



Report to the Partnership for South Hampshire Joint Committee

Date: 26 September 2023
Report of: Simon Kennedy, PFSH Principal Strategic Environmental
Planning Officer
Subject: NUTRIENT MITIGATION UPDATE

SUMMARY

This report provides an update on nutrient mitigation around the Solent. **Appendix 1** of this report provides a full supply and demand analysis of nutrient mitigation availability in South Hampshire.

RECOMMENDATION

It is RECOMMENDED that the Joint Committee NOTES the contents of this report.

1. Background

- 1.1 The Nutrient Mitigation Update Report to Joint Committee on 4 April 2023, along with other reports provided to Joint Committee previously¹, provide a general background to nutrient neutrality efforts around the Solent. Additionally, the Partnership for South Hampshire (PfSH) website provides a substantive background to the provision of nutrient mitigation in the context of the Solent - which is updated as required.
- 1.2 On 29 August an announcement from government (Department of Levelling Up Housing and Communities) advised that it would be proposing an amendment to the Levelling up and Regeneration Bill². The Chief Planner, in a subsequent letter dated 1 September³, stated that the effect of the amendment would be to “no longer require the consideration of nutrient flows from urban wastewater as part of Habitats Regulations Assessments (HRA) for planning decision making and plan-making in nutrient neutrality catchments.”
- 1.3 The amendment (247YY) was introduced late into the Bill's passage through parliament and was debated in the House of Lords on 13 September 2023. Following a motion to vote on the amendment, a result of not content was returned. As all counter amendments were withdrawn no amendment was returned to the House of Commons for consideration. It is considered by the Strategic Environmental Planning Team that it is unlikely that there will be a change in approach to nutrient neutrality requirement in the short term.

2. Supply and Demand Analysis

- 2.1 It remains the case that there is a sufficient supply of strategic **nitrogen** mitigation options to aid the delivery of growth across the Solent region in the short term. Therefore, any developers wishing to progress applications in the short term will have sufficient mitigation to do so.
- 2.2 **Appendix 1** provides a full supply and demand report as a continuation of previous supply and demand reports presented to Joint Committee. The appendix highlights the acute need for further mitigation to come forward to meet future demand.

3. Next Steps

- 3.1 PfSH member local authorities should continue to work pro-actively with suitable mitigation providers to maintain confidence in the local mitigation market.
- 3.2 PfSH will continue to engage with government departments and ministers in relation to access to the Local Nutrient Mitigation Fund - following PfSH's

¹ [PfSH Joint Committee Meeting Page - Nutrient Neutrality Updates from 2019 - 2021](#)

² [DLUHC Press Release \(Amendment 247YY\)](#)

³ [Letter about nutrient neutrality \(1 September 2023\) \(publishing.service.gov.uk\)](#)

expression of interest (bid for funding) submitted earlier this year and detailed in a report to Joint Committee at its meeting in July.

RECOMMENDATION

It is RECOMMENDED that the Joint Committee NOTES the contents of this report.

Appendices: - Appendix 1 Nutrient Mitigation Supply and Demand Analysis

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Nutrient Mitigation Supply and Demand Analysis September 2023

Summary

The partnership and catchment-based approach to strategic nutrient mitigation in the Solent region, employed by the Partnership for South Hampshire local authorities, has facilitated an active nutrient mitigation market. This has resulted in sufficient mitigation to satisfy the short-term need for development in all catchments with the exception of phosphorus from development draining to the mid and upper Itchen.

The total amount of mitigation delivery by 12 strategic schemes⁴ is approximately 23,000 nutrient credits (both total nitrogen and phosphorus), with the potential for a further 2,500 nutrient credits from three strategic schemes. The number of permissions equates to approximately 14,500 Kg/TN/Yr.

There is also the potential for strategic phosphorus mitigation schemes to come forward, which are all at different stages. As highlighted in the report to PfSH Joint Committee on the 11 July⁵ an Expression of Interest was submitted to DLUHC in May for funding to support the schemes. We await the outcome of this, in particular following the government announcement on 29 August that government is seeking to remove nutrient neutrality as a planning consideration through an amendment to the Levelling up and Regeneration Bill.

The upgrades to wastewater treatment works proposed in the Levelling Up and Regeneration Bill have a significant impact on the scale of unmet need for nutrient mitigation in the Solent sub-region. However, it is also clear that continued support may be required to ensure that sufficient supply of suitable mitigation comes forward so that planned development can continue across the impacted area to meet the residual need.

If the proposed wastewater treatment work upgrades do not come forward as expected, then the delivery of new mitigation in the Test and Itchen catchment will need to be substantially increased to meet the demands of future growth. The failure of the upgrades to come forward as indicated is likely to have a disproportionate and detrimental impact on rural communities and those areas served by poorly performing wastewater treatment works and may stall planned growth in these areas.

⁴ [Potential Nutrient Mitigation Schemes - Partnership for South Hampshire \(push.gov.uk\)](https://push.gov.uk)

⁵ [Public Pack\)Agenda Document for Partnership for South Hampshire \(PfSH\) Joint Committee, 11/07/2023 18:00 \(push.gov.uk\)](https://push.gov.uk)

In the event that the supply of strategic mitigation fails to keep up with demand, then growth would stall until new mitigation solutions come forward - it will be essential that supply is maintained above the level of demand to avoid a situation where planning permissions cannot be issued for sustained periods of time across the sub-region. While we wait for the Government's proposal to remove requirements for nutrient neutrality to be debated, there is a risk of creating uncertainty of nutrient mitigation supply. In the short term, this uncertainty could potentially stall housing growth if developers are not willing to purchase nutrient credits for new developments whilst the position in relation to nutrient neutrality requirements remains unclear.

Supply and Demand Analysis

1. It remains the case that there is a sufficient supply of strategic **nitrogen** mitigation options to aid the delivery of growth across the Solent region in the short term. There are twelve strategic mitigation sites listed on the PfSH website⁶ to guide developers to potential mitigation schemes. The supply of nutrient mitigation in the East Hampshire and Test and Itchen catchments remains constrained against the required demand. For calculations of strategic nutrient demand the figure is based on the receiving waste-water treatment works permit level for developments.
2. As well as further information becoming available as local plans progress, this report has started to further refine demand assessments. The PfSH Strategic Environmental Planning Officer (SEPO) Team have been able to assess detailed budgets for two local authorities in the East Hampshire catchment using the updated Crop Map of England (CROME) 2020. The CROME data ensures land use data is taken account of in these demand calculations using the Solent Nutrient Budget Calculators⁷. The data along with GIS maps received from the relevant authorities allows a more precise estimation of the required total nitrogen mitigation. The use of individual nutrient budgets for site trajectories increases the accuracy of assessments made for strategic nutrient mitigation. The PfSH SEPO team intend to undertake further site nutrient budgets in the next round of reporting for authorities that are progressing their local plans to a stage where site trajectory information is available.
3. It should be noted that there is no account made for sites that may be able to utilise their own on-site mitigation. Additionally, due to other factors unrelated to nutrient neutrality, demand may not be as high or come forward as quickly

⁶ <https://www.push.gov.uk/work/mitigation-schemes-available-to-developers/>

⁷ Solent Nutrient Budget Calculator Version 2.3 - [Natural England nutrient calculator and guidance - Partnership for South Hampshire \(push.gov.uk\)](#)

as anticipated. Therefore, the demand figure may be lower than shown or nutrient mitigation supply may last longer than anticipated.

