficient to support the task of the competent authority in determining whether the plan or project will adversely affect the integrity of the habitats site. An AA must contain complete, precise, and definitive findings and conclusions to ensure that there is no reasonable scientific doubt as to the effects of the proposed plan or project.¹
- 1.6 In 2018, the European Court of Justice refined the definition of plans and projects in the so-called 'Dutch case' ruling that mitigation needs to be certain at the time of assessment to ensure that there will be no adverse effect on the conservation status of European designated sites which already exceed compliance limits².
- 1.7 Nutrient neutrality is a means of ensuring that a plan or project does not add to existing nutrient burdens. Where nutrient neutrality is properly applied and the existing land does not undermine the conservation objectives, Natural England (NE) considers that an adverse effect on integrity alone and in combination can be ruled out³.
- 1.8 In the Stour Valley River catchment in East Kent, developments could adversely affect Stodmarsh, which is designated a Site of Special Scientific Interest (SSSI), a Special Protection Area (SPA), a Special Area of Conservation (SAC) and a Ramsar site. Several of the nature reserve lakes at Stodmarsh are in a state of eutrophication (an unfavourable conservation status) and therefore the ruling of the Dutch Case applies.
- 1.9 The practical implication of the Dutch Case across England is the necessity to mitigate increases in nutrient loading from new development including nutrients contained in surface water runoff

¹ Guidance on the use of Habitats Regulations Assessment – <https://www.gov.uk/guidance/appropriate-assessment> – accessed 03/2024

² Joined Cases C-293/17 and C-294/17 of the European Court of Justice

³ Wood, A., Wake, H., and McKendrick-Smith, K. (2022) 'Nutrient Neutrality Principles' Natural England Technical Information Note, TIN186

and an increase in wastewater flows to any of the Wastewater Treatment Works (WwTW) in the relevant catchment.

- 1.10 Following the passage of the Levelling Up and Regeneration Act (LURA) on 26 October 2023, WwTW that meet the requirements will need to be upgraded to meet much stricter effluent concentration requirements.
- 1.11 Schedule 15 of the LURA specifies that authorities must assume that the WwTW will be upgraded by the 1st of April 2030, and so two different nutrient budgets will be calculated for the development.

Scope of Study

1.12 The main objectives of this study are to:

- Provide an overview of NE's position with respect to water quality within the Habitats Sites;
- Present calculations, based on the absence of any mitigation measures, to outline the potential increase in nutrient loading as a result of the proposed development; and
- Outline the mitigation strategy proposed to manage surface and wastewater from the proposed development and present supporting calculations in order to ensure that, from first occupation of the dwellings, the proposed development is nutrient neutral.

2 WATER QUALITY IN THE STODMARSH

Stodmarsh Designated Sites⁴

2.1 The Stodmarsh SSSI is designated by NE for the following features of interest:

- Wetland habitats including extensive reedbeds, swamp and fen communities;
- Open water habitats including lakes, ditches, and lagoons;
- Diverse breeding and non-breeding bird communities. Two rare British birds – Cetti's warbler and bearded tit – breed here in nationally significant numbers;
- Varied invertebrate fauna, including multiple scarce moth species;
- An assemblage of vascular plants.

2.2 The Stodmarsh SPA is designated for the following features and supported species:

- Bittern (Non-Breeding);
- Gadwall (Breeding and Non-Breeding);
- Hen Harrier (Non-Breeding);
- Shoveler (Non-Breeding);
- Breeding bird assemblage;
- Waterbird assemblage;

2.3 The Stodmarsh Ramsar Site is designated, under criteria 2 of the Ramsar Convention, for:

- Wetland invertebrate assemblage;
- Wetland plant assemblage;
- Assemblage of rare wetland birds;
- Bearded tit populations (Breeding and Wintering);
- Bittern (Wintering);
- Gadwall (Breeding and Wintering);
- Hen Harrier (Wintering);
- Shoveler (Wintering);

2.4 The Stodmarsh SAC is designated for the following qualifying species:

- Desmoulin's whorl snail;

2.5 The focus of this letter is on the evidence of degrading water quality in the Stodmarsh SSSI, SPA, Ramsar and SAC, henceforth referred to as the 'Habitats Sites'.

⁴ Designatedsites.naturalengland.org.uk (Accessed 03/2024)

Nutrients of Significance

- 2.6 It has been found that the nutrients of the highest significance in terms of water quality in the Habitats Sites are Total Nitrogen (TN) and Total Phosphorus (TP).
- 2.7 TN includes organic and inorganic forms of nitrogen, both of which are available for plant growth and can contribute to algal blooming. TN is the sum of inorganic forms of nitrogen – nitrate nitrogen ($\text{NO}_3\text{-N}$), nitrite nitrogen ($\text{NO}_2\text{-N}$) and ammoniacal nitrogen ($\text{NH}_3\text{-N}$ and $\text{NH}_4\text{-N}$) – and organically bonded nitrogen.
- 2.8 TP includes all phosphorus components – phosphate phosphorus ($\text{PO}_4\text{-P}$), dissolved organic phosphorus and particulate phosphorus in algal and bacterial cells – and also includes mineral particles such as clay.

