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Nutrient Neutrality Assessment and Mitigation Strategy

Land off Lyme Road, Axminster

September 2025

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Revision Schedule

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date
A	For Comment	RL/AY	07/04/25	RR	02/04/25		
B	For Planning	AY	21/05/25	RR	21/05/25	RL	22/05/25
C	Updated Development Proposals	AY	26/08/25	EJ	26/08/25	GN	27/08/25
D	Updated Local Policy	AY	09/09/25	RL	09/09/25	RL	09/09/25

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Executive Summary

This section presents a non-technical summary of the outcomes of the Nutrient Neutrality Assessment and Mitigation Strategy (NNAMS). The assessment has been undertaken to support a planning application for residential development at Land off Lyme Road, Axminster, Devon.

The Site lies within the River Axe Special Area of Conservation (SAC), which is subject to advice issued by Natural England in March 2022, that all development should be nutrient neutral. This means that development should not increase the loading of phosphorous and nitrogen (otherwise referred to as 'nutrients') entering the hydrological catchment.

The foul produced by the development is assumed to convey to the Kilmington Wastewater Treatment Works (WwTW). There is currently a permit level of 1mg/litre for phosphorous. In accordance with the Levelling Up and Regeneration Act (LURA), the permit level at Kilmington WwTW will be upgraded to the highest Technologically Achievable Limit (TAL) of 0.25mg/l for phosphorous by 2030.

The nutrient budget for the proposed development has been calculated using the Natural England Nutrient Neutrality budget calculator for the River Axe SAC, assessed for the proposals of up to 84 dwellings and associated infrastructure.

Surface water runoff and foul produced by the Site will both be discharged into the Lim and Axe Operational Catchment. As a result, nutrient mitigation is provided to ensure no increase in nutrient loading in the catchment.

The proposed surface water drainage strategy will provide onsite mitigation. The strategy will utilise Sustainable Drainage Systems (SuDS), discharging surface water to watercourse via two Detention Basins. The strategy is indicated to remove approximately 1.81 kgTP/yr of total phosphorus in accordance with CIRIA C808.

The remaining nutrient budget will be offset via the purchase of nutrient credits from a third-party provider equating to 7.15 kgTP/yr of temporary credits and 2.52 kgTP/yr of permanent credits.

Therefore, the Site achieves nutrient neutrality and will not result in an increase in the supply of phosphorous to the River Axe SAC.

1 Introduction

1.1 Scope of the Report

1.1.1 This Nutrient Neutrality Assessment (NNAMS) has been prepared by Stantec on behalf of our Client, Persimmon Homes (South West) Ltd, to support a planning application for residential development at land off Lyme Road, Axminster, Devon.

1.1.2 The purpose of this NNAMS is to undertake a desk-based assessment of the development proposals to calculate a nutrient budget. Based on this nutrient budget, a mitigation strategy will be developed which will address the site-specific approach that must be taken to offset the nutrient budget.

1.1.3 All work has been undertaken following advice provided by Natural England (NE) in a letter titled 'Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impact on habitats Sites' on 16th March 2022 and using the Nutrient Neutrality Generic Methodology which included specific regional guidance and calculator for the River Axe SAC.

1.1.4 The information given within this report is based on publicly available data at the time of writing and no discussions with consultees have been undertaken.

1.2 Sources of Information

1.2.1 The NNAMS has been prepared based on the following sources of information:

- 'Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impact on habitats sites' prepared by Natural England dated 16th March 2022;
- Natural England (NE) River Axe Nutrient Budget Calculator, dated May 2024;
- River Basin Management Plan 'River basin management plan for the South West River Basin District' prepared by DEFRA and EA, updated 2022;
- CIRIA C808 'Using SuDS to treat phosphorus in surface water runoff' (2024);
- Stantec UK Ltd. Planning Layout (Drawing no. PL-03, Rev F) dated 15/01/2025 (Appendix B);
- Defra Magic Map website[1];
- British Geological Survey, UK Soil Map[2];
- UK Centre for Ecology & Hydrology, National River Flow Archive[3];
- Cranfield Soil and Agrifood Institute, Soilscapes[4];
- Environment Agency, Catchment Data Explorer[5];

[1] https://magic.defra.gov.uk/MagicMap.aspx

[2] UK Soil Observatory (bgs.ac.uk)

[3] https://nrfa.ceh.ac.uk/data/station/spatial/45004

[4] Soilscapes soil types viewer - National Soil Resources Institute. Cranfield University (landis.org.uk)

[5] England | Catchment Data Explorer

- East Devon District Council River Axe Nutrient neutrality Catchment Map[6].
- East Devon District Council, East Devon Local Plan 2013 to 2031 (adopted January 2016);
- East Devon District Council, East Devon Local Plan 2020 to 2042, Regulation 19 Publication Draft (February 2025).

1.3 Nutrient Neutrality

1.3.1 Following the Dutch Nitrogen Case ('Dutch-N') which ruled that, where an internationally important Site (i.e. SACs, SPAs and Ramsar Sites) is failing to achieve favourable condition due to pollution, the potential for a new development to add to the nutrient load is "necessarily limited". The Dutch-N case has informed the way in which regulation 63 of the Habitats Regulation 2017 should apply to pollution related incidents.

1.3.2 In March 2022 NE issued a letter 'Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impact on habitats Sites' to the affected Local Planning Authorities. This letter outlined that there is evidence showing high levels of nutrient input to the environment causing eutrophication at specific Sites with environmental designations. These nutrient inputs are often currently caused by wastewater from existing housing and agricultural sources, and there is uncertainty as to whether new growth will further deteriorate designated Sites.

1.3.3 For each of the affected areas presented in the NE Letter catchment specific guidance and calculators were released which included background on the designated Sites affected. The proposed development Site lies within the River Axe SAC nutrient neutrality catchment. The River Axe SAC Site is considered unfavourable, or at risk, from the effects of eutrophication caused by excessive nutrients. As such, any increase in phosphorus supply caused by the development within the catchment of the River Axe SAC Site must be offset.

1.3.4 One way to address this uncertainty is for new developments to achieve nutrient neutrality. Nutrient neutrality is a means of ensuring that the development does not add to existing nutrient burdens and aims to provide certainty that the whole scheme is deliverable in line with the requirements of the Conservation of Habitats and Species Regulation 2017 (as amended).

1.3.5 NE has set out the planning and environmental context for nutrient neutral approach as well as a practical methodology to calculating how nutrient neutrality can be achieved. Natural England states that "*the achievement of nutrient neutrality, if scientifically and practically effective, is a means of ensuring that development does not add to existing nutrient burdens*".

1.3.6 Therefore, in line with national planning policy, the advice is that the competent authority should consider the implications of these matters on the SAC Site by undertaking a Habitats Regulation Assessment (HRA), proceeding to an appropriate assessment. The appropriate assessment must rule out any reasonable doubt as to the likelihood of an adverse impact on the integrity of the Site, having regard to its conservation objectives.

