



Barry Farrell
The Old Chapel Bakey
Union Street
Wells
Somerset
BA5 2PU

51.209249, -2.648498

Shadow Habitat Regulation Assessment

S25-268/SHRA
January 2026

Revision 1

Prepared by :

**Southwest Environmental Limited
The Generator Quay House
Kings Wharf
The Quay
Exeter
EX2 4AN**

On behalf of :

**Barry Farrell
The Old Chapel Bakey
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Somerset
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0.0 Document Control

Date and version	January 2026 - Revision 1
Document prepared by/ and on behalf of	MR C H Canevali on behalf of Barry Farrell
Competency and experience of author	Principal Ecologist BSc (Hons)

1.0 Introduction



This document is a Shadow Habitats Regulation Assessment (SHRA) report in compliance with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended); hereafter referred to as the 'Habitats Regulations'.

This document has been prepared to assist the assessment of the potential for effects from nutrient changes caused by the proposed plan or project on the River Brue and Axe, and subsequently, the Somerset Levels and Moors RAMSAR as required by Regulation 63 of the Habitats Regulations.

Appendix A contains important background information and guidance on completing an HRA using this template and must be read in full before using this document.

The Somerset Levels and Moors RAMSAR are vulnerable to nutrient loading and are located within the Somerset Mendip (East) Council administrative area. The Site is protected by the Habitats Regulations and any proposals that could affect it requires an HRA.

This document is to be submitted to Natural England (NE) as the statutory advisor for designated nature conservation sites in England to formally request their views on the assessment under Regulation 76 of the Habitats Regulations, and specifically whether they can concur with the conclusions.



1.1 Application Overview

Site Address	The Old Chapel Bakey Union Street Wells Somerset BA5 2PU	
Proposed Development Summary	Redevelopment of existing 2 commercial units building to provide 3 residential units.	
Which catchment is your proposal in? Catchment map here	☒ Brue and Axe ☐ Parrett ☐ Tone	
Is sewage to be handled by Wastewater Treatment Works (WwTW) or a package treatment plant?	☒ WwTW	N/A
Name of WwTW (if applicable)	Wells STW	
Make and Model of PTP (if applicable)	N/A	

1.1 The HRA Process

Regulation 63 of the Habitats Regulations requires a competent authority to make an 'Appropriate Assessment' of the implications of the plan or project for that site in view of its Conservation Objectives, before deciding to undertake or give consent for a plan or project which (a) is likely to have a significant effect on a European Site (either alone or in-combination with other plans or project), and (b) is not directly connected with or necessary to the management of that site. In light of the conclusions of the assessment, the competent authority may proceed with or consent to the plan or project only after having ascertained that it will not adversely affect the integrity of the European Site.

All plans and projects should identify any possible effects early in the process and then either alter the plan or project to avoid them or introduce mitigation measures to the point where no adverse effects remain. The 'competent authority' shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned, and if appropriate, having obtained the opinion of the general public.

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The assessment of a project under the Habitats Regulations can be split into four stages as shown in **Table 1**. This template covers Screening (Stage 1) and Appropriate Assessment (Stage 2).

Table 1 - Stages of HRA

Stage	Description
Screening (Stage 1)	Assessment of the likelihood of a plan or project, alone or in-combination, having a significant effect on a European Site or its features. If a significant effect is likely, an Appropriate Assessment is required as set out in Regulation 63(1).
Appropriate Assessment (Stage 2)	A detailed consideration of the potential effects of the plan or project in relation to the Conservation Objectives for the European Site(s) to determine if there is likely to be an adverse effect on the integrity of the site (i.e. an effect that would compromise the site meeting its Conservation Objectives). If it can be demonstrated that with appropriate mitigation measures the plan or project would not give rise to an adverse effect on the integrity of a European Site, the plan or project can proceed.
Assessment of Alternative Solutions (Stage 3) <u>not covered in this template</u>	Where it cannot be demonstrated that there is no adverse effect, or there is uncertainty, the assessment would then need to consider if there were any other alternatives to the plan or project that would not give rise to adverse effects on the integrity of the European Site.
Assessment where no alternative solutions exist and where adverse impacts remain (Stage 4) <u>not covered in this template</u>	If adverse effects are still likely then the competent authority would then consider if there are any Imperative Reasons of Overriding Public Interest (IROPI), only at this stage can Compensatory Measures be considered. It is very unusual for plans or projects to be considered in Stages 3 or 4.

2.0 Guidance and Policy when Assessing the Potential Effects of a Plan or Project

The following guidance and policy must be followed when assessing the potential effects of the plan or project:

- The Habitats Regulations Assessment Handbook, DTA Publications Ltd; which includes analysis of relevant recent case law.
- Gov.uk website.

Professional advice should be sought when required in order to ensure a thorough and scientific assessment of the plan or project and its potential effects on a European Site.

In addition to the guidance noted above, a number of websites can be used to gather information on the European Sites in order to inform the assessment, in particular, the Management Plans for European Sites and Regulation 37 information. This is not an exhaustive list, however commonly used websites used include:

- Natural England (NE) website;
- MAGIC (Multi-Agency Geographic Information for the Countryside) website;
- Joint Nature Conservation Committee (JNCC) website.

