

POOLE HARBOUR

Nutrient Management Scheme

Prepared by: Poole Harbour Agriculture Group Community Interest Company¹

Details for an "approved scheme" for the agricultural sector in the Poole Harbour catchment

Final Version

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¹ Poole Harbour Agriculture Group CIC, Agriculture House, Acland Road, Dorchester, England, DT1 1EF Company number 13814790

Signatories

Wakely Cox, Chairman, Poole Harbour Agriculture Group CiC

Ian Withers, Manager, Wessex Area Environment Agency

Rachel Williams, Wessex Area Manager Natural England Date

<u>Contents</u>

Scheme st	tructure, management, and overview	5
1.1.	The Poole Harbour Agriculture Group (PHAG)	5
1.2.	The Approved Scheme for agriculture	5
1.3.	The third party	6
1.4.	PHAGs approach to support PHNMS	6
1.5.	Scheme Overview	8
2. PH	INMS Management	9
2.1.	Governance	9
2.2.	Technical Nutrient Group	
2.3.	Sector approaches to regulated aspects of nutrient in Poole Harbour	11
Scheme R	ules	12
3. Fa	rmer membership of PHAG	
Overv	iew	
3.2.	Issues with farmers meeting PHNMS requirements	
3.3.	Eligible land	14
4. Co	mpliance with existing regulations	
4.1.	Overview	
4.2.	The role of the third party and the regulator (FA)	
4.3.	Mechanisms to be used for self-assessment of compliance	
4.4.	Working with PHNMS farmers that self-assess as non-compliant	
4.5.	The role of the regulator (FA)	
4.6	Renorting	<u>-</u> / 17
4 7	Validation with the ACT	
4.8.	Reviewing compliance regulations and approach	
5. Nu	trient Accounting	
5.1		19 19
5.2	Process for nutrient accounting	19 19
5.2.	Additional sources of nitrogen accounting	ברדיייייייייייייייייייייייייייייייי
5.4	Auditional sources of hitrogen accounting	22 22
5.4.	Validation of nutrient accounts	22 22
5.5.	Nutrient planning to deliver environmental economic ontimum yield (EEOV)	23 22
5.0.	Nutrient Accounting Tool selection, everyight, and coordination	25
5.7. 5.8.	Reporting	24
6. Nu	Itrient Management Plans	
7 14	noting the glidenath target	
7. IVI	Overview	
7.1.	Overview	20 حد
7.2.	Review of glidepath	27
0 T#		20
8. 116	acing	
8.1.	Overview of trading and its place in PHNIVIS	
8.2.	Applicable Land	
8.3.	Structure of trading	
8.4.	Gildepath Target and Trading Target	
8.5.	Farmer Below Glidepath Target but above External Trading Target:	
8.6.	Farmer Below Glidepath Target and below External Trading Target:	
8.7.	Process through time	34
8.8.	Timing of farm Planned Nutrient Accounts/Position	35
8.9.	Timing of farm Actual Nutrient Accounts/Position and Settling of Positions	
8.10.	Infining for External Offset Buyers	

Wessex Water Timing	
Managing Undersupply	37
Pricing	
Double counting and stacking benefits	37
erification of results for trading	
Overview	
Verifiers	
Verification by the regulator	
Verification in PHNMS	
The verification process	40
Disputes following verification	41
Relationship with the regulator's enforcement inspections	
Overview	
Approach to be taken	
Best practice	
Overview	
Approach to be taken	
Data management	44
Overview	
Approach	44
Review	
Overview	
Annual reviews	
2024 Full review	45
Key dates	45
	Wessex Water Timing Managing Undersupply. Pricing Double counting and stacking benefits erification of results for trading Overview Verifiers Verification by the regulator. Verification in PHNMS The verification process. Disputes following verification Relationship with the regulator's enforcement inspections Overview Approach to be taken Data management Overview Approach. Review Overview Approach. Review Overview Approach. Review Overview Approach. Review Overview Annual reviews 2024 Full review 2024 Full review

Scheme structure, management, and overview

1.1. The Poole Harbour Agriculture Group (PHAG)

- 1.1.1. PHAG is registered as a Community Interest Company limited by guarantee². It has Directors who are the legal members of the CIC and come together to form the PHAG Board.
- 1.1.2. The objects for PHAG CIC are laid out in its Articles of Association. These objects are:
- 1.1.2.1. provide a farmer-controlled and managed entity to represent the agricultural community within Poole Harbour catchment area;
- 1.1.2.2. develop unified and coherent governance and management for the agricultural community of the Poole Harbour catchment area;
- 1.1.2.3. develop a farm-level nutrient accounting tool to record the use of nutrients within the Poole Harbour catchment area;
- 1.1.2.4. develop a farm-level nutrient trading tool to encourage reduced reliance upon, and use of, nitrogen and other nutrients within the Poole Harbour catchment area;
- 1.1.2.5. provide access to new environmental markets through the production of nutrient trading tool(s); and
- 1.1.2.6. provide grants for the benefit of the community within the Poole Harbour catchment area
 - 1.1.3. The PHAG Board are liable for operation of the CIC and the Approved Scheme (AS) and will appoint an independent third-party organisation to manage, administer and produce reports related to the AS.
 - 1.1.4. The PHAG Board will present the reports from the third party to the regulator³ (Environment Agency) in line with the requirements of the AS (Section 4.6). The Board will not alter the content of these report but may include additional reports relevant to the operation of the scheme.
 - 1.1.5. Wider PHAG membership is taken from the agricultural community within Poole Harbour catchment as defined in section 3.
 - 1.1.6. All farmers in the AS are required to meet requirements laid out in this document and in any subsequent supplementary documents.

1.2. The Approved Scheme for agriculture.

- 1.2.1. PHAG will aim to deliver an "approved scheme" (AS) (hereafter known as PHNMS) as part of its commitment to help deliver the agricultural sector's fair share of nutrient reductions across the Poole Harbour catchment. PHNMS has been developed in line with the "Poole Harbour Consent Order Technical Investigation and Recommendations⁴" (PHCOTR) guidelines produced by the Environment Agency and Natural England.
- 1.2.2. The tools and support provided will need to be aligned with the approach taken by the Environment Agency (the regulator), which will

² Poole Harbour Agriculture Group CIC, Agriculture House, Acland Road, Dorchester, England, DT1 1EF Company number 13814790

³ The term "regulator" in this document refers to the regulatory role of the Environment Agency.

⁴ Poole Harbour Consent Order Technical Investigation and Recommendations, Results, and recommendations from the schedule of work under High Court of Justice Consent Order (CO/3029/2015), FINAL, 11 February 2021 Version 53.0

be to prioritise direct inspection of farms outside of PHNMS. Details for this are laid out in section 10 of this document.

- 1.2.3. This document lays out the key processes to be operated by PHAG for the agricultural sector in the Poole Harbour catchment in its commitment to deliver the Poole Harbour Nutrient Management Scheme (PHNMS).
- 1.2.4. PHNMS is a farmer led voluntary scheme approved by the regulators. PHAG will commission a third party to administer and deliver PHNMS.
- 1.2.5. It is understood by PHAG that the processes for managing and delivering PHNMS will develop as more is learnt. This is a highly innovative scheme that has never been piloted in the UK before and as such will be subject to considerable learning and the need for adaptation.
- 1.2.6. The PHNMS is a voluntary arrangement and, as such, is not subject to regulatory authorisation requiring compliance with the Habitats Regulations 2017 as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Participation in the scheme must not be relied upon to demonstrate compliance with these Regulations. This includes, but not exhaustively, compliance by plans and projects requiring authorisation through planning permission, approval of permitted development or through other regulatory consent, permission, or authorisation, and in meeting other requirements relevant to Poole Harbour placed on local authorities, Wessex Water and others as Competent Authorities under the Regulations.⁵

1.3. The third party

- 1.3.1. The third party will not be a farmer organisation and will not be a signatory to this document⁶. Adopting this approach will ensure that there is sufficient independent oversight of the processes and results from PHNMS and will contribute to the trust for each party to the AS in the delivery of PHNMS.
- 1.3.2. The third party will have the skills and experience needed in working with environmental and agricultural schemes.
- 1.3.3. The third party will have a good working understanding of environmental regulations and working with a regulator. In addition, the third party will have an excellent understanding of PHNMS and strong relationships with all the partners needed to deliver it.
- 1.3.4. The third party will ensure that all data protection and information management systems are put in place to ensure the protection of the members of PHNMS and other parties such as Wessex Water and the regulators.
- 1.3.5. The third party will liaise directly with the regulator (Environment Agency) where needed for the management and delivery of PHNMS.

1.4. PHAGs approach to support PHNMS

1.4.1. PHAG will enable all farmers in the Poole Harbour (PH) catchment to come together under one entity and to take collective

⁵ Habitats regulations assessments: protecting a European site - GOV.UK (www.gov.uk)

action to meet any nutrient reductions required for the agricultural sector. This entity is a Community Interest Company, registered at Companies House.

- 1.4.2. PHAG will provide mechanisms for reducing nitrogen losses and delivering additional environmental benefits for agriculture and potentially for other sectors within the catchment.
- 1.4.3. PHAG will work closely with existing schemes and projects that enable farmers to deliver nutrient reductions across PH. This includes Catchment Sensitive Farming managed by Natural England and the catchment work by officers working for Wessex Water Services Ltd.
- 1.4.4. PHAG will work with other stakeholders in the catchment to create opportunities for new projects to help reduce nutrient losses from agriculture into PH.
- 1.4.1. PHAG will follow an "adaptive management" approach as outlined in the PHCOTR⁷:
- 1.4.2. Adaptive management approach will ensure the environmental objectives are delivered in a timely way, without risking excessive, unwarranted regulatory burden being applied to commerce across the catchment. Whilst providing sight that further reductions of nitrogen into the harbour may be required in the longer term; this longer-term reduction could significantly draw from opportunities that restore natural nutrient removal processes (e.g., wetlands) in the catchment and the harbour itself.
- 1.4.3. This "enhanced adaptive management approach" is in line with current internal Environment Agency and Natural England guidance, in taking forward actions on Natura 2000 and Ramsar sites affected by diffuse water pollution, where there remain some uncertainties regarding the target.
- 1.4.4. Enhanced adaptive management is needed where there is uncertain and changing information which has an impact on environmental delivery and investment opportunities and costs. Within PHNMS this also means developing approaches with a strong positive ecological and environmental impact but understanding that these may also have high operational costs and only marginally contribute to meeting other objectives such as reduction of nitrogen.
- 1.4.5. PHAG will achieve this approach through:
- 1.4.5.1. Managing the PHNMS as a "flexible document" and reviewing the processes laid out for PHNMS, with the regulator and key partners, on an annual basis and carrying out a full review with the regulators in 2024.
- 1.4.5.2. Adopting a management structure with close links to the regulator and to key buyers and sellers within the catchment. Understanding values and ensuring open and transparent processes are key to the adaptive management approach,
- 1.4.5.3. PHAG will push for increased research to better understand the science of nutrients in agriculture and the environment. Initial work in this area includes a study of all relevant nutrient accounting tools

⁷ Ibid Page 11

(globally) and how these could be adapted for use in the Poole Harbour catchment.

1.5. Scheme Overview

- 1.5.1. PHNMS is a voluntary whole catchment approach that offers all farmers in the Poole Harbour (PH) catchment the opportunity to come together and collectively reduce nitrogen levels entering Poole harbour. It has been developed to work with a regulated approach managed and delivered by the Environment Agency and detailed in section 8 of this document.
- 1.5.2. PHNMS will achieve nitrogen reductions through 5 key components:

a) The guidance and support of a farmer owned and controlled entity - the Poole Harbour Agricultural Group (PHAG)

b) The implementation of catchment wide governance and management supporting its members in delivering catchment targets

c) The use, refinement and where required further development of a farm level nitrogen accounting tool, used by farmers to inform nutrient management decision making.

d) The development and implementation of catchment level nitrogen balancing that incorporates nitrogen trading and which can be used to track a farmer's progress in delivering catchment targets.

e) Access to new environmental markets through trading.