1.3.7 In relation to mitigation, the letter explains that it should be in place so as to avoid either permanent, or temporary increases in phosphate loads to the designated Site and must be effective for the duration of the effect. In the case of new housing the duration of the effect is typically taken as in perpetuity, with the costs of maintaining, monitoring and enforcing mitigation calculated for a minimum of 80 – 125 years.

1.4 Water Quality

1.4.1 The Water Framework Directive (WFD) (Commission of the European Communities, 2000) (ref 13.2) establishes a framework for a European-wide approach to action in the field of water

[6] https://eastdevon.gov.uk/planning/phosphates-on-the-river-axe/nutrient-neutrality-and-planning-applications/

policy. Its ultimate aim is to ensure all inland and near shore watercourses and water bodies (including groundwater) are of 'Good' status or better, in terms of ecology, and also chemical, biological and physical parameters, by the year 2027. Therefore, any activities or developments that could cause detriment to a nearby water resource or prevent the future ability of a water resource to reach its potential status, must be mitigated so as to reduce the potential for harm and allow the aims of the Directive to be realised.

1.4.2 The Environment Agency (EA) Catchment Data Explorer website has water quality data available for watercourses. This includes background data on the catchment, the existing standards of water quality and expected standards of water quality the watercourse is expected to achieve by set dates which are reviewed on a seven-year cycle. Also included are any national or local protected areas.

1.4.3 The Environment Agency Catchment Data Explorer website has water quality data relating to the WFD targets for 2027. Based on the most recent water quality data recorded in 2019, The Devon East Management catchment data indicates approx. 85.5% of water bodies have not achieved good ecological status and 100% have not achieved good chemical status. Evidence indicates that of the classification elements for not achieving good is total phosphorus.

Types of Phosphorus

1.4.4 The forms of phosphorous need to be recognized when calculating nutrient budgets. The key measure for still and very slow flowing waters such as lakes or ditches is total phosphorous (TP) because this is available for algae and plant growth. For rivers, the designated Sites standards are for Soluble Reactive Phosphorous (SRP) as both an annual and a growing season mean. The relationship between SRP and TP is not straight forward and can vary between, and even within catchments. Modern WRC permits usually have values for total phosphorous and the Environment Agency guidance on technically achievable limit (TAL) is for total phosphorous.

Designation Current Condition

1.4.5 The River Axe Catchment is designated as a Special Area of Conservation (SAC) under the Habitat Regulation 2017.

1.4.6 The River Axe SAC is an Annex 1 habitat, and is classified as such due to it containing: "*Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation"*[7].

1.4.7 Only the lower reaches of the River Axe have been specified as an SAC, where the mixed underlying sandstone and limestone geology causes calcareous water to form. This specialised riverine habitat enables uncommon species of Crowfoot (R. penicillatus ssp. Pseudofluitans), Buttercups (R. fluitans), and Water Starwort (Callitriche truncata) to flourish, engendering the area's classification as a SAC.

1.5 Levelling Up and Regeneration Act (2023)

1.5.1 The Levelling Up and Regeneration Act (LURA) places a legal obligation on water and sewerage providers to upgrade Wastewater Treatment Works (WwTW) to the "highest Technologically Achievable Limit (TAL)" by 2030 (serving a population equivalent of greater than 2000), which is enforceable via the provisions of Section 18 of the Water Industry Act, 1991.

[7] River Axe - Special Areas of Conservation

1.5.2 The government released a list of nutrient significant plants[8] which are required to be upgraded in accordance with the LURA, the list indicates the phosphorus permits for Kilmington WwTW are to be upgraded to 0.25mgTP/l by April 2030.

1.6 Local Policy

1.6.1 The Site is allocated within the East Devon Local Plan 2020 to 2042 (Regulation 19 Publication Draft) under Strategic Policy SD02 – See below.

East Devon Local Plan 2013 - 2031: Planning Applications

1.6.2 Local planning policy is contained within the East Devon District Council, East Devon 'Local Plan 2013 – 2031', adopted January 2016. Relevant information covering the Site's allocation for mixed-use development, including residential homes (ref. E105), is contained within Strategy 20 'Development at Axminster', which states:

Strategy 20 – Development at Axminster

In Axminster we will support and reinforce the town's role as a self-contained medium sized town, serving the employment, commercial and community service needs of the settlement and its rural surroundings. Proposals for development in Axminster should be consistent with the strategy, which is to:

1. **New homes** - encourage the building of substantial numbers of new homes.
2. **Jobs** – provide employment land.
3. **Town Centre** - give priority to the enhancement of the environment and promotion of business opportunities in the expanded town centre shopping area defined on the Proposals Map to provide the focus for jobs, shops and tourism. Promote the regeneration of the Webster Garage site and adjoining land to support commercial activity, enhance the public realm and address traffic congestion issues.
4. **Transport** - support the provision of better sustainable (non-car) transportation, including footpaths, cycle routes and bus services both within the town and to link with the countryside and other settlements. Introduce through-route large vehicle traffic management measures and promote a North-South relief road.
5. **Infrastructure** - ensure quality, accessible recreational facilities and secure drainage improvements for the town to mitigate the likely environmental impact of new housing. Support the schools, health and other service providers to meet their accommodation needs and local aspirations for new and improved facilities.
6. **Environment** - make sure that any development does not harm wildlife and habitats in the Axminster area. In particular, the water quality of the River Axe and the surrounding wildlife sites should be protected.

[8] https://www.gov.uk/government/publications/notice-of-designation-of-sensitive-catchment-areas-2024/information-about-nutrient-significant-plants

Land Allocations at Axminster – as part of the delivery mechanism the following sites are allocated and shown on the Proposals Map for development:

a) **North and East of the town** (E105) for mixed uses to incorporate;
   i. Around 650 new homes;
   ii. 8 Hectares of land for mixed job generating commercial and employment uses;
   iii. a range of social, community and open space facilities to support development;
   iv. a 210 pupil primary school (1.5ha site – which forms part of the overall 8 hectare employment allocation), including a nursery and accommodation to support children's centre services; and
   v. a North South relief road for the town will be delivered as part of this development linking Chard Road (A358) to Lyme Road (B261).

c) A Masterplan will be required for this site and development will be subject to improved public transport provision.

Prior to the granting of planning permission for any major residential schemes at Axminster, the Council will agree, with the Environment Agency and Natural England, a timetable for the review or development of a Nutrient Management Plan for the River Axe. This plan will set out detailed actions that allow for new growth at Axminster to progress with adequate mitigation in place to negate the additional phosphate load that would be caused. The Nutrient Management Plan will work in collaboration with the diffuse Water Pollution Plan, and will seek to restore water quality for the River Axe SAC to enable it to meet its conservation objectives within a specified timescale, and in accordance with commitments to European Directives. Depending on the findings of the plan, growth will only proceed in accordance with the mitigation delivery set out within that plan. Growth at Axminster will also be informed by the current status of the relevant discharge consents for waste water treatment works, and any upgrade required to support new growth will be the subject of Habitats Regulations Assessment prior to planning permission being given. The determination of such development applications will be informed by Habitat Regulations Assessment that takes account of the consent requirements.

