Nitrogen Reduction in Poole Harbour

Supplementary Planning Document Summary of Comments to the Consultation Document

Poole, Purbeck, North Dorset and West Dorset & Weymouth Councils consulted upon the Draft Supplementary Planning Document (SPD) for 6 weeks from 9 October – 20 November 2016. Each Council contacted organisations and members of the public who have asked to be kept informed of planning policy matters. The consultation attracted 26 responses. 19 of these were from organisations and 6 from members of the public. The responses are summarised in the tables below with an officer response.

Comments from Organisations:

Respondent	Comment	Officer comment and Action
Ashvilla Estates	 Request some clarity in relation to the evidence-base behind the SPD and how the calculations for nitrogen off-setting have been arrived at. In particular, how the figure of £18,000 per hectare has been arrived at. To avoid double dipping, each Council should clearly define the circumstances where contributions to offsetting will be sought via CIL or site specific S106 agreements (S106); either to secure on site mitigation e.g. via SANG, and/or off-site contributions to a defined project, in order to ensure that such obligations are consistent with CIL regulations on the pooling of S106. An effective way to deliver the necessary nitrogen off-setting will be to prioritise sites through the Local Plan process which can deliver at least some of their nitrogen off-setting on-sites. 	 The calculations as set out in the appendices are a guide for calculating nitrogen neutrality. £18,100 represents an estimated cost of buying a hectare of land and planting up sparsely with trees. Acknowledge that costs can be quickly outdated so these will be removed from the final version of the SPD. The relevant Local Plans already set out where certain sites (settlement extensions) should be nitrogen neutral. Monitoring will ensure that there is no double dipping as settlement extensions will be expected to be nitrogen neutral (usually under S106 not be charged CIL for self nitrogen neutral) The delivery of required infrastructure is one of the factors considered when determining the development options in the Partial Review. Action required: Remove costings from final version of SPD as they become quickly outdated. Instead refer to mitigation in tonnes of nitrogen or hectares of land. Highlight in the SPD the importance of monitoring of CIL/S106 contributions and how it has been spent securing mitigation.

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Charborough Estate	 Welcomes the Nitrogen Reduction in Poole Harbour initiative, but objects to the approach set out within the SPD Delete options 4, 7, 8 and 9 as they are inconsistent with paragraph 8, 17 and 28 of the NPPF as nitrogen neutrality is sought to the detriment of the farming and food sectors. Preparing an implementation plan relating to the mitigation of impacts from agriculture is a more appropriate strategy to achieve nitrogen neutrality in Poole Harbour than taking land out of agricultural use. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition and should only be sought where they meet all of the relevant tests. Developments should not be subject to such a scale of obligations and policy burdens that their ability to be viable is threatened. Amend paras 20 and 30 accordingly. Delete the statement that Local Authorities may have to refuse planning applications for new housing development until adequate mitigation has been provided, as it is incompatible with paragraphs 7 and 47 of the NPPF 	 At present there is no shortage of land for food production in the UK. If there is a future shortage, it can be expected that food production would take a precedent over the state of Poole Harbour and agricultural land would be re-instated. Any offsetting mitigation will be provided by working with landowners to secure mitigation on land that is less productive and requires a large amount of nitrogen fertiliser. For example planting trees on steeply sloping fields offered up by landowners. This SPD focuses on nitrogen neutrality of development and is one of a range of measures being put in place in the catchment. The catchment partnership is also concentrating on reducing nitrates from farming. The evidence indicates population growth contributes to the adverse impacts on Poole Harbour and therefore must be avoided, and when it can't as in this instance, mitigated. Without a mitigation strategy the Council as competent authority under the Habitats Regulations cannot grant planning permission for new housing, so the statement of such is correct. Requiring certain strategic developments to be nitrogen neutral is a planning condition and in certain circumstances can be achieved on site or within a wider landholding. The remaining development is mitigated through CIL.
Dorset AONB team	 The SPD should reflect that land use change to a sparsely treed landscape may not be appropriate within the AONB and should conform to guidance within the Dorset AONB Landscape Character Assessment or the Dorset Landscape Character Assessment. Recommend use of the methodology outlined in Dorset Landscape Change Strategy: Pilot Methodology. There should be positive discrimination to change land use where 	 Agree that reference should be made to the landscape character assessments. The implementation and monitoring plan that will follow this SPD will be prepared with other bodies in the catchment partnership to ensure a joined up approach with maximum benefits. Action: Reference the landscape character assessments