East Hampshire Catchment – current supply and demand:

- The current supply and demand of total nitrogen mitigation is represented in figure 1. Where a supply of credits is indicated in figure 1, it relates to a mitigation site that is actively marketing credits to the development industry and has received confirmation from Natural England that the mitigation site is suitable in principle. Figure 1 shows that there is a current availability of approximately 4600Kgs/TN/Yr. The current available supply of total nitrogen mitigation in the catchment would be exhausted at the end of the 2025/26 financial year.

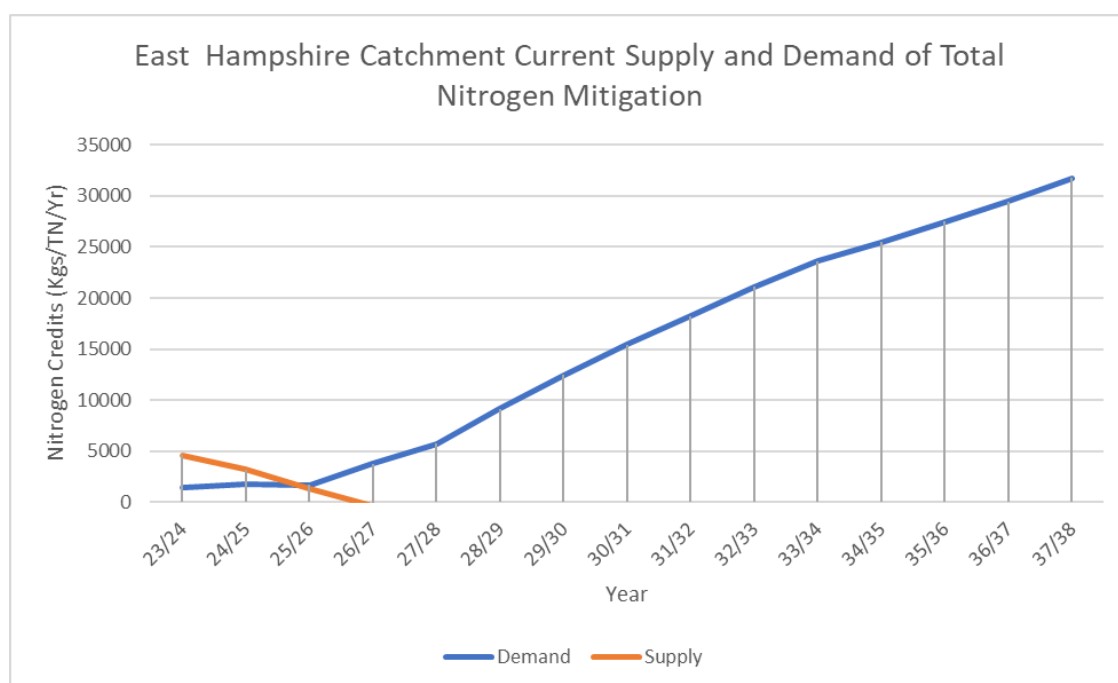


Figure 1 – Current Supply and Demand of Total Nitrogen in the East Hampshire Catchment

- The unmet demand for mitigation is approximately 31,800Kgs/TN/Yr to 2037/38. This reduction in anticipated demand since the 4 April 2023 Joint Committee Report⁸ is partly due to authorities progressing local plans and providing detailed site trajectories, the use of CROME data to complete detailed nutrient budgets for two authorities, and the inclusion of supply at Heaton Farms. This decrease in demand also accounts for the increase in time in which supply will be available.

⁸ [\(Public Pack\)Agenda Document for Partnership for South Hampshire \(PFSH\) Joint Committee, 04/04/2023 18:00 \(push.gov.uk\)](#)

East Hampshire Catchment – projected supply and demand

6. As highlighted in previous reports development in the East Hampshire Catchment is predominantly served by waste-water treatment works at Peel Common and Budds Farm. Both wastewater treatment works employ a level of technology comparable to the technically achievable limit set out in the Levelling Up and Regeneration Bill (LURB)⁹.
7. Over the last four years a number of strategic mitigation schemes have come forward in the East Hampshire catchment, with an average delivery rate of 3,052Kgs/TN/Yr. As highlighted in Figure 2, should mitigation come forward at a similar rate then the mitigation supply will continue to keep up with demand.

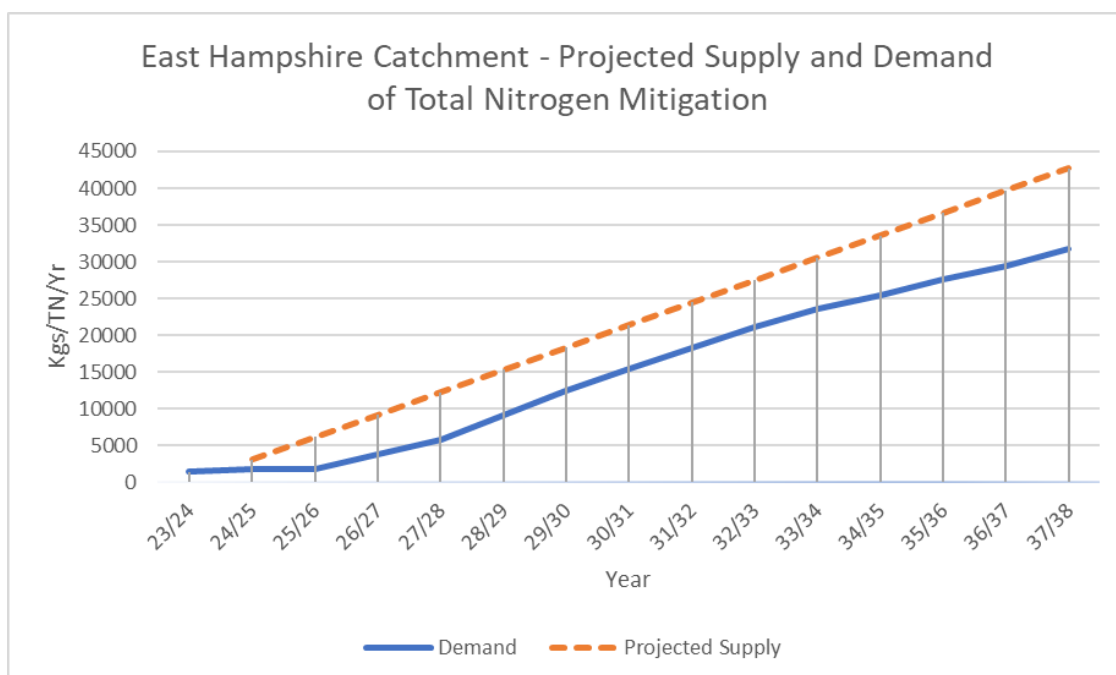


Figure 2 – Projected Supply and Demand of Total Nitrogen in the East Hampshire Catchment

East Hampshire Catchment – emerging supply and demand

8. Figure 3 below shows that there is a potential emerging supply of approximately 5,400Kgs/TN/Yr. This means that the emerging supply would be exhausted mid 2026/2027 financial year.