East Devon Local Plan 2020 - 2042: Regulation 19 Publication Draft

1.6.3 The Site is allocated within the East Devon District Council, East Devon Local Plan 2020 to 2040 (Regulation 19 Publication Draft), published February 2025, under Strategic Policy SD02: Axminster and its development allocations, which states:

Strategic Policy SD02: Axminster and its development allocations

The sites/areas listed below, as identified on the Policies Map, are allocated for development.

Land east of Lyme Road (Axmi_22)

This site is allocated for 100 dwellings. The site layout should make provision for a suitable access road to facilitate the development of site GH/ED/80 to the north and also be built to a standard suitable for use as part of a possible future relief road to link to the A358, Chard Road, south of the Weycroft Bridge…

2 Proposed Development Site

2.1 Site Description

The proposed development Site (hereafter referred to as *'the Site'*) is located at Land off Lyme Road, Axminster, Devon (see **Figure 2-1**) (see **Appendix A**).

Figure 2-1 Site Location

2.1.1 The Site is centred around the Ordnance Survey (OS) NGR E 330718, N 098029, with an area of 4.7 ha.

2.1.2 The Site is bound to the north by Sector Lane, to the east by a Public Right of Way path and agricultural land, to the south by Lyme Road, and to the west by existing residential properties.

2.2 Hydrological Setting and the Water Framework Directive

2.2.1 The nearest watercourse to the Site is the Mill Brook Ordinary Watercourse which is located approximately 80m to the north. The Mill Brook flows broadly to the northwest and outfalls into the River Axe, an EA designated Main River, approximately 1.5km to the northwest.

2.2.2 The Site is not located within a NVZ, and receives an annual average rainfall of 1000 - 1100mm/yr[9].

Water Framework Directive

2.2.3 The Site falls within the 'Lower Axe Water Body' (part of the Lim and Axe Operational Catchment). The Environment Agency (EA) Catchment Data Explorer website has water quality data relating to the WFD targets for 2027. Based on the most recent water quality data recorded in 2022, the 'Lower Axe' received a 'Moderate' ecological classification, and in 2019 a 'Fail' for chemical water quality.

2.2.4 Data shows the reasons for the 'Lower Axe Water Body' not achieving 'Good' status. These include (but are not limited to) pollution from diffuse sources (poor livestock management), and point sources (continuous sewage discharge, and industrial discharge). This water body includes the River Axe SAC Protected Area.

2.2.5 The Kilmington Wastewater Treatment Works (WwTW), which serves the Site, also lies within the 'Lower Axe Water Body' and is located approximately 3km to the west.

2.3 Geology and Hydrogeology

2.3.1 The Geology of Britain viewer provided by the British Geological Survey (BGS)[10] indicates that the Site is underlain by bedrock comprising Charmouth Mudstone Formation (Mudstone) in the west, and 'Blue Lias Formation' (Limestone and Mudstone) in the east. The EA class the on-site bedrock as a Secondary Undifferentiated Aquifer.

2.3.2 The superficial geology is primarily comprised of 'Head' (Clay, Silt, Sand and Gravel), with an area with No Information in the east. The EA class the superficial bedrock as a Secondary Undifferentiated Aquifer. The Site is not located within a Nitrate Vulnerable Zone.

2.3.3 A review of Soilscapes data indicates that soils on-site are primarily "*Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils*" (Soilscapes 18). A smaller area of "*Freely draining slightly acid loamy soils*" (Soilscapes 6) is located in the south of the Site.

2.4 Development Proposals

2.4.1 This report will review the nutrient management for 84 residential dwellings and associated infrastructure. A copy of the Planning Layout is provided in **Figure 2-2** and **Appendix B**. The Site lies within an allocated area for residential development (ref. E105) in Strategy 20 'Development at Axminster' as a part of the Local Plan (**Section 1.6.1**).

2.4.2 The foul water resulting from the development has been assumed to discharge to Kilmington WwTW, which discharges into the Lower Axe Water Body, within the Lim and Axe Operational Catchment. The '*Flood Risk Assessment and Drainage Design Report*' confirms the Site will discharge surface water runoff via Detention Basins to existing adjacent watercourses. Therefore, surface water also discharges into the Lim and Axe Operational Catchment.

[9] NRFA station catchment information for 52014 - Tone at Greenham

[10] http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Figure 2-2 Development Proposals

3 Nutrients Budget Assessment

3.1 Methodology

3.1.1 The Nutrient Budget Assessment has been undertaken by applying the Natural England (NE) River Axe Nutrient Budget Calculator V3.1.5. The four stages of the nutrient budget calculations are outlined below. A copy of the calculation is provided in **Appendix E.**

3.2 Stage 1 - Wastewater

3.2.1 The aim of Stage 1 is to calculate nutrient loading in kilograms per annum derived from the development that would exit the WRC after treatment.

3.2.2 In the NE Nutrient Guidance, the additional population is determined by applying suitable average occupancy rates. An occupancy rate of 2.4 persons/dwelling has been adopted as per the Natural England (NE) River Axe Nutrient Budget Calculator V3.1.5[11].

3.2.3 The nutrient load is calculated from the scale of water used, and thus the higher water efficiency standards under the building regulations would minimise the increase in nutrients from the development. The River Axe Nutrient Budget Calculator applies a water usage of 120 litres per person per day.

3.2.4 For most planning applications, the WwTW provider is not confirmed until after planning permission is granted. The nutrient calculation should be based on the permit levels of the most likely WwTW, which for this development is Kilmington WwTW. Kilmington WwTW currently has a permit level of 1.0mg/l for TP In accordance with the Levelling Up and Regeneration Act (LURA), the permit level at Kilmington WwTW will be upgraded to the highest Technologically Achievable Limit (TAL) of 0.25mg/l for phosphorous by 2030.

3.2.5 Based on the proposals for 84 dwellings, the Total Phosphorous Discharge after treatment at the sewage works calculated for the Site is currently **7.95 kgTP/yr,** and **1.99 kgTP/yr** for the post 2030 TAL permit.

3.3 Stage 2 – Pre-Development Land Use

3.3.1 The aim of Stage 2 is to adjust the nutrient load to offset the existing nutrient load from current land. The nutrient budget calculator uses a Farmscoper model to estimate the loss of nutrients from different farm types in relevant catchments and takes into account the drainage type of the soil on Site, annual average rainfall and NVZ status.

3.3.2 It is recommended that the selection of the farm type is based on last 10 years land use and professional judgement as to what the land would revert to in the absence of the proposed development.

3.3.3 Based on a review of the historic aerial imaging and the Crop Map of England (CROME) dataset, the pre-development land use of the Site is primarily General Cropping with small areas of existing Residential Urban (road). Areas of the Site which aren't undergoing a land use change have been discounted from the calculations. Therefore, the total land area used in the calculations is 4.06 ha.