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	 nitrogen application is high. Land use change should also aim to be multi-beneficial, e.g. creating wetlands for wading bird populations, providing flood protection for communities downstream, increase habitat connectivity and improve green infrastructure. The SPD has the potential to create a false market which accelerates the already increasing land prices to an unsustainable level and that is not viable economically. Consult with conservation bodies to ensure that there is appetite for taking on land that may not initially be of any direct conservation value. It would be helpful to have a clear strategy that identifies: Areas of high nitrogen loading, Where land is likely to be made available for purchase, Where there is a willingness of conservation bodies to purchase/manage sites. Explore other investment in land within the Poole Harbour catchment such as green bonds and pension investment schemes. 	
Dorset County Council	 Supportive of the fact that Nitrogen reduction in Poole Harbour is to be addressed through the proposed guidance. SPD should refer to Water Framework Directive. The SPD should acknowledge that future land use will be assessed on a site specific basis and follow guidance within the Dorset Landscape Character Assessment and the Dorset Landscape Change Strategy. It is not appropriate to generalise converted/changed landscapes as sparsely treed landscape as this may not fit with the surrounding character of the area. The guidance must ensure that there is no uncharacteristic change to our landscape. There is a need for a clear coordinated strategy on what methods are likely to be used. Identify possible areas of agricultural land that may be 	 Agree SPD should make reference to Water Framework Directive. Agree that reference should be made to the Dorset Landscape Character Assessment and mitigation should respect character. This will be an important element to the implementation and monitoring plan to be prepared after the SPD. Implementation will need a coordinated approach with partners in the catchment. Minerals sites were considered early on for inclusion as possible mitigation but there is uncertainty of the long-term future of the sites and mitigation needs to be in perpetuity. This could be revisited as part of the implementation and monitoring plan. Agree with importance of linking to Minerals and Waste local plans

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	 future levels of nitrates entering the surface or ground water. The restored use of at least one site could be a specifically designed wetland that will act to remove nitrates from ground/surface water. The SPD could refer to the Site Restoration /Aftercare/ Afteruse Policy (Policy RS1) of the Bournemouth, Dorset and Poole Minerals Strategy (Adopted 2014). Policy RS1 could be used to justify restoration of sites to non-agricultural uses or reduced-intensity. 	
Dorset CPRE	 Document is too complacent as it only seeks nitrogen neutrality. Real improvements/betterment should also be sought and implemented, e.g run off from farmland may be reduced by changing ploughing techniques, improving flood management, reducing excessive use of fertilisers and by planting trees/hedges. Encouragement to use less washing up liquids and to pay for more thorough/expensive sewage treatment. The need for collaborative education across the associated catchment area should also be stressed to supplement the need for wise monetary investments. 	 This SPD focusses on new development which is only required to be nitrogen neutral, not to try and solve the much bigger issues around excess nitrates in the Poole Harbour catchment. No action required
Dorset Local Nature Partnership	 Supports the mitigation options 7 and 8 set out within the draft because these will have additional benefits to nitrogen reduction in terms of their potential for increasing biodiversity and creating open spaces which will support health and wellbeing through access to nature, both of which support the DLNP vision. The DLNP vision should be incorporated into the SPD. The DLNP's position paper on Water Management in Dorset supports the catchment partnership approach and contains recommendations that should be integrated into the SPD. A public engagement and education programme is needed to raise awareness about water management in Dorset. Integrate water management into all development plans. 	 The SPD is focussed very specifically on the duty of local authorities to mitigate development and ensure no further harm to Poole Harbour. The DLNP suggestions are aimed more at the implementation of mitigation to ensure as the DLNP Water Management Paper recommends <i>"effective future water management in Dorset through integrated catchment partnership delivery</i>". Action: Consider the DLNP Water Management Paper in preparing the implementation and monitoring plan to mitigate the impact of development. There is an opportunity to work with the catchment partnership to ensure joined up offsetting projects.
	Flood defences should work with nature and enhance the environment	

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Environment Agency	 Adopt soft engineering solutions as a first and preferred option Development should not result in increased nutrient loads. Have no objections or concerns to make in regards to the document submitted, as have been involved in the evidence base and discussion lead up to the draft document. Point out an inconsistent approach to kg or tonnes unit for 0.000875. Given the pressures and demands on CIL, this will need to be appropriately monitored through the annual monitoring programme. 	 Reference to units is noted Delivery of mitigation through S106 and CIL will be closely monitored and reported on annually. Action required: Amend incorrect reference to units
Grainger	 Support in principle for a planning mechanism that seeks to ensure that future development is 'nitrogen neutral'. However, the purpose of the consultation document is a little confusing, possibly because it is trying to cover such a wide range of issues. Needs clarity on: How the planning authorities will use CIL; How mitigation secured through CIL contributions will be provided before new development is occupied; What mitigation projects are being considered for each planning authority's Regulation 123 list - what balance is to be struck in practice between CIL contributions to nitrogen reduction and other key, necessary infrastructure; The application of S106 for strategic sites; How double counting of CIL/S106 will be avoided; The inherent inequality in an approach that seeks to tackle development industry related impacts whilst the largest polluter (agricultural practice) carries on unhindered; How action and spending on mitigation projects will be coordinated, monitored and reviewed; The duties applying to Wessex Water in terms of the stripping of nitrates at sewage treatment works (STWs); 	 The document highlights the options for using CIL money and how strategic sites will be expected to be nitrogen neutral. Projects will be set out in an implementation and monitoring plan to follow this SPD, and will appear in Councils Reg123 list where funding is through CIL. Delivery of mitigation through S106 and CIL will be closely monitored and reported on annually. The focus of this document is on the requirement of development to be nitrogen neutral. Measures are also being put in place by bodies in the catchment partnership to reduce nitrates from agriculture. The sewage works which are most efficient at stripping nitrogen, such as the one at Poole, produce significant amounts of CO2. Swapping one problem for another is not deemed appropriate. Action required: Remove costings from final version of SPD as they become quickly outdated. Instead refer to mitigation in tonnes of nitrogen or hectares of land. Highlight in the SPD the importance of monitoring of CIL/S106 contributions and how it has been spent securing mitigation.