2.1 A Note on Case Law Regarding the Consideration of Mitigation

With regards to recent case law (Coillte vs People Over Wind) the inclusion of plainly established and uncontroversial mitigation during Stage 1 is no longer considered appropriate. Mitigation, as considered by the Centre Européen de Coopération Juridique (CECJ) in regard to the case law, is interpreted to mean measures that are intended to avoid or reduce the harmful effects of the envisaged plan or project on the site concerned.

Consequently, any plan or project which identifies an impact on a European Site and where avoidance and mitigation is applicable will need to address these measures during Stage 2 Appropriate Assessment.

3.0 Details of the Plan or Project

3.1 Overview

Application reference number	PENDING
Applicant details	Barry Farrell Barry Farrell
Document prepared by/ and on behalf of	 Southwest Environmental Limited for Barry Farrell
Plan or Project Name	The Old Chapel Bakey
Plan or Project Location	The Old Chapel Bakey Union Street Wells Somerset BA5 2PU
European Site(s) potentially affected	Somerset Levels and Moors RAMSAR 
Component SSSI(s):	Catcott, Edington, and Chilton Moors Curry and Hay Moors King's Sedgemoor Moorlinch Shapwick Heath Southlake Moor Tealham and Tadham Moors West Moor West Sedgemoor Westhay Heath Westhay Moor Wet Moor

3.2 Plan or Project Site Location

The proposed development would see the redevelopment of an existing building and conversion into 3 residential units. Designs can be seen in **Appendix E**.

3.3 Environmental Baseline

The site is currently urban - Buildings. The site would be currently described as “urban” land use when considering categories used in the Phosphate Budget Calculator.

Hydraulic connectivity exists in the form of foul water that would be discharged to public sewers, and in turn discharge via Wells STW to waterways of the local area, which supports seasonal flow of tributaries to the Somerset Levels and Moors RAMSAR most notably, the River Axe at 850 metres to the North-East, which is connected to the Designated Sites.

3.4 Plan or Project description

The proposal would see the redevelopment of existing mixed use units building to provide 2 residential units.

Redevelopment of existing building to provide 2 separate flats (increase of 2 residential units from existing 1 units). That will not be occupied prior to the end of 2025.

Therefore the number of dwellings proposed is calculated as 2.

Drawings of the plan or project are provided in **Appendix E**.

3.5 Construction Methodology and Programme

Construction techniques will be standard. Further information is available in the document: *PROP GF.pdf*, **Appendix E**.

3.6 Operation

3.6.1 Operational Phosphorous Outputs

3.6.1.1 Before Mitigation

If the project were to continue without mitigation. Foul water from the proposed recreational use would be discharged to public sewers, and in turn discharged via Wells STW to tributaries of the River Axe.

Owing to the hydraulic connectivity of the proposal to the designated sites, this would result in a Phosphorous loading of 0.25 kgTP/yr. **Appendix D - Stage 4 - Post 2025 Annual Nutrient Budget for the site.**

This includes a 20% precautionary buffer.

Phosphorus is inherent in faeces and urine, and is also present in detergents and toothpaste. These outputs would be maintained fairly constantly during recreational use of the project.

3.6.1.2 After Mitigation

This budget of 0.25kg/year will be offset via Phosphorus Credits. The reservation of credits has been secured as seen within **Appendix G** and shall be used solely for the purpose of mitigating the impact of the development in accordance with the Council's adopted nutrient neutrality strategy.

Therefore the additional load from the development will be zero. The project will be Phosphorous Neutral.

3.6.1.2.1 Maintenance and monitoring

Maintenance and Monitoring of the credit scheme will be undertaken by Somerset County Council.

3.6.1.3 Limitations

The Phosphorous Budget Calculator used to calculate phosphorous outputs for the plan or project follows a generic 'broad-brush' approach and therefore cannot be tailored to meet specific sites or situations. This is detailed in the calculator information page which states,

"The tool has been designed so that the user is able to update the data and methods in light of any new research or understanding" and "The information supplied in this tool is for guidance purposes only and is not intended to provide an exact budget calculation due to the limitations and assumptions of the model. The user is responsible for ensuring the accuracy and completeness of all data entered, be it manually or automatically, and used by this tool."



4.0 Information about the Somerset Levels and Moors Ramsar Site

4.1 Identifying sites

European Sites that are located close to the plan or project or are linked by pathways such as hydrological connections must be identified. This report is for plans or projects potentially affecting the Somerset Levels and Moors Ramsar Site via nutrient change.

Please note that if European Sites other than the Somerset Levels and Moors Ramsar Site are identified as being linked to the project, this template alone may not be suitable, and further professional advice should be sought.

4.2 European Site Conservation Objectives and Qualifying Features

Distance and direction are measured as a straight line from the closest edge of the plan or project to the closest edge of the European Site.

The features and the conservation objectives of the Somerset Levels and Moors Ramsar Site and the potential vulnerability of the features to any effects that might arise from the plan or project are summarised in **Table 3**.