- 1.5.3. PHNMS has been developed by the farming community with support from the NFU and other partners. This has been undertaken by working closely with the regulators, the potential sellers of nutrients (farmer members of PHAG) and potential buyers of nutrients (primarily nitrogen) in the catchment outside of the agricultural sector.
- 1.5.4. Wessex Water are a key potential buyer of nitrogen as part of PHNMS and will look to do so as part of their regulatory requirements and performance commitments that are negotiated with the Environment Agency and Natural England. Details are laid out in section 8 of this document.
- 1.5.4.1. It is recognised that the offsetting of phosphates by the farming community to meet regulatory requirements will be a crucial aspect of future work.
 - 1.5.5. Bournemouth, Christchurch and Poole Council and Dorset Council have confirmed they support and wish to engage with the scheme and are potential customers for nitrogen reductions [1]. The opportunity is to provide both fixed permanent measures (e.g., arable conversion to woodland), and then variable annual measures (e.g., cover crops) as part of a "bridging" approach in line with requirements as laid out by Natural England. Further details are laid out in the trading section of this document (Section 8).
 - 1.5.6. A high level of support has also been received from the regulators: Environment Agency, Natural England, and other partners including Catchment Sensitive Farming, Poole Harbour Catchment Initiative, Cambridge Institute for Sustainability

Leadership funded by the Prince of Wales Charitable Foundation, and stakeholders including the Farming and Wildlife Advisory Group and the Countryside Land and Business Association.

2. PHNMS Management

2.1. Governance

- 2.1.1. The governance structure for PHNMS is shown in Diagram 1 below.
- 2.1.2. The diagram shows the relationship between the farmers as members of PHAG and with the regulator and key buyers of nitrogen. The relationship between all parties and PHNMS is shown in the link to the PHNMS Partners Group.
- 2.1.3. PHAG has identified a need for a "Technical Nutrient Group" which will enable agreed and scientifically robust tools, measures and metrics that meet the requirements of a number of key stakeholders. It is understood by PHAG that there are a number of schemes linked to nutrients that have a regulatory component.
- 2.1.4. The key areas for development are, inter alia:
- 2.1.4.1. Tools development
- 2.1.4.2. Measures
- 2.1.4.3. New approaches to nutrient reductions
- 2.1.4.4. Formal updates and reporting
- 2.1.4.5. Includes the work of the regulator and regulated schemes
- 2.1.4.6. Provide strategic priorities and outcomes to deliverers in the wider PHCI membership.



Diagram 1; Governance structure for PHNMS

2.1.5. A high-level model for the governance with trading is shown below in Diagram 2. It should be noted that this model will evolve as relationships and processes develop. In essence all farmers in PHAG, who are complying with PHNMS, will be required to use an approved Nutrient Accounting Tool, as detailed in section 4, and to work with an independent third party who will validate and verify results. The results will be compared to the glidepath target and give a value for the overall agricultural sector performance and the performance of each farm. Where possible, the agriculture sector will work with other buyers to meet their requirements. This is laid out in the trading section 8.



Diagram 2; Governance structure for trading within PHNMS Note; Annual reporting will include farm reporting to the third party and third-party reporting to the regulator

2.1.6. The Poole Harbour Nutrient Management Scheme Partners Group has been established with Terms of Reference. The Partners consist of those parties with regulatory, legal, or financial risk relating to nutrient levels in Poole Harbour. These are NFU, Natural England, Environment Agency, Wessex Water, Bournemouth, Christchurch and Poole Council, Poole Harbour Catchment Initiative, and representatives of Poole Harbour Agricultural Group (PHAG). This group provides insight and guidance into the delivery and development of PHNMS.

2.1.7. PHNMS Partners Group allows a collaborative consensus driven forum. This is fundamental and underpins the scheme and, to a great extent, determines success or failure. With decision making by consensus, any real or perceived bias from either or any party in the partner group is met and managed. It is noted that PHNMS provides an opportunity for mutual benefit. Each partner involved will have their own responsibilities and will use their organisational and regulatory powers as is required by them with regard to this scheme.

2.2. Technical Nutrient Group

- 2.2.1. A "Technical Nutrient Group" (TNG) has been identified as an important independent expert science grouping that needs to be created to provide support and advice on key areas related to accounting for and managing nutrients in the Poole Harbour catchment (see diagram 1).
- 2.2.2. There are a number of schemes/ approaches operated by different sectors and competent authorities that have a regulatory component. As such ensuring coordination and synergies between them is crucial.
- 2.2.3. The TNG would be developed to meet the needs of different stakeholders and would include suitably qualified and expert persons drawn from a range of key stakeholders and academics. The TNG will support the needs of nutrient reduction within the catchment and provide specific recommendations related to the management of nitrogen as part of regulated and voluntary schemes linked to Poole Harbour.
- 2.2.4. The TNG will enable the development and roll out of mutually agreed and scientifically robust tools, measures and metrics that meet the requirements of a number of key stakeholders.
- 2.2.5. These key stakeholders are regulators; buyers; sellers; third party deliverers.
- 2.2.6. The key areas for development are, inter alia:
- 2.2.6.1. Nutrient Accounting Tool development
- 2.2.6.2. Recommendations for catchment tool for each nutrient accounting year. Guidance to be given in July of each preceding year to provide time to support users.
- 2.2.6.3. Measures development, efficacy, and usage
- 2.2.6.4. Oversight of efficacy of existing measures within NATs and used outside of NAT but with a value for impacting on nutrient losses.
- 2.2.6.5. Reviewing values of measures and ensuring that all schemes use the same values and specifications.
- 2.2.6.6. Recommendations for new measures to be tested and researched and incorporated in the NAT.

2.3. Sector approaches to regulated aspects of nutrient in Poole Harbour

2.3.1. PHNMS, being the "approved scheme" for the agricultural sector is related to a number of pieces of legislation and sector permits. The

document aligns with (*PHCOTR*)⁸ and will align with Wessex Water Services Ltd.'s "Operating Techniques Agreement for Dorchester" and AMP7 WINEP. In addition, PHNMS is aligned with aligned with Wessex Water Services Ltd.'s statutory obligations and performance commitments as detailed in their PR19 Business Plan.





Diagram 3; Relationships between parties delivering the Poole Harbour PHCOTR

2.3.3. As previously noted, PHAG will have a limited role working with councils in the delivery of the "Nitrogen Reduction in Poole Harbour Supplementary Planning Document (SPD)" as adopted by Bournemouth Poole and Christchurch and Dorset unitary authorities and in offsetting the nitrogen load draining from urban land areas.

Scheme Rules

3. Farmer membership of PHAG

Overview

- 3.1.1. PHAG will implement a "membership" process with rules for eligibility and requirements for being a member based on this document.
- 3.1.2. The membership system is linked to PHAG CIC, and the objects and rules laid out in the Articles of Association as well as in this

⁸ Poole Harbour Consent Order Technical Investigation and Recommendations, Results, and recommendations from the schedule of work under High Court of Justice Consent Order (CO/3029/2015), FINAL, 11 February 2021 Version 53.0

document. The membership process and records will be administered by a third party for PHAG CIC.

- 3.1.3. The primary focus for membership will be farmers in the Basic Payment Scheme. Other farms will be considered where the landowner (or person with management control) can prove that the land is on the agricultural census and or have an SBI number.
- 3.1.4. To be eligible for membership of PHAG, and entry into PHNMS, individuals or farm businesses must meet the requirements as laid out in this document and align with and build on the "minimum requirements" which are laid out at a high level in the PHCOTR⁹. The PHCOTR minimum requirements are:
- 3.1.4.1. Farm regulatory compliance.
- 3.1.4.2. Meeting a glidepath target.
- 3.1.4.3. Nutrient planning to deliver environmental economic optimum yield.
- 3.1.4.4. Whole Farm Nutrient Balance:
- 3.1.4.5. Farm Annual Reporting:
- 3.1.4.6. Catchment Reporting:
 - 3.1.5. The tools and techniques used to calculate farm nutrient losses, whole farm nutrient balance and nutrients trade, should be scientifically robust and agreed with the Environment Agency.
 - 3.1.6. As part of their membership of PHAG, and when complying with PHNMS, all farmers will be required to provide accurate and honest information.

3.2. Issues with farmers meeting PHNMS requirements

- 3.2.1. Where a farmer in PHNMS is deemed to no longer meet the scheme requirements, a process will be followed to address and resolve any shortcomings including provision of evidence and changes in practice.
 - 3.2.2. All farmers in PHNMS will be given a minimum of one month to resolve an issue with more time if agreed by the PHAG board and depending on the nature of the issue.
 - 3.2.3. All farmers will be supported to remain part of PHNMS. Shortcomings will be allocated a period of time for remediation, appropriate to nature of the shortcoming. The maximum remediation time will be 12 months from the date of notification of the issue by the third party and PHAG.
 - 3.2.4. If needed a dispute hierarchy will be followed. This is:
 - 3.2.5. Stage 1 Between the third party and farmer
 - 3.2.6. Stage 2 PHAG CIC directors
 - 3.2.7. Report given to the PHAG board by the third party with an opportunity for representations to be made by the member.
 - 3.2.8. If there is any potential for a board member to have a conflict of interest the third party will notify this to the chairman and, if necessary, the affected board member will remove themselves from the proceedings.
 - 3.2.9. If, on following the dispute process, the member is still found to be in breach of the minimum requirements for membership, then they will cease to be members of PHAG and the Approved Scheme.

⁹ Ibid P 13

- 3.2.10. When a farmer ceases to be part of PHNMS the third party will inform the regulator and the farmer's name will be removed from the list of farmers in PHNMS.
- 3.2.11. A farmer who's PHAG membership ceases as a result of nonadherence with the rules, will not be allowed to re-join the scheme for a period of at least 3 years. They will then only be allowed to re-join where they can demonstrate to the third party that they are now meeting all requirement of PHCOTR and PHNMS scheme, prior to re-joining. They will not be given a further period of grace to remain compliant with scheme rules.
- 3.2.11.1. The third party will adjust all records regarding nitrogen losses from that farmer's PHNMS accounts to ensure correct accounting.
- 3.2.11.2. Historic data for PHNMS members will however be maintained by the PHAG for 5 years¹⁰ after the cessation of their membership in case of audit or queries relating to historic reporting.

3.3. Eligible land

- 3.3.1. Only farmers with land within the Poole Harbour catchment are eligible to be part of PHNMS.
- 3.3.1.1. PHNMS applies exclusively to parcels of land within the Poole Harbour catchment area illustrated in the map below¹¹. (The authoritative definition of land within the Poole Harbour Rivers Operational Catchment, on which diagram 5 is based, resides with central government¹²).



- 3.3.1.2. Diagram 5: Water catchment area of Poole Harbour (Source: Catchment Data Explorer¹³).
 - 3.3.2. Access to and compliance with PHNMS shall only be granted on the basis that the eligible area of land is located within the boundary line shown in diagram 5 and that this is agricultural land where the farmer has management control. Land which is outside of this boundary shall not be considered.

¹⁰ To be equivalent to key regulations linked to water quality for agriculture e.g., NVZ

¹¹ Contact Wessex Water - For You. For Life

¹² https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3367

¹³ https://environment.data.gov.uk/catchment-planning/OperationalCatchment/3367

3.3.3. Where an agricultural holding includes a parcel of land which spans the catchment boundary, only land within the boundary will be eligible: land outside the boundary will not be eligible.

4. Compliance with existing regulations

4.1. Overview

- 4.1.1. All farmers in PHNMS will be required to annually self-assess their current level of compliance with existing regulations relating to pollution from agriculture according to a process laid out in this section.
- 4.1.2. The third party will ensure that the farmer has completed the selfassessment honestly and accurately and returned a copy of it to them by the 31st of October in each farming calendar year.
- 4.1.3. The regulations in scope for PHNMS are [6]:
- 4.1.4. Nitrogen Pollution Prevention Regulations 2015 (NVZ Regulations), Reduction and Prevention of Agricultural diffuse Pollution Regulations 2018 known as New Farming Rules for Water GOV.UK (April 2018),
- 4.1.5. Water Resources (Control of Pollution) (Silage Slurry and Agricultural Fuel Oil) Regulations 2010 (SSAFO),
- 4.1.6. The initial focus of PHNMS to determine farm membership will be on regulations related to the direct loss of nitrogen to the environment. These are primarily NVZs and SSAFO.
- 4.1.7. All farmers joining PHAG will be sent details of the process they must follow to self-assess their regulatory compliance.
- 4.1.8. Through agreement with the EA, all farmers who follow the minimum rules set out in PHCOTR and are compliant as part of PHNMS, will be a lower priority for regulatory inspections as part of a programme of priority visits by the regulator.