Water Quality

- 2.9 The condition of the Habitats Sites which support the designated features is in part dependent on the water quality within them. The occurrence of excessive nutrients in the Habitats Sites can impact the competitive interactions between high plant species, and between higher plant species and algae, which can result in dominance in attached forms of algae, and a loss of characteristic plant species.
- 2.10 Changes in plant growth and community composition can have implications for the wider food web and the species present. Increased nutrients and the occurrence of eutrophication can also affect the dissolved oxygen levels in the waterbody, which can also impact the biota within the Habitats Sites.
- 2.11 Algal Bloom and fish kill events have been observed in one of the Habitats Sites Lakes (SSSI Unit 010). Assessments by NE have described the condition of this lake as 'unfavourable' and indicated high nutrient levels. TP has been measured at $1000\text{ }\mu\text{g/l}$ where the target for SSSI lakes is $49\text{ }\mu\text{g/l}$. Eutrophication, which arises as a result of increased water nutrient levels, can lead to a reduction of fish and macrophyte populations. This in turn impacts food availability for SPA/Ramsar birds and the qualifying invertebrate community. The reason for this adverse condition is quoted as 'Freshwater pollution – Water Pollution – Discharge'.
- 2.12 The lake within SSSI Unit 007 has also been described as 'unfavourable' and has been found to fail in reaching nationally agreed water quality targets, including an excess of nitrogen and phosphorus. The reason for this adverse condition is quoted as 'Freshwater pollution – Water Pollution – Agriculture/Runoff'.
- 2.13 Lakes within Units 001, 002 and 005 are described as in 'Favourable' or 'Unfavourable – recovering' condition and thus are not of concern for this assessment.
- 2.14 Concentrations of TN and TP have been recorded within the lakes in SSSI Units 007 and 010 above the NE SSSI Favourable Condition Targets (FCTs) of $49\text{ }\mu\text{g/l}$ TP and 1.5 mg/l TN. It is important to understand the mechanism by which these nutrients enter the Habitats Sites. Some of the major sources of TN and TP have been identified as the following⁵:
- WwTWs which outfall into the Stour upstream of the Habitats Sites;
 - Runoff from urban and agricultural land;
 - Flood waters from the River Great Stour (during both high flow and tidal events); and
 - Recycling of Nutrients within lake 007 itself.

⁵APEM, Stodmarsh SSSI, SPA and NNR Lake Hydrology Project Phase 1, April 2016

- 2.15 In the case of TP, it has been estimated that the dominant source of phosphate in the River Stour is WwTWs, accounting for 50% – 80% of concentrations in the river adjacent to the Habitats Sites⁶.

Strategic Approach

- 2.16 Where sites are already in unfavourable condition due to elevated nutrient levels, NE considers that competent authorities will need to carefully justify how further inputs from new plans and projects, either alone or in combination, will not adversely affect the integrity of the site given the conservation objectives.⁷
- 2.17 To address the uncertainty and the subsequent risk to the Habitats Sites, the mitigation strategy outlined in this report will ensure that the proposed development does not add to existing nutrient burdens and provides certainty that the whole of the scheme is deliverable in line with the requirements of the Conservation of Habitats and Species Regulations 2017⁸ and in light of relevant case law⁹.
- 2.18 The latest NE guidance has been followed to ensure that the proposed development will be nutrient neutral (i.e. will not increase the flux of nutrients to the designated site).
- 2.19 In this report the following staged approach has been implemented: in Part 1, it was calculated, in the absence of any mitigation measures, the potential increase in nutrient loading from the proposed development. In Part 2, a mitigation strategy was proposed and supporting calculations have been presented which provide sufficient and reasonable certainty that the development will not contribute to an increase in nutrient loading.
- 2.20 The nutrient neutrality calculations in this report were based on key inputs and assumptions based on the best available scientific evidence and research. To accommodate for the necessary level of uncertainty in these key assumptions, a buffer has been used when calculating levels of nutrients. This buffer ensures that a precautionary approach is followed throughout.

⁶ATKINS, Stodmarsh Lake Hydrology Study, May 2016

⁷ Natural England (16 March 2022) Letter to LPA Chief Executives and heads of planning 'Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites.'

⁸ Conservation of Habitats and Species Regulations (England and Wales) Regulations 2017

⁹ Including Wildlife and Countryside Act 1981, Countryside and Rights of Way Act 2000 and Rural Communities Act 2006

3 SITE DESCRIPTION

Location

- 3.1 The application site is located in Ashford, west of Boys Hall Road and north of the railway line. The address is 6 Boys Hall Road, Willesborough, Ashford, Kent, TN24 0LA.
- 3.2 The site covers an area of approximately 0.39 ha and currently comprises two dwellings (a bungalow and a mobile home) and a hairdressing salon.
- 3.3 The site boundary and location in respect to the Stour Valley catchment is shown in Figure 1. The site is located in the Upper Stour Operational Catchment.