⁹ [HL Bill 84—II \(parliament.uk\)](#) (Clause 153, page 178)

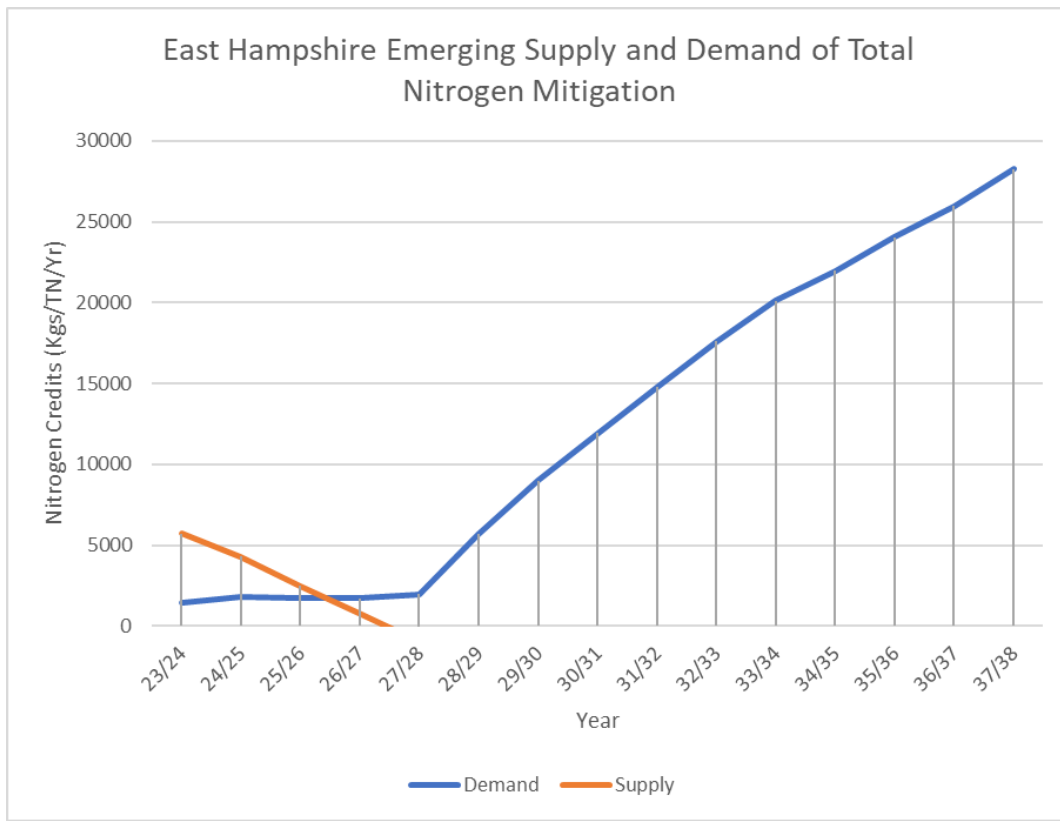


Figure 3 – Emerging Supply and Demand of Total Nitrogen in the East Hampshire Catchment

9. The projections shown in Figure 3 are supported by two emerging total nitrogen mitigation schemes. The two emerging strategic mitigation schemes have been granted planning permission and are expected to be delivered in the 2023/2024 financial year:
 - Interceptor wetland at Shalfleet sewage treatment works
 - Interceptor wetland at Knowle sewage treatment works
10. Both schemes are anticipated to provide around 1,100Kgs/TN/Yr in total for the 2023/2024 financial year and are likely to be fully operational in the next six – twelve months.
11. In the previous two reporting periods Meon Marsh was included as an emerging strategic mitigation scheme. Due to operational delays the scheme is not expected to be fully effective until at least autumn 2024 and therefore, due to this uncertainty, has not been including in the emerging list in this reporting period.

Conclusion from analysis of supply and demand of nutrient mitigation in East Hampshire Catchment

12. The East Hampshire Catchment provides sufficient nutrient mitigation for development to continue in the short term.
13. In the long term (up until 2037/38) the supply of mitigation will need to continue to come forward at the current rate in order for demand to be met in the East Hampshire Catchment.

Test and Itchen Catchment – Current Supply and Demand of Total Nitrogen Mitigation

14. The current supply and demand of total nitrogen mitigation is highlighted in figure 4. Where a supply of credits is indicated in figure 4 this relates to a mitigation site that is actively marketing credits to the development industry and has received confirmation from Natural England that the mitigation site is suitable in principle.

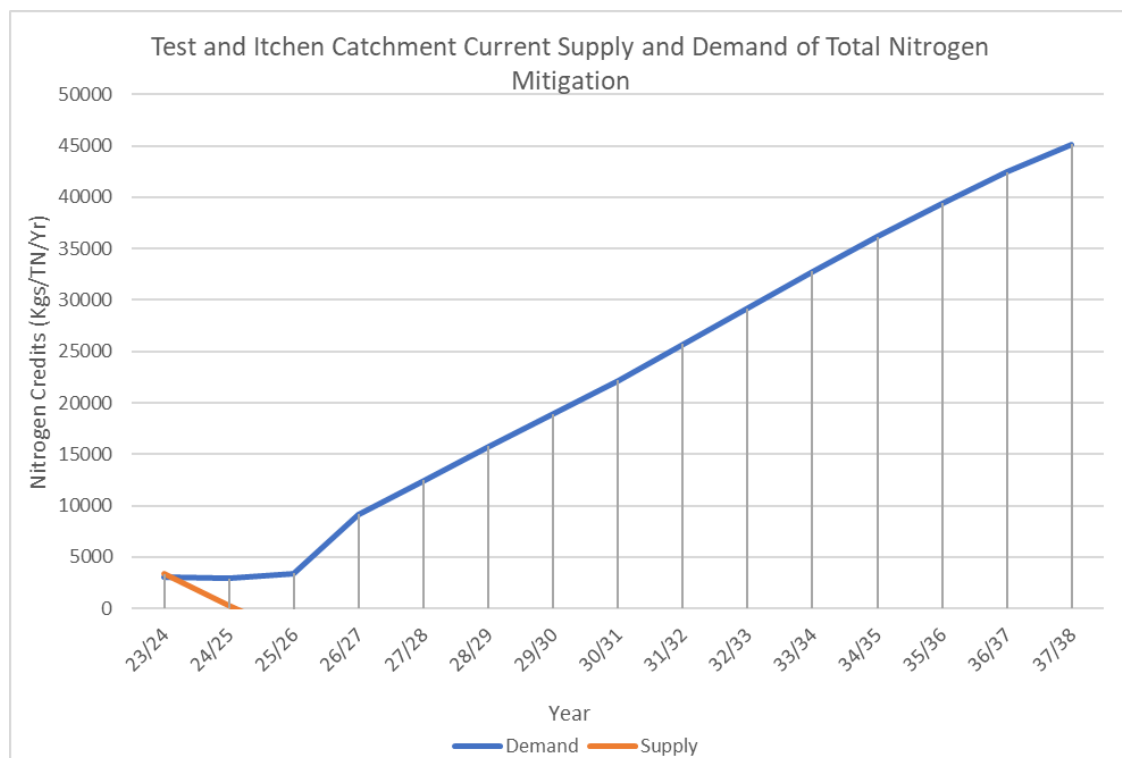


Figure 4 – Current Supply and Demand of Total Nitrogen in the Test and Itchen Catchment

15. Figure 4 shows there is a current availability of 3351Kgs/TN/Yr of strategic mitigation in Test and Itchen catchment. Since the previous report 2200Kgs/TN/Yr has been used and no further schemes have come forward in the catchment. The currently supply of mitigation is expected to be exhausted at the beginning of the 2024/2025 financial period.