4.2.1 Somerset Levels and Moors Ramsar Site

Table 3: Characteristics of the Somerset Levels and Moors Ramsar Site (refer to Information Sheet on Ramsar Wetlands (RIS) 8 and Natural England Advice Note 9 for further information)

Name of European Site and its EU Code	Somerset Levels and Moors Ramsar EU Site Code UK11064 (914)
European Site size	6,388 ha
Description of European Site	The Somerset Levels and Moors Ramsar is one of the largest and richest areas of traditionally managed wet grassland and fen habitats in lowland UK. The majority of the site is only a few metres above mean sea level and drains through a network of ditches, rhynes, drains and rivers, between numerous small, low-lying fields and meadows. Many of the meadows have a diverse flora. Large numbers of wintering birds visit and feed on the moors during the winter months as well as significant numbers of passage waterfowl. The hydrological value of the site lies in flood water storage / desynchronisation of flood peaks and maintenance of water quality (removal of nutrients). The Ramsar site is designated for its internationally important wetland features including floristic and invertebrate diversity and consists of a series of Sites of Special Scientific Interest (SSSIs)¹⁴ within the largest area of lowland wet grassland and associated wetland habitat remaining in Britain. It covers about 35,000 ha in the flood plains of the Rivers Axe, Brue, Parrett, Tone and their tributaries. The site attracts internationally important numbers of wildfowl in winter and is one of the most important sites in southern Britain for breeding. The network of rhynes and



	ditches support an outstanding assemblage of aquatic invertebrates, particularly beetles. The designated invertebrate assemblage is outlined in the Table below.		
	The designated invertebrate assemblage associated with the Somerset Levels and Moors Ramsar		
	Scientific name	Common name	Habitat
	<i>Hydrochara caraboides</i>	Lesser silver water beetle	Shallow water, generally less than 20cm deep. This could be as a separate temporary pool that completely dries up in the summer or as a wide, shallow shelf of an otherwise permanent pool.
	<i>Bagous nodulosus</i>	Flowering rush weevil	It is understood to be a monophagous species closely associated with flowering-rush <i>Butomus umbellatus</i> .
	<i>Odontomyia angulata</i>	Orange-horned green colonel (soldier fly species)	The amphibious larvae develop amongst the wet vegetation of pools. Adults fly from June until August.
	<i>Oulema erichsoni</i>	Beetle species	Wet peat cuttings or trenches with little other vegetation.
	<i>Valvata macrostoma</i>	A minute freshwater snail species	Range of freshwater ditches in long-established aquatic habitats.
	<i>Odontomyia ornata</i>	Ornate brigadier (soldier fly species)	Grazing marsh species, larvae like slow-flowing ditches.
	<i>Stethophyma grossum</i>	Large marsh grasshopper	Found in wet, marshy locations, typically quaking acidic bogs. It was formerly known from fenland habitat, wet meadows and riverside areas.
	<i>Pteromicra leucopeza</i>	Snail-killing marsh fly species	Parasitic.
	<i>Lejops vittata</i>	Sea club-rush hoverfly	Associated with stands of <i>Scirpus maritimus</i> in grazing marsh ditches.
	<i>Cantharis fusca</i>	Soldier beetle species	Wet grassland.
	<i>Paederus caligatus</i>	Beetle species	Both larvae and adults, inhabit ecotones of water-related habitats (e.g., peat bogs, ponds, slow-flowing waters, floodplain meadows).
	<i>Hydaticus transversalis</i>	Predatory water beetle species	Most frequently associated with ditches in grazing levels that are rich in emergent and submerged macrophyte vegetation.
	<i>Dytiscus dimidiatus</i>	Diving beetle species	Occurs in ponds, ditches and open fen, usually where there is plenty of submerged and emergent vegetation.
	<i>Hydrophilus piceus</i>	Great silver water beetle	Favours late succession grazing marsh ditches.
	<i>Limnebus alula</i>	A small water beetle species	Typically occurs among moss and litter on wet mud or silt among marginal vegetation.
	<i>Laccornis oblongus</i>	Diving beetle species	Occurs mainly in standing waters of bog and marshes.
Qualifying Features of the European Site	Ramsar criteria 2 - A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.		

	- Supports 17 species of Red Data Book invertebrates. The vascular plants <i>Wolffia arrhiza</i>, <i>Hydrocharis morsus-ranae</i> and <i>Peucedanum palustre</i> are considered vulnerable by the GB Red Book Ramsar criteria 5 - A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds. - Species with peak counts in winter: 97,155 waterfowl (5 year peak mean 1998/99-2002/2003) Ramsar criteria 6 - A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird. - Qualifying Species/populations (as identified at designation) Species with peak counts in winter: - Eurasian teal, <i>Anas crecca</i>, NW Europe 21,231 individuals, representing an average of 4.2% of the population (5 year peak mean 1998/9-2002/3) - Northern lapwing, <i>Vanellus vanellus</i>, Europe - Breeding 36,580 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3) - Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in winter: - Eurasian wigeon, <i>Anas penelope</i>, NW Europe 25,759 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3) - Mute swan, <i>Cygnus olor</i>, Britain 842 individuals, representing an average of 2.6% of the population (5 year peak mean 1998/9-2002/3) - Northern pintail, <i>Anas acuta</i>, NW Europe 927 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3) - Northern shoveler, <i>Anas clypeata</i>, NW & C Europe 1,094 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/9-2002/3)
European Site Conservation Objectives ¹⁰	Site specific conservation objectives for Ramsar sites have not been published. However, the following generic Conservation Objectives for all Ramsar sites have previously been signed off by Natural England: <i>'With regard to the Ramsar Site and the wetland habitats, individual species and/or groups of species for which the site has been listed (its 'Qualifying Features'), and subject to natural change;</i> <i>Ensure that the integrity of the [Ramsar] site is maintained or restored as appropriate, and ensure that the site contributes to achieving the wise use of wetlands across the UK, by maintaining or restoring:</i> <i>The extent and distribution of qualifying habitats and habitats of qualifying species</i> <i>The structure and function of qualifying habitats and habitats of qualifying species</i> <i>The supporting processes on which qualifying habitats and habitats of qualifying species rely</i> <i>The populations of each qualifying species, and,</i>