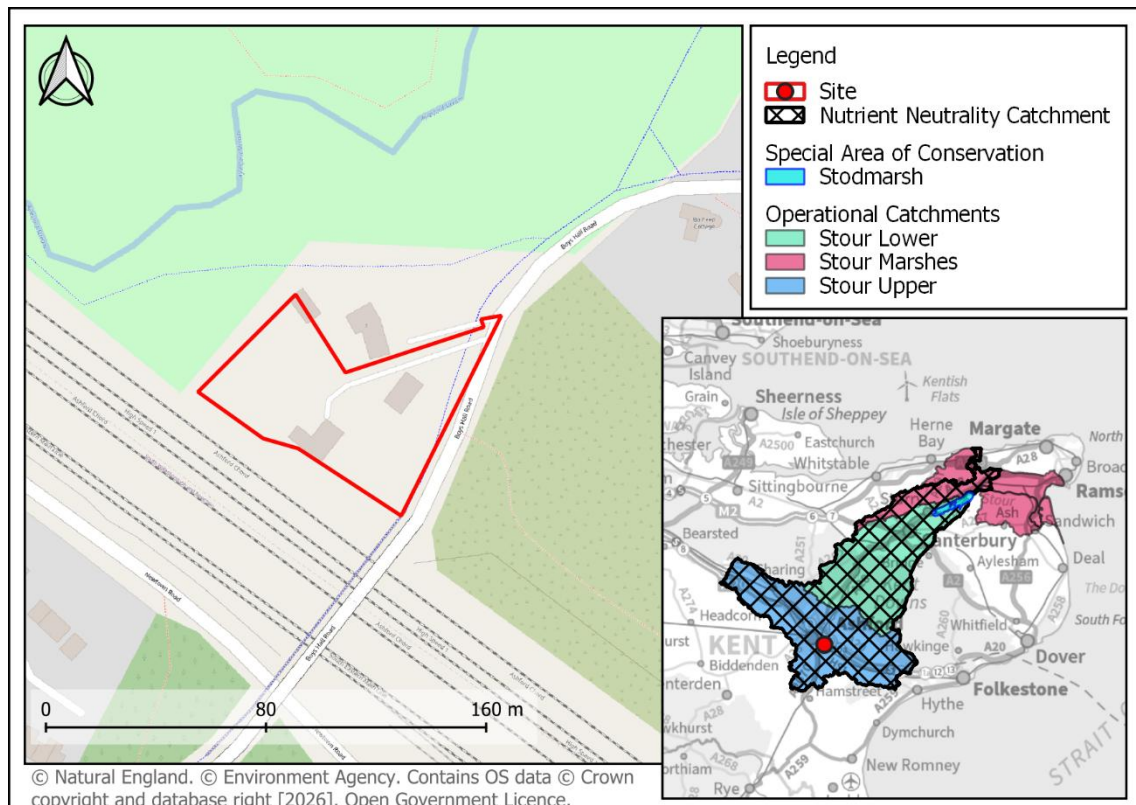


Figure 1: Site layout and context

Proposed Development

- 3.4 The proposal is for the removal of the mobile home and the hairdressing salon, and the construction of five new 4-bedroom houses. The existing bungalow is to be retained.
- 3.5 Drawings for the proposed scheme are attached in Appendix A.

4 CALCULATING THE NUTRIENT BUDGET

Natural England Methodology

- 4.1 The latest version of the Natural England Generic Methodology (NEGM) for determining whether a site achieves nutrient neutrality was issued in September 2025¹⁰. This guidance lays out the process of calculating the nutrient budget and provides worked examples.

Stage 1 – Total Wastewater Load

- 4.2 Stage 1 of the calculation is to calculate the nutrient load from the additional wastewater that will be generated by the development. This stage specifically only includes new overnight stays in the development, as it is assumed that any additional wastewater generated by diurnal use would be accounted for elsewhere.
- 4.3 This is done by multiplying the total amount of wastewater by the expected concentration of treated effluent from the WwTW serving the development. The WwTW can be determined through an enquiry from the wastewater service provider in the development location. The effluent concentrations of the various WwTW have been provided by NE for the pre-2025, 2025-2030 and post-2030 epochs.
- 4.4 The NEGM recommends using water use as a proxy for total wastewater amount, excluding any garden use. NE's advice is to use the Building Regulations to determine the average water use per person, and then to add 10 litres/person/day (l/p/d) to the value to account for uncertainty in any future changes to fittings.
- 4.5 The increase in the number of people from a development can be determined using census data from the Office for National Statistics (ONS). This gives the average occupancy of a dwelling type, and NE recommends the use of the national average occupancy rate to determine the expected population.

Stage 2 and Stage 3 – Existing and Future Surface Water Loads

- 4.6 Stage 2 of the calculation is to consider the existing land use on the site, and Stage 3 is to consider the future land-use onsite. Using the ADAS Farmscoper tool, loading factors can be determined for all different agriculture uses within the catchment. These loading factors are further separated by the underlying soil drainage conditions and average rainfall and are measured in kg/ha/year.
- 4.7 The NEGM does not elaborate on how greenspace and woodland loading rates were derived, however, in previous NE Guidance¹¹, detail was provided on how TN loading factors for non-agricultural and non-urban land uses were calculated. Three main sources of TN were identified: atmospheric deposition, pet waste and TN fixation. It was estimated, based on several studies, that the catchment would retain 90% of all TN. This was studied in both the Solent catchment and the Stodmarsh catchment, and it was found that the numbers did not vary significantly. It is expected that this would be the case throughout England.
- 4.8 For woodland and heathland, the pet waste was discounted, and a total loading factor of 3 kgN/ha/year was therefore calculated. In the latest guidance, greenspace, open space, and woodland have all been given the same loading factor of 3 kgN/ha/year.