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	 land out of production is desirable as a principle, but there will be some practical issues to resolve: Achieving / enforcing mitigation on a wider land holding How is land taken out of high agricultural production is managed and funded without any form of productive economic use? The cost implications of taking land out of agricultural production Promotes land at North Dorchester for a comprehensive strategic development solution could include mitigation in the form of an extensive country parkland to serve the town. 	
Inland Homes	 Support the overall principle of the strategy and consider the mitigation strategy to be sound. Supports the current planned mitigation measures which involve indirectly offsetting the impact. Recommend that other options are considered, and as a minimum, the level of contributions is subject to ongoing monitoring and review to reflect any potential savings that could be made through other delivery mechanisms Consider the RSPB's 'The Feasibility of a Nitrogen PES Scheme in the Poole Harbour Catchment' (2013), which identifies that nitrogen reduction could be achieved at significantly lower cost through changes to existing land management (such as establishment of cover crops following winter wheat production) rather than land purchase and reversion Consider other measures which may help tio reduce overall costs under the land purchase option, such as other land uses which could provide an income from the land (such as use for solar production, game rearing or other outdoor pursuits), and use of existing grant schemes. Welcome the intention to use the CIL, but caution against the use of Section 106 payments as SPD should be used only <i>"where they can"</i> 	 Agree that implementation measures should be flexible to allow for bespoke mitigation, particularly future alternative nitrogen reduction technology. Local Plan policies require strategic sites to be nitrogen neutral and the option is there for developers to choose S106 rather than CIL on these schemes, enabling developers to offer bespoke mitigation. This is a flexible approach. Therefore the SPD will not be specific in terms of mitigation requirements or S106/CIL for specific types of sites. Using CIL for grants to landowners would in principle appear easier than land purchase and reversion, but the mitigation has to be secured in perpetuity. Cover crops cannot achieve this but longer term woodland projects could if accompanied by a legal contract. The S106 contributions are not unfair burdens on development, but a means to help the developer achieve nitrogen neutrality and therefore secure a planning permission, which is what the purpose of SPD is for – providing certainty and enabling development. Extensions to properties do not always require planning permission, so are not liable for a contribution, which follows national guidance. Actions – Provide flexibility for S106 or CIL on sites and allow the applicant to undertake bespoke mitigation packages that can achieve nitrogen neutrality at a cheaper cost.

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	 help applicants make successful applications or aid infrastructure delivery", should not be used to "add unnecessarily to the financial burdens on development" and "should not be used to set rates or charges which have not been established through development plan policy" (NPPF/NPPG). Concerned that s106 contributions, at a cost of £956 per dwelling, will be sought on future residential planning applications which would be contrary to the policies in the NPPF and NPPG. To resolve this the SPD should provide a distinction between what would be considered a small scale infill type developments and covered by CIL payments and what would be considered to be strategic and expected to provide S106 contributions. Encourage a flexible approach is adopted if S106 contributions are sought as this could have financial viability implications on complicated sites. Recommend that consideration is given to the potential for bespoke mitigation schemes delivered by individual developments, particularly if the developer is able to deliver nitrogen offsetting at a lower cost than that set out by the SPD. Notably, under the planning permission for redevelopment of the former Pilkington Tiles, conversion of arable land to SANG to offset nitrogen was secured at a cost of £380 per dwelling rather than £956 per dwelling set out under the SPD. Concerned over the SPD's approach in dealing with the potential increased amounts of sewage arising from extensions to residential and commercial properties that are not CIL liable. There is a concern that the SPD will place an unfair requirement on developers to pay for the mitigation measures for these developments. 	
Milborne St Andrew Parish Council	• The capacity of the STW which serves this community and discharges into the Bere Stream has not kept pace with the increase in population and will require upgrading in order to be able to contribute towards achieving the reduction in nitrates being proposed.	 Wessex Water is responsible for removing 75% of nitrogen from waste water and will need to invest in STWs to ensure this target is achieved. The Councils will prepare annual monitoring reports that set out how much mitigation has been secured from development contributions (through CIL