4.2. The role of the third party and the regulator (EA)

- 4.2.1. The third party delivering PHNMS will work with the Environment Agency (EA) to support the EA's role as the competent authority for a number of regulations linked to diffuse pollution from agriculture [6].
- 4.2.2. The third party will make available to farmers a self-assessment Agricultural Compliance Tool (ACT), devised, managed, updated and owned by the EA.
- 4.2.3. The third party will ensure the ACT (or other tools agreed by the EA) are completed annually by PHNMS members and any actions for its members to resolve any areas of non-compliance, have been actioned in the following years ACT submission (Section 4.3 to 4.4).
- 4.2.4. PHAG CIC and the third party are not responsible for assessing regulatory compliance on a farm. This is the role of the warranted officers of the regulator. Given the issues of liability and legal authority, compliance assessments cannot be carried out by a third party.
- 4.2.5. PHAG will however ensure the third party appointed to oversee PHNMS, complete the compliance assessment tasks (Section 4.3 to 4.4) required for its members to maintain "low risk" status by the regulator.
- 4.3. Mechanisms to be used for self-assessment of compliance

- 4.3.1. The list of mechanisms will be reviewed annually in July by the TNG in section 1. The range of mechanisms to be looked at will include, *inter alia*: EA Agricultural Compliance Tool (ACT); farm assurance schemes; software tools; processor contracts.
- 4.3.2. It is noted that some farmers will have received regulatory compliance visits and assessments by EA Environment Officers and as such the EA reports will provide a regulator's assessment of compliance which would go beyond any self-assessment.
- 4.3.3. It is essential that whatever mechanism used is approved by the EA.
- 4.3.4. At the time of writing this document the EA is developing the ACT which will then be given to all PHAG members for their completion and return to the third party, as part of their onboarding.
- 4.3.5. All PHAG members participating in PHNMS will then need to complete the ACT (or other agreed tools and methods) each year as part of PHNMS membership rules. It is recognised that there are benefits to using the regulator's tool, including the ability for farmers to work to the regulator's prescribed time frames for compliance.
- 4.3.6. Use of the ACT will involve the following process:
- 4.3.7. Each new member is sent the ACT to use, with a deadline to complete and return. They will be offered other mechanisms where this has been agreed by the TNG and EA.
- 4.3.8. The farmer will be reminded of their legal requirement to provide accurate and truthful records when meeting existing regulatory compliance requirements. The farmer will send the completed compliance self-assessment form to the third party administering this aspect of the scheme.
- 4.3.9. The ACT will <u>exclusively</u> make automated determinations with regards areas of compliance and non-compliance with the relevant regulations. The third party will record this determination in PHNMS's records and check the member has resolved any areas of non-compliance within the time specified in the ACT. This will be a desk-based activity checking each year's ACT results with the next
- 4.3.10. In event of non-compliance for newly applying non-members, membership decisions related to compliance will be governed by a pre-existing determination made by EA as to what type and level of non-compliance is acceptable if accompanied by a commitment to achieve compliance within a given time [a grace period (Section 3.2.3)], and which non-compliance is not acceptable. The third party will note this status on the new members' records. Where appropriate and available, guidance on best practice for achieving compliance will be sent to the farmer.
- 4.3.11. In event of non-compliance for existing members, the process outlined in 3.2 and Section 4 will be followed.
- 4.3.12. The third party will contact the farmer for a compliance update ahead of the expiry of the EA-determined grace period to assess eligibility to join or remain in PHAG.
- 4.3.13. If an existing member does not become compliant within the EA grace period or has not agreed to an extension with the EA, the PHAG membership will cease, and the regulator will be informed.

4.3.14. The third party will carry out analysis of areas of compliance and non- compliance by all farmers in PHNMS using the ACT aggregating tool. This will help to inform future communications, priorities, and future areas of support.

4.4. Working with PHNMS farmers that self-assess as non-compliant

- 4.4.1. Where a farmer in PHNMS self-assesses that they are noncompliant, with the required rules and regulations, they will be required to confirm that they have a "plan in place," agreeable to EA guidelines, in order to resolve any areas of non-compliance within an agreed time scale.
- 4.4.2. With the ACT the process is detailed in the section above.
- 4.4.3. PHAG and TNG may agree alternative methods to the ACT to demonstrate compliance. These will be agreed in writing and added to any updated PHNMS scheme when the rules are reviewed each year (Reference reporting section).
- 4.4.4. If the farmer does not become compliant within a timeframe agreed directly with the EA, the farmer membership will be cancelled by PHAG.
- 4.4.5. PHAG and the third party undertake to recommend all farmers that self-asses as non-compliant farmers must speak to the EA.
- 4.4.6. As part of PHNMS members gives permission to the EA sharing compliance data with the third party if the EA has undertaken a farm inspection of a PHNMS members (Section 4.5.2). This will help to provide additional quality assurance of farms self-assessed compliance records.

4.5. The role of the regulator (EA)

- 4.5.1. PHAG and the third party cannot and will not act as a regulator. There is a clear distinction between the roles of PHNMS and the regulator. These are noted as being mutually beneficial as both approaches will help to increase awareness of compliance and increase adherence to the rules laid out in existing regulations.
- 4.5.2. PHAG notes that the EA are still legally required to carry out inspections as part of their regulatory role and that these could be with farmers that are complying with PHNMS. PHAG understands that the EA will respond to any incidents of pollution which could include visiting a member of PHAG. In addition, the EA will undertake random checks which could include visiting a member of PHAG.
- 4.5.3. If the EA visits a PHAG member the Environment Officer should ensure that they are aware of the farmer's membership of PHAG and that this is communicated to the farmer and the reason for the visit clearly explained to avoid any confusion.

4.6. Reporting

4.6.1. The third party will ensure the EA knows all farms that are in PHNMS and in any year have left the scheme, and reason for this. The EA will ensure that the EA enforcement team adjust visits and communications accordingly with a priority for non PHNMS farmers. Farmers in PHNMS will have earned recognition and be a low priority for regulator inspections.

- 4.6.2. The third party and PHAG will report to the EA on an annual basis regarding how farmers in PHNMS are performing according to self-assessment for compliance.
- 4.6.3. The annual report will detail the following elements:
- 4.6.4. Names of farms in PHNMS
- 4.6.5. Number of farms determined by self-assessment through the ACT as "compliant" with each regulation.
- 4.6.6. Number of farms determined by self-assessment through the ACT as "non-compliant" with each regulation, but actively working towards compliance to the agreed timeframe.
- 4.6.7. What mechanisms (if not ACT) were used to show self-assessed compliance.
- 4.6.8. Overview of actions being taken to review progress to compliance of non-compliant farms.
- 4.6.9. Both the EA and PHAG (through the third party) will share data between each other on compliance performance at a water body level ensuring that anonymity of farmers is maintained. If required water bodies will be aggregated to ensure there are at least 5 farms¹⁴ (unless otherwise agreed in writing with the regulator) in any water body to maintain appropriate anonymity. [7]

4.7. Validation with the ACT

- 4.7.1. The third party will use the ACT in combination with the NAT to validate results. This will involve:
- 4.7.2. Checking that the ACT has been fully completed for the current year.
- 4.7.3. Check if the farm was non-compliant with any regulations the previous year and the date by which any actions should have been completed.
- 4.7.3.1. Check if the farm is now "compliant" for the regulations they may have been "non-compliant" the previous year.
- 4.7.3.2. If there is any non-compliance, contact the farm to identify why they have not implemented the plan to become fully compliant and or if they have agreed an alternative delivery date with the EA. Where appropriate signpost to support that will help bring the farm into compliance with PHNMS rules (Section 3.2)
 - 4.7.4. Validation of results by:
- 4.7.4.1. Checking the breakdown of the different land uses for the farmed area e.g., woodland, arable, grassland and biodiversity.
 - 4.7.5. Comparison of farm size and livestock numbers between the NAT and compliance tool.
- 4.7.5.1. Checking that all areas of the NAT are completed and there are no anomalies.
- 4.7.5.2. Checking for unusually high and low leaching nitrogen values in relation to crop data in RB209.
- 4.7.5.3. Checking stocking rates in relation to farmed area
- 4.7.5.4. Understanding the crop rotation in relation to farmed area

¹⁴ 5 farms is acknowledged as standard in other schemes and tools.

- 4.7.6. Check NAT validation sheet to ensure the manure and nutrients generated on the farm has been accounted for in the NAT.
- 4.7.7. Check NAT ACT validation. Where any inconsistency is shown, contact the farmer to review their input to these tools and where relevant identify the reason for this and or ask them to update and resubmitted tools.

4.8. Reviewing compliance regulations and approach

- 4.8.1. It is recognised that the regulatory regimes and guidance relating to them is constantly changing. As such PHAG will work with the regulators to review these on an annual basis and agree any changes to the self-assessment regime.
- 4.8.2. The third party will undertake desk-based assessment of ALL PHNMS members each year to ensure they have completed ACT and NAT.
- 4.8.3. The third party will also undertake a more detailed verification linked to the NAT as laid out in section 5.5.

5. Nutrient Accounting

5.1. Overview

- 5.1.1. As part of PHNMS all farmers are required to carry out annual whole farm nitrogen accounting. The key tool for achieving this will be the use of a "nutrient accounting tool" (NAT).
- 5.1.2. PHAG recognises that no NAT will be able to have a complete understanding of nitrogen losses. As such additional data may be asked from the farm holding to help to PHAG develop a complete picture of nitrogen losses on a farm. Only data from the NAT will be used for trading and meeting the glidepath unless agreed otherwise with the competent authorities and through the TNG. See section 4.3.
- 5.1.3. PHAG recognises that within existing regulations it is an offence to provide inaccurate or false records. All farmers will be reminded of this when they are sent their tool each year and on submitting results to the third party. This forms part of the quality assurance process used by PHAG.
- 5.1.4. Failure to send in completed copies of actual and annual nitrogen baseline accounts using the NAT will compromise PHAG membership eligibility.

5.2. Process for nutrient accounting

- 5.2.1. The nitrogen accounting year that farmers will be required to record their "baseline" as part of their nitrogen accounts is aligned with the farming calendar year (1st October to 30th September).
- 5.2.2. The nutrient accounting year used by the NAT/NLT will predict the nutrient loss that will occur during the subsequent autumn and winter as a result of the amount of N left in the soil after harvest and the land management proposed over these high-risk periods (See next figure).
- 5.2.3. For any given nitrogen accounting year, a farm in PHAG will be required to record their baseline for both their "planned" nitrogen accounts for the nitrogen accounting year and their baseline for their actual nitrogen accounts after the year has finished.
- 5.2.4. The details for the process are laid out in the diagram below:



5.2.5. Planned nitrogen accounts

- 5.2.5.1. Creating an annual baseline using planned nitrogen accounts will enable a farmer to assess how their nitrogen baseline is performing according to the years glidepath target and opportunities for additional measures to reduce nitrogen losses or whether purchasing permit allocations of nitrogen from other farmers is necessary.
- 5.2.5.2. A copy of the "annual baseline" for the planned NAT will be sent to the third party by the 31st October in each farming year.
- 5.2.5.3. In addition, these planned nitrogen accounts will enable the third party to assess how PHNMS farmers will sit against the agreed glidepath in 12 months' time. The third party will inform PHAG if farmers need to start planning for further nitrogen reduction measures in 12 months' time should it look like next year's glidepath will be exceeded
- 5.2.5.4. Where the third-party requests additional planned accounts of nitrogen to be completed to enable trading then this date will be extended to the 31st December.
- 5.2.5.5. Creation of planned accounts will enable farmers to plan and then implement measures to reduce nitrogen losses whilst helping meet requirements for related diffuse pollution regulations.
- 5.2.5.6. The actual accounts will measure post-harvest when yield (and therefore N uptake in crops) is known, and land management has been put in place to reduce nutrient leaching/loss over winter.
 - 5.2.6. Actual nitrogen accounts
- 5.2.6.1. Completion of actual nitrogen accounts will involve the farmer reviewing all the measures/scenarios they had planned to use on their farm holding. The farmer will confirm whether or not they have been implemented. In addition, all yield data will be inputted.
- 5.2.6.2. Farmers will be required to record their actual nitrogen accounts by the 30th November in the year immediately following the end of the farming calendar year but within the nutrient accounting year.
- 5.2.6.3. In the farmer's first year as part of PHNMS the farmer should use their NVZ records from previous years to help calculate their baseline and modelled N losses.
- 5.2.6.4. "Actual" losses will be accounted for using the same NAT as was used for the planned nutrient losses.
- 5.2.6.5. A copy of the "actual" NAT will be sent to the third party.
- 5.2.6.6. After completing actual accounts and where the farmer requires additional allocations as a result of failure to implement a measure they must purchase these allowances in the PHAG marketplace.
- 5.2.6.7. There is a degree of uncertainty linked to crop yields and therefore nutrient uptake by a crop. Yields are heavily dependent on the weather¹⁵ as well as factors such as soils and farming practice.
- 5.2.6.8. Where the yields are consistently overestimated for a period of 3 years or more the farmer will be required to adjust their yield forecast. Farmers will not be required to purchase additional nitrogen allocations.