	• <i>The distribution of each qualifying species within the site</i>. The conservation objectives for the Ramsar Site are consistent with the published conservation objectives for the Somerset Levels and Moors SPA (refer to Table 7 in Appendix H for details).
Vulnerability of the European Site	The vast majority of the ditches within the Ramsar Site and the underpinning SSSI's are classified as being in unfavourable condition, or at risk, from the effects of eutrophication caused by excessive phosphorous⁹. <u>Aquatic invertebrate assemblage</u> The designated invertebrate assemblage is sensitive to changes in water quality. Water beetles and large mouthed valve snails associated with the Ramsar are particularly dependent on the maintenance of water quality¹¹. The interest features of the Ramsar are in unfavourable condition, or at risk, due to the effects of eutrophication caused by excessive phosphates. Phosphorus levels are frequently 2-3 times higher than the target for total phosphorus set out within the Conservation Objectives underpinning the Ramsar. There is widespread evidence of biological harm linked to eutrophication, which in lowland ditch systems such as the Somerset Levels and Moors, are in the form of excessive filamentous algae growth (forming large mats on the water surface) and increasing blooms of <i>Lemna</i> species. This can adversely affect the ditch invertebrate and plant communities through a variety of mechanisms including shading, smothering and anoxia, leading to a dominance of plant species better able to deal with these conditions, with negative competitive effects on others. This can lead to a significant negative shift in habitat quality and structure, which in turn threatens the integrity of the invertebrate communities that should be specially protected under the Ramsar designation. High risk activities include: • Sewage effluent from both single dwellings (i.e. Package Treatment Plants, septic tanks) and mains Sewage Treatment Works (STW); • Changes in land use that increase the risk of pollution run-off (maize, increase in herd size etc.); • Use of fertilisers, run-off from new roads and urban environments; • Animal waste and slurries; • Industrial sources such as dairy processing plants; • Processes involving decomposition and leachate; • Peat workings; and • Processing involving the release of large volumes of tap water to the environment Due to the unfavourable condition of the Somerset Levels and Moors Ramsar resulting from excessive phosphates, if new development is identified as giving rise to additional phosphates within the hydrological catchment and left unmitigated, the development would result in a Likely Significant Effect upon the Ramsar. Therefore, developments giving rise to additional phosphates must demonstrate 'nutrient neutrality' to be permitted. <u>Migratory/wintering birds</u> The availability of an abundant food supply is critically important for adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which could affect the

	distribution, abundance and availability of prey and hence adversely affect species' populations. The nature, scale, timing and duration of some human activities can result in the disturbance of birds at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. This includes increased recreational pressure.
Identified ways in which the Qualifying Features of the European Site could be affected by the plan or project	<u>There are several main identified ways by which the qualifying features of the European Site could be affected. These are noted below.</u> <u>Aquatic invertebrate assemblage</u> The main factors considered to potentially cause loss or decline in the aquatic invertebrate assemblage of the Ramsar include: • Degradation or changes to water quality resulting from increased nutrients entering watercourses which are hydrologically linked to the Ramsar. In freshwater habitats it is often the case that the abundance of nutrients, especially phosphorus, is a key limiting factor of excessive primary productivity, particularly algae, which in turn affects habitats on which aquatic invertebrates depend. The key sources of phosphorus, commonly assessed in the form of phosphates, derive from diffuse water pollution (such as agricultural leaching) and point discharges (such as from sewage effluent) within the catchment. • Loss or degradation of ecologically supporting habitat outside the designated site due to development. <u>Migratory/wintering birds</u> The main factors considered to potentially cause loss or decline in the migratory/wintering birds of the Ramsar/SPA include: • Increased disturbance arising directly from development outside the designated site due to human activity, noise and introduced/increased levels of lighting. This includes recreational disturbance from increased visitor access. Birds respond to disturbance by engaging in activity that is energetically expensive (e.g. flying) or behaviour is affected in a way to reduce food intake (e.g. moving to a less preferred and less profitable feeding site; losing time loafing before resuming feeding). A number of studies have measured these costs and show that they sometimes can be considerable¹². • Loss or degradation of ecologically supporting habitat outside the designated site due to development.

5.0 Stage 1 - Screening of the Plan or Project

5.1 Likelihood of Significant Effects alone

Stage 1 of the HRA, the screening, is a test of Likely Significant Effect (LSE) to determine whether an Appropriate Assessment is required against all impact pathways identified. The screening is done considering the proposal in isolation and therefore not in-combination with any other plans or projects. It is also done in the absence of avoidance or other mitigation measures. Note that the assessment is made with awareness of the conservation objectives for the features of the European Site, however the actual assessment of the plan or project against the conservation objectives is not required until the Appropriate Assessment (Stage 2).