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	 The sewage infrastructure in the village is not secure and suffers ingress of groundwater which probably adds to the overall nitrate level that the plant has to deal with. Wessex Water has partially lined sewage pipes in the village but further work will be needed. The village lies in a flood plain and when flooding occurs the STW cannot cope, leading to raw sewage entering the Stream. Wessex Water has a borehole upstream of the village which it regularly flushes to be able to pump potable water to a reservoir. The waste from this flushing process is discharged into the Bere Stream, a process which possibly adds to the nitrate level in the Stream. This will need to be investigated as the volume of water discharged is significant and creates significant disturbance to the silt in the Stream, an action which in itself releases nitrate into the water. The Parish Council feels very strongly that the revenue raised by any form of levy imposed on developers, householders or Wessex Water is used locally to reduce the problem of nitrate levels contributing to the overall level in Poole Harbour, and does not 'disappear' into a central fund with no transparent accountability. 	or S106). This funding must be used for the purpose it was required. Action: Highlight in the SPD the importance of monitoring of CIL/S106 contributions and how it has been spent securing mitigation.
National Farmers Union	 There should be some principles that guide the planning authorities and any future development in implementation: A voluntary approach Look to ensure that there is no swapping of issues from the area to another area Multiple benefits are produced by the mitigation options The nitrogen saved must be accounted for against a baseline Nitrogen savings belong to the asset and sector owner unless paid for and/ or agreed via contract as an offsetting. When the option or options are chosen there must be full consultation to ensure that they meet the principles here and have 	 Recognise the need to work together on a voluntary approach to implementation of mitigation measures - a partnership between the Councils, landowners and other bodies in the catchment. Agree with many of the suggestions for mitigation than need exploring through the preparation of an implementation and monitoring plan. In terms of banking past growth, the SPD has to mitigate development that has taken place since relevant local plans were adopted, and should recognise mitigation that has already taken place. For example SANGS take land out of agricultural use and this provides a double benefit to the developer, helping in mitigating both heathland and nitrate issues. Agree with comment of WPZs

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	 buy in. The list of options should include different ways of delivering nitrogen offsets combined with appropriate contracts. This together with some of the other options might produce a workable package. Explore the use of an offsetting bank as this would have the advantage of adding some flexibility to the process whilst still delivering the nitrogen savings required to a set criteria. Concerned that developers and local authorities are banking current and previous land use change as mitigation for future growth. Any changes would sit with agriculture unless otherwise agreed through some form of contract. This highlights the need for a banking process and/ or monitoring. Concerned that SANGs are being used for nitrogen offsetting as well as for its intended regulatory role of greenspace to mitigate for development pressures on existing Natura 2000 sites. Do not support option 3 for the use of Water Protection Zones. They are a last resort but crucially any savings made would be for the agricultural sector and not as a free pass for development. If Wessex Water agreed to the end of pipe solutions for options 5 and 6 then these options would deliver the necessary nitrogen savings with many additional benefits. NFU would be concerned regarding the loss of county farmland from agriculture and into forestry. County Farms represent a critical gateway into farming for young farmers. The option 9 for the creation of woodland has potential to deliver benefits but would likely need to be phased and very strategic. In addition it would have multiple benefits for water quality, biodiversity, carbon storage and recreation. Purchasing land under either option 7 or 8 would seem to be difficult 	 Note the concern about the role of County Farms This SPD is about how development addresses its Habitat Regulations and Water Framework Directive requirements, not about how the agricultural industry tackles its responsibilities around nitrogen reduction. We acknowledge a parallel process is being undertaken to address this and will refer to it in the SPD. Action: Ensure message of SPD is that implementation will be in partnership with landowners. Remove the option of a WPZ as an option for mitigating development. Ensure SPD extends beyond 2025. Refer to role agriculture is playing in tackling nitrates.

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	 and create an issue in perpetuity rather than a solution. It would also likely have an impact on land prices locally. However, it might be possible to deliver some of the needed mitigation via this route. There should be some balance which shows that farmers are taking action, e.g. Catchment Sensitive Farming. Why is the period only until 2025? Is there any possibility for an offset to be traded? Most solar farms will have a trust attached to deal with removal costs and as such it could be possible to include clauses that require the land to remain in low intensity production after the panels have been removed or for the trust to pay for suitable alternative nitrogen offsetting elsewhere. 	
Natural England	 Add a new option for innovative strategic solutions to offset nutrients through e.g. wetland establishment. Add <i>"It may be that applicants at large scale development sites or at unrelated land uses are able to propose bespoke solutions which are appropriate but are specific to their proposal. These will be considered by the authorities with advice from the Environment Agency and Natural England on a case by case basis"</i> Note perpetuity is either 80 and 125 years not 120 years as far as Natural England are aware. Clarify that recent CIL regulations limit the way S106 is collected and that the authorities may either collect contributions from small developments not required to pay CIL, through either S.111 provisions, or that they may meet the mitigation requirements from their existing CIL funds as is the case for normal CIL exempt development. The authorities should be mindful of reviewing mitigation provision in light of new local plans. 	 Agree with the suggested amendments to improve the SPD Rather than plan to 2025, the timeframe and costings will be removed and the occupancy updated to the census data. These changes will make the SPD more flexible and will not require an update every time one of the authorities changes a plan, provided the strategy of nitrogen neutrality is required. Rather than use S111 agreements, mitigation for CIL exempt developments (excluding tourism accommodation & attractions and residential institutions) will be covered by the CIL funding pot. Action: Add option for innovative strategic solutions, amend perpetuity timeframe, amend example A and use new occupancy rates for consistency