¹⁵ The NAT/NLT will however use average annual recharge data to estimate the N loss for each field.

- 5.2.7. Nature-based solutions carry a degree of uncertainty as to the level of environmental outcomes that may be achieved over time. This is because such solutions are grounded in natural systems where outcomes will be sensitive to broader environmental factors, some of which the farmer may have limited control over. Examples of this include exposure to extreme weather, pests, and disease, which could either destroy or reduce the extent or condition of the environmental outcome being pursued.
- 5.2.8. The third party and PHAG will collate data on measures used by farmers complying with PHNMS and this can be used to inform communication to farmers on best practice and also to help farmers understand what benefits measures can provide on their farm.
- 5.2.9. The approved NAT can be used to help determine Environmental outcomes that will assist farmers in determining business decisions. Each farm and field will be different and as such will need to be worked by the farmer and used to guide future nutrient management planning depending upon climate changes and market prices.

5.3. Additional sources of nitrogen accounting

- 5.3.1. No NAT is likely to be able to model every aspect of land management/land use change that reduces N loss, for example nitrogen reductions may be achieved by providing and sustaining additional nitrogen interception interventions. These include, by way of examples, constructed wetland, re-wetted land, saturated buffer land alongside watercourses and below springs and seepages, woodchip bioreactors, and watercourse restoration to a near-natural form.
- 5.3.2. As such PHNMS will use robust site-specific scientific evidence on N reduction agreed through the TNG, or where agreed in writing by NE and EA, where the NAT is not able to model the reduction from a measure e.g., rewetted land or wetlands.
- 5.3.3. Where agreed by the TNG or agreed in writing by NE and EA, these values can be used for calculating the whole farm N balance and accounting against the farmers glidepath target and used in nitrogen trading.

5.4. Quality assurance for nutrient accounting

- 5.4.1. PHNMS recognises the importance of correct and quality completion of all nutrient accounting. A system of quality assurance will be used to develop confidence in the results for all parties. This will involve:
- 5.4.2. Farmers following a hierarchy of support for using a NAT to ensure they have the skills and understanding to use the NAT and to reduce inputting errors.
- 5.4.3. The third party validating all NATs using a process laid out in this section.
- 5.4.4. The third party verifying a number of NATs using a process as laid out in this document (Section 5.5).
- 5.4.5. The third-party validating results will have sufficient environmental skills and experience.
- 5.4.6. Linking ACT validation (Section 4.7) with NAT validation (5.5)

- 5.4.7. The NAT use hierarchy will range from:
- 5.4.8. Clear written guidance and where possible access to recorded video guidance.
- 5.4.9. Access to group workshops for farmers
- 5.4.10. Support for advisers and consultants on use of tools
- 5.4.11. Access to one-to-one support on tool usage
- 5.4.12. Providing a directory of advisers that can complete the nutrient accounts for the farmer where the farmer does not have access to their own advisers who can do the work.

5.5. Validation of nutrient accounts

- 5.5.1. The third party will adopt the following process for validation of all nutrient accounts submitted as part of membership to PHAG. Validation will be focused on data inputs and ensuring consistency between the data provided by the farmer in PHNMS. Verification (detailed in section 9) will involve assessing on farm activity.
- 5.5.2. Checking the breakdown of the different land uses for the farmed area e.g., woodland, arable, grassland and biodiversity.
- 5.5.3. Comparison of farm size and livestock numbers between the NAT and agriculture compliance tool and ensure the sum of the amount of organic N generated, imported, and exported from the farm has been populated within the NAT (to within an agreed tolerance c+-10%) (or other mechanisms which have been approved by the regulator and TNG).
- 5.5.4. Checking all agricultural land under management control of the farmer has been included in the NAT and that all areas of the NAT are completed and there are no anomalies. Note: This can take place by comparing SBI land areas with those included in the tool and by asking the farmer to confirm that all additional fields under their management control have been included in the tool.
- 5.5.5. Checking for high and low leaching values (compared to other similar land uses from other farms and where appropriate farm and field NVZ limits).
- 5.5.6. Checking stocking rates in relation to farmed area
- 5.5.7. Understanding the crop rotation in relation to farmed area
- 5.5.8. Checking nutrient inputs for selected crops are in line with guidance in AHDBs RB209 or other recognised sources for crop fertiliser recommendations.
- 5.5.9. Checking other "validation" statistics used in the NLT.
- 5.5.10. Checking that the farm target has been achieved by checking NAT against the farm target and the nitrogen credit that has been bought or sold.
- 5.5.11. Check that where a farmer non-compliance reported in one year has been resolved in timescales required by the EA through the ACT or via their consultant's guidance.
- 5.6. Nutrient planning to deliver environmental economic optimum yield (EEOY).
 - 5.6.1. In line with the PHCOTR and as part of best practice, "farmers need to start to calculate the nutrient losses that are likely to result from their proposed nutrient plan. In particular considering the yield they seek to achieve, soil and nutrient management measures they

propose to implement and the impact this will have on nutrient losses from their farm holding. Having calculated the nutrient losses, they should then adjust their nutrient application rates, measures they propose to implement, to a point where they can maximise crop yield without causing harm to the environment..."¹⁶

- 5.6.2. EEOY can be assessed at the planning stage and then reviewed when harvest has been completed, yields are known, and the actual price is known for the grain.
- 5.6.3. PHAG will support this in three ways by following an iterative process of:
- 5.6.3.1. Firstly, encouraging members to use planning tools such as AHDB's "Nitrogen fertiliser adjustment calculator" which is based on RB209 fertiliser guidance (which is the general guide for crop requirements) and will suggest changes to nitrogen rates accounting for the yield that is sought, the amount of N within the soil (and which will become available with the breakdown of organic material), fertiliser prices and grain/ oilseed prices.
- 5.6.3.2. Secondly, by requiring all members to model the average N loss from each farm holding, that will result by applying the amount of nitrogen detailed in 5.6.3.1, using the NAT and then adjusting these application rates (and resulting yield) that will meet their glide path, taking into consideration the amount of N they would like to trade.
- 5.6.3.3. Thirdly, through encouraging farmers to work with their existing advisers and consultants to consider the balance between farm yield, targets, and environmental performance.
 - 5.6.4. All farmers recognise that the return on yields both in terms of quantity and financial value may not be available for many months or even years after harvest. As such this approach will help guide farmers to best practice in the short term and in the medium to long term enable more efficient and effective use of nutrients to crops.

5.7. Nutrient Accounting Tool selection, oversight, and coordination

- 5.7.1. PHAG will work with key partners to create a "Technical Nutrient Group" (TNG) with an independent chair.
- 5.7.2. The TNG will review all measures and nutrient accounting tools to be used as part of this Approved Scheme. All those with an interest in buying, selling, and regulating nitrogen in the Poole Harbour catchment will support this work. The TNG will report to the PHNMS Partners Group as is shown in figure 1 Section 4.3
- 5.7.3. Members of the TNG will work together to achieve consensus based on the requirements of their roles and the need for delivering an adaptive management scheme.
- 5.7.4. The decision on what tool can be used for a farming year to meet the requirements of the PHCOTR will be decided on an annual basis by the TNG. This will ensure all users requirements are met and that new tools can be developed and deployed to be used by farmers in the PH catchments.
- 5.7.5. It is a requirement that all farmers signed up to PHAG must use a NAT that has been approved by the regulator.

¹⁶ Consent Order Page 98

- 5.7.6. Any NAT will need to be scientifically robust and work at a field scale.
- 5.7.7. Through this approach farmers will be able to calculate nitrogen losses to a standard approved by the regulator.
- 5.7.8. Any NAT used will also need to meet the requirements for farmers, buyers of nitrogen credits (Wessex Water and developers through the local planning authorities), Natural England and the third party administering PHNMS. Meeting their requirements will give confidence in the ability of the regulator to enforce the targets and allow parties to trade and have commercial contracts based on the results of the NAT.
- 5.7.9. In any one farming year there can only be one NAT being used. This will ensure results can be compared and also allow for new tools to be developed and deployed where the conditions in this section are met.
- 5.7.10. Measures that underpin any NAT will have standard values and specification that are scientifically robust and referenced.
- 5.7.11. Measures will be developed through a defined and robust process, with a focus on farmer use, clear specifications and robust efficacy that provides confidence to the regulator and others.
- 5.7.12. As new NATs are developed and become available then through a coordinated and agreed process farmers will be able to adopt this tool. Agreement for the forthcoming year must be done by July before farmers start doing their planned nitrogen accounts.
- 5.7.13. The third party and regulator will both use their experiences of using the NAT with farmers to inform development of any NAT and to ensure consistent processes for tool usage by farmers, and validation and verification of results by the regulator and third party, are used.

5.8. Reporting

- 5.8.1. The third party will analyse and report on the nitrogen accounts (kg/N/ha) for all participants in PHNMS in the Poole Harbour catchment. The data will be presented at a whole catchment level (as this is the scale at which the glidepath has been developed) but also at the water body scale. This will be carried out in relation to the nitrogen glidepath for that accounting year.
- 5.8.2. To help better understand performance in areas of the catchment the third party will also report at a water body level so long as this protects the anonymity of the farmers involved and their identity cannot be noted by the regulator (Section 4.6.9).
- 5.8.3. The report will show:
- 5.8.3.1. The number of farms that are participating in PHNMS
- 5.8.3.2. The area of participating land being farmed and equivalent agricultural glide path for the scheme.
- 5.8.3.3. the breakdown of this nitrogen loss in terms of land use
- 5.8.3.4. Total nitrogen baselines for all participating farms and the average nitrogen loss per land use.
- 5.8.3.5. The average scheme nitrogen loss compared to the scheme glide path (5.8.3.2).

- 5.8.3.6. The additional nitrogen offset for non-agricultural sectors and if this is to deliver a) short term offsets or b) long term in perpetuity offsets.
- 5.8.3.7. Any additional reporting requirements detailed by the regulator to fulfil their requirements.
 - 5.8.4. This information will be reported to the regulators annually in April of each year for the previous farming calendar year [9].
 - 5.8.5. Where there are issues with anonymity in a waterbody then waterbodies will be aggregated.
 - 5.8.6. The data shared with the regulator will be anonymous and at sufficient scale to protect the anonymity of the individual farm holdings.
 - 5.8.7. The EA will not have access to the data held by PHAG and the third party as part of PHNMS.