5.1.2 Potential Impact Pathways

The proposed development will result in an increase in phosphate loading within the hydrological catchment of the RAMSAR, through the production of wastewater/slurry during construction or operation, potentially leading to degradation of habitat or changes in water quality.

The proposed development could result in species mortalities and injuries e.g. through pollution incidents during wet weather to the adjacent watercourse.

The increased phosphorous input could lead to eutrophication of the watercourse and connected waterbodies during construction or operation.

5.1.3 Likely Significant Effects

We would consider the receptor to be of high vulnerability.

Risk to the receptor will be present during the operational phase of the development.

The geographical extent has potential to be considerable, if mitigation is not maintained.

There is a potential net gain of phosphorous due to the plan or project, with an impact pathway to the RAMSAR Site although there will not be a Likely Significant Effect on the site integrity. This net phosphorous due to the plan or project when assessed alone, is unlikely to be measurable. Contributions from the project when assessed alone would not impact on the current position of Natural England on the unfavourable condition of the Somerset Levels and Moors RAMSAR Site (refer to **Appendix A** for more information).

However, there are potential cumulative impacts that are assessed in subsequent chapters.

Table 4: Potential effects of the plan or project alone on the Somerset Levels and Moors

Qualifying Feature	Relevant conservation objectives	Potential impact pathway	Likely Significant Effect alone
1	2	3	4
European Site: Somerset Levels and Moors Ramsar (5800 metres East)			
Ramsar criteria 2 - A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities. Supports 17 species of Red Data Book invertebrates. The vascular plants <i>Wolffia arrhiza</i>, <i>Hydrocharis morsus-ranae</i> and <i>Peucedanum palustre</i> are considered vulnerable by the GB Red Book	Ensure that the integrity of the Ramsar site is maintained or restored as appropriate, and ensure that the site contributes to achieving the wise use of wetlands across the UK, by maintaining or restoring; - The extent and distribution of qualifying habitats and habitats of qualifying species - The structure and function of qualifying habitats and habitats of qualifying species - The supporting processes on which qualifying habitats and habitats of qualifying species rely - The populations of each qualifying species, and, - The distribution of each qualifying species within the site	The proposed Development will result in an increase in phosphate loading that if enters the hydrological catchment of the Ramsar, through the production of wastewater/slurry during operation, potentially leading to degradation of habitat or changes in water quality.	There is an impact pathway and significant effects that cannot be ruled out. <u>If Appropriate Mitigation is Not Secured</u>
Natural England is satisfied that additional nutrients from typical new developments are unlikely, either alone or in-combination, to have a likely significant effect on the internationally important bird communities for which the site is designated (and the bird communities come under criteria 5 and 6). Refer to Appendix A for more information.			
Screening Decision of the Plan or Project Alone			
The issue is not with a single project. It lies with cumulative impacts. However, if this and other projects are made to be Phosphorous Neutral then over outcome to the receptor should not be detrimental. The risk of Likely Significant Effects on the Somerset Levels and Moors Ramsar Site from the application cannot be ruled out, and therefore an Appropriate Assessment (Stage 2) is required.			
Limitations We cannot comment on the efficacy of the phosphorous budget calculator, as we are not privy to the mathematics used therein. However, having compared various calculation methods from across the UK, we are reasonably confident the result is representative, and that the precautionary buffer of 20% adequately accounts for any uncertainties.			

Within the HRA process it would be normal to carry out an in-combination assessment at screening stage, should a conclusion of no Likely Significant Effect be reached. However, the position adopted by Natural England means that if there is an increase in phosphorous due to the project, then a conclusion of no Likely Significant Effect should not be reached.

6.0 Stage 2 - Appropriate Assessment

6.1 Appropriate Assessment of the plan or project alone

Where screening in **Table 4** has determined that the plan or project may have a likely significant effect on the Somerset Levels and Moors RAMSAR site alone, an Appropriate Assessment is required. The Appropriate Assessment is detailed in **Table 5** and **Table 6**.

6.1.1 Assessment of Potentially Adverse Effects Without Additional Mitigation

If phosphorous is produced (and not mitigated against), then there will be an adverse effect on the Ramsar site integrity.

The Nutrient Neutrality Budget Calculator for the Somerset Levels and Moors Ramsar has been used to calculate the total quantity of phosphorous that is expected to be produced by the plan or project as seen within **Appendix D**; insert this figure into the last row of the table as indicated (as calculated in Section 3.6.1.1).