16. The unmet demand for nutrient mitigation has increased to 45,000Kgs/TN/Yr since the last reporting period. This is due to two reasons. Firstly, the availability of more accurate information on strategic site trajectories as local plans progress. Secondly, the supply of strategic mitigation in the catchment decreasing with no further emerging mitigation sites coming forward. However, the SEPO Team will seek to do further CROME analysis of allocated sites within the Test and Itchen catchment which may result in a reduction of strategic demand within the next reporting period.

Test and Itchen Catchment – Proposed upgrades for waste water treatment works for total nitrogen

17. A number of waste-water treatment works will benefit from the proposed upgrades and the removal of total nitrogen and total phosphorus anticipated to take place through the Levelling Up and Regeneration Bill (LURB) in 2030. Figure 5 calculates the impacts of the proposed upgrades to waste water treatment works and its impact on the anticipated strategic demand.

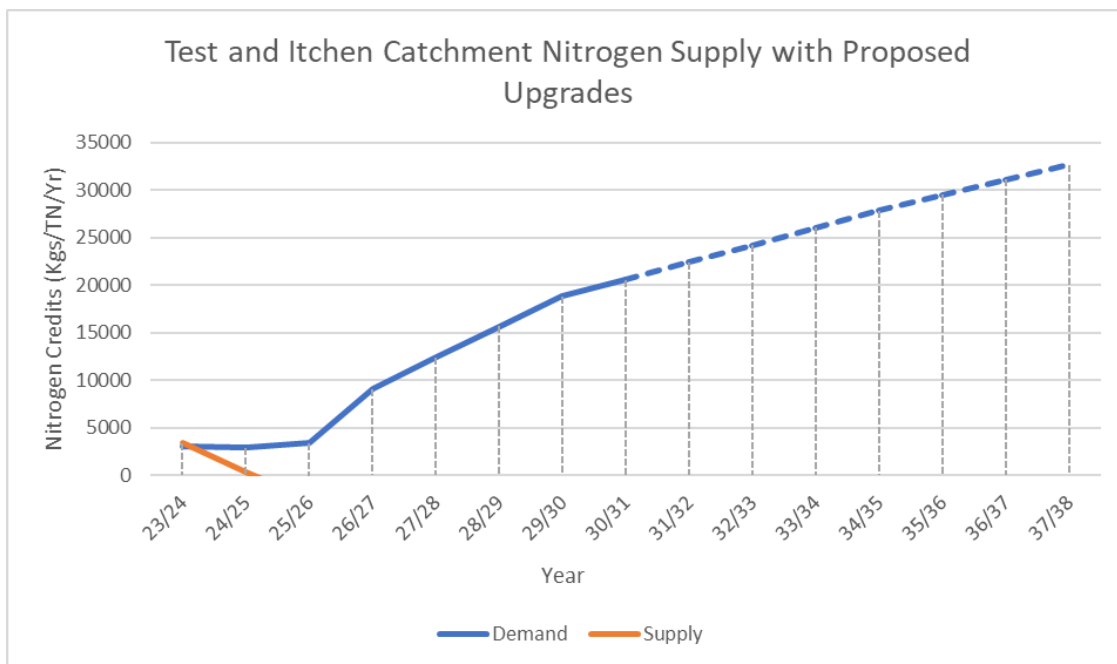


Figure 5 – Current supply and demand of Total Nitrogen in the Test and Itchen Catchment – Impact of the proposed upgrades to waste water treatment works

18. Figure 5 shows that due to the proposed upgrades only becoming effective in 2030 there is no impact on short term supply and demand. However, the impacts of the proposed upgrades are significant in reducing the unmet need in the catchment from approximately 45,000Kgs/TN/Yr to 32,500Kgs/TN/Yr.
19. As highlighted in the April 23 Joint Committee Report, some of the proposed upgrades equate to around a 25% reduction in overall demand, with some areas experiencing around a 60% reduction.

Test and Itchen Catchment – projected supply and demand

20. Over the last three years a number of strategic mitigation schemes have come forward in the Test and Itchen catchment, with an average delivery rate of around 3,470Kgs/TN/Yr. As can be seen in Figure 6 should mitigation come forward at a similar rate then the mitigation supply will continue to keep up with demand. Figure 7 shows that if waste water treatment upgrades proceed supply will exceed the projected likely demand.