6. Nutrient Management Plans

- 6.1.1. All farmers in PHNMS are required to confirm that they have a Nutrient Management Plan (NMP) in place for the current year. This is a minimum requirement for membership. Failure to confirm this or to not be able to provide a copy when requested could lead to removal from the scheme according to the dispute process for PHAG.
- 6.1.2. Farms record their NMP in different ways ranging from paperbased copies using systems such as "Tried and Tested" through to digital versions using software such as Gatekeeper and Planet.
- 6.1.3. It is recognised that all famers in the PH catchment are in a Nitrate Vulnerable Zone. It is a requirement of NVZs that farmers must have nutrient management plans in place completed annually.
- 6.1.4. The completion of both a NAT and the ACT will mean that a farmer has a NMP in place and the figures included in the NAT and ACT in any year should align with the NMP.
- 6.1.5. Process for checking NMPs
- 6.1.6. Third party check the farmer has completed and submitted to them a copy of the farm NAT and ACT
- 6.1.7. The third party can request to see a copy of the NMP (as part of interim verification) where a farmer has stated they have one. Farms will have 1 month to send in a copy (digital or paper) of their records when requested.
- 6.1.8. Where the farm is selected for verification the NMP will be checked and compared with the NAT.

7. Meeting the glidepath target

7.1. Overview

7.1.1. Within the PHCOTR¹⁷ the regulator states that "non permitted agricultural point and diffuse inorganic nitrogen loads, modelled to be lost from the soil zone through all land use within agricultural holdings (grassland, arable, woodland, rough grazing heathland etc.) should be reduced to c1127 tonnes N, equivalent to a maximum nitrogen

¹⁷ Ibid 115

leaching target of c18.1kg/N/ ha from all agricultural land use reported in 2010 census (land area of 62,178 ha)."

- 7.1.2. Any emissions (losses of nitrogen to the environment) above the target (or limit) of 18.1kg/N/ ha are regarded by the regulator as polluting the groundwater body and harbour.
- 7.1.3. Farmers in PHNMS will be permitted by the regulator to work to a glidepath target which will take the sector as a whole to the final target of 18.1kg/N/ ha by 2030. The GT is shown in diagram 4 below.
- 7.1.4. Performance against the glidepath will be reported on annually in April to the regulator by PHAG.
- 7.1.5. The regulator has stated that "agricultural OP [orthophosphate] losses also need to be reduced to deliver their fair share. Farmscoper modelling indicates that this will occur, if N targets are met¹⁸". As PHNMS develops estimates of orthophosphate losses will be made based on measured used within the NAT and other information collated from the farmers.



Diagram 4; Glidepath agricultural nitrogen reduction target (tonnes/N/yr.) to reduce N load to 1127 tonnes N per year & annual maximum farm leaching target to 18.1 kg/ha; taken from Poole Harbour PHCOTR¹⁹

7.2. Process for farmers working to the glidepath

¹⁸ Ibid 15 & 120

¹⁹ Ibid glidepath page

- 7.2.1. Farmers will make their first assessment of their baseline nitrogen leaching in relation to the glidepath target when they first join the scheme and complete their "planned" NAT accounts in their first year of membership. They will use this as a basis for decisions on their strategy for meeting the glidepath target through further reductions in nitrogen losses on their farm using additional land use and land management changes or through looking to procure nitrogen through a trading system (Section 5).
- 7.2.2. In the first instance, farmers will record the yield they seek to achieve, farming practices they will implement and the proposed nutrient application rates for each field across their land holding. The NAT will then identify the impact this will have on nitrogen losses from their farm holding (at field and farm scale). This will be an iterative process and the final proposed plan will form the basis of their nutrient management plan for managing nitrogen and will need to be implemented.
- 7.2.3. At the end of the farming year, farmers in PHNMS will review and submit their actual nitrogen baseline based on actual yields achieved, nutrients applied to fields and the measures implemented during the year.

7.3. Review of glidepath

- 7.3.1. The PHCOTR discusses the need for a review of the glidepath "based on the average farm holding N²⁰ losses (kg/ha) across the year for 3 years prior to the scheme starting, evidence using NVZ records²¹."
- 7.3.2. PHAG recognises the importance of having an accurate understanding of baselines from farms and that this will impact on the ambition of individual farmers and the sector as a whole to meet the glidepath target and in turn achieving the ambition of favourable status for PH SPA. In addition, it will impact on how many allowances are available from agriculture to help offset other sectors. PHAG will work with the regulator with regard to any review of a glidepath²².
- 7.3.3. Finding a new glidepath will need to be based on having a statistically robust number of farmers involved who have had sufficient validation and verification to ensure confidence in their results. Final verification of figures will not be known until after the actual nitrogen accounts have been submitted.
- 7.3.4. There needs to be caution around how any adjustments are made given the impact this will have on trading and therefore farm costs and costs to other sectors.
- 7.3.5. The overall objective will be to reduce average annual N leaching from agricultural land to <18.1 kg/ha N. The EA will need to review the land area under Agriculture land uses, following census years, to identify if any change in target levels will be required. In principle this

²⁰ N

²¹ PHCOTR page 98

²² PHAG recognises that it is difficult to adjust the baseline in the first year for a number of reasons. It will severely impact on farmer confidence and understanding of the science behind the consent order and also what they need to do. A moving target right from the beginning will not enable farmers to know what their strategy needs to be for that year and the following year as they complete their baselines through a planned NAT

should not be material to the agricultural sector delivering their fair share and targets outlined in PHCOTR.

8. Trading

8.1. Overview of trading and its place in PHNMS

- 8.1.1. Trading is a tool within PHNMS that can enable the sector as a whole, individual farms and sectors outside of agriculture to meet their regulatory nitrogen requirement. It is a unique and highly innovative approach to catchment nutrient management and is underpinned through alignment with the regulator and high integrity with regard to compliance with existing regulations, measurement, and verification.
- 8.1.2. The nature of the evolution of the scheme is such that annual reviews on progress (see section 13) and subsequent development of processes with approval by the regulators is essential. The first review of PHNMS scheme in 2023 will be a crucial moment with regard to trading.
- 8.1.3. For farmers the priority will be on meeting their own glidepath targets through cost efficient measures on their own farms. However, this might not always be possible for a number of reasons including, inter alia, farm type, cost, availability of equipment, skills, and farm business model. Where a farm in PHAG is meeting the rules laid out in this document they are able to balance their nitrogen requirement through trading.
- 8.1.4. In a nitrogen trading scheme, a farm will use a nutrient accounting tool (NAT) to create a whole farm value of nitrogen losses on their farm. The NAT provides the summation of a number of calculable nitrogen actions (measures or scenarios) on their farm. This will include direct mitigation measures, land type, weather, farming practices, farm stocking, crop yields etc. These figures will need to be based on values with an agreed efficacy value. PHAG recommends these values are agreed through the Technical Nutrient Group (TNG).
- 8.1.5. The NAT's end result is a single nutrient value for the whole of a given farm. The whole farm value will be represented at a per ha value based on the land on the holding that is on the Agricultural Census and or other agricultural land that they have management control over for the year or period over which any trading takes place. For land within the Poole Harbour catchment
- 8.1.6. Where the farm is above the glidepath then they are regarded as being in debit/deficit and where they are below they are regarded as being in credit/surplus.
- 8.1.7. In a nitrogen trading scheme, farmers with surplus (unused) allowances can in the first instance sell to farmers in deficit (insufficient allowances relative to their actual leaching) and then to External Offset Buyers like Wessex Water looking to offset their own non regulatory nitrogen emissions. External trading/offsetting can only occur where the average N reduction delivered by PHNMS go beyond the glide path target required.

- 8.1.8. Farmers must use their whole eligible land area, including low input and high input land, to calculate their position on the glidepath. See 8.1.5.
- 8.1.9. There is no ability to bank allowances from year to another year.
- 8.1.10. PHAG will provide farmers with a mechanism that will enable trading and ensure that the scheme rules are met.
- 8.1.11. Farmers in PHNMS commit to trading between farmers and allowing any unused allowances to be sold to farmers who require allowances to meet the glidepath and meet minimum rules of the scheme.
- 8.1.12. Farmers with unused allowances can choose not to sell to parties other than farmers in PHNMS.

8.2. Applicable Land

- 8.2.1. Details of eligible land are shown in section 3.3. If a farmer has land both in and outside the Poole Harbour catchment, only the land area within the catchment will be eligible to trade.
- 8.2.2. All eligible land within a farm holding is included in nutrient calculations and trading of unused allowances, regardless of its leaching value. The relevant value for both nutrient accounting and trading is the average leaching of kg/N/ha at whole farm level.
- 8.2.3. Where land in a farm holding is permanently converted to nonagricultural use through an agreement external to PHAG, for the purposes of offsetting N emissions of another party, and with funding received from that other party, the land in question will be removed from the farm holding hectarage for the purposes of calculating farm nutrient accounts. The position of that land will not be included in the farm nutrient calculation, nor will the hectares of that land be used to derive a kg/n/ha farm level figure.
- 8.2.4. Any member of PHAG that enters into a bilateral agreement with another party that takes land out of agriculture must tell PHAG and exclude this land from their NAT.
- 8.2.5. PHAG will inform the regulator of the change in land use. The regulator will need to keep a record of the amount of land that is in different land uses and will need to adjust the overall sector targets accordingly to represent any changes that occurred over the previous farming year. As any offsetting delivered for development will be outside PHNMS and each land parcel will need to go beyond the agricultural emission limit before claiming offsetting credit for that development, the overall agricultural target should not be impacted by these changes.

8.3. Structure of trading

- 8.3.1. Trading occurs:
- 8.3.1.1. between farmers to allow farmers above the glidepath to buy unused allowances from farmers below the glidepath if that is more viable than making further on farm reductions, and conversely to enable farms to generate income by implementing N reduction measures on farm and selling unused allowances. This is termed the "Farmer-to-Farmer Market".

- 8.3.1.2. Where this is between farmers and External Offset Buyers like Wessex Water who wish to buy unused allowances to offset their own non regulatory organisational emissions of N. This is termed the "External Market".
 - 8.3.2. PHAG will be the counterparty for every trade. PHAG will:
- 8.3.2.1. buy unused allowances from those farmers with a surplus to sell,
- 8.3.2.2. sell the unused allowances procured above, to farmers with a deficit
- 8.3.2.3. sell unused allowances to External Offset Buyers like Wessex Water [where the average N loss of PHNMS members are less than the glide path and a demonstrable reduction in N loading can be demonstrated to the satisfaction of the regulator (Section 8.6.1 & 2)].
- 8.3.2.4. PHAG will manage financial risk by buying *only* the number of unused allowances it is able to sell to farmers and External Offset Buyers. Any unused allowances, above the combined demand of farmers and offset buyers, will remain untraded and will deliver further benefit to the environment.

8.4. Glidepath Target and Trading Target

- 8.4.1. Farms achieving the Glidepath Target will be compliant with the PHCOTR. Should most farms meet only the Glidepath Target, there would be a poor supply of unused allowances to service i) the needs of farms which cannot reduce to the Glidepath Target, and ii) the needs of External Offset Buyers. To establish a trading system that services both needs, and which conversely generates income for well-performing farms, PHAG will set a target below the Glidepath Target, for that accounting year, to ensure a good supply of unused allowances for those who need them.
- 8.4.2. This 'External Trading Target' is a stretch target. The incentive for reaching this target will be the ability to sell unused allowances to External Offset Buyers at the 'External Trading Rate'.
- 8.4.3. The scheme notes that the regulator will have requirements on external buyers (for example Wessex Water) relating to specific point sources. It is likely that an offsetting ratio greater than 1:1 could be required in these circumstances. The relative ratio values will be agreed between the regulator and external buyer, based on evidence, on a case-by-case basis. This is to address uncertainty in calculating nutrient losses and delivering reductions in these losses from non-point (diffuse) sources compared to point sources where nutrient losses can be easily measured, for example a ratio of 2:1 agriculture diffuse source N credits vs point source N load offset could be applied.
- 8.4.3.1. Where trading is with an external party to provide offsetting for a point source, the trading could require allowances to come from the same geology or drainage basin to the harbour e.g., drainage basins of Holes Bay, Lytchett Bay, Studland Peninsula, such requirements will be agreed between the regulator and external party.