Table 5: Appropriate Assessment of the plan or project alone and in the absence of any mitigation measures

Qualifying Feature	Impact pathway	Description of impacts and adverse effects	Assessment of adverse effects in relation to conservation objectives	Can adverse effect on Somerset Levels and Moors Ramsar Site Integrity be ruled out? Yes or No
Site: Somerset Levels and Moors RAMSAR site				
Ramsar criteria 2 - A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities. Supports 17 species of Red Data Book invertebrates. The vascular plants <i>Wolffia arrhiza</i>, <i>Hydrocharis morsus-ranae</i> and <i>Peucedanum palustre</i> are considered vulnerable by the GB Red Book	The proposed development will result in an increase in phosphate loading within the hydrological catchment of the RAMSAR site, through the production of wastewater during operation, potentially leading to degradation of habitat or changes in water quality.	This will result in an increase in phosphorous (0.25/kg/yr) that if not treated, will flow into the catchment and ultimately be discharged into the RAMSAR site. Due to the sensitivity of the RAMSAR site any increase in phosphorous, this increase could cause further degradation or changes to water quality to the water bodies which support the aquatic invertebrate assemblage and vascular plants named under Annex I and Annex II.	The increase in phosphorous could adversely affect all of the conservation objectives listed for the site; it will contribute to eutrophication of water bodies and changes to water chemistry within the site, thus making it unfavourable to aquatic invertebrates, affecting the structure and function of the habitats that support both them and vascular plants named under Annex I and Annex II.	Without use of mitigation an adverse effect cannot be ruled out. BUDGETS ACCOUNT FOR NO OCCUPATION PRIOR TO END OF 2025
Total Phosphorous produced by the plan or project in the absence of mitigation (as calculated in Section 3.6.1.1 = 0.25 kgTP/yr - Appendix D - Stage 4 - Post 2025 Annual Nutrient Budget for the site.				

6.1.2 Assessment of Potentially Adverse Effects with Additional Mitigation

The Nutrient Neutrality Budget Calculator for the Somerset Levels and Moors Ramsar has been used to calculate the total quantity of phosphorous that is expected to be produced by the plan or project.

After mitigation measures are implemented (via the purchase of credits), the project can be considered Phosphorous Neutral.

Table 6: Appropriate assessment of the plan or project alone with any mitigation measures, conditions or restrictions

Qualifying Feature	Description of Adverse Effects	Can adverse effects be mitigated? Yes or No	Description of mitigation measures including how they would be applied	Can adverse effect on site integrity be ruled out?
Ramsar criteria 2 - A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities. Supports 17 species of Red Data Book invertebrates. The vascular plants <i>Wolffia arrhiza</i>, <i>Hydrocharis morsus-ranae</i> and <i>Peucedanum palustre</i> are considered vulnerable by the GB Red Book	The proposed development will result in an increase in phosphate loading within the hydrological catchment of the RAMSAR site, through the production of wastewater during operation, potentially leading to degradation of habitat or changes in water quality.	Yes.	This budget of 0.25kg/year will be offset via Phosphorus Credits. An Allocation Certificate demonstrating that sufficient phosphate credits have been allocated to this development is added within Appendix E . The Allocation Certificate has confirmed the allocation of 0.25 kg/year of phosphate credits from an approved third-party provider (Manor Farm Mendip) to fully offset the phosphate loading from this development.	Yes. There will be no net gain in Phosphorous. BUDGETS ACCOUNT FOR NO OCCUPATION PRIOR TO END OF 2025.
Total Phosphorous produced by the plan or project with mitigation (as calculated in Section 3.6.1.2) = 0.00 kg/yr.				
N.B. Negative values show phosphorous removed from the catchment, '0' shows nutrient neutrality and positive values show that more mitigation is needed.				
Total number of phosphate credits Reserved / purchased		See Section 7.0 and Appendix E		
Credit provider (Somerset Council or Approved 3rd Party provider)		☐ Somerset Council		☒ Approved 3rd Party provider
Concluding Statement of Appropriate Assessment Alone				
When considered alone, it has been determined that the proposal has no adverse effect on the integrity of the RAMSAR Site. Cumulative impacts will be avoided by ensuring the project is phosphorous neutral.				

6.2 Likelihood of Adverse Effects on Site Integrity owing to Cumulative Impacts

6.2.1 Likelihood of Adverse Effects in Combination Due to Nutrients

If nutrient neutrality is demonstrated for the project alone with mitigation in place, then there will be no adverse effect on the integrity of the RAMSAR Site due to nutrients.

Nutrient neutrality has been demonstrated for the project alone with mitigation in place and therefore there will be no adverse effect on the integrity of the Somerset Levels and Moors RAMSAR Site due to nutrients. Therefore, no in-combination assessment is required.

7.0 Conclusions

When considered alone, it has been determined that the proposal has no adverse effect on the integrity of the Somerset Levels and Moors Ramsar Site., subject to location and the mitigation identified in section 3.6.1.2 being secured in perpetuity.

An Allocation Certificate demonstrating that sufficient phosphate credits have been allocated to this development is added within **Appendix E**. The Allocation Certificate has confirmed the allocation of 0.25 kg/year of phosphate credits from an approved third-party provider (Manor Farm Mendip) to fully offset the phosphate loading from this development as calculated in the approved Nutrient Neutrality Assessment and Mitigation Strategy (2023_0096_FUL-NUTRIENT_NEUTRALITY_CALCULATIONS_AND_MITIGATION-130937 2.pdf - Environmental Gain Ltd).

Reason: To ensure the proposal achieves nutrient neutrality and does not adversely affect the integrity of the Somerset Levels and Moors Ramsar Site, in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) and to comply with Regulation 63 of the Habitats Regulations.



Appendix A

Background on Phosphorous and Planning Applications

Background on phosphorous and planning applications in Somerset West and Taunton Council

Background

In August 2020 Natural England issued an Advice Note¹⁴ (see Appendix B) to Somerset West and Taunton Council regarding the implications of the Court of Justice of the European Union CJEU case known as the “Dutch N” in relation to planning applications that may affect the Somerset Levels and Moors Ramsar and Special Protected Area (SPA) European Sites.