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	 to take account of emerging local plans and the fact that the Dorset Heathlands SPD uses census predictions giving an occupancy figure of 2.42 people per house. A consistent approach would avoid a situation where mitigation requirements for the same additional dwelling are calculated on different occupancy rates for two SPDs. An appendix should be added referencing the sources and assumptions made to provide suitable transparency. Natural England advise that the document should continue to provide a long term forecast of mitigation provision but should also provide a graph (as Fig 2) showing the actual and predicted cumulative housing delivery in the periods, 2011-2016, 2016-2021 etc for each authority and for the four authorities. This will aid in considerations of short term variations in delivery. Natural England advise that the authorities should make available a clear map showing the extent of the catchment where the SPD will apply, this should be at a level of detail which allows the development control function of the authority as well as applicants to see which applications require consideration and which do not. Natural England advises that the principles used in calculating nutrient offsetting in Appendix 4 are considered robust, proportionate and pragmatic. There is clear advice that the applicant may present their own evidence which provides a suitable level of flexibility. Clarify that Example A it is a worked example relating to N neutrality rather than any consideration of SANG provision. Natural England suggest that note is made that in the final paragraph that where the authorities agree a strategic facility for offsetting nutrients is available the applicant could alternatively make a suitable exertibution to available the applicant could alternatively make a suitable 	
Persimmon	The SPD lacks certainty in how its strategy will be implemented to	The SPD focusses on what developers will need to do. Further work is

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Homes South West	 deliver the mitigation. Supportive of CIL to mitigate nitrates. Where S106 is used, there could be double counting. If there are opportunities for on-site mitigation – such as taking agricultural land out of production then this must be off set against any contributions whether through CIL or 106. More attention needs to be given to agriculture as it is the greatest polluter. 	 needed with the catchment partnership to prepare an implementation and monitoring plan to secure the mitigation required by the SPD. The avoidance of double dipping, or the appearance of double dipping, will be managed through detailed monitoring. The catchment partnership is also supporting the preparation of a plan for agriculture in the catchment to reduce nitrate pollution and many projects are already being implemented Action: Highlight in the SPD the importance of monitoring of CIL/S106 contributions and how it has been spent securing mitigation.
Salmon & Trout Association	 We find the nitrate issue confusing since this consultation document relates purely to mitigation and is described as supplementary to a nitrate reduction strategy. It would be very helpful to have a single table highlighting historic nitrate trends and future targets and whether they are being achieved. Whilst it is appreciated that STWs incorporated a nitrogen stripping facility in 2009 the consultation document does not give the reader information about annual trends in the level of nitrates entering Poole Harbour over say the past 10 years. We do not believe that nitrates can be looked at in isolation and does need to be researched in relation to sedimentation. With Poole Harbour already failing environmental legislation the consultation gives no comfort as to whether it ever will. The European Commission has challenged the United Kingdom's commitment to the implementation of the of the Water Framework Directive (WFD - Directive 2000/60/EC). If the UK fails to act, the case may be referred to the Court of Justice of the EU. Rather than provide a vague overview of the NMP it would be useful to highlight what tangible progress is being / has been made to date. 	 The information requested is set out in the NMP which provides a technical background and justification for nitrogen reduction in the harbour. It recommends two approaches – a plan for reduced nitrates from agriculture and a plan for nitrogen neutral development. This SPD only deals with the latter. No action required

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	 We believe in the concept of the polluter pays. We fully understand mitigation can come at a significant cost but equally there is a cost associated with inaction. What value can you place on the environment? Not just Poole Harbour but also the river catchments. It is rightly acknowledged that the local authority is the competent authority under the Habitats Regulations. As such it has a responsibility to fully consider an environment impact assessment for all proposals impacting directly or indirectly on a designated area which falls under the Habitats Directive. 	
Savills – on behalf of a range of clients	 Question whether the main basis of the SPD is correct – that without it LPAs will be liable as competent authorities under the Habitats Regulations for the deleterious effects of the additional nitrogen loading on the harbour that results from new development? This is a fundamental question and the SPD does not set out a clear explanation of the legal basis on which the CIL and S106 implications of the SPD are to be levied. When the quantum of the additional contribution to the overall levels of pre-existing pollution is relevant and, when that additional contribution is very small, it can be considered insignificant. Question whether the policy will be effective and make a tangible difference in solving the problem? Even if the full nitrogen load of new development is avoided or offset, there will remain very significant loading from other sources, the effect of which may well be to render ineffective any measures related to new development. There is also a considerable time lag between nitrogen entering surface or ground water in the catchment and the effects of it appearing in the harbour. 	 The comments raise important questions about the principle of the mitigation, in particular the significance of the additional nitrogen loading from development when compared to the loading from agriculture. The Council has been advised through a legal paper prepared by Natural England that the contribution from development is significant and therefore requiring mitigation, without which no development could proceed and all applications would be turned down. The Councils are working with partner bodies to the Poole Harbour Catchment Initiative to ensure that nitrates are reduced from all sources and that any mitigation secured is part of a joined up strategy working with landowners. Since 2011 Councils' have required that strategic settlement extensions should be nitrogen neutral through section 106 agreements. The requirements for infill developments will be met through CIL, including those that are not CIL liable, or are exempt, such as affordable housing CIL is not linked to any specific development but can be spent anywhere on anything appropriate. CIL and S106 are the only/most appropriate funding sources for any of the options. The most likely solutions to the issue involve 'provision, improvement, replacement, operation or maintenance of infrastructure' through improvement or changes to STWs or converting agriculture to