Defined Terms:

- External Offset Buyers a non-agricultural party wishing to procure N offsets from PHAG to offset that parties only organisational N emissions.
- Glidepath Target kg/N/ha for a given Nutrient Accounting Period as defined by the glidepath in the EA PHCOTR.
- External Trading Target the kg/N/ha that a farmer must achieve in a given Nutrient Accounting Period in order to sell unused allowances in that Period to External Offset Buyers. This will be lower kg/N/ha (a smaller number) than the Glidepath Target and comprises the Glidepath Target less:
 - the total kgs of N offsets required by any External Offset Buyers (e.g., Wessex Water) divided by the combined hectares of PHAG members (i.e., PHAG members only, not the full catchment) expressed in kg/n/ha, and
 - an amount set by PHAG in order to create a sufficient 'Supply Buffer' to manage any shortfall in supply that would cause farmers above the Glidepath Target to be *unable* to buy unused allowances to meet the Glidepath Target (the focus will be to first supply N to other PHNMS members and only if N loss is reduced below the glide path will trading with external offset buyers take place).
- Farmer Rate the price in GBP at which unused allowances are transacted through PHAG in the Farmer-to-Farmer Market
- Farmer-to-Farmer Market transactions of unused allowances through PHAG for the purposes of enabling PHAG members to achieve the Glidepath Target. Only PHAG members are party to this market.
- External Rate the price in GBP at which unused allowances are transacted through PHAG in the External Market
- External Market transactions of unused allowances through PHAG for the purposes of enabling External Offset Buyers to achieve their own offset targets

Example of External Trading Target calculation

62,178 hectares of agricultural land in the catchment Glidepath Target equates to 20 kg/N/ha

10,000 hectares of land held by PHAG members

Offset buyers total demand = 5000 kgs of N in the Nutrient Accounting Period 5000 divided by 10,000ha = 0.5 kg/N/ha

PHAG set a Supply Buffer of 3000 kgs of N. 3000 divided by 10,000 = 0.3 kg/N/ha

Trading Target for all PHNMS members = Glidepath Target (20) - Offset demand (0.5) - PHAG Buffer (0.3) = 19.2 kg/N/ha.

Final tradable N in this case study²³ = (10,000*20kg- buffer)- (10,000* average NAT delivered)

8.5. Farmer Below Glidepath Target but above External Trading Target:

- 8.5.1. Farmers below the Glidepath Target but above the External Trading Target will be able to sell unused allowances to other farmers at the 'Farmer Rate' where there is demand from farmers above the Glidepath Target. PHAG will only procure unused allowances from farmers below the Glidepath Target at the Farmer Rate, to the extent that there are contracted farmer buyer for these allowances. This minimises financial risk for PHAG.
- 8.5.2. In the event of oversupply, a pro rata approach will be used to ensure all farmers below the Glidepath Target receive fair and proportional access to the Farmer-to-Farmer Market. Pro rata rules will be based on the farmers % contribution to the total supply.

Pro Rata Illustration:

Farm 1 has 10kgs of N available for sale (under the Glidepath Target) Farm 2 has 20kgs of N available for sale (under the Glidepath Target) Farm 3 has 30kgs of N available for sale (under the Glidepath Target)

Total supply is 60kgs. By percent, each farms contribution is: Farm 1: 16.7% Farm 2: 33.3%

Farm 3: 50%

Total Demand by farms above the Glidepath Target: 40kgs.

Tradable amount per farm: Farm 1: 16.7% of 40kgs = 6.68kgs Farm 2: 33.3% of 40kgs = 13.32kgs Farm 3: 50% of 40kgs = 20kgs

8.5.3. Farmers below the Glidepath Target but above the External Trading Target will not be able to sell unused allowances to External Offset Buyers at the External Rate.

8.6. Farmer Below Glidepath Target and below External Trading Target:

8.6.1. Farms below the External Trading Target will be able to sell unused allowances to External Offset Buyers once all farmer-to-farmer demand is satisfied.

²³ Note any negative number means the glide path has not been met and no trade with external buyers can take place. Any positive number is potentially tradable subject to meeting wider PHNMS rules.

- 8.6.2. Once PHAG have determined that all farms above the Glidepath Target have procured the unused allowances necessary to bring them to the Glidepath Target, unused allowances from only those farms below the External Trading Target, will be offered to External Offset Buyers, at the External Rate.
- 8.6.3. PHAG will only procure unused allowances from farmers below the External Trading Target at the External Rate, to the extent that there are contracted External Offset Buyers for these allowances.
- 8.6.4. In the event of oversupply, a pro rata approach will be used to ensure all farmers below the External Trading Target receive fair and proportional access to the External Market. Pro rata rules (as illustrated above) will be based on the farmers % contribution to the total supply.

8.7. Process through time

8.7.1. There are multiple timing considerations. No perfect timetable exits. Presented is the current best available timetable which considers the farming cycle and farm business planning, months of highest leaching, completion of existing compliance e.g., NVZ records, operating cycles and reporting dates for Wessex water, and requirements of regulators.

Defined Terms:

- Farming (Operational) Year when the farming cycle is deemed to begin and end. 1st October to 31st September
- Nutrient Accounting Period the period for which a set of nutrient accounts must be drawn up. See section 5.2.2
- 'Planned' Reporting Date: date of submission to PHAG of the planned N leaching for the forthcoming Nutrient Accounting Period: the 31st October for the Nutrient Accounting Period in which it falls
- 'Actuals' Reporting Date: date of submission to PHAG of the actual N leaching for the most recent Nutrient Accounting Period. The 30th November that falls one month after the end of the Nutrient Accounting Period being reported
- Regulators reporting date (outside scheme farmers) 31 December
 - 8.7.2. In the months preceding a Nutrient Accounting Period, farmers must plan activities relating to nutrient leaching, for the coming Nutrient Accounting Period. By 31st October one month into a Nutrient Accounting Period, all plans should be made and a 'Planned' set of nutrient accounts must have been submitted to PHAG.

Example:

For the Farming Year/Nutrient Accounting Period running 1st October 2022 to 30th September 2023, farmers might make nutrient management plans during Jan-Sept 2022. By 31st October 2022, nutrient accounts for the Accounting Period 1 Oct 22 – 30 Sept 2023 must be submitted to PHAG. NAT 22/23 Actual Year= based on SNS in spring 2022 and crops grown and harvested in given year and land management put in place by 30th October (which will be material to the amount of N that is predicted to be lost).

NAT Scenario = SNS forecast for Spring 2023, planned crop and nutrient management plan and planned land management post-harvest until spring 2024.

8.8. Timing of farm Planned Nutrient Accounts/Position

- 8.8.1. Farms have up until 31st October to adjust their planned farm operations for the coming Nutrient Accounting Period, to either reduce leaching as far as possible and thus avoid the need to procure unused allowances in the Farmer-to-Farmer Market, or to maximise income potential by reducing leaching down below Glidepath and External Trading Target.
- 8.8.2. By 31st October, all farms will know their leaching positions for the coming Accounting Period courtesy of their submitted Planned Nutrient Accounts. PHAG will record and confirm these 'Planned Nutrient Positions' per farm, issuing a position statement to each farm that records the degree of surplus of deficit of allowances, the Farmer Rate for the coming Nutrient Accounting Period, and the financial implication – either cost to buy unused allowances or the potential income from sales, based on the forecast demand.
- 8.8.3. In addition to the year preceding submission of the Planned Nutrient Accounts, every farm still has another 12 months to adjust operations (and reduce leaching) before submission of the Actual Nutrient Accounts (by the 30th November falling one month after the end of the Nutrient Accounting Period being reported).

8.9. Timing of farm Actual Nutrient Accounts/Position and Settling of Positions

- 8.9.1. Famers will submit Actual Nutrient Accounts by the 30th November after the end of the Accounting Period to the third party. PHAG will issue closing positions to all farms confirming their surplus/deficit of allowances and either i) for farms above the Glidepath Target, the sum due to PHAG to procure allowances to settle the farm nutrient position, or ii) for farms below the Glidepath Target, the sum to be received for unused allowances being sold to PHAG.
- 8.9.2. As the central counterparty, PHAG will administer and manage contracts and banking. Funds received from farms above the Glidepath Target will be paid to farms below the Glidepath Target, less a fee to be retained by PHAG to contribute to scheme running costs. Fee to be a percent and TBC. Once all farms above the Glidepath Target have bought sufficient unused allowances to reach the Glidepath Target, the Farmer-to-Farmer Market for the given Nutrient Accounting Period will be deemed closed.

8.10. Timing for External Offset Buyers

8.10.1. On submission of the Planned Nutrient Accounts, PHAG will issue to External Offset Buyers an estimate forecast of the unused allocations that will be available for purchase when Actual Nutrient Accounts are submitted. This will be the total of unused allowances from all farms in the scheme, less those required to service the needs of farms above the Glidepath Target in the Farmer-to-Farmer market. The Forecast will apply to the Nutrient Accounting Period (Oct to Sept) in which that December falls.

- 8.10.2. External Offset Buyers will have visibility of the Forecast Position (allowances that are likely to be available for a given Nutrient Accounting Period) in November one month into that period.
- 8.10.3. Confirmation of the available allowances will be in December of the following year. This will be after submission by farmers of the Actual Nutrient Accounts, the deadline of which is the 30th November.

8.11. Wessex Water Timing

8.11.1. The Wessex Water (WW) Dorchester Offsetting Year runs June to May and is not aligned with the Nutrient Account Period. WW will need to determine how to apply offsets from within a given PHAG Nutrient Accounting Period against the Dorchester Year(s). It is likely that a PHAG Actual position, available in Nov, would allow WW to apply any offsets bought against the Dorchester Year in which that Nov falls. This would give WW a further 6-month period to make adjustments to achieve any remaining shortfall in terms Dorchester Offsetting.

Example:

- PHAG Accounting Period 1st Oct21 31st Sept22
- PHAG Actuals for the Accounting Period Nov22
- Dorchester Offsetting Year June22-May23
- WW apply Offsets bought from PHAG Accounting Period ending Sept22, to Dorchester Year ending May23.
 - 8.11.2. The WW Performance Commitment (PC) Year runs Jan to Dec which is fairly aligned with the PHAG Accounting Period. A forecast will be available to WW for a given Jan-Dec PC Year in the preceding November (2 months before the PC year starts). WW will have a 1year period to adjust operations based on the forecast. PHAG will be able to confirm the Actual Position in the following November – immediately after submission of Actual Nutrient Accounts and 1 month before the end of the WW PC year. (The farmer perspective is that Actuals will not vary greatly from Planned with yield being the most material factor).

Example:

- PHAG Accounting Period 1st Oct22 31st Sept23
- Performance Commitment Year 1st Jan23 31st Dec23
- Forecast Available to WW Nov22
- Period of Adjustment for WW to compensate for forecast over/undersupply – Dec22- Nov23

- Actuals Available to WW Nov23
- WW Reporting Date for Dorchester Year Jan-Dec23 31st Dec23.

8.12. Managing Undersupply

- 8.12.1. If on submission of Planned Nutrient Accounts, PHAG determine that there may be a short supply of unused allowances for either Farmer-to Farmer or External Market, PHAG will communicate this to PHAG members with an invitation to adjust planned farm practices for the coming Accounting Periods, and to resubmit this Planned Nutrient Accounts, by 15th Dec. The intention is that farms see income potential by freeing up more allowances for sale.
- 8.12.2. As the scheme matures it will be easier to predict the Forecast Position of the coming Accounting Period giving farms better information on how to manage nutrients in lieu of markets.

8.13. Pricing

- 8.13.1. A mature cap and trade scheme uses free market principles to determine prices. PHNMS may evolve to that model in time but for simplicity in early years, will start with a fixed price in both Farmer-to-Farmer, and External Markets.
- 8.13.2. A fixed rate does not allow full market efficiency to achieve reductions by the agricultural sector at lowest overall cost, given the income received for allowances made available by two measures of different cost, will be the same. Regardless, at the early stages of PHNMS, and in lieu of limited price signals, managing a market with fully dynamic pricing is too complex for all involved.
- 8.13.3. PHAG will determine the price in both markets, in liaison with farmers and External Offset Buyers.
- 8.13.3.1. PHAG will use a number of tools for price discovery including surveys of members based on the farmers relative position the glidepath for the forthcoming accounting year and willingness to pay. In addition, PHAG will use data from other sources.
 - 8.13.4. The Farmer Rate will likely be lower than the External Rate to i) avoid any farmer disincentive to participate in the Farmer-to-Farmer market, which would undermine the scheme, and ii) to create additional incentive to make greater N reductions by an ability to sell at the External Rate in the External Market.
 - 8.13.5. PHAG will use what market intelligence is available (e.g., in farm Nutrient Accounts) to set a fair but manageable Farmer Rate. The External Rate will be agreed with External Offset Buyers.
 - 8.13.6. Both Farmer and External Rates will carry a commission to be retained by PHAG to help cover costs.