¹⁰ Ricardo and Natural England (November 2022) Nutrient Neutrality Generic Methodology (September 2025 Update) NECR459, Natural England

¹¹ Natural England (2020), 'Advice on Nutrient Neutrality for New Development in the Stour Catchment in Relation to Stodmarsh Designated Sites'

- 4.9 For TP, evidence suggested that non-agricultural, non-urban land uses do not leach TP. It was therefore conservatively assumed that woodland, greenspace, and similar land uses would leach TP at the limit of detection which, in some studies, was 0.02 kgP/ha/year.
- 4.10 In the NEGM, urban loading factors were modelled using assumed¹² 'event mean concentrations' (EMC) of nutrients for rainfall events. The average runoff for a site can be calculated using the Modified Rational Method and multiplying the runoff by the EMC will give the nutrient load. This has been standardised for a 1 ha site so that a loading factor can be obtained in the same units of measurement as for agriculture and greenspace.
- 4.11 Using these loading factors, and the area of various land uses on the site, the existing and future nutrient load from diffuse sources can be calculated.

Stage 4 – Final Unmitigated Nutrient Budget

- 4.12 Stage 4 of the calculation is the final stage. At this point, the totals from Stage 1 and Stage 3 are added together, and the total from Stage 2 is subtracted. If there is a surplus (i.e., the proposed total is higher than the existing total), a buffer (factor of safety) of 20% is added to the total, and this is then referred to as 'the nutrient budget'. If the nutrient budget comes out as less than or equal to zero, then the development has achieved nutrient neutrality.
- 4.13 All the calculations set out in this section can be seen in full in Appendix B of this report.

Additional Wastewater – Pre 2030

- 4.14 Typically, wastewater is conveyed from the development to the public sewerage and onto the WwTW for treatment before discharge to surface waters.
- 4.15 The wastewater nutrient load can be calculated by entering the relevant information into the following equation:

$$\text{Wastewater Load (kg/year)} = \frac{\text{Population (p)} \times \text{Daily Water Use (l/p/d)} \times \text{Effluent Conc. (mg/l)} \times 365.25 \text{ (d/year)}}{1,000,000 \text{ (mg/kg)}}$$

- 4.16 The proposed development comprises five new 4-bedroom houses. Ashford Borough Council (ABC) have released guidance on average occupancy rates for specific types of development¹³. For a house, ABC recommend using 2.4 as an occupancy rate. For five houses, this gives a total future population of 12 people.
- 4.17 The new development will meet the Optional Requirement for water efficiency under Approved Document G of the Building Regulations (2010, as amended in 2015 and 2024) of 110 l/p/d, and in line with the NEGM, an additional 10 l/p/d has been added as a buffer against future change. The daily water use is therefore 120 l/p/d.
- 4.18 The wastewater for the proposed development will be conveyed to Ashford Wastewater Treatment Works (WwTW) for treatment. Ashford WwTW has a licence limit of 0.50 mg/l for phosphorus and no license limit for nitrogen. Therefore, in line with the NEGM, effluent concentrations of 27 mgN/l and 0.45 mgP/l have been used.
- 4.19 Entering these figures into the equation in §4.15 gives a future wastewater nutrient load of 14.20 kgN/year and 0.24 kgP/year.

¹² The latest NE methodology quotes 'Mitchell, G., 2005. Mapping hazard from urban non-point pollution: A screening model to support sustainable urban drainage planning. Journal of Environmental Management, 74(1), pp. 1-9' in the definition of the so-called 'event mean concentrations'. However, the paper does not disclose how the event mean concentrations listed were calculated.

¹³ Available at: [Information page to help developers submitting nutrient calculations & mitigation for developments affected by nutrient neutrality \(ashford.gov.uk\)](https://www.ashford.gov.uk/information-page-to-help-developers-submitting-nutrient-calculations-mitigation-for-developments-affected-by-nutrient-neutrality) [Accessed 01/2024]

- 4.20 Note that the existing bungalow on the site has been screened out of the calculation as it is being retained, and therefore results in no change in wastewater in the catchment.

Existing Wastewater – Pre 2030

- 4.21 There is a mobile home currently on the site which contributes wastewater to the catchment.
- 4.22 The ABC guidance for occupancy rates does not include mobile homes, so an occupancy rate of 2.4 (as recommended for a house or a holiday let) has been used.
- 4.23 It is assumed that the mobile home complies with the Building Regulations standard for water usage of 125 l/p/d, and line with the NEGM an additional 10 l/p/d has been added to allow for changes to fixtures and fittings over time. The daily water use is therefore 135 l/p/d.
- 4.24 Wastewater from the mobile home is conveyed to Ashford WwTW so effluent concentrations of 27 mgN/l and 0.45 mgP/l have been used, as described in §4.18.
- 4.25 Entering these figures into the equation in §4.15 gives a future wastewater nutrient load of 3.20 kgN/year and 0.05 kgP/year.
- 4.26 Note that the existing bungalow on the site has been screened out of the calculation as it is being retained, and therefore results in no change in wastewater in the catchment.