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	 Changes to the way fertilisers are applied and slurry managed in recent years are unknown and may themselves be effective on reducing nitrates in the harbour. For hotels / boarding schools - people living here also stay in tourism accommodation / live in schools outside the catchment, which has a balancing effect. Question whether the conclusion that offsetting is the most appropriate means to address nitrogen from new developments correct? The cost structure of the SPD therefore assumes offsetting is the means by which mitigation will occur. The options are an incomplete analysis of nitrogen reduction options. Suggest the use of cover crops, catchment sensitive farming, thermal techniques to lock nitrogen into a chemical structure, slurry management, incorporating drainage, mires, reed beds, etc., the more targeted and data-driven application of nitrates, restoration of minerals sites. Recognise that there may be problems in attempting to create "conservation covenants" that bind future interested parties. Is there suitable land for offsetting and if the price of land increases then the fixed amounts required set out in the SPD will buy less land? Any land removed from intensive agricultural use, e.g. SANGS, schools, etc., should also be taken into account. Rather than the total removal of land from agricultural production, other forms of intervention may have the effect of reducing the productivity of land. Suggest creation of a "Catchment System Operator" that would be paid through levies on water bills or council tax to resolve conflicts between activities in the catchment. This would require primary 	 open space, which is precisely what happens with the Suitable Alternative Natural Green Space, an accepted form of infrastructure which co-incidentally may double up to provide nitrogen offsetting. The list on infrastructure is not exclusive. Nitrogen reduction is an intrinsic part of development on green field sites, so the development itself contributes to the requirements of nitrogen neutrality. Acknowledge that costings are soon out of date so will be removed from final version of SPD and an implementation and monitoring plan will be prepared on a regular basis in consultation with catchment partners and landowners. Agree with suggestion about boarding schools having a balancing effect and so will therefore remove residential institutions as requiring mitigation. However tourism accommodation and attractions will generate a net inmigration as this is a tourist area and this increase in population will therefore need mitigation. Action required: Remove costings from final version of SPD as they become quickly outdated. Instead refer to mitigation in tonnes of nitrogen or hectares of land. Remove example of a residential institution. Highlight in the SPD the importance of monitoring of CIL/S106 contributions and how it has been spent securing mitigation

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	legislation and be a significant intervention in the system for	
	managing water and environmental resources.	
	 managing water and environmental resources. Question whether CIL and Section 106 actually provide a workable solution or the best means of addressing the issue. Not clear that the mitigation is infrastructure and therefore capable of being delivered through CIL. The levies although relatively small would impose an additional development cost and thus be a disincentive to project delivery, which Government is advising authorities against. The Councils will need to update their list of infrastructure projects to be funded by CIL (CIL Regulation 123). Further top-slicing of CIL will mean that other infrastructure intended to be funded from CIL will lose out. For a 100sq m dwelling located in the lowest charged areas of Poole, the nitrogen mitigation would be nearly 13% of the CIL payable. The ability of CIL to actually fund the mitigation is not clear as collection rates will vary between Charging Authorities. It is unclear from the SPD what forms of development are considered necessary to require mitigation. The existing and emerging CILs in the Poole Harbour catchment area focus on residential development, on the basis that it would not be viable to chargen CIL and the forms of development. 	
	 It is not clear whether non-CIL liable developments will have to provide mitigation through S106, e.g. affordable housing. 	
	 provide mitigation through S106, e.g. affordable housing. The SPD is an opportunity to set out what infrastructure will be 	
	 tunded by CIL and from S106 Mitigation delivered on site will reduce developable area, which may affect viability. 	