8.14. Double counting and stacking benefits

8.14.1. PHAG will work with the government and private investors to ensure that there is no double counting of nitrogen within PHNMS. PHAG recognises that the rules between how private investors and the government operate are different and will be dependent on their specific contracts and agreements with farmers in PHAG.

- 8.14.2. PHAG recognises that current Government guidance and rules for existing schemes and future schemes differ.
- 8.14.3. Where an agreement or contract states that the value of nitrogen saved cannot be used for sale as an allowance to another party then the farmer in PHAG must notify PHAG of this and the amount not used as part of a sale. Farmers will need to sign a document stating that the allowances they have for sale are not in contravention of any other agreements or contracts. The liability for this rests with the farmer and not PHAG.
- 8.14.3.1. Farmers could be liable to repayments of an agreement or other funded arrangement, if there is also an income generated through trading under PHNMs for the same nutrient reduction. Any action or measure calculated by the approved NAT as going beyond that required by the funded agreement or other arrangement can be traded.
 - 8.14.4. The exact process for this will be developed in agreement with Defra and the relevant competent bodies overseeing Government support, especially through Countryside Stewardship and the future Environmental Land Management scheme.
 - 8.14.5. Farmers cannot sell the same N allowance multiple times or to multiple buyers.
 - 8.14.6. There will be no double funding for a natural capital outcome where this has been specified in any contract whether Government or private investor. All buyers and sellers will get and deliver what they pay for or are paid for.
 - 8.14.7. The process for trading will be overseen by PHAG and reported to the PHNMS Partners group and the regulator.

9. Verification of results for trading

9.1. Overview

- 9.1.1. A robust verification system is key to the confidence of regulators, buyers, sellers, and managers in a nutrient trading scheme. Without this, the approved scheme cannot function and deliver its purpose or role.
- 9.1.2. Verification will be managed by the independent third party contracted by PHAG to deliver PHNMS for the agricultural sector. This section lays out what skills the third party requires and how verification should be done.
- 9.1.3. Other sectors will need to have their own measurement, reporting and verification processes with the regulator where it comes to how they use accounting tools.
- 9.1.4. The third party will use a number of mechanisms to verify nutrient losses on a farm to check that those farmers have changed their farming practices, undertaken approved nitrogen reduction measures, and recorded them in the approved Nutrient Accounting Tool (NAT).
 - 9.1.5. Verification is likely to be achieved through a combination of checking evidence sent by farmers, 'on the ground' assessment by recognised advisors/ verifiers, remote sensing, and the use of any newly developed mechanisms.

- 9.1.6. A basic form of verification shall be submitted by each farmer delivering nutrient offsets for other farmers and or external trades (and is receiving payment). Submission of this evidence will be confirmation by each farmer that the measures they have included in the NAT have been implemented.
- 9.1.7. The process for verification is likely to evolve as the scheme progresses and will be reviewed on an annual basis by PHAG and the TNG.
- 9.1.8. All verification reports will be agreed and signed off by the farmer and verifier. Where there is disagreement that can't be resolved this will be dealt with through a dispute hierarchy given later in this section.
- 9.1.9. When farms return Planned Nutrient Accounts they will required to keep all relevant information in case of need for verification or EA inspection. The third party will also maintain a copy of this verification.
- 9.1.10. The third party will ensure that a farmer is given a copy of any guidance related to the NAT they are using. Where this is not available (for example where the software provider has not made one available) then it will not be possible to require a farmer to meet a certain requirement.
- 9.1.11. The third party will confirm with the farmer when they submit their Planned Nutrient Accounts that they have read and understood the conditions for each measure or scenario chosen
- 9.1.12. Where any farmer or member of the public is concerned by farm practice and/or pollution then this must be reported to the Environment Agency. PHAG, the verifier and the third party are not responsible for dealing with pollution.

9.2. Verifiers

- 9.2.1. Undertaken by suitably qualified advisor agreed by the regulator and PHAG in advance of any verification.
- 9.2.2. The range of skills and qualifications will include good agronomic knowledge, an excellent understanding of the measures and farming practice required to reduce nutrient losses.
- 9.2.3. All farmers will be advised to work with their agents and consultants to ensure their accounts are as accurate as possible. However, the farm's own adviser, agent or agronomist cannot be the verifier to ensure impartiality.
- 9.2.4. PHAG will work with the regulator and other stakeholders to provide training to agents and consultants on nitrogen accounting and required verification.
- 9.2.5. PHAG will hold all records for verification for a period of 5 years.

9.3. Verification by the regulator

9.3.1. Those farmers not part of PHNMS will be validated and verified by the EA. Whilst all members of PHNMS will be a low priority for an inspection by the regulator, it is understood that small percentage of regulatory inspections will focus on PHNMS members each year (Section 4.5).

9.4. Verification in PHNMS

9.4.1. All PHNMS that are paid for delivery of nutrient trades, will be required to submit annual verification of the key measures, as

specified in any NAT used, put in place to deliver nutrient reduction, and will receive an annual desk-based verification by the third party. This is likely to be a semi-automated approach with analysis of the results to inform the fuller verification.

- 9.4.2. 10% of members of PHAG CIC in PHNMS will have a fuller verification. The third party will use a hierarchy to help select who should have their accounts verified as detailed below:
- 9.4.2.1. Those where the validation and QA process has identified concerns.
- 9.4.2.2. Those selling and buying a large proportion of nitrogen allowances. Identification to be made using analysis of the PHNMS nutrient accounts.
- 9.4.2.3. The rest to be taken at random by the third party.
 - 9.4.3. Verification will be finalised based on final baselines produced in the actual nitrogen accounts. The process for this is laid out in section 5.
 - 9.4.4. Actuals will be completed by farmers by the end of November for the preceding year.
 - 9.4.5. Verification will be based on measures requirements laid out in the NAT used by the farmer as part of PHNMS.
 - 9.4.6. There will be two forms of verification. "Interim verification" and "full verification".
 - 9.4.7. Interim verification
- 9.4.7.1. This will enable the third party to maintain an all-year process and ensure that farmers are keeping the correct records and applying the measures.
- 9.4.7.2. The process can be undertaken during the year and will be dependent on the farming system, and practices and measures deployed.
- 9.4.7.3. This can happen on any number of farms as decided by the third party and does not mean they are to be part of the full verification.
 - 9.4.8. Full verification
- 9.4.8.1. Full verification will use all the processes detailed below. It must occur after Actual Nutrient Accounts have been produced by the farmer.
- 9.4.8.2. Where available the results from interim verification will be used to help make a decision.
- 9.4.8.3. Will be carried out on a minimum of 10% of the cohort.
- 9.4.8.4. Trading can't take place until after the final verification process has been confirmed for at least 75% of the verification cohort as decided by the third party.
- 9.4.8.5. All information and documentation related to the Nutrient Accounts and farm records must be kept in line with NVZ guidance.
- 9.4.8.6. PHAG will work with the NAT provider to ensure that all farmers have access to guidance books on measures and practices to understand requirements.

9.5. The verification processes

9.5.1. The verification will follow the process laid out below. As well as following the process below, the experience and skills of the verifier

will help to identify issues of any concern within the nitrogen accounts.

- 9.5.2. Process to be followed:
- 9.5.2.1. The verifier will check that the farm results are in line with farming NAT and ACT returns and system type. This will be based on previous records for the farm and comparable farms.
- 9.5.2.2. As the system matures more data will be available to help inform this approach.
- 9.5.2.3. All data has been entered and accounted for in all the fields areas/parcels
- 9.5.2.4. The only fields being accounted for are within the Poole Harbour catchment.
- 9.5.2.5. Any fertiliser and manure applications do not exceed NVZ recommendations and must take into account inorganic and organic fertilisers (Check NLT verification page).
- 9.5.2.6. The NAT needs to show the total N applied for all fields and whole farm broken down to organic and inorganic to tie in with the ACT.
- 9.5.2.7. The farmer will be asked to supply photos and visual evidence that has been dated & geo-tagged.
- 9.5.2.8. The verifier will check any relevant farm records. This could include invoices and accounts, or records related to other regulations and assurance schemes.
- 9.5.2.9. Checking with other tools and software used by the farmer.
- 9.5.2.10. The verifier will check field/crop records and Nutrient Management Plans.
- 9.5.2.11. The verifier will compare actual yields for the year being verified with previous years. In addition, the verifier will look at comparable yield results with other farms in PHAG and any other data available.
- 9.5.2.12. Where there are significant differences to comparables this will be discussed with the farmer and future planned nutrient management adjusted.
- 9.5.2.13. If there are significant issues over three years with a wide difference between expected and actual yield farmers will either need to change yield expectation or will be reported to the third party and a potential dispute process started.

9.6. Disputes following verification

- 9.6.1. Where there is disagreement (dispute) by the farmer regarding the results from the NAT this will be dealt with through a dispute hierarchy managed through PHAG.
- 9.6.1.1. Stage 1 Between the verifier and farmer
- 9.6.1.2. Encouraged to better understand what the issue is. Verifier to document this and send to third party.
- 9.6.1.3. Stage 2 The third party
- 9.6.1.4. Acting as an arbiter and will work with the farmer and verifier to get resolution,
- 9.6.1.5. Stage 3 PHAG CIC directors
- 9.6.1.6. Report given to the PHAG board.
- 9.6.1.7. If there is any potential for a board member to have a conflict of interest the third party will notify this to the chairman and if necessary the board member will be removed from the proceedings.

- 9.6.1.8. Stage 4 PHAG CIC directors can choose to pass the issue to the TNG for further guidance
- 9.6.1.9. If the farmer is considered to be at fault by the third-party verifier the costs will be borne for any dispute by the farmer. The cost for TNG involvement will be borne by the farmer.
 - 9.6.2. If needed the PHAG board can choose to bring in an independent verifier.
 - 9.6.3. The decision made by the board will be final.

10. Relationship with the regulator's enforcement inspections

10.1. Overview

- 10.1.1. Farmers in the PH catchment will have two choices for how they wish to manage nitrogen to the targets and limits laid out in the PHCOTR. Firstly, through working directly to and with the Environment Agency, and meeting the 18.1 kg/ha N target. Secondly, through meeting the minimum rules laid out in the PHCOTR and further detailed in this scheme (PHNMS), or other schemes as approved by the EA.
- 10.1.2. PHAG and its members note that the regulator will carry out visits linked to incidents, random checks or where the regulator must act to prevent a pollution event. Where they do this they will be checking farmers' compliance with the glidepath and wider regulations.
- 10.1.3. Given the relationship between the two approaches it is important that synergies are developed that help inform each approach's delivery.

10.2. Approach to be taken

- 10.2.1. All farmers that have a compliance visit by the Environment Agency in PH will likely be assessed to the final target for the catchment of 18.1kg/N/ ha (unless that farmer is part of PHNMS in which case they will be assessed according to the glidepath target for that year).
- 10.2.2. The regulator will use a Nutrient Accounting Tool that is acceptable to the farmers and also meets the needs of the regulator.
- 10.2.3. The regulator will share anonymised data with PHAG to enable a better understanding of nitrogen losses across the catchment. Where possible these will be at a water body scale, but it is understood that this cannot always be done in order to preserve anonymity.
- 10.2.4. The regulator will share a list of all priority areas with the third party which will provide opportunities to bring them into PHNMS and to get relevant support for compliance.
- 10.2.5. Where the regulator visits a farm they will carry out a compliance check and use the NAT and may ask farmers to complete or send the EA their latest completed ACT.
- 10.2.6. The EA will endeavour to inform all farms about PHNMS and give them an opportunity to join.
- 10.2.7. The regulator will work with the third party to align standards regarding verification and validation of accounts and compliance.
- 10.2.8. Where the regulator visits a PHNMS farmer and they are noncompliant with farm regulations and or do not appear to have followed a plan to become compliant within the timescales detailed in the ACT

and or cannot demonstrate they are meeting the glide path (including trading), the regulator will take the action they see fit and report this farm to the third party detailing the discrepancies.