3.3.4 A review of Soilscapes[12] indicates the soil drainage to be split between "*Freely Draining*" and "*Impeded Drainage*". The Stage 2 budget for each soil type has therefore been calculated separately.

[11] River Axe SAC: nutrient neutrality calculator - GOV.UK

[12] https://www.landis.org.uk/soilscapes/

3.3.5 A breakdown of the pre-development land use is provided in **Table 3-1,** and

3.3.7 Figure 3-.

Table 3-1 Pre-development Land Use

Existing Land Use(s)	Soil Type (ha)		Total Area (ha)
	Impeded	Freely Draining	
General Cropping	3.52	0.47	**3.99**
Woodland/ Greenspace	0.07	-	**0.07**
Total			**4.06**

Figure 3-1 Pre-Development Land Use

3.3.8 The Total Phosphorous load resulting from the current land use is **3.61 kgTP/yr**.

3.4 Stage 3 – Post-Development Land Use

3.4.1 The aim of Stage 3 is to adjust the nutrient loads to account for land uses with the proposed development. This includes the nutrient load from the proposed Residential Urban, Greenspace, Open Urban land, existing Woodland, and existing Residential Urban (road).

3.4.2 The post-development land use areas, provided in Error! Reference source not found.**2** are based upon the masterplan (see

3.4.3 Figure 2-2, and **Appendix B**). A post-development land use plan is provided in **Figure 3-2** (**Appendix D).** As the existing woodland and road are not undergoing a land use change these areas have been discounted from calculations.

Table 3-2 Post-development Land Use

Land Use Definition	Proposed Land Uses	Area (ha)
Residential Urban	Dwellings, private gardens, road infrastructure, soft landscaping including verges	2.61
Open Urban	Play Area	0.01
Greenspace	Greenspace, Public Open Space, SuDS	1.44
Total		**4.06**

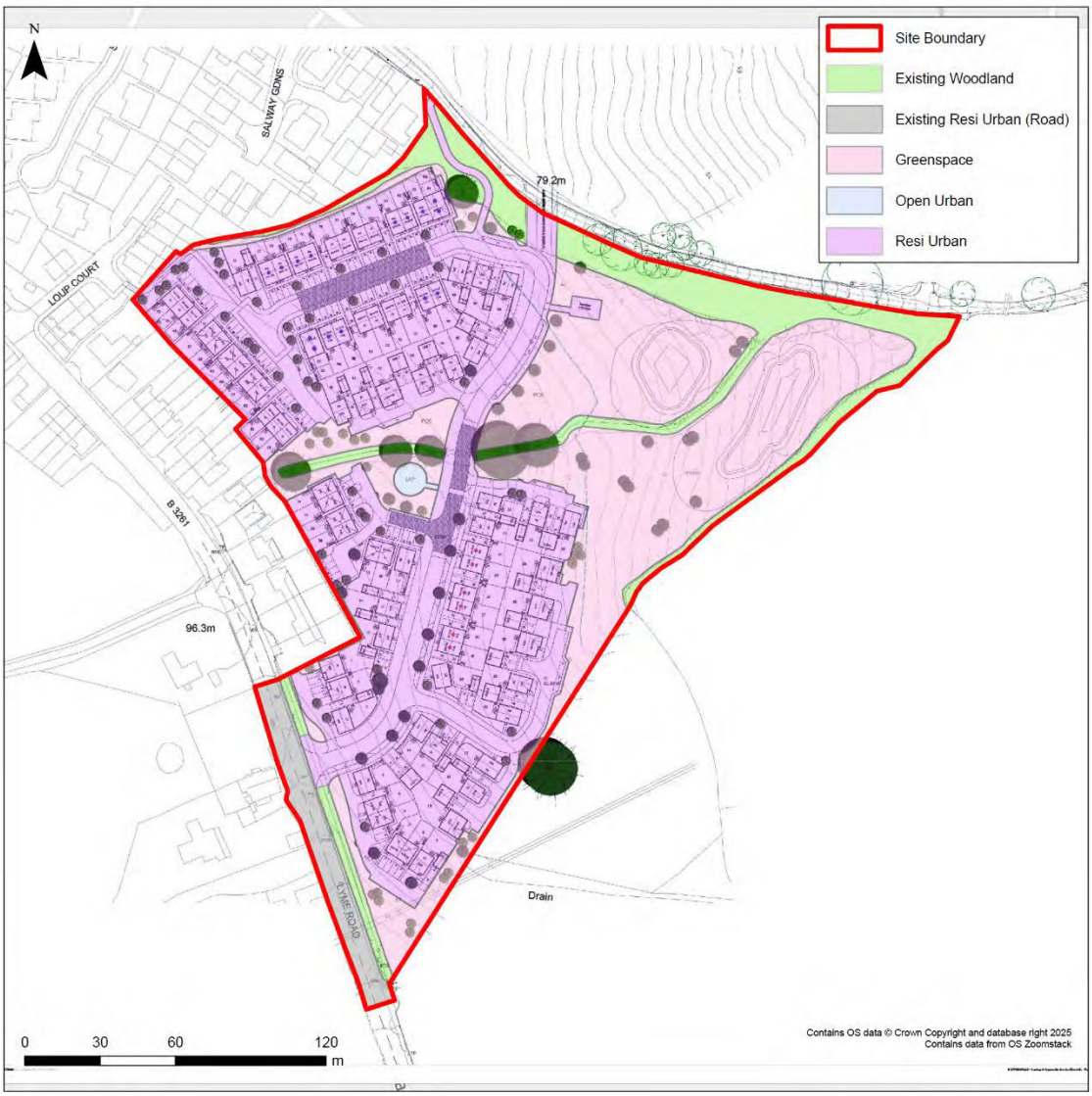

Figure 3-2 Post-Development Land Use

3.4.4 The output from Stage 3 is the total nutrient load resulting from the proposed land usage. The Total Phosphorous load resulting from the proposed land uses is **5.53 kgTP/yr**.

3.5 Stage 4 – Nutrient Budget

3.5.1 The aim of Stage 4 is to calculate the net change in the nutrient load that would result from the development.

3.5.2 The net change is calculated by the difference between the nutrient load calculated for the proposed development and that for the existing land use, using the best available data and evidence. A precautionary buffer of 20% is applied to the nutrient budget. This precautionary buffer is used to recognise the uncertainty with the data and ensures the approach is precautionary.

3.5.3 **Table 3-3** presents a breakdown of the nutrient budgets for the proposed residential development on land off Lyme Road, Axminster.

Table 3-3 Nutrient Budget

Calculation Stage	Calculation Output	Current Budget	Post 2030 Budget
Stage 1	Annual Wastewater load (kg/yr)	7.95	1.99
Stage 2	Pre-development Annual Nutrient Export (kg/yr)	3.61	
Stage 3	Post-development Total Annual Nutrient Export (kg/yr)	5.53	
Stage 4	Nutrient Budget (kg/yr)	9.87	3.91
Stage 4	Nutrient Budget incl 20% buffer (kg/yr)	**11.84**	**4.69**

3.5.4 The results shown in **Table 3-3** demonstrate that there is a phosphorous surplus created by the development proposals. Therefore, there is a requirement for the development to demonstrate nutrient neutrality through the application of mitigation in order to achieve planning consent.