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	 S106 contributions will introduce procedural complexity and delay to development in administering payments, in particular spending of no more than 5 contributions on a single mitigation project. 	
Sibbett Gregory	 We should not be doing anything to reduce the amount of land in food production, or the ability of the available land to generate increased food production. The alternatives must be given greater priority. The development industry and new home buyers cannot be expected to keep on funding requirements which should be funded by the community at large. 	 At present there is no shortage of land for food production in the UK. If there is a future shortage, it can be expected that food production would take a precedent over the state of Poole Harbour and agricultural land would be re-instated. Any offsetting mitigation will be provided by working with landowners to secure mitigation on land that is less productive and requires a large amount of nitrogen fertiliser. For example planting trees on steeply sloping fields offered up by landowners. There is no mechanism to secure such mitigation through taxation. The most direct mechanism currently available is through CIL or Section 106 Agreements to enable the grant of planning permission.
Southern Inshore Fisheries and Conservation Authority	 Supportive of the SPD generally, but the plan could support the use of aquaculture to mitigate eutrophication. Shellfish has a significant potential for fixing nitrogen and mitigating the harmful effects of future development. The plan should identify a business case to look at the opportunities for shellfish aquaculture. 	 Mitigation is regarded as preventing the problem, in this case reducing the amount of nitrogen in groundwater, streams, rivers and the harbour at source. The suggestion is a 'cure' rather than 'prevention', and would be difficult if not impossible to secure in perpetuity. No action required
Wessex Water	 Supports the aims and proposals put forward to achieve nitrogen neutrality from future residential and commercial development within the Poole Harbour Catchment. The requirements outlined in the SPD will assist in the overall aim of lowering nitrogen levels within the Harbour to achieve the necessary outcomes mandated by the Habitats Regulations and Water Framework Directive. Advocates a sustainable approach to tacking eutrophication and its effects within the catchment, focussing on the sources of the problem rather than costly, energy and chemically intensive end-of-pipe 	Agree the need for implementation to be part of a catchment wide approach to provide a joined up strategy. The implementation and monitoring plan that follows this SPD will be worked up in other bodies in the with catchment partnership. Actions required: Remove reference to water bills and costings. Make clearer reference to wider catchment partnership role and contribution development makes.

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	 treatment solutions. Moving towards nutrient neutrality for new development will become an active component of such a wider sustainable approach and will complement the investment and efforts that Wessex Water is already making, or planning to make, to reduce nitrogen levels within the catchment. Data and costings on which the SPD is based arise from information. 	
	supplied by WW to inform the NMP and was correct at the time of production, but may be subject to change in the intervening period and in the future.	
	• The latest source apportionment information for nitrogen demonstrates that 66% of the nitrogen arises from diffuse agricultural inputs, with only 12% from STWs.	
	 Recommend Option 5 is reworded to "Improve the discharge quality at Poole STW to 5 mg/l". 	
	• Emphasise that any increase in future water bills would need to be considered as part of future water industry Price Review processes and would be subject to discussion and agreement with OFWAT and the Secretary of State.	
	 It should be more clearly emphasised that Options 2 & 3 are nil cost options only for developers, but will involve significant costs to other sectors. Options 5 & 6 should include a footnote indicating that the figures are based on costings from 2012/13. 	
	Under the National Environment Programme) for 2015-2021 Wessex Water will be completing: A nitrogon offsetting scheme in the Peole Harbour estehment	
	Already underway this involves Wessex Water catchment advisors working with farmers and landowners to deliver a 40t/yr nitrogen	
	STW. This will include agronomic advice and payments to change	

Respondent	Comment	Officer comment and Action
	 land management practices leading to a measurable decrease in nitrogen application, leaching and runoff. An obligation to install nitrogen removal at Wareham STW to meet a 15mg/l nitrogen standard by December 2021. This requirement was not foreseen at the time of the production of the Nutrient Management Plan (NMP). Recommend outcomes delivered as part of the SPD are reported to, and integrated into, Poole Harbour Catchment Initiative's wider plans and future programmes to ensure stakeholder awareness and maximise opportunities for joint working and achieving multiple beneficial outcomes. There will be a need for a clear coordination and auditing strategy that covers all partners involved with nitrogen reductions in the catchment. There is a potential risk of overlap or double counting when deployment of nitrogen offsets are being initiated through the SPD, by Wessex Water and other farmers/land managers involved with the diffuse pollution reduction plan. 	
Woodland Trust	 Pleased to see the references to the role of trees & woods in reducing the effect of nitrogen on Poole Harbour. Trees and woodlands can deliver a major contribution to resolving a range of water management issues. They offer opportunities to make positive water use change whilst also contributing to other objectives, such as biodiversity, timber & green infrastructure. As well as commercial woodland, there are also opportunities to create conservation woodland, for wildlife, landscape and recreation benefits and Countryside Stewardship grant aid may be available for this. Suggest the option is amended to read <i>"Provide grants for farmers to change land use to commercial and conservation woodland"</i>. Do not agree with para 29 that <i>"Option 9 is the most expensive option due to high maintenance costs"</i>. Planting certain woodland regimes can 	 Agree that if offsetting options are pursued, such as planting of trees, commercial timber or conservation woodland, the wider benefits of improved biodiversity and water management can be achieved. The costings were used in the consultation draft as a guide and further work is needed in costing up specific projects. Action: Remove costings from the SPD as they are easily outdated and through the implementation and monitoring plan the benefits of individual projects can be reviewed on a case by case basis.

Respondent	Comment	Officer comment and Action
	 offer long term management budget savings. In addition, maintenance costs can be offset against future timber income from positive woodland management. Therefore maintenance costs for woodland can vary depending on site circumstances and management intentions and are not always 'the most expensive option. Table 3 - the figures do not reflect the wider ecosystems benefits that trees can provide at the same time as contributing to nitrogen mitigation, including biodiversity, landscape recreation and health. The planting costs do not reflect possible Countryside Stewardship grant of up to £4,000 per hectare. In addition, the £200 per hectare management grant is included as a cost rather than income. We also query why a 100 year period is assumed for mitigation when nitrogen levels may well decrease over this period due to legislation and changes in farming practice. Furthermore the figures do not reflect any direct income from thinning and/or timber harvesting over the 100 years. 	