The ruling has resulted in greater scrutiny of plans or projects that are likely to, either directly or indirectly, increase nutrient loads to internationally important sites (i.e. Special Areas of Conservation (SACs), Special Protection Areas and Ramsar Sites) where a reason for unfavourable condition is an excess of a specific pollutant.

Natural England advised that, in light of the unfavourable condition of the Somerset Levels and Moors Ramsar Site (due to high levels of phosphorous), before determining a planning application that may give rise to additional phosphorous within the catchment, competent authorities should undertake a Habitats Regulations Assessment (HRA) proceeding to an Appropriate Assessment where a likely significant effect cannot be ruled out, even where the development contains pollution mitigation provisions.

The Appropriate Assessment must rule out any reasonable doubt as to the likelihood of an adverse impact on the integrity of the site, having regard to its conservation objectives. Permission for the plan or project may only be given if the assessment allows you to ascertain that it will not have an adverse effect on the integrity of the site.

Somerset Levels and Moors Protected Site(s)

The Somerset Levels and Moors are designated as an SPA under the Habitat Regulations 2017 and listed as a Ramsar Site under the Ramsar Convention. The Ramsar Site broadly covers the same area as the Somerset Levels and Moors SPA. While the SPA is designated for its international waterbird communities, the Ramsar Site is designated for its internationally important wetland features including the floristic and invertebrate diversity and species of its ditches, which is shared as a designated feature of the underpinning Sites of Special Scientific Interest (SSSIs). Further information relating to the unfavourable condition of the Ramsar Site and the underpinning SSSIs designated under the Wildlife & Countryside Act 1981 (as amended) is provided in Annex 1 of the Advice Note¹⁴.

¹⁴ Natural England Advice Note <https://www.somersetwestandtaunton.gov.uk/media/2434/natural-england-advice-to-lpas-on-nutrients-in-the-somerset-levels-and-moors.pdf>

In relation to the Somerset Levels and Moors SPA, based on current understanding, Natural England is satisfied that additional nutrients from typical new developments¹⁵ (as described in the Advice Note) are unlikely, either alone or in-combination, to have a likely significant effect on the internationally important bird communities for which the site is designated. On this basis, Natural England is satisfied that the effects of additional nutrients from development on the SPA can normally be screened out of further assessment.

The types of development classed as 'typical' include:

- New residential units – including tourist accommodation, gypsy sites /pitches
- Commercial developments – where overnight accommodation is provided
- Agricultural Development – additional barns, slurry stores etc. where it is likely to lead to an increase in herd size
- Anaerobic Digesters
- Possibly some tourism attractions

However, the interest features of the Somerset Levels and Moors Ramsar Site are considered unfavourable, or at risk, from the effects of eutrophication caused by excessive phosphorous. The vast majority of the ditches within the Ramsar Site and the underpinning SSSIs are also classified as being in unfavourable condition due to excessive phosphorous and the resultant ecological response. Any plan or project which has the potential to affect the features of a European Site such as the Somerset Levels and Moors Ramsar Site is required to have an HRA.

Due to the number of applications for plans or projects being received by Somerset West and Taunton Council with phosphorous outputs, an HRA template was developed.

The purpose of the HRA template is to facilitate the HRA process for applicants and decision makers; a standardised approach will facilitate its review and the decision on whether the HRA can subsequently be adopted by the competent authority.

Notes on use of the HRA Template

¹⁵ Refer to Somerset West and Taunton Council website for definition of a 'typical new development' <https://www.somersetwestandtaunton.gov.uk/planning/phosphates-on-the-somerset-levels-and-moors/>