4 Mitigation Strategy

4.1 Overview

4.1.1 The nutrient budget assessment indicates there is a requirement for surface water mitigation to achieve neutrality in the River Axe catchment. This section outlines the elements that will form the mitigation strategy for the proposed development.

4.2 SuDS

4.2.1 Sustainable Drainage System (SuDS) features are an effective way to treat a development's surface water to reduce the amount of pollution entering watercourses from new development.

4.2.2 The estimated nutrient removal potential of the proposed SuDS features has been assessed in line with CIRIA C808F '*Using SuDS to treat phosphorus in the surface water runoff'.* The proposed surface water drainage strategy for the Site proposes to discharge to watercourse via two Detention Basins.

4.2.3 Swales are included within the Planning Layout (**Appendix B**), but have been discounted from the Nutrient Neutrality calculations, to provide a conservative estimate.

4.2.4 CIRIA C808 provides phosphorus removal efficiencies for different SuDS features given for particulate phosphorus (PP) and dissolved phosphorus (DP) and assumes Total Phosphorus is comprised of a PP:DP ratio of 55:45. The phosphorus removal efficiencies for a Detention Basin are provided in Table 2.2 of the CIRIA C808F guidance and specified as providing a 33% SuDS TP removal rate.

4.2.5 The Axe Nutrient Budget Calculator V3.1.5 includes an additional stage in the calculation to account for the benefit provided by SuDS, which indicates the proposed onsite SuDS will remove 1.81 kg TP/yr.

4.2.6 The nutrient budget accounting for SuDS is provided in **Table 4-1**. A copy of the calculations is provided in **Appendix F.**

Table 4-1: Nutrient Budget including SuDS

Calculation Stage	Calculation Output	Current Budget	Post 2030 Budget
Stage 1	Annual Wastewater load (kg/yr)	7.95	1.99
Stage 2	Pre-development Annual Nutrient Export (kg/yr)	3.61	
Stage 3	Post-development Total Annual Nutrient Export (kg/yr)	5.53	
SuDS	Annual Nutrient Load removed by SuDS (kg/yr)	1.81	
Stage 4	Nutrient Budget (kg/yr)	8.06	2.1
Stage 4	Nutrient Budget incl 20% buffer (kg/yr)	**9.67**	**2.52**

4.3 Nutrient Credits

4.3.1 The remaining nutrient budget after SuDS will be mitigated via the purchase of third-party credits. Given the upgrades at Kilmington WwTW, the mitigation for the Site will be provided through a mixture of temporary and permanent credits.

4.3.2 Temporary credits are defined as the number of credits required to offset the pre-upgrade nutrient budget over and above the number of permanent credits. Permanent credits are defined as the number of credits required to offset the post-upgrade TAL budget, and therefore, are required in perpetuity. Once the upgrades are in place at Kilmington WwTW, temporary credits will no longer be required.

4.3.3 The proposed development would require third-party credits equating to:

- Temporary Credits: 7.15 kgTP/yr.
- Permanent Credits: 2.52 kgTP/yr

4.3.4 As such, with this mitigation in place the Site will achieve nutrient neutrality.

5 Summary

5.1 Overview

5.1.1 The Nutrient Neutrality Assessment and Mitigation Strategy (NNAMS) has been undertaken to support a planning application for residential development, and associated infrastructure at Land off Lyme Road, Axminster, Devon.

5.1.2 The Site lies within the River Axe SAC, which is subject to advice issued by Natural England in March 2022, that all development should be nutrient neutral. This means that development should not increase the loading of phosphorous (otherwise referred to as 'nutrients') entering the hydrological catchment.

5.1.3 The nutrient budget for the proposed development has been calculated using the Natural England River Axe Nutrient Budget Calculator, which is assessed on the proposals for up to 84 dwellings and associated infrastructure. The Site lies within an allocated area for residential development (ref. E105) in Strategy 20 'Development at Axminster' as a part of the Local Plan.

5.1.4 The foul produced by the development is assumed to convey to the Kilmington WwTW. There is currently a permit level of 1mg/litre for phosphorous. In accordance with the Levelling Up and Regeneration Act (LURA), the permit level at Kilmington WwTW will be upgraded to the highest Technologically Achievable Limit (TAL) of 0.25mg/l for phosphorous by 2030.

5.1.5 The proposed surface water drainage strategy will provide onsite mitigation. The strategy will utilise Sustainable Drainage Systems (SuDS), discharging surface water to the watercourse via two Detention Basins. The strategy is indicated to remove approximately 1.81 kgTP/yr of total phosphorus, in accordance with CIRIA C808.

5.1.6 The remaining nutrient budget will be offset via the purchase of nutrient credits from a third-party provider equating to 7.15 kgTP/yr of temporary credits and 2.52 kgTP/yr of permanent credits. Therefore, this NNAMS demonstrates that the Site can achieve nutrient neutrality.

Appendix A Site Location

Stantec

Client

Persimmon Homes (South West) Ltd

LAND OFF LYME ROAD, AXMINSTER

Site Location

0 75 150 m

Contains OS data © Crown Copyright and database right 2025
Contains data from OS Zoomstack

1:1,500 @ A3 | Date: 21/08/2025

Drawn: AY | Checked: RR

Figure: 01 | Rev: C

Document Path: \\Tnt-vfps-001\tnt\Projects\333101454 Land off Lyme Road Axminster\Nutrient Neutrality\GIS\ArcPro\Axminster.aprx

Appendix B Planning Layout

Stantec UK Ltd. Planning Layout (Drawing no. PL-03, Rev F) dated 15/01/2025

The scaling of this drawing cannot be assured

Revision		Date	Drn	Ckd
A	Minor amendments to align with site levels	21.01.25	HF	MRW
B	Layout amended to engineers latest road design	07.03.25	KR	MRW
C	Carriageway increased to 6m	26.03.25	KR	MRW
D	Plot 32 changed to Sherwood	11.04.25	BE	MRW
E	Plots 4-9 amended and substation added	30.05.25	KR	MRW
F	SO plots indicated, potential future connection arm removed	23.06.25	MRW	KR

Land East of Axminster

Drawing: PL-03 AC-02 Schedule of Accommodation — Revision F

Property Type	No's	Sq.ft	Sq.m	Storeys	Bedrooms	Total Sq.Ft
Open Market						
Addlebrough	18	779	72	2	2	14,022
Sherwood	11	968	90	2	3	10,648
Galloway	12	996	93	2	3	11,952
Chandvale	5	1059	98	2	3	5,295
Barndale	9	1060	98	2	3	9,540
Rivington	3	1096	102	2	4	3,288
Cambridge	5	1377	128	2	4	6,885
Market Sub-total	63					61,630
Affordable Rent						
1B Mais	4	695	65	1	1	2,781
Wareham	7	859	80	2	2	6,013
Rendlesham	4	919	85	2	3	3,676
AR sub-total	15					12,470
Shared Ownership						
Wareham	2	859	80	2	2	1,718
Rendlesham	4	919	85	2	3	3,676
SO sub-total	6					5,394
Affordable sub-total	21	25.0%				17864
Total Dwellings	84				Total sq.ft	79,494
Gross Site Area			11.62 acres			4.70 ha
Net Site Area			5.37 acres			2.17 ha