Comments from the Public:

Respondent	Comment	Officer comment and Action
Beeson, Mr K	 The SPD should consider the impact of reduced nitrogen use on food production. Consider re-directing Dorchester's effluent from the Frome to Weymouth Bay by means of a 5 mile pipeline. It may be possible to take advantage of putting high voltage cables underground in order to find cost savings. 	 At present there is no shortage of land for food production in the UK. If there is a future shortage, it can be expected that food production would take a precedent over the state of Poole Harbour and agricultural land would be re-instated. Any offsetting mitigation will be provided by working with landowners to secure mitigation on land that is less productive and requires a large amount of nitrogen fertiliser. For example planting trees on steeply sloping fields offered up by landowners. Suggestion noted No action required
Nitrogen Reduction	in Poole Harbour SPD – Consultation Responses– January 2016	20

Respondent	Comment	Officer comment and Action
Burrell, Mr T	 Simple and inexpensive technologies are on the horizon such as a new and relatively inexpensive way to treat wastewater and drainage from agricultural lands using "denitrifying bioreactors." These bioreactors use common waste products, such as wood chips, to provide a food source for naturally occurring microorganisms. The microbes convert dissolved nitrogen into harmless nitrogen gas, which is then released to the atmosphere. Denitrifying bioreactors have been integrated into agricultural fields - underground drainage pipes there remove excess water that contains excess nitrogen. By intercepting some of this drainage water, direct inputs of nitrate to surface water can be reduced. Bioreactors can operate for more than a decade without replacement of wood chips or substantive maintenance. 	 Suggestion noted. This technology, if viable, could retain the principle use of the land for production with CIL/S106 monies paying for the drainage pipes. Consideration would be needed for how the cost of maintenance is paid for over 80-120 years Action required: Include option for development to utilise alternative forms of technology to secure mitigation.
Cross, Dr M.	 Delivery organisation structure should be set up to manage nitrogen in Poole Harbour. Open monitoring system set up for the catchment area. 	 The Councils could utilise the partnership of the Poole Harbour Catchment Initiative that is already in place and oversees a number of different initiatives focussed on the harbour including nitrogen reduction from agriculture and development. This could include assessing bids for offsetting mitigation from landowners and providing grants for mitigation schemes. Similarly the partnership can continue to monitor the position, through the Environment Agency updating the NMP. No action required
Jarvis J	Will climate change affect indirect mitigation?	 Climate change may be an issue that needs monitoring to ensure that any
(by telephone)	 Will growth of algal mats be further increased by rising water temperatures? Would extremely heavy rainfalls increase the rate at which nitrogen spread on farmland is washed into the rivers and would farmers increase their use of nitrogen in these circumstances? 	 implementation of mitigation measures is effective. It is likely that the mitigation will help with adaptation to climate change, with tree planting helping to reduce surface run off, controlling temperatures, etc. No action required
Meachin, Rev C	Could fountains in the harbour like those in Cardiff Bay disperse algae?	• Fountains could serve to oxygenate the water but this is not the problem. Fountains may just serve to stir the nitrogen up, perhaps releasing more nitrogen into the water.
Nitrogen Reduction	in Poole Harbour SPD – Consultation Responses – January 2016	21

Respondent	Comment	Officer comment and Action
Williams, Mrs H.	 Issues around age of STWs to manage additional effluent are not covered in the SPD. It would not be beneficial to the local economy to take agricultural land out of production. Lower the limit on the use of nitrogen fertilisers on farmland. Housing development in the catchment should be nitrogen neutral. Developers should pay for improvements to STWs before they build. Avoiding harm to the Poole Harbour SPA/Ramsar is more important than housebuilding. Building large scale development on areas of greenbelt which have low agricultural use will increase nitrogen loading on Poole Harbour. 	 No action required At present there is no shortage of land for food production in the UK. If there is a future shortage, it can be expected that food production would take a precedent over the state of Poole Harbour and agricultural land would be re-instated. Any offsetting mitigation will be provided by working with landowners to secure mitigation on land that is less productive and requires a large amount of nitrogen fertiliser. For example planting trees on steeply sloping fields offered up by landowners. There is minimal prospect of government designating the catchment as a water protection zone, which would set limits on fertiliser usage. The STWs which are most efficient at stripping nitrogen, such as the one at Poole, produce significant amounts of CO2. Swapping one problem for another was not deemed appropriate. Implementing nitrogen stripping measures in STWs is significant and not deliverable by developers due to the sheer cost.
		 If Green Belt in the catchment of Poole Harbour is needed for development, such sites would be expected to be nitrogen neutral to be granted planning permission. No action required
Woolfe, Mrs D.	 Environmental issues associated with additional house building and population pressure are the real problem. 	 Local plans that determine future housing targets, undergo rigorous testing through sustainability appraisal and habitats regulations assessment to determine whether growth can accommodated within the environment. No action required