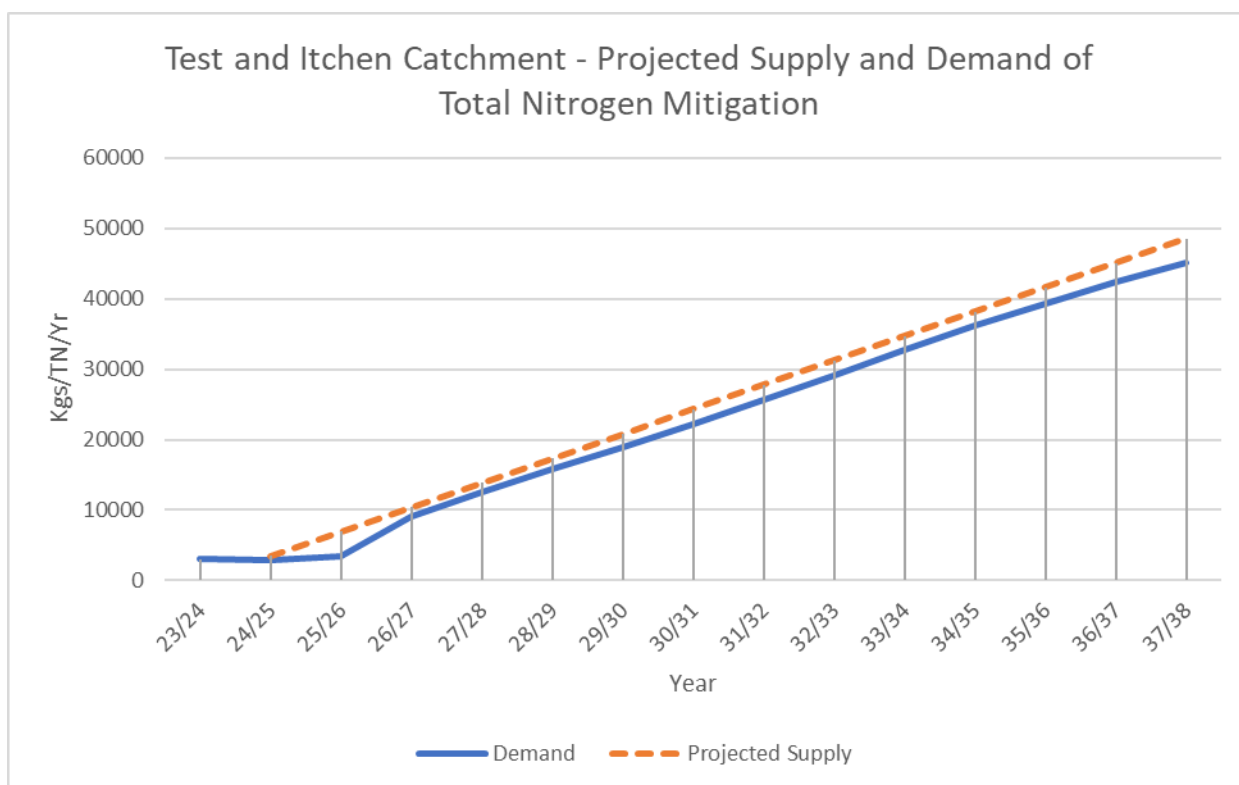


Figure 6 – Projected Supply and Demand of Total Nitrogen in the Test and Itchen Catchment

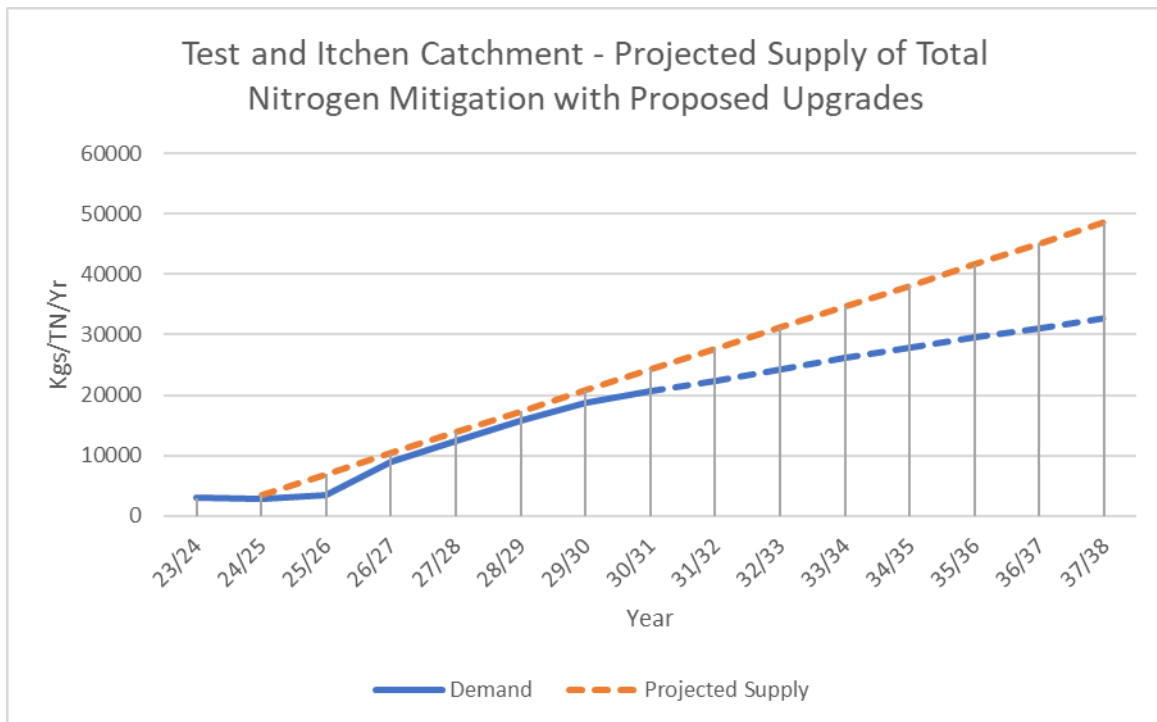


Figure 7 – Projected Supply and Demand of Total Nitrogen in the Test and Itchen Catchment – Impact of the proposed upgrades to waste water treatment works

Conclusion from analysis of supply and demand of total nitrogen mitigation in Test and Itchen Catchment

21. The supply of total nitrogen mitigation remains sufficient for sustainable development to continue in the short term, with supply likely to be exhausted at the beginning of the 2024/2025 financial year.

Itchen Catchment – supply and demand of phosphorus mitigation

22. Due to the way in which development impacts phosphorus levels in the Itchen, and the need to deliver mitigation where the impact of mitigation is upstream of proposed development, two assessments have been made of in relation to supply and demand of phosphorus in the Itchen. An assessment has made in relation to the supply and demand of nutrient mitigation for development draining to Chickenhall. In addition, a separate assessment has been made for phosphorus mitigation to development draining to remaining waste water treatment works in the Itchen.
23. In some areas of the Upper Itchen, including a small part of the East Hampshire District Council administrative area, development primarily drains to package treatment plants and septic tanks due to the lack of mains sewerage. Although there is little planned development in these areas without a phosphorus solution it is unlikely that development will be able to suitably mitigate against phosphorus in the short to medium term.

Itchen Catchment – Development draining to Chickenhall Waste water treatment works

24. Development draining to Chickenhall waste water treatment works is primarily within the Eastleigh administrative area, part of Test Valley and part of south Winchester areas. The data used to calculate the supply and demand of nutrient mitigation for development that drains to Chickenhall WWTW assumes the programmed upgrade to the permit limit¹⁰ will take place by March 2025. Figure 8 provides an analysis of the current supply and demand of phosphorus mitigation to Chickenhall waste water treatment works.