Wastewater Load – Post 2030

- 4.27 Following the passage of the Levelling Up and Regeneration Act (LURA) on 26 October 2023, Ashford WwTW will be required to upgrade its treatment process to meet new licence limits of 10 mgN/l for TN and 0.25 mgP/l for TP respectively.
- 4.28 This will impact the calculation of the future wastewater nutrient load, reducing it to 4.73 kgN/year and 0.12 kgP/year, following the upgrade of the WwTW.
- 4.29 This will also impact the calculation of the existing wastewater nutrient load, reducing it to 1.07 kgN/year and 0.03 kgP/year, following the upgrade of the WwTW.
- 4.30 Schedule 15 of the LURA specifies that authorities must assume that the WwTW will be upgraded by the 1st of April 2030, so two different nutrient budgets have been calculated for the development.

Development Nutrient Load from Surface Water

- 4.31 The greenfield runoff estimation tool on the HR Wallingford Website¹⁴, gives a standard annual average rainfall (SAAR) for this site of 730 mm/year, and Cranfield University's Land Information System¹⁵ indicates that the site comprises Soilscape no. 7 ("Freely draining slightly acid but base-rich soils"). Soilscape 7 has a FarmScoper Soil Drainage Type of "Freely Draining" (FreeDrain).
- 4.32 The site lies in the River Great Stour Nitrate Vulnerable Zone¹⁶.
- 4.33 The site is currently in mixed use with a hair dressing salon, a bungalow, a mobile home and a large garden area. This has been classified as follows:
- 0.07 ha "Commercial/Industrial", and
 - 0.32 ha "Residential urban".

¹⁴ Available at: uksuds.com

¹⁵ Available at: <http://www.landis.org.uk/soilscales/#> [Accessed on 08/2024]

¹⁶ Available at: <https://mapapps2.bgs.ac.uk/ukso/home.html?layers=NVZEng> [Accessed 08/2024]

4.34 This results in a total nutrient loading due to surface water runoff of 4.83 kgN/year and 0.54 kgP/year.

4.35 The proposed development will be classified in its entirety as "Residential Urban". This gives a total future water nutrient load of 5.27 kgN/year and 0.57 kgP/year.

The Nutrient Budget

4.36 The nutrient budget can be calculated by adding the future wastewater and surface water nutrient loads together then subtracting the existing nutrient load. After adding a 20% buffer to account for uncertainty and future change, the final nutrient budget is calculated.

4.37 Table 1 below shows a summary of these calculations.

Table 1: Summary of proposed development nutrient budgets, pre- and post-2030

All units in kg/year	Future Wastewater Load		Existing Wastewater Load		Future Surface Water Load		Existing Surface Water Load	
	TN	TP	TN	TP	TN	TP	TN	TP
Pre-2030	14.20	0.24	3.20	0.05	5.27	0.57	4.83	0.54
Post-2030	4.73	0.12	1.07	0.03	5.27	0.57	4.83	0.54

All units in kg/year	Nutrient Budget		Nutrient Budget with 20% Buffer	
	TN	TP	TN	TP
Pre-2030	11.45	0.21	13.74	0.25
Post-2030	4.11	0.12	4.93	0.14

5 PART 2: MITIGATION STRATEGY

- 5.1 As the development will result in an increase in nutrient load, mitigation will be required to achieve nutrient neutrality. The mitigation strategy presented in this section has been designed to reduce the nutrient budget to zero.
- 5.2 All calculations for the proposed mitigation strategy are included in full in Appendix B of this report.
- 5.3 Due to the LURA there are two separate nutrient budgets that are required to be offset by the development, these are as follows:
- Pre-2030: 13.74 kgN/year and 0.25 kgP/year,
 - Post-2030: 4.93 kgN/year and 0.14 kgP/year.

