



4 South Street

Nutrient Neutrality Assessment and Mitigation Strategy

February 2025

Prepared for:

Wasim Saleem

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CONTENTS

1	INTRODUCTION	4
1.1	Appointment.....	4
1.2	Purpose	4
2	EXECUTIVE SUMMARY	4
3	SITE DESCRIPTION	4
3.1	Site location	4
3.2	Proposed development.....	4
3.3	Hydrological catchment	5
3.4	Existing drainage arrangements	5
3.5	Proposed drainage strategy	5
4	NUTRIENT NEUTRALITY ASSESSMENT.....	6
4.1	Basis for assessment	6
4.2	Stage 1 – Phosphate load due to occupancy	6
4.3	Stage 2 – Phosphate load due to land-use	6
4.4	Stage 3 – Post development phosphate load due to land-use.....	6
4.5	Stage 4 - Phosphate summary	7
	APPENDIX B – NUTRIENT BUDGET CALCULATIONS	8

FIGURES

Figure 1 - Site location	5
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TABLES

Table 2 - Catchment characteristics.....	6
Table 3 - Nutrient summary	7

1 INTRODUCTION

1.1 Appointment

WCI have been appointed by Wasim Saleem (the 'Client') to prepare a nutrient neutrality assessment and mitigation strategy (NNMAS) to support a planning application at 4 South Street, Buxton, SK17 6LB.

1.2 Purpose

This assessment aims to establish the current and proposed total phosphorous (TP) levels and proposed total nitrogen (TN) levels of the development and present a strategy for achieving nutrient neutrality.

Nutrient neutrality is a requirement for planning permission for Peak District Dales Special Area of Conservation as indicated in Natural England advice letter for proposed developments, dated 16 March 2022¹.

2 EXECUTIVE SUMMARY

This report presents the Nutrient Neutrality Assessment and Mitigation Strategy to support a planning application for the change of use from C1 hotel to C2 residential childrens care home.

The site lies within the hydrological catchment of the River Wye associated with Peak District Dales Special Area of Conservation which Natural England has identified to have high levels of phosphorous and nitrates and therefore subject to nutrient neutrality requirements.

The proposed development reduced occupation levels and has no change of land use so will generate a reduction of total phosphorus load of 0.02 kg.TP/yr and 2.84 kg.TN/yr and is subsequently nutrient neutral.

3 SITE DESCRIPTION

3.1 Site location

The site is located at 4 South Street, Buxton, SK17 6LB and is centred on grid reference SK05807314.

3.2 Proposed development

The proposed development is for the change of use from C1 hotel to C2 residential childrens care home. Please refer to the application form lodged on the planning for further details of the development.

¹ Natural England letter (March 2022) – "Advice for development proposals with the potential to affect water quality resulting in adverse impacts on habitats sites."

4 South Street

Nutrient Neutrality Assessment & Mitigation Strategy

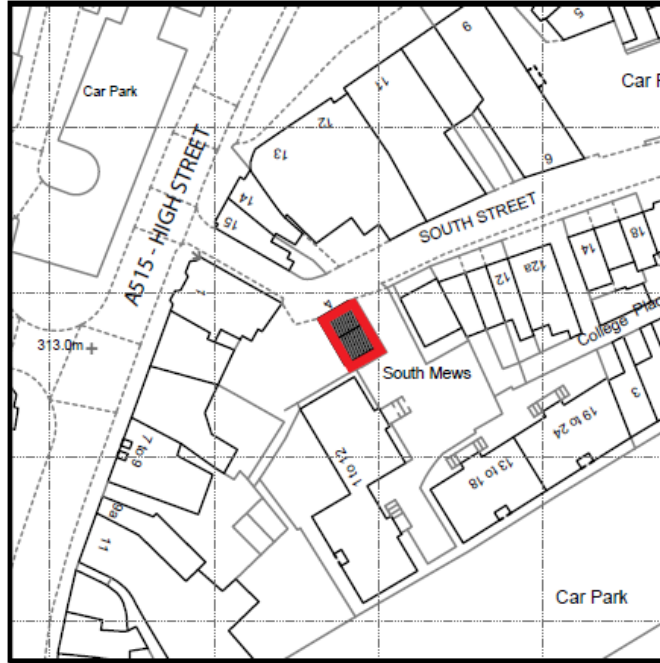


Figure 1 - Site location

3.3 Hydrological catchment

The site lies within the hydrological catchment of the Peak District Dales SAC' which Natural England has identified to have high levels of phosphorous and nitrates and therefore subject to nutrient neutrality requirements.

3.4 Existing drainage arrangements

The existing property drains to public sewer which ultimately discharges to the Buxton Wastewater Treatment Works (WwTW).