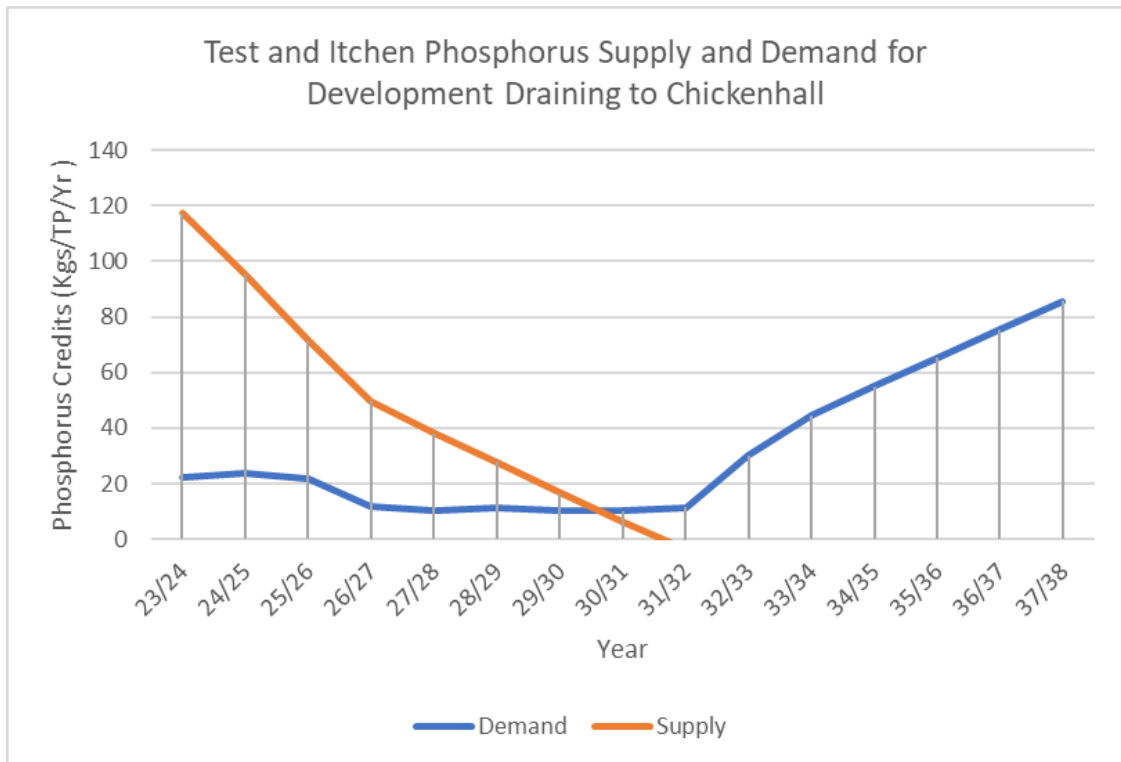


Figure 8 – Current Supply and Demand of Phosphorus for Development Draining to Chickenhall

25. As highlighted in the 4 April Nutrient Mitigation update the supply of mitigation for Chickenhall waste water treatment works is entirely from the Eastleigh Borough Council strategic mitigation scheme. The precise quantum of phosphorus mitigation is still to be formally agree with Natural England, however, for the purposes of this report it is anticipated that the supply of mitigation will not be exhausted until mid 2030/31 financial year.
26. The shortfall of phosphate mitigation is estimated to be around 85Kgs/TP/Yr for planned development to Chickenhall waste water treatment works up until 2037/38.

¹⁰ Reduction from 1ml/l to 0.6ml/l

Itchen Catchment – Development draining to Chickenhall Waste water treatment works – Further Proposed Waste Water Treatment Works Upgrade

27. Although an upgrade to the permit limit for Chickenhall WWTW's is accounted for in figure 8. It is anticipated that Chickenhall will be upgraded to a tighter permit limit¹¹ in 2030 as indicated in the LURB. Figure 9 provides an indication of the impact of this further upgrade.

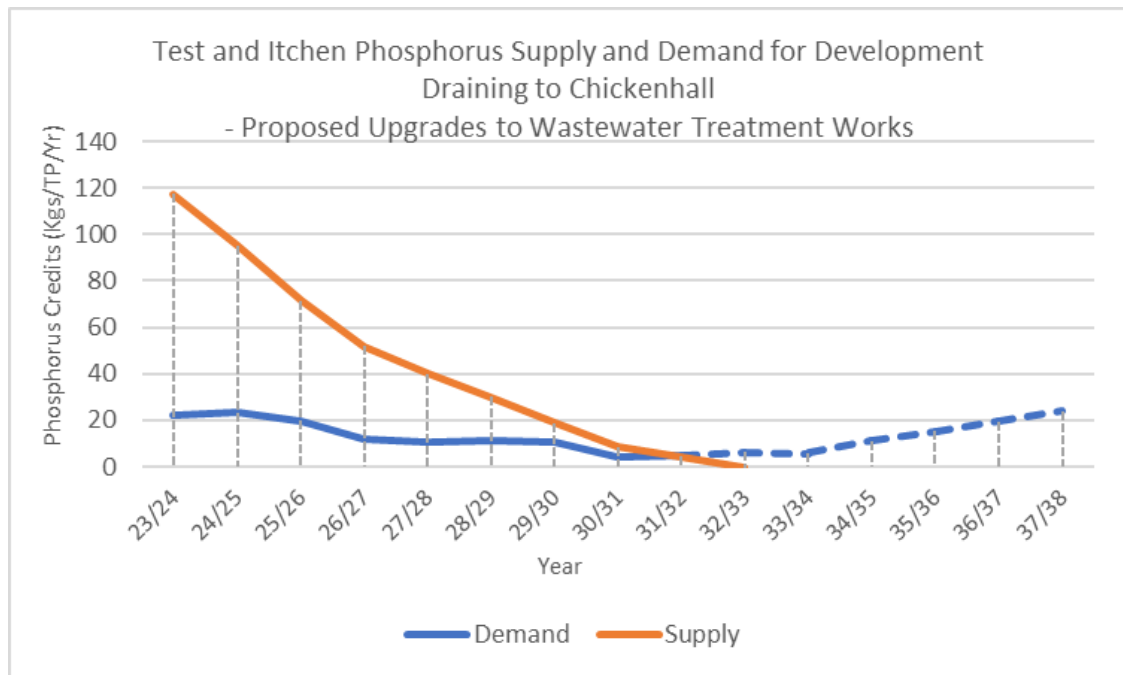


Figure 9 – Anticipate Supply and Demand of Phosphorus for Development Draining to Chickenhall with proposed 2030 waste water treatment works upgrades

28. The proposed upgrades to Chickenhall waste water treatment works extends the availability of phosphorus mitigation supply to the end of the 2031/2032 financial year as well as reducing the shortfall up until 2037/37 to 24Kgs/TP/Yr.

Conclusions from analysis of supply and demand of phosphorus mitigation from development draining to Chickenhall wastewater treatment works

29. There is sufficient supply of strategic phosphorus mitigation to satisfy demand in the short to medium term for development draining to Chickenhall waste water treatment works. As highlighted in the previous report there is the possibility of increasing the amount of mitigation available over the long term.

¹¹ Reduction from the planned 0.6ml/l to 0.25ml/l

Supply and demand of phosphorus mitigation for development draining to remaining waste water treatment works in the Itchen Catchment

30. Figure 10 shows the estimated supply and demand of phosphorus mitigation for development draining to all other waste water treatment works in the Itchen. The demand calculations include a proposed upgrade to the Harestock waste water treatment works in 2025. The supply of strategic phosphorus mitigation remains extremely low and will only mitigate a small proportion of the existing backlog of development in the Itchen catchment.