KEY

- Application Boundary
- Affordable Rent Housing
- Shared Ownership Housing
- Fence 1.8 Closeboard
- Wall 1.8m Screen Brick
- Block Paving Marshalls Tegula 240 gauge Pennant Grey or similar approved
- External Recycling Bins Store
- 1.8m x 1.8m patio (600 sq. paving slabs)
- S/S Sub Station with 10m offset

N

Project
Land East of Lyme Road
Axminster

Drawing Title
Planning Layout

Date	Scale	Drawn by	Check by
15.01.25	1:500 @ A0	BE	MRW

Project No.	Drawing No	Revision
333101454	PL-03	F

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Bristol
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Appendix C Pre-development Landuse

Stantec

Client

Persimmon Homes (South West) Ltd

LAND OFF LYME ROAD, AXMINSTER

Pre-development Landuse

0 75 150 m

Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

1:1,500 @ A3	Date: 21/08/2025
Drawn: AY	Checked: RR
Figure: 01.1	Rev: C

Document Path: \\Tnt-vfps-001\tnt\Projects\333101454 Land off Lyme Road Axminster\Nutrient Neutrality\GIS\ArcPro\Axminster.aprx

Appendix D Post-development Landuse

Stantec	Client: Persimmon Homes (South West) Ltd	**LAND OFF LYME ROAD, AXMINSTER** Post-development Landuse	0 75 150 m Contains OS data © Crown Copyright and database right 2025 Contains data from OS Zoomstack	1:1,500 @ A3	Date: 21/08/2025
				Drawn: AY	Checked: RR
				Figure: 01.2	Rev: C

Document Path: \\Tnt-vfps-001\tnt\Projects\333101454 Land off Lyme Road Axminster\Nutrient Neutrality\GIS\ArcPro\Axminster.aprx

Appendix E Nutrient Budget Calcs

Nutrients from wastewater

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B9 in the first table 'Water infrastructure information'. Cells B10 is automatically calculated and will state '0.00' unless the user inputs have been entered. Cells A11 to A12 and B11 to B12 are automatically generated and will state 'Not applicable' depending on the inputs to cells B5 and B9. You may need to fill in cell C10 depending on the information you entered in cell B9. Cells C5 to C9 and cells C11 to C12 are intentionally blank cells.
You do not need to fill in any cells in the second table 'Final calculation of nutrient load from wastewater'. Cells B16 to B18 are automatically calculated and will state '0.00' unless the user inputs have been entered to the first table 'Water infrastructure information'. Cells A19 to A22, cells B20 and B22 are automatically generated and will state 'Not applicable' depending on the user inputs to the first table 'Water infrastructure information'. Cell B15, cell B19 and cell B21 are intentionally blank cells.
How to fill in the table 'Water infrastructure information'
Cell B5: Enter the date of first occupancy.
Cell B6: Enter the average occupancy rate of the development. The default rate is 2.4, this should not be edited without sufficient evidence.
Cell B7: Enter the water usage. This value should be kept at 120 unless other efficiency measures are used.
Cell B8: Enter the total number of dwellings or units that will be within the development site as of the project completion date.
Cell B9: Choose the receiving wastewater treatment works (WwTW) from the dropdown list.
If you select 'Package Treatment Plant user defined' or 'Septic Tank user defined', you must enter their certified value of total phosphorus (TP) in cell C10. Otherwise the default values will be used in the calculation of the nutrient load associated with wastewater.
Nutrient permits may be changing for the WwTW you select, from 01/01/2025, or 01/04/2030. If the date of first occupancy is in-between changing permit dates, multiple permit limits may be automatically generated in cells B10 to B12. If applicable, up to 3 values for the nutrient loading associated with wastewater will be presented in cell B18, B20 or B22.

Water infrastructure information

Description of required information	Data entry column - user inputs required	Additional data entry column - user inputs may be required
Date of first occupancy (dd/mm/yyyy):		
Average occupancy rate (people/dwelling or people/unit):	2.40	
Water usage (litres/person/day):	120	
Development proposal (dwellings/units):	84	
Wastewater treatment works:	Kilmington WwTW	
Current wastewater treatment works P permit (mg TP/litre):	**1.00**	
Not applicable	**Not applicable**	
Post 2030 WwTW P permit (mg TP/litre):	**0.25**	

Final calculation of nutrient load from wastewater

Description of values generated	Values generated
Post-2030 wastewater nutrient Loading	
Additional population (people):	**201.60**
Wastewater by development (litres/day):	**24192.00**
Annual wastewater TP load (kg TP/yr):	**1.99**
Pre-2030 wastewater nutrient loading	
Annual wastewater TP load (kg TP/yr):	**7.95**
Not applicable	
Not applicable	**Not applicable**

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells D11 to D27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27. Row 28 is a Total Row. The Total Row states 'Totals:' in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28 and C11 to C27 in cell C28. Cell D28 is intentionally blank.
How to fill in the table 'Current land use information'
Cell B5: Choose the operational catchment the site is located within from the dropdown list.
Cell B6: Choose the soil drainage type associated with the predominant soil type within the development site from the dropdown list.
Cell B7: Choose the annual average rainfall the development will receive from the dropdown list. If the rainfall volume is not on the list, select the nearest value.
Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
How to fill in the table 'Current land uses'
Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP).
The total nutrient load from current land uses is shown in cell C28 for TP.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Lim and Axe
Soil drainage type:	Freely draining
Annual average rainfall (mm):	1,000.1 - 1,100
Within nitrate vulnerable zone (NVZ):	No

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)	Notes on data
General	0.47	0.08	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
Totals:	0.47	0.08	

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells D11 to D27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27. Row 28 is a Total Row. The Total Row states "Totals:" in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28 and C11 to C27 in cell C28. Cell D28 is intentionally blank.
How to fill in the table 'Current land use information'
Cell B5: Choose the operational catchment the site is located within from the dropdown list.
Cell B6: Choose the soil drainage type associated with the predominant soil type within the development site from the dropdown list.
Cell B7: Choose the annual average rainfall the development will receive from the dropdown list. If the rainfall volume is not on the list, select the nearest value.
Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
How to fill in the table 'Current land uses'
Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP).
The total nutrient load from current land uses is shown in cell C28 for TP.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Lim and Axe
Soil drainage type:	Impeded drainage
Annual average rainfall (mm):	1,000.1 - 1,100
Within nitrate vulnerable zone (NVZ):	No

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)	Notes on data
Woodland	0.07	0.00	Not applicable
General	3.52	3.52	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
Totals:	3.59	3.53	

Nutrients from future land use

This sheet contains one table.