Mitigation Through Purchase of Nutrient Credits

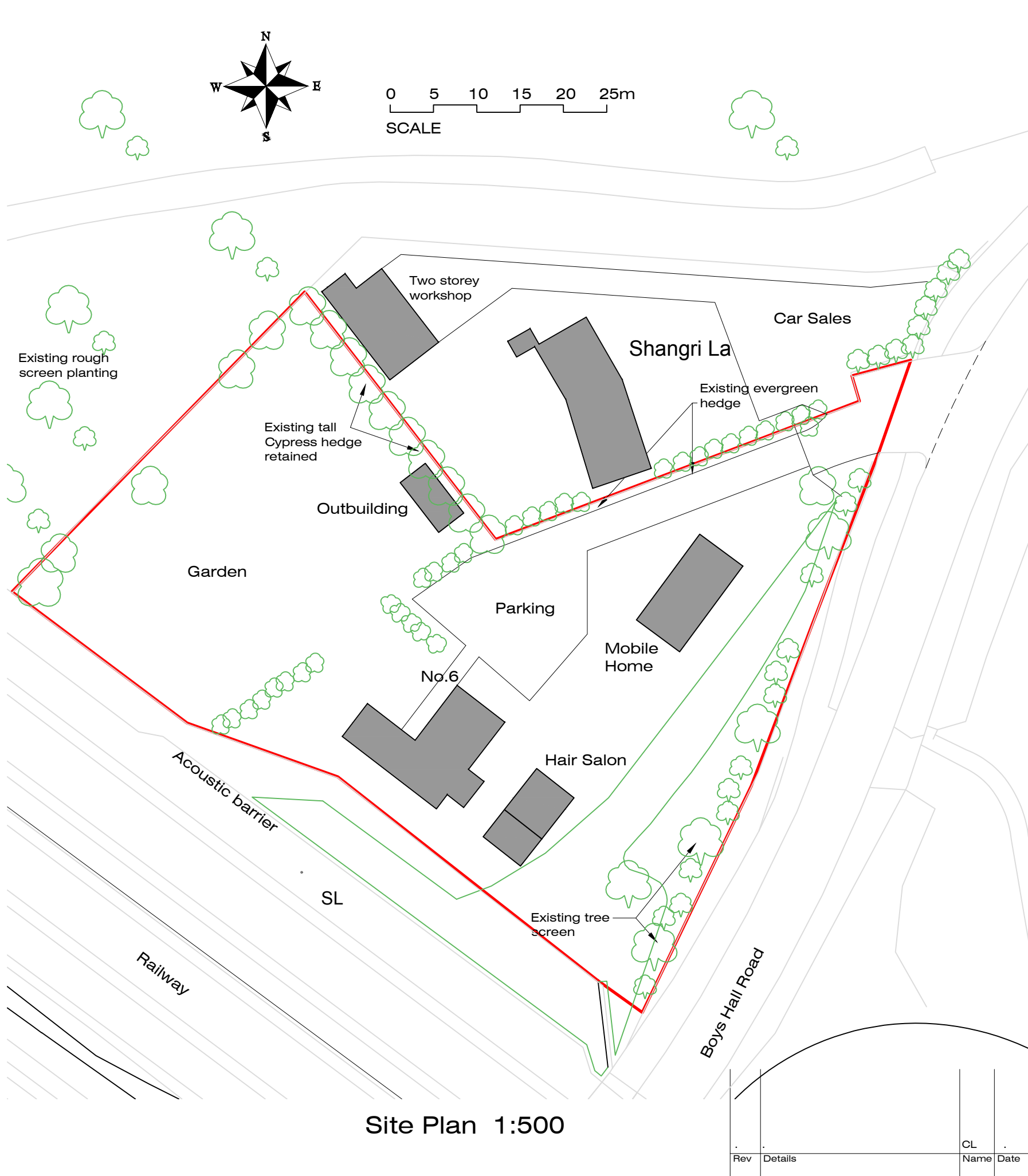
- 5.4 It is proposed that the development will use nutrient credits, obtained from a nutrient credit scheme, to offset the residual nutrient budget, thus reducing the budget to zero and achieving nutrient neutrality.
- 5.5 The purchase of nutrient credits is a feasible solution to offset developments within the catchment of the Stodmarsh. The credits will be provided from an approved development scheme that has a surplus of TN and TP credits available or via a Nutrient Credit Bank.
- 5.6 A credit certificate has been provided by DACE Environmental Ltd, and this is available in Appendix C.
- 5.7 This shows the purchase of 8.81 kgN/year worth of TN credits until 2030, as well as 4.93 kgN/year worth of TN credits in perpetuity. This sums up to meet the requirements in §5.3, for the pre-2030 and post-2030 nutrient budgets.
- 5.8 The certificate also shows the purchase of 0.25 kgP/year worth of TP credits in perpetuity, which is sufficient to cover both the pre-2030 and post-2030 nutrient budgets.

6 CONCLUSIONS

- 6.1 The proposal is for the construction of five new dwellings with garden, driveways and parking, with an access road. Following the procedure outlined in the NEGM it has been demonstrated, through the implementation of the proposed mitigation strategy, that the proposed development will be nutrient neutral with respect to the Habitats Site.
- 6.2 Different nutrient budgets have been prepared to account for the change in wastewater nutrient load following the passage of the LURA. These nutrient budgets will be mitigated by purchasing nutrient credits.
- 6.3 Regardless of the mitigation strategy proposed on the development, it is expected and accepted elsewhere in the UK, that a series of Grampian Planning Conditions and Obligations will be required to limit occupation, providing further certainty to NE, that no unit on the proposed scheme will be occupied until nutrient neutrality can be demonstrated.

APPENDIX A: DRAWINGS

Colin Ladd Associates: Drawing no. 599-04



Location Plan 1:1250

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Verify all dimensions on site before commencing any work or preparing any shop drawings. Dimensions in mm unless otherwise stated. Report any alterations or omissions to the Architect. This drawing incorporates information from other professions. Colin Ladd Associates cannot accept responsibility for the integrity and accuracy of such information. Any clarification and/or additions that are required appertaining to such information should be sought from the relevant profession or their representative.