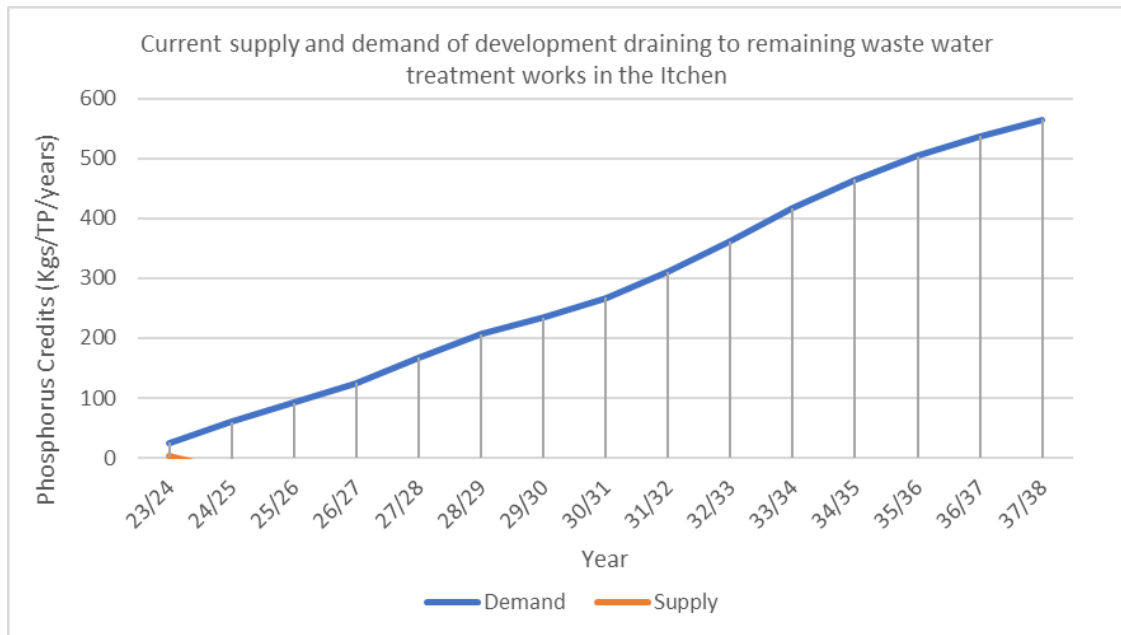


Figure 10 – Current Supply and Demand of Phosphorus for Development Draining to remaining wastewater treatment works in the Itchen

31. The backlog of applications will continue to increase whilst there is an absence of a suitable scheme that can provide strategic phosphorus mitigation. The current unmet demand for phosphorus mitigation draining to the remaining waste water treatment works in the Itchen is around 565Kgs/TP/Yr.

Supply and demand of phosphorus mitigation for development draining to remaining waste water treatment works in the Itchen Catchment – proposed 2030 upgrades

32. Figure 11 shows the impacts of the proposed 2030 upgrades to waste water treatment works in the Itchen Catchment. Although Harestock is programmed in for an upgrade in 2025, both Morestead and New Alresford will receive substantial improvements as part of the requirements under the LURB.

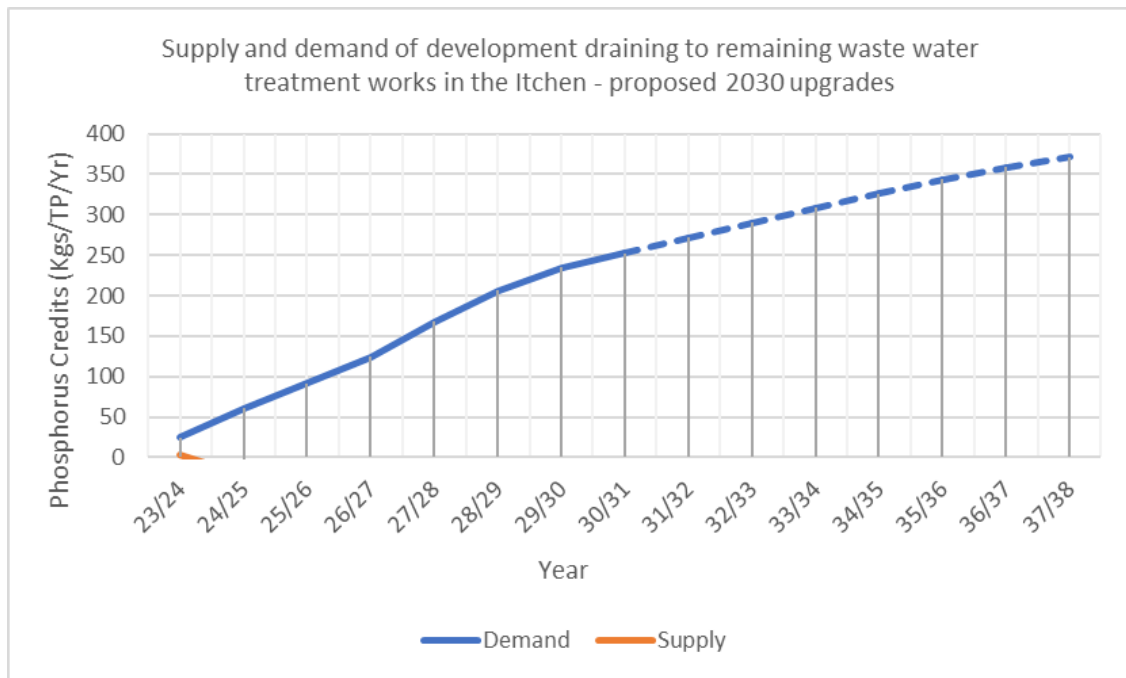


Figure 11 – Supply and Demand of Phosphorus for Development Draining to remaining wastewater treatment works in the Itchen – Proposed 2030 upgrades

33. Due to the extremely low availability of phosphorus mitigation there is no impact on the anticipated demand in the Itchen. However, the proposed 2030 upgrades would reduce the forecast demand for phosphorus mitigation to around 372Kgs/TP/Yr.

Emerging Strategic Phosphorus Mitigation Schemes

34. There are currently three potential sources of strategic phosphorus mitigation in the Itchen Catchment at various stages of development. These mitigation sources schemes are currently in the process of being considered by DLUHC in a funding bid that was submitted by the Strategic Environmental Planning Manager reported at Joint Committee on the 11th July 2023¹². The potential schemes include:
- a) The retrofitting of Council owned housing stock with water efficiency measures. The reduction of water use has an associated effect on the amount of phosphorus entering the relevant waste water treatment works. This reduction can be used to mitigate new development.
 - b) Winchester City Council, supported by the Partnership for South Hampshire Strategic Environmental Planning Team are in the process of undertaking work to investigate the potential to upgrade council owned package treatment

¹² [\(Public Pack\)Agenda Document for Partnership for South Hampshire \(PfSH\) Joint Committee, 11/07/2023 18:00 \(push.gov.uk\)](#)

plants to generate a reduction of phosphorus. This reduction can then be used to mitigate new development.

- c) Two parcels of land have been identified by separate landowners in the Winchester City Council administrative area with the potential to provide phosphate mitigation. Work is ongoing to identify the suitability of the sites.
- 35. Due to the current uncertainty of these schemes and assessment has not been made of the potential impact on supply and demand. However, this may be included in the next reporting period should they be sufficiently progressed.

Conclusions from analysis of supply and demand of phosphorus mitigation from development draining to the remaining waste water treatment works in the Itchen

- 36. The emerging strategic phosphorus mitigation schemes are all at various stages of development. However, work that has been undertaken to date suggest that the emerging solutions could unlock the backlog of planning applications and provide phosphorus mitigation in the short to medium term. The Partnership for South Hampshire Strategic Environmental Planning Team are continuing work on these solutions to aid the delivery of phosphorus mitigation as soon as practically possible.
- 37. It is currently estimated that there are over 1,000 dwellings unable to proceed due to a lack of available solutions for phosphorus in Winchester. This has a significant impact on both the sub-regional economy and the availability of market and affordable housing.