3.5 Proposed drainage strategy

For the purpose of nutrient neutrality, it is assumed that sewage from the proposed development will be discharged to the same sewer as the existing property, which is understood to discharge to River Wye within the protected SAC'

4 NUTRIENT NEUTRALITY ASSESSMENT

4.1 Basis for assessment

This assessment of phosphate load and mitigation has been undertaken in accordance with the guidance available at the time of writing and may be subject to change as guidance evolves.

Where possible, the principles and data included in the published High Peak District Council's Nutrient Budget which was last modified on the 17th September 2024.

Not all assessments and mitigations are covered by the published budget calculator and in these instances, separate calculations are made using values from the published calculator and other reputable sources.

A summary of the phosphate balance calculations can be found in Appendix B – Nutrient Budget Calculations.

4.2 Stage 1 – Phosphate load due to occupancy

The existing property is classed as C1 hotel with 4 no. bedrooms. The proposed change of use is for a C2 residential childrens care home with 4 no. bedrooms. Two additional bed spaces will be provided for staff.

In accordance with guidance presented by Natural England, only new overnight residential accommodation is considered.

Each of the proposed rooms will provide for a single occupant only. However, each of the existing rooms provides for double occupancy.

As such, the existing use represents 8 persons. Allowing for partial occupancy of 80%, the existing occupation is 6.4 persons while the proposed use is for 4 children. The proposed occupation is assumed at 100% occupancy in accordance with the precautionary principle.

The proposed development therefore reduces occupation from 6.4 persons to 4 persons on an average basis with an associated reduction of 0.02 kg.TP/yr and 2.84 kg.TN/yr.

4.3 Stage 2 – Phosphate load due to land-use

The published nutrient calculator presents phosphate loads according to different land use definitions. These land uses are defined according to the CORINE 2018 land use data.

Other defining land-use characteristics within the calculator are soil drainage type, annual average rainfall (AAR) and whether the site lies within a nitrate vulnerability zone (NVZ). These have been summarised below for the site:

Catchment characteristics	Result
Catchment	Derwent Upper Derbyshire
Soil drainage type	Free Draining
Annual Average Rainfall (AAR)	1,000 – 1,100 mm/yr
Nitrate Vulnerable Zone (NVZ)	No

Table 1 - Catchment characteristics

The site covers an area of **0.01 ha** and is currently residential urban.

4.4 Stage 3 – Post development phosphate load due to land-use

The proposed development will retain its current land use as residential urban,

As such there will be no increase in nutrient load due to change of land use.

4.5 Stage 4 - Phosphate summary

Description	Load (kg.TP/yr) ²	Load (kg.TN/yr) ³
TP from Current Occupation	0.05	7.57
TP from Proposed Occupation	0.03	4.73
Change in TP due to Change in Occupation	-0.02	-2.84
TP from Current Land Use	0.03	0.29
TP from Proposed Land Use	0.03	0.29
Change in TP due to Change in Land Use	0.00	0.00
Net Change in TP due to Development	0.00	0.00
Precautionary Buffer (+20%)	0.00	0.00
TP produced by the development before mitigation	-0.02	-2.84

Table 2 - Nutrient summary

The proposed development is subsequently nutrient neutral.

² All values rounded to be in accordance with nutrient budget calculations which presents values rounded to 2 decimal places

³ All values rounded to be in accordance with nutrient budget calculations which presents values rounded to 2 decimal places

APPENDIX B – NUTRIENT BUDGET CALCULATIONS

Existing

Stage 1

User Inputs

Date of first occupancy:	01/01/2026
Average occupancy rate:	6.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	1
Wastewater treatment works:	Buxton WwTW
Wastewater treatment works P permit (mg TP/litre):	0.2
Wastewater treatment works N permit (mg TN/litre):	27

Stage 1 Calculated Loading

Stage 1 Nutrient Loading

Additional population	6.4	people
Wastewater by development	768	litres/day
Annual wastewater TP load	0.05	kg TP/yr
Annual wastewater TN load	7.57	kg TN/yr

Proposed

Stage 1

User Inputs

Date of first occupancy:	01/01/2026
Average occupancy rate:	4.00
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	1
Wastewater treatment works:	Buxton WwTW
Wastewater treatment works P permit (mg TP/litre):	0.2
Wastewater treatment works N permit (mg TN/litre):	27

Stage 1 Calculated Loading

Stage 1 Nutrient Loading

Additional population	4	people
Wastewater by development	480	litres/day
Annual wastewater TP load	0.03	kg TP/yr
Annual wastewater TN load	4.73	kg TN/yr

Stage 2

User Inputs

Catchment:	Derwent Upper Derbyshire
Soil drainage type:	Freely draining
Annual average rainfall (mm):	1,000.1 - 1,100
Within Nitrate Vulnerable Zone (NVZ):	No

Existing land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.01	0.03	0.29
Total:	0.0146	0.03	0.29

Stage 3

User Inputs

New land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.01	0.03	0.29
Select post-development land use types from the drop down list.			
Total:	0.0146	0.03	0.29

No Stage 4 as there is no increase in occupation or change in land use.