Colin Ladd Associates Architects & Designers 8 Haymakers Lane Ashford Kent TN23 4GN Tel: 01233 625538 email: mail@colinladd.com	Client Mr & Mrs M Luker		Status PLANNING	
	Project 6 Boys Hall Road Ashford Kent TN24 0LA		Scale @ A3 1:500 & 1:1250	Date Mar 2021
	Drawing Name LOCATION AND EXISTING SITE PLAN		Drawn By CL	Checked By
			Drawing No 599-04	Revision .

Rev	Details	CL	Name	Date
.	.	.	.	.

APPENDIX B: CALCULATIONS

Water Environment Limited: Nutrient Neutrality Calculations Ref: 21113-NUT-CA-01 P01

- Sheet 1: Pre-2030 Unmitigated
- Sheet 2: Post-2030 Unmitigated

Nutrient Neutrality Calculations Unmitigated Pre-2030				 WATER ENVIRONMENT Water Environment Limited • 6 Coppergate Mews • Brighton Road • Surbiton • London • KT6 5NE Tel: 020 8545 9720 • Email: admin@waterenvironment.co.uk		
Reference 21113-NUT-CA-01	Revision P01	Sheet 1				
Client	Mr and Mrs M Luker					
Project	6 Boys Hall Road					
Author	Caroline Pericleous					
Checker	Christopher Garrard					
Date	16/03/2026					
Stage 1 - Total Nutrient Load from Development Wastewater						
Measurement		Value	Unit	Reference		
New Dwellings		5	number	Number of dwellings from Planning Statement Occupancy rates in line the ABC guidance Water use in line with Building Regulations and NEGM Effluent concentrations in line with NEGM		
Average Occupancy		2.4	persons/dwelling			
Future Population		12.0	persons			
Water Use		120	litres/person/day			
Wastewater Discharging to:			epoch			
		TN	TP			
Licence Limits (mg/l)		27.00	0.50			
Effluent Concentrations (mg/l)		27.00	0.45			
Future Wastewater Nutrient Load		14.20 kgN/year	0.24 kgP/year			
Stage 1a - Existing Nutrient Load from Development Wastewater						
Measurement		Value	Unit	Reference		
Existing Dwellings		1	number	Number of dwellings from Planning Statement Occupancy rates in line the ABC guidance Water use in line with Building Regulations and NEGM Effluent concentrations in line with NEGM		
Average Occupancy		2.4	persons/dwelling			
Future Population		2.4	persons			
Water Use		135	litres/person/day			
Wastewater Discharging to:			epoch			
		TN	TP			
Licence Limits (mg/l)		27.00	0.50			
Effluent Concentrations (mg/l)		27.00	0.45			
Future Wastewater Nutrient Load		3.20 kgN/year	0.05 kgP/year			
Stage 2 - Calculation of Existing Nutrient Load from Surface Water						
SAAR (mm):	730	NVZ:	TRUE	Catchment:	Upper Stour	
Existing Land Use	Existing Area (ha)	Soil-scape	Nutrient Loads (kg/year)		Soilscape Description	
			TN	TP		
Urban Land Uses		PIMP			Reference	
Residential Urban	0.32	80%	4.32	0.46	Area from Planning Statement	
Commercial/Industrial	0.07	80%	0.50	0.07		
Existing Surface Water Nutrient Loads			4.83 kgN/year	0.54 kgP/year		
Stage 3 - Calculation of Future Nutrient Load from Surface Water						
Future Land Use	Future Area (ha)	PIMP	Nutrient Loads (kg/year)		Reference	
			TN	TP	Area from Planning Statement Land use in line with NEGM	
Urban Land Uses						
Residential Urban	0.39	80%	5.27	0.57		
Reduction factor due to SuDS						
Urban Nutrient Load			5.27	0.57		
Non-Urban Land Uses						
Non-Urban Nutrient Load			0.00	0.00		
Future Surface Water Nutrient Loads			5.27 kgN/year	0.57 kgP/year		
Stage 4 - Calculation of Nutrient Budget						
Measurement		TN	TP	Explanation		
Future Nutrient Load		19.47	0.80	The nutrient budget is equal to the future nutrient load minus the existing nutrient load. A 20% buffer is then added to the difference as a factor of safety.		
Existing Nutrient Load		8.02	0.59			
Nutrient Budget		11.45	0.21			
Nutrient Budget with 20% Buffer		13.74 kgN/year	0.25 kgP/year			