Note: You will need to fill in cells A5 to A21 and B5 to B21. Cells B22 and C5 to C22 are automatically generated calculations and will state '0.00' unless the user inputs have been entered. Row 22 is a Total Row. The Total Row states 'Totals:' in cell A22 and automatically calculates the total sum of cells B5 to B21 in cell B22 and C5 to C21 in cell C22.

How to fill in the table 'Future land uses'

Cells A5-A21: Choose the future (post-development) land use type(s) of landcover present on the new site from the dropdown list
Cells B5-B21: Enter the area in hectares of each land use type.

The nutrient load from future land uses is shown in cells C5 to C21 for total phosphorus (TP).

The total nutrient load from future land uses is shown in cell C22 for TP.

Future land uses

New land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)
Residential urban land	2.61	5.49
Greenspace	1.44	0.03
Open urban land	0.01	0.01
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
Totals:	4.06	5.53

Nutrient Neutrality Calculations

Stantec

Summary of Nutrient Budget

Project Title	Land off Lyme Road, Axminster
Project Code	333101454

Based on Natural England (NE) methodology and Local Planning Authority (LPA) guidance at the time of undertaking the budget calculation. Where parameters are not user defined standard values provided in the NE calculator have been used.

Stage 1 - Additional wastewater

Average population per dwelling	2.4
Water Usage (l/person/day)	120
Net Number of new houses	84
Wastewater Treatment Works	Kilmington WwTW

	Current	Post-2030
Wastewater treatment works P discharge (mg TP/lit	1	0.25

	Current	Post-2030
Annual wastewater TP load (kg TP/yr)	7.95	1.99

Stage 2 - Existing Land Use

Values extracted from NE nutrient budget calculator

Operational Catchment	Lim and Axe
Average Annual Rainfall	1,000 - 1,100
Nitrate Vulnerable Zone	No
Soil Drainage Type	Impeded / Freely

General (Impeded Drainage)	3.52
General (Freely Draining)	0.47
Existing Woodland	0.07

Total	4.06

Annual phosphorus export (kg TP/yr)	3.61

* calculator presents 3.52 kg tp/yr (General Impeded) + 0 kg tp/yr (Existing Woodland) as 3.53 kg tp/yr, due to rounding

Stage 3 - Proposed Land Use

Values extracted from NE nutrient budget calculator

Residential Urban Land (ha)	2.61
Greenspace (ha)	1.44
Open Urban (ha)	0.01

Total	4.06

Annual phosphorus export (kg TP/yr)	5.53

Stage 4 - Annual Nutrient Budget

	Current	Post-2030
Total annual phosphorus export (kg TP/yr)	9.87	3.91

	Current	Post-2030
Total annual phosphorus export including 20% buffer (kg TP/yr)	11.84	4.69

CHECKING RECORD

Rev	Comments	Prepared	Date	Checked	Date
-	Original calculation	AY	12/08/2025	RR	13/08/2025
C	Updated Development Propoal	AY	21/08/2025	EJ	21/082025

Appendix F Mitigation Strategy Budget Calcs

Nutrients from wastewater

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B9 in the first table 'Water infrastructure information'. Cells B10 is automatically calculated and will state '0.00' unless the user inputs have been entered. Cells A11 to A12 and B11 to B12 are automatically generated and will state 'Not applicable' depending on the inputs to cells B5 and B9. You may need to fill in cell C10 depending on the information you entered in cell B9. Cells C5 to C9 and cells C11 to C12 are intentionally blank cells.
You do not need to fill in any cells in the second table 'Final calculation of nutrient load from wastewater'. Cells B16 to B18 are automatically calculated and will state '0.00' unless the user inputs have been entered to the first table 'Water infrastructure information'. Cells A19 to A22, cells B20 and B22 are automatically generated and will state 'Not applicable' depending on the user inputs to the first table 'Water infrastructure information'. Cell B15, cell B19 and cell B21 are intentionally blank cells.
How to fill in the table 'Water infrastructure information'
Cell B5: Enter the date of first occupancy.
Cell B6: Enter the average occupancy rate of the development. The default rate is 2.4, this should not be edited without sufficient evidence.
Cell B7: Enter the water usage. This value should be kept at 120 unless other efficiency measures are used.
Cell B8: Enter the total number of dwellings or units that will be within the development site as of the project completion date.
Cell B9: Choose the receiving wastewater treatment works (WwTW) from the dropdown list.
If you select 'Package Treatment Plant user defined' or 'Septic Tank user defined', you must enter their certified value of total phosphorus (TP) in cell C10. Otherwise the default values will be used in the calculation of the nutrient load associated with wastewater.
Nutrient permits may be changing for the WwTW you select, from 01/01/2025, or 01/04/2030. If the date of first occupancy is in-between changing permit dates, multiple permit limits may be automatically generated in cells B10 to B12. If applicable, up to 3 values for the nutrient loading associated with wastewater will be presented in cell B18, B20 or B22.

Water infrastructure information

Description of required information	Data entry column - user inputs required	Additional data entry column - user inputs may be required
Date of first occupancy (dd/mm/yyyy):		
Average occupancy rate (people/dwelling or people/unit):	2.40	
Water usage (litres/person/day):	120	
Development proposal (dwellings/units):	84	
Wastewater treatment works:	Kilmington WwTW	
Current wastewater treatment works P permit (mg TP/litre):	**1.00**	
Not applicable	**Not applicable**	
Post 2030 WwTW P permit (mg TP/litre):	**0.25**	

Final calculation of nutrient load from wastewater

Description of values generated	Values generated
Post-2030 wastewater nutrient Loading	
Additional population (people):	**201.60**
Wastewater by development (litres/day):	**24192.00**
Annual wastewater TP load (kg TP/yr):	**1.99**
Pre-2030 wastewater nutrient loading	
Annual wastewater TP load (kg TP/yr):	**7.95**
Not applicable	
Not applicable	**Not applicable**

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells D11 to D27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27. Row 28 is a Total Row. The Total Row states 'Totals:' in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28 and C11 to C27 in cell C28. Cell D28 is intentionally blank.
How to fill in the table 'Current land use information'
Cell B5: Choose the operational catchment the site is located within from the dropdown list.
Cell B6: Choose the soil drainage type associated with the predominant soil type within the development site from the dropdown list.
Cell B7: Choose the annual average rainfall the development will receive from the dropdown list. If the rainfall volume is not on the list, select the nearest value.
Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
How to fill in the table 'Current land uses'
Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP).
The total nutrient load from current land uses is shown in cell C28 for TP.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Lim and Axe
Soil drainage type:	Freely draining
Annual average rainfall (mm):	1,000.1 - 1,100
Within nitrate vulnerable zone (NVZ):	No

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)	Notes on data
General	0.47	0.08	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
Totals:	0.47	0.08	

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells D11 to D27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27. Row 28 is a Total Row. The Total Row states "Totals:" in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28 and C11 to C27 in cell C28. Cell D28 is intentionally blank.
How to fill in the table 'Current land use information'
Cell B5: Choose the operational catchment the site is located within from the dropdown list.
Cell B6: Choose the soil drainage type associated with the predominant soil type within the development site from the dropdown list.
Cell B7: Choose the annual average rainfall the development will receive from the dropdown list. If the rainfall volume is not on the list, select the nearest value.
Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
How to fill in the table 'Current land uses'
Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP).
The total nutrient load from current land uses is shown in cell C28 for TP.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Lim and Axe
Soil drainage type:	Impeded drainage
Annual average rainfall (mm):	1,000.1 - 1,100
Within nitrate vulnerable zone (NVZ):	No

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)	Notes on data
Woodland	0.07	0.00	Not applicable
General	3.52	3.52	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
		0.00	Not applicable
Totals:	3.59	3.53	

Nutrients from future land use

This sheet contains one table.