New Forest Rivers Catchment Supply and Demand

- 38. All development draining to the Pennington waste-water treatment works, as well as the smaller wastewater treatment works within the New Forest National Park area¹³, is considered to be demand in the New Forest catchment, as shown in Figure 12.

¹³ Including Ashletts Creek.

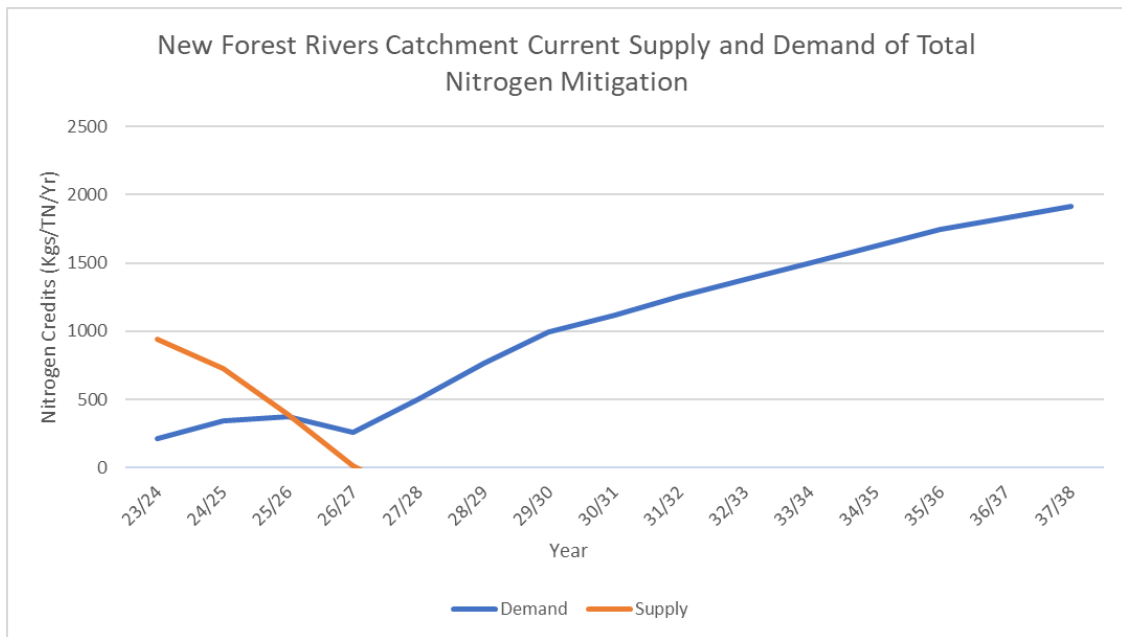


Figure 12 – Supply and Demand of Total Nitrogen in the New Forest Rivers Catchment - A figure of 1kg/TN/Per Year per dwelling was used to calculate demand

39. Figure 12 shows that the strategic supply of mitigation serving the New Forest Rivers catchment will be exhausted at the beginning of the 26/27 year. The estimated unmet need equating to approximately 1900Kg/TN/Yr.

New Forest Rivers Catchment – proposed upgrades to wastewater treatment works and emerging supply and demand of Total Nitrogen Mitigation

40. Pennington wastewater treatment works already employs levels of technology comparable to the technical achievable limit described in the LURB. However, some development, particularly in the New Forest National Park, drains to smaller waste water treatment works. Although some of the works may be considered for upgrades through the LURB, the impact of these upgrades is negligible.
41. The projections shown in Figure 13 are supported by two emerging total nitrogen mitigation schemes. The first emerging mitigation scheme is the constructed wetland at Shalfleet sewage treatment works which also serves development draining to Peel Common wastewater treatment works in the East Hampshire Catchment and Pennington wastewater treatment works in the New Forest Rivers Catchment. The second emerging mitigation scheme is Keyhaven which includes the cessation of inputs on site. The two emerging strategic mitigation schemes are expected to be delivered in the 2023/2024 financial year. Both schemes are initially likely to provide approximately 1,500/Kgs/TN/Yr.

42. Figure 13 shows the impact of the proposed upgrade and the additional emerging supply from Keyhaven and Shalfleet.

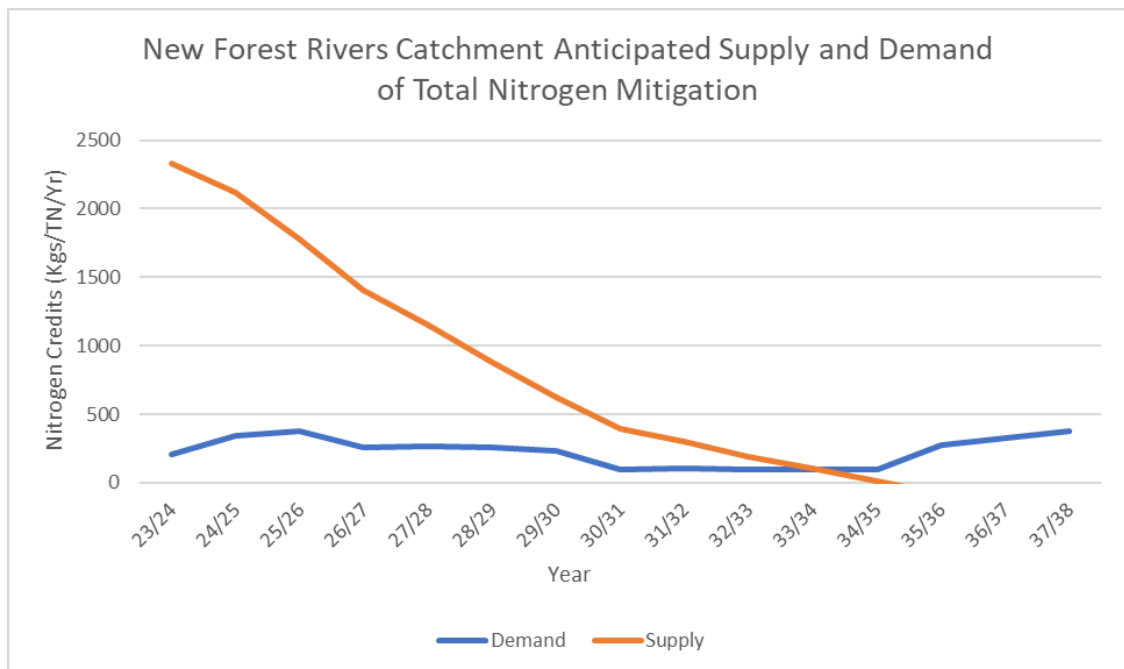


Figure 13 – Supply and Demand of Total Nitrogen in the New Forest Rivers Catchment – Proposed wastewater treatment upgrades

43. As can be seen in Figure 13 the emerging supply of strategic mitigation will be exhausted at the beginning of the 2034/2035 year. The unmet need equating to approximately 380Kgs/TN/Yr.

Conclusions for New Forest Catchment Supply and Demand Analysis

44. There is currently sufficient supply within the New Forest Rivers Catchment to satisfy demand in the short to medium term.

ENDS