Nutrient Neutrality Calculations Unmitigated Post-2030				 WATER ENVIRONMENT Water Environment Limited • 6 Coppergate Mews • Brighton Road • Surbiton • London • KT6 5NE Tel: 020 8545 9720 • Email: admin@waterenvironment.co.uk	
Reference 21113-NUT-CA-01	Revision P01	Sheet 2			
Client	Mr and Mrs M Luker			Number of dwellings from Planning Statement Occupancy rates in line the ABC guidance Water use in line with Building Regulations and NEGM Effluent concentrations in line with NEGM	
Project	6 Boys Hall Road				
Author	Caroline Pericleous				
Checker	Christopher Garrard				
Date	16/03/2026				
Stage 1 - Total Nutrient Load from Development Wastewater					
Measurement		Value	Unit	Reference	
New Dwellings		5	number	Number of dwellings from Planning Statement Occupancy rates in line the ABC guidance Water use in line with Building Regulations and NEGM Effluent concentrations in line with NEGM	
Average Occupancy		2.4	persons/dwelling		
Future Population		12.0	persons		
Water Use		120	litres/person/day		
Wastewater Discharging to:	Ashford WwTW	Post-2030	epoch		
		TN	TP		
Licence Limits (mg/l)		10.00	0.25		
Effluent Concentrations (mg/l)		9.00	0.23		
Future Wastewater Nutrient Load		4.73 kgN/year	0.12 kgP/year		
Stage 1a - Existing Nutrient Load from Development Wastewater					
Measurement		Value	Unit	Reference	
New Dwellings		1	number	Number of dwellings from Planning Statement Occupancy rates in line the ABC guidance Water use in line with Building Regulations and NEGM Effluent concentrations in line with NEGM	
Average Occupancy		2.4	persons/dwelling		
Future Population		2.4	persons		
Water Use		135	litres/person/day		
Wastewater Discharging to:	Ashford WwTW	Post-2030	epoch		
		TN	TP		
Licence Limits (mg/l)		10.00	0.25		
Effluent Concentrations (mg/l)		9.00	0.23		
Future Wastewater Nutrient Load		1.07 kgN/year	0.03 kgP/year		
Stage 2 - Calculation of Existing Nutrient Load from Surface Water					
SAAR (mm):	730	NVZ:	TRUE	Catchment:	Upper Stour
Existing Land Use	Existing Area (ha)	Soil-scape	Nutrient Loads (kg/year)		Soilscape Description
			TN	TP	
Urban Land Uses		PIMP			Reference
Residential Urban	0.32	80%	4.32	0.46	Areas measured using GIS Land use in line with NEGM
Commercial/Industrial	0.07	80%	0.50	0.07	
Existing Surface Water Nutrient Loads			4.83 kgN/year	0.54 kgP/year	
Stage 3 - Calculation of Future Nutrient Load from Surface Water					
Future Land Use	Future Area (ha)	PIMP	Nutrient Loads (kg/year)		Reference
			TN	TP	
Urban Land Uses					Area from Planning Statement Land use in line with NEGM
Residential Urban	0.39	80%	5.27	0.57	
Reduction factor due to SuDS					
Urban Nutrient Load			5.27	0.57	
Non-Urban Land Uses					
Non-Urban Nutrient Load			0.00	0.00	
Future Surface Water Nutrient Loads			5.27 kgN/year	0.57 kgP/year	
Stage 4 - Calculation of Nutrient Budget					
Measurement		TN	TP	Explanation	
Future Nutrient Load		10.00	0.68	The nutrient budget is equal to the future nutrient load minus the existing nutrient load. A 20% buffer is then added to the difference as a factor of safety.	
Existing Nutrient Load		5.89	0.57		
Nutrient Budget		4.11	0.12		
Nutrient Budget with 20% Buffer		4.93 kaN/year	0.14 kaP/year		

APPENDIX C: SUPPORTING DOCUMENTATION

- DACE Environmental: Nutrient Neutrality Offset Scheme – Reservation Certificate



Mr & Mrs Luker
6 Boys Hall Road
Willesborough
TN24 0LA

Dear Sir/Madam,

Date 16/04/2026

Nutrient Neutrality Offset Scheme – Reservation Certificate

Pursuant to the permanent nutrient purchase agreed dated 16/04/2026 and made between (a) DACE Environmental Limited (1) and Mr & Mrs Luker(2), we write to confirm the initial reservation of Nitrogen and Phosphate Credits as set out below.

Reservation Certificate Number	047
Pre 2030 Nitrogen Credits Purchased	8.81 credits amounting to 8.81 TN/year until 2030
Pre 2030 Phosphate Credits Purchased	0 credits amount to 0 kg TP/year until 2030
Pre 2030 Source of Credits	Allocation of DACE credits arising from Price land following.
Post 2030 Nitrogen Credits Purchased	4.93 credits amounting to 4.93kg TN/year in perpetuity
Post 2030 Phosphate Credits Purchased	0.25 credits amount to 0.25 TP/year in perpetuity
Post 2030 Source of Credits	Allocation of DACE credits arising from project Bliby DD1
Planning Application Reference	21/00521/AS
Relevant LPA of Development	Ashford
Address of Development	6 Boys Hall Road, Willesborough, TN24 0LA.
Description of Development	Removal of hair salon, mobile home and outbuilding and erection of five four bedroom homes.
Affected Fluvial Catchment	River Stour

We confirm that the terms of the legal agreement or planning obligation securing works to generate the credits mentioned above:

- these credits cannot be transferred, sold or otherwise used for the benefit of any party other than the Applicant, nor can they be used for the benefit of any property other than the Development;
- these credits are not refundable in any circumstances; and
- there has been no transfer of any property or any rights in property as a result of this transaction.

Please retain this letter for your records.



Yours faithfully,

A handwritten signature in blue ink, appearing to read "D. O'Connell".

DACE Environmental Limited