- 10.2.9. The third party will then cross check the EA report with the farm self-reporting (ACT/ NAT). Where there are any inconsistencies are found the third party will take commence an investigation into the non-compliance of the farm following PHNMS rules and take appropriate action as detailed in these rules.
- 10.2.10. The regulator will report details to PHNMS Partners Group and also to the Poole Harbour Nutrient Group. The report will consist of:
- 10.2.10.1. Number of farms visited
- 10.2.10.2. Levels of compliance
- 10.2.10.3. Total nitrogen losses
- 10.2.10.4. Area of all holdings visited

11. Best practice

11.1. Overview

- 11.1.1. PHAG and farmers recognise that there is best practice for nutrient use that will deliver productive and efficient agriculture, nutrient reductions, and additional environmental benefits.
- 11.1.2. Best practice can be very locally specific based on certain environmental and climatic factors as well as based on farm type and infrastructure.
- 11.1.3. Best practice is not always legally required and therefore not always mandatory. Where a farmer is meeting existing regulations and contract requirements then there is no requirement that they must apply best practice.
- 11.1.4. The use of best practice is likely to be in a farmer's interest and will be strongly encouraged by PHAG and all partners to PHNMS.

11.2. Approach to be taken

- 11.2.1. The work of using a NAT and farmers taking leadership on nitrogen losses (and phosphorus losses) will enable an increase in the knowledge base and the ability to communicate best practice. Actions will include:
- 11.2.2. Third party analysing most popular and or effective measures for nitrogen reductions and working with partners to develop best practice to be shared in a variety of ways including case studies and priority measures for the year.
- 11.2.3. Offering grants (where available) through PHAG CIC to encourage measure uptake within the NAT.
- 11.2.4. Incentivising N reduction in areas of greatest ecological effectiveness and more quickly effective in Poole Harbour where it is close to the harbour and does not involve long time delays in reaching the harbour such as travel through chalk geology.
- 11.2.5. Supporting farmers to make small scale changes in farm practice that are not captured through the NAT and will result in small levels of nitrogen reductions. The aggregation of these changes in farm practice can meaningfully reduce nitrogen contributions.
- 11.2.6. It is likely these will need to be incentivised through projects aligned with PHNMS e.g., disrupting overland run-off pathways along

tracks and through fields, moving feeders away from run-off pathways.

- 11.2.7. Working with universities and research institutions to develop innovative new techniques and better understand the costs and benefits of nutrients in farming and the environment.
- 11.2.8. Encouraging farmers to adopt "*Nitrogen Capture and Removal* (*NCAR*)". This includes nature-based solutions e.g., re-wetted land, restored natural wetlands, stream naturalisation, constructed interception wetlands and using engineered technology.
- 11.2.8.1. PHAG will work with the TNG to bring these measures within NATs. Where N allowances can be earned through the use of NCAR, backed up by robust scientific evidence or monitoring, these allowances will be applied to the farmers' glidepath target and made available for use in trading.

12. Data management

12.1. Overview

- 12.1.1. PHAG, through the third party, will be collecting data from farmers. As such it will be subject to and must meet all requirements for data protection, including GDPR.
- 12.1.2. The third party will ensure all data is stored in a secure server which cannot be accessed by unauthorised parties. Authorised parties will be those with an agreement with PHAG to access data for the purpose of managing PHNMS.
- 12.1.3. The data will belong to PHAG and can only be used at the direction of PHAG. Where there is a change in the third party, access and use of the data will revert to PHAG solely and can then be recontracted.
- 12.1.4. Farmers will be supplying information around their nutrient usage, costs of production and compliance with regulations with a third party. Much of the information will be highly sensitive and commercial.

12.2. Approach

- 12.2.1. Strict processes to protect the anonymity and security of farmer members' information will be in place through the use of secure data storage and strict controls on access to data.
- 12.2.2. The third party will do this on behalf of PHAG, and other parties as needed.
- 12.2.3. The third party will enter into data controller and processer agreements as necessary.
- 12.2.4. All farmers' personal and commercial information will be anonymous to the regulator.

13. Review

13.1. Overview

13.1.1. Given the innovative nature of PHNMS and the changing regulatory, trading, and environmental context, regular reviews that allow for changes in approach are crucial.

13.2. Annual reviews

13.2.1. PHAG and its members will review progress annually having reported to the regulator and been reported to by the third party.

Recommendations for change will then be taken to the annual review by the Partners Group.

- 13.2.2. PHNMS will be reviewed by all parties annually in March after PHAG has reported to the regulator on the previous year and in time to make any changes needed for the forthcoming year.
- 13.2.3. It is likely that there will need to be changes to the scheme structure after year one to build on learnings in the first year of operation. The focus will be on improving the integrity of the scheme across all areas but with a focus on standards and transparency.
- 13.2.4. All aspects of the scheme and on the ground implementation by farmers will be reviewed in an adaptive planning approach.
- 13.2.5. The review will look at performance with the minimum requirements and opportunities for enhancing the service and identify how any failures can be resolved in the subsequent year.

13.3. 2024 Full review

- 13.3.1. The 2021 PHCOTR states that the regulators will carry out a full review of any approved scheme in 2024.
- 13.3.2. It is understood that whilst 2024 represents 6 years from the first drafting of the PHCOTR and 3 years from the full publication of the PHCOTR the scheme itself will only have been operational for 2 years and within this timeframe farmers and scheme as a whole only having access to nitrogen baselines for one year.
- 13.3.3. The full review will be an opportunity for PHAG to continue its process of performance improvement PHAG and understanding the benefit and cost of the approach and ways to improve delivery.
- 13.3.4. As part of the full review, refinements to improve the trading scheme will be considered, including spatial limitations of trading within the catchment based on geology, ecological recovery, and relevant spatial targets.
- 13.3.5. Once the robustness of the scheme and trading has been established over time and through the review process, there may then be the ability to bringing external trading associated with plans and projects under the Habitats Regulations.

14. Key dates

Date	Key Scheme Activity	
1 st October to 30 th September	 Nutrient (nitrogen) Accounting Period for all PHNMS farmers Farmers implement all measures in management plans 	
31 st October	 Deadline for farmers to submit Planned Nutrient Accounts for the Accounting Period in which the 31st Oct falls Deadline for self-assessment compliance for the year ahead 	
November	 PHAG calculates and presents Planned Nutrient Position for each farm, for agriculture as a whole, and the forecast balance of supply and demand in both Farmer-to-Farmer, 	

	 and External Markets, for the coming Nutrient Accounting Period In case of a forecast of short supply to Farmer-to Farmer and External Markets, PHAG offer to farms to revise Planned Nutrient Accounts to release more allowances. 	
30 th November	 Deadline for farmers to complete Actual Nutrient Accounts for the Nutrient Accounting Period closing on the preceding 30th Sept. 	
15 th December	• Deadline for revised Planned Nutrient Accounts for the coming Accounting Period, in event of a short supply forecast	
December and January	Final Verification of Actual Nutrient Accounts	
April	Reporting to regulator by PHAG and third party	
March	 PHAG and third party will inform farmers of the Glidepath Target and External Trading Target of the coming Accounting Period starting 1st Oct. PHAG to negotiate with Wessex Water for nitrogen requirements and prices for the coming year. PHAG to communicate Farmer Rate and External Rate. 	
May	Review of PHNMS performance by partners group	

15. Glossary

'Actuals' Reporting Date:	Date of submission to PHAG of the actual N leaching for the most recent Nutrient Accounting Period. The 30 th November that falls one month after the end of the Nutrient Accounting Period being reported
Adaptive management	Adaptive management is a structured approach to decision making that emphasizes accountability and explicitness in decision making. Adaptive management is useful when there is substantial uncertainty regarding the most appropriate. Strategy for managing natural resources.
Agricultural Compliance Tool	An Excel spreadsheet produced by the Environment Agency that enables farmers to assess their compliance with existing regulations and for the regulator to give time limits for achieving compliance so that the farmer is anonymous to the EA but is still known to the PHNMS managers.
Allocations	Each farmer is required to meet a Glidepath Target that represents their emissions limit with regard to nitrogen. The nitrogen that make up this target are allocated to each farmer. Where a farmer is below the target they will

	have a surplus of allocations which can be traded. Where
	a farmer is above the target they will have a shortfall of
	allocations and will need to secure these from other
	farmers.
Approved scheme	The approved scheme refers to the requirement for the
	regulator to "approve" a scheme that meets the
	minimum requirements set out in the PHCOTR and
	provides an alternative to existing regulations and the
	creation of new regulations. The regulator has stated
	that anyone can set up an approved scheme and so
	one or more is possible. Poole Harbour Nutrient
	Management Scheme intends to be and is being
	developed to become an approved scheme. To avoid
	confusion this document refers to PHNMS as the
	approved scheme as that is what it is applying to be.
Emissions limit	The maximum level to which the regulator will allow a
	farmer to leach nitrogen from their operations without
	naving to secure allocations from other farmers. The
	links more clearly with pollution
Extornal Bata	The price in GRP at which upused allowances are
	transacted through PHAG in the External Market
External Market	Transactions of unused allowances through PHAG for
	the purposes of enabling External Offset Buyers to
	achieve their own offset targets
External Offset Buyers	a non-agricultural party wishing to procure N offsets from
, , , , , , , , , , , , , , , , , , ,	PHAG to offset that parties only organisational N
	emissions.
External Trading	The kg/N/ha that a farmer must achieve in a given
Target	Nutrient Accounting Period in order to sell unused
	allowances in that Period to External Offset Buyers. This
	will be lower kg/N/ha (a smaller number) than the
	Glidepath Target and comprises the Glidepath Target
	less:
	 the total kgs of N offsets required by any External Offset Divisition (a.g., M(k)M) divided
	External Offset Buyers (e.g., VVXVV) divided
	by the combined hectales of PHAG
	the full catchment) expressed in kg/n/ba
	and
	 an amount set by PHAG in order to create
	a sufficient 'Supply Buffer' to manage any
	shortfall in supply that would cause farmers
	above the Glidepath Target to be <i>unable</i> to
	buy unused allowances to meet the
	Glidepath Target
	-
Farmer Rate	The price in GBP at which unused allowances are
	transacted through PHAG in the farmer-to-farmer market

Farmer-to-Farmer Market Farming (Operational)	Transactions of unused allowances through PHAG for the purposes of enabling PHAG members to achieve the Glidepath Target. Only PHAG members are party to this market. When the farming cycle is deemed to begin and end. 1 st October to 20 th September
Tear	
Flexible document	A document that will be reviewed regularly and adjusted to reflect the innovative nature of the product or service being delivered.
Glidepath target	The nitrogen figure that farmers are required to meet on their farm. Expressed as nitrogen per ha per year kg/N/ha for a given Nutrient Accounting year.
Losses	Losses refers to the leaching of nitrogen to the environment and in particular to groundwaters.
Nitrogen	Including all nitrogen related emissions that will be converted to nitrates.
Nitrogen accounting year	The nitrogen accounting year that farmers will be required to record their nitrogen accounts for is aligned with the farming calendar year (1 st October to 30 th September). N-
Nutrient Accounting Period	The period for which a set of nutrient accounts must be drawn up. 1 st October to 30 th September.
Partners group	The key buyers, sellers, and regulators with an interest in nitrogen and the running of PHNMS.
'Planned' Reporting Date:	Date of submission to PHAG of the planned N leaching for the forthcoming Nutrient Accounting Period: the 31 st October for the Nutrient Accounting Period in which it falls
Poole Harbour Nutrient Management Scheme	Approved scheme for the Poole Harbour catchment that looks to reduce nitrogen losses from farms by using a Glidepath Target that reduces annually and enables farmers to assess their nitrogen baselines and, as a result, to trade nitrogen allowances between themselves and other sectors.
Self-assessment	A process by which farmers are able to carry out their own assessment without the need for any other parties to do the work.
Technical Nutrient Group	A group of scientific experts that come together to provide guidance and support for the tools and measures used to reduce nitrogen losses.
Third party	An organisation or body that is brought in to provide a service that is not one of the parties signing the service off.