Note: You will need to fill in cells A5 to A21 and B5 to B21. Cells B22 and C5 to C22 are automatically generated calculations and will state '0.00' unless the user inputs have been entered. Row 22 is a Total Row. The Total Row states 'Totals:' in cell A22 and automatically calculates the total sum of cells B5 to B21 in cell B22 and C5 to C21 in cell C22.

How to fill in the table 'Future land uses'

Cells A5-A21: Choose the future (post-development) land use type(s) of landcover present on the new site from the dropdown list
Cells B5-B21: Enter the area in hectares of each land use type.

The nutrient load from future land uses is shown in cells C5 to C21 for total phosphorus (TP).

The total nutrient load from future land uses is shown in cell C22 for TP.

Future land uses

New land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)
Residential urban land	2.61	5.49
Greenspace	1.44	0.03
Open urban land	0.01	0.01
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
Totals:	4.06	5.53

Nutrients from future land use after sustainable urban drainage system (SuDS) treatment

This sheet contains one table.
Note You will need to fill in cells A5 to A29, cells B5 to B29, cells C5 to C29, cells E5 to E29 and cells F5 to F29. If you are including SuDS to remove nutrients from the surface runoff. Cells B30, D5 to D30 and cells G5 to G30 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells H5 to H29 are automatically generated and will state 'Not applicable' unless the total area of the landcover entered is larger than the total area of the landcover entered into the worksheet 'Nutrients_from_future_land_use'. Row 30 is a Total Row. The Total Row states 'Totals:' in cell A30 and automatically calculates the total sum of cells B5 to B29 in cell B30, cells D5 to D29 in cell D30 and cells G5 to G29 in cell G30. Cell C30, cell E30, cell F30 and cell H30 are intentionally blank.
How to fill in the table 'SuDS information'
Cells A5 to A29: Choose the future (post-development) land use type(s) of landcover present on the new site within the SuDS catchment area from the dropdown list. Only landcovers entered into the worksheet titled 'Nutrients_from_future_land_use' can be entered.
Cells B5 to B29: Enter the area in hectares of each new land use type within the SuDS catchment area.
Cells C5 to C29: Enter the percentage of the flow entering the SuDS feature. If all flow is being diverted to the SuDS feature then this value should be set to 100%.
The annual total phosphorus (TP) loads associated with the landcovers in the SuDS catchment area are automatically calculated in cells D5 to D29.
Cells E5 to E29: Enter the name of the SuDS features used to intercept surface flows can be entered in. Any text can be entered into these cells.
Cells F5 to F29: Enter the nutrient removal rates associated with the SuDS features for TP.
Values for column F must be identified by the user and must be specific to the SuDS features being implemented.
The annual TP load removed by the SuDS features are automatically calculated in cells G5 to G29. These values are subtracted from the nutrient budget.
You do not need to fill in column H 'Notes on data'. It will state "Not applicable" unless the total area of each landcover within the SuDS catchment area exceeds the area of the landcovers entered into the worksheet titled 'Nutrients_from_future_land_use'.
The total nutrient load removed through the SuDS features is shown in cell G30 for TP.

SuDS information

New land use type(s) within SuDS catchment area - user inputs required	SuDS catchment area (ha) - user inputs required	Percentage of flow entering the SuDS (%) - user inputs required	Annual phosphorus inputs to SuDS feature(s) (kg T/yr)	Name of SuDS feature(s) - user inputs required	TP removal rate for features - user specified (%) - user inputs required	Annual phosphorus load removed by SuDS (kg TP/yr)	Notes on data
Residential urban land	2.61	100.00	5.49	Detention	33.00	1.81	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
Totals	2.61		5.49			1.81	

Nutrient Neutrality Calculations

Stantec

Summary of Nutrient Budget

Project Title	Land off Lyme Road, Axminster
Project Code	333101454

Based on Natural England (NE) methodology and Local Planning Authority (LPA) guidance at the time of undertaking the budget calculation. Where parameters are not user defined standard values provided in the NE calculator have been used.

Stage 1 - Additional wastewater

Average population per dwelling	2.4
Water Usage (l/person/day)	120
Net Number of new houses	84
Wastewater Treatment Works	Kilmington WwTW

	Current	Post-2030
Wastewater treatment works P discharge (mg TP/litre)	1	0.25

	Current	Post-2030
Annual wastewater TP load (kg TP/yr)	7.95	1.99

Stage 2 - Existing Land Use

Values extracted from NE nutrient budget calculator

Operational Catchment	Lim and Axe
Average Annual Rainfall	1,000 - 1,100
Nitrate Vulnerable Zone	No

Soil Drainage Type	Impeded Drainage

General (ha)	3.52
Existing Woodland (ha)	0.07

Annual phosphorus export (kg TP/yr)	3.53

* calculator presents 3.52 kg tp/yr + 0 kg tp/yr as 3.53, due to rounding.

Soil Drainage Type	Freely Draining

General (ha)	0.47

Annual phosphorus export (kg TP/yr)	0.08

Total annual phosphorus export (kg TP/yr)	3.61

Stage 3 - Proposed Land Use

Values extracted from NE nutrient budget calculator

Residential Urban Land (ha)	2.61
Greenspace (ha)	1.44
Open Urban (ha)	0.01

Annual phosphorus export (kg TP/yr)	5.53

SuDS TP Removal

SuDS Features	Detention Basin
SuDS TP Removal (%)	33.0%
SuDS TP Removal (kg/yr)	1.81

Annual phosphorus export (kg TP/yr)	3.72

Stage 4 - Annual Nutrient Budget

	Current	Post-2030
Total annual phosphorus export (kg TP/yr)	8.06	2.1

	Current	Post-2030
Total annual phosphorus export including 20% buffer (kg TP/yr)	9.67	2.52

CHECKING RECORD

Rev	Comments	Prepared	Date	Checked	Date
-	Original calculation	AY	12/08/2025	RR	13/08/2025
C	Updated Development Proposal	AY	21/08/2025	EJ	21/08/2025