A plan showing the boundary of the Somerset West and Taunton Council area and

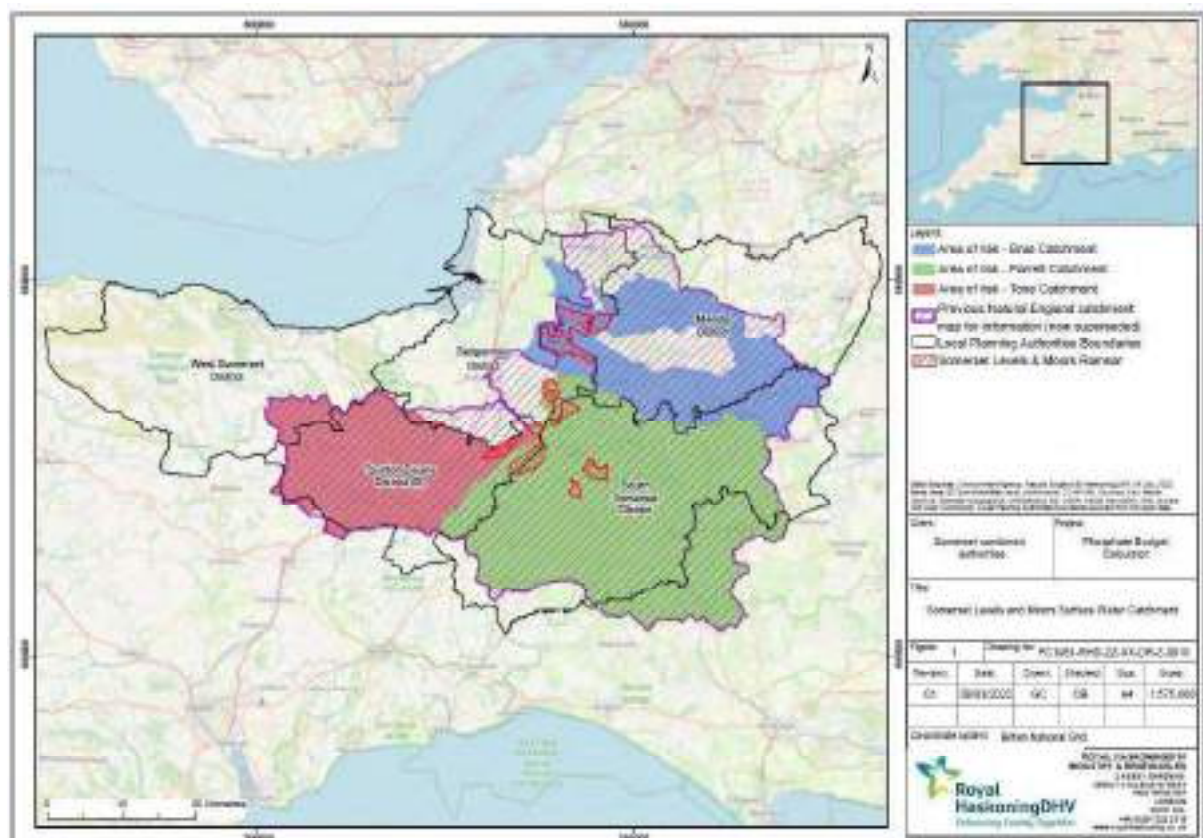
This HRA template has been developed for use by applicants of plans or projects that meet the definition of a 'typical development' (as defined in this document)*. The plans and projects should be located within the Somerset West and Taunton Council area and have the potential to affect only the Somerset Levels and Moors Ramsar Site** through risk of discharging phosphorous into its catchment area.

**Note: if the project does not fit under this classification, or is not considered straightforward, contact the Council for advice: a modified or extended version of this HRA may need to be carried out considering all European Sites.*

***Note: other European Sites are present throughout the Somerset West and Taunton Council area (for example the Severn Estuary Ramsar and SAC) and if these or any other European Site could be affected by the plan or project, a separate HRA should be prepared.*

the Somerset Levels and Moors Ramsar Site is shown in Figure 1.

Figure 1 Somerset West and Taunton Council area, river catchments and the Somerset Levels and Moors Ramsar Site



Please note the following when completing this template:

- The applicant should read all of the information and guidance in this document including Sections 1 and 2 and then start filling in the template from Section 3.
- Guidance notes in each section are provided in **green** and should be deleted after use and before submitting the template to the Council.
- For any unused appendices state 'N/A' under the appendix heading
- The Somerset West and Taunton Phosphorous Budget Calculator¹⁶ should be used to calculate phosphorous outputs. Refer to the Somerset West and Taunton Council website for further information on how to use it.
- Further subheadings may be created as appropriate under the existing sections to structure the information provided, but should not be numbered so as to preserve the existing section numbering
- When filling out tables, extra rows should be inserted as appropriate.
- Additional information may be referenced under the most relevant section and included in an Appendix (Appendices can be added as necessary as long as they are referenced in the text)
- If a section is not required, the numbered section heading should be preserved, but any guidance information and tables deleted and replaced with 'N/A'
- The template is provided for guidance purposes only, the applicant remains fully responsible for its content and for ensuring that it contains thorough, correct and scientifically accurate information.
- If the applicant is unsure of how to complete the HRA or does not possess the necessary skills and expertise to complete it accurately, they must seek professional advice.

When complete, the HRA is to be submitted to Somerset West and Taunton Council, as the competent authority under the Habitats Regulations. Natural England is the statutory nature conservation body and will be consulted at the appropriate assessment stage of the HRA process in line with statutory responsibilities¹⁷.

This template has been prepared using the guidance stated in Section 2 and has also drawn upon the HRA template available from Natural Resources Wales 'OGN 200 Form 1 Record of a Habitat Regulations Assessment of a project', Version 1.3, in particular using the same format of screening and appropriate assessment tables **and the method of colour coding impact pathways for simplicity.**¹⁸

¹⁶ Somerset Authorities Phosphorous Budget Calculator available at: https://ssccust1.spreadsheethosting.com/1/3d/08e177701b0026/Copy%20of%20P%20budget%20Calc_V3.1%20developer%20version/Copy%20of%20P%20budget%20Calc_V3.1%20developer%20version.htm

¹⁷ See: <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

¹⁸ Natural Resources Wales 'OGN 200 Form 1. Record of a Habitat Regulations Assessment of a project' Version 1.3 <https://cdn.cyfoethnaturiol.cymru/media/690578/eng-habitat-regulations-assessment.pdf>



Appendix B

Natural England Advice Note

Date: 17 August 2020



Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Dear Sir/Madam

Matters regarding development in relation to the Somerset Levels and Moors Ramsar Site

Background

Natural England is writing to your Authority regarding the implications of the CJEU case known as the “Dutch N” (Joined Cases C-293/17 and C-294/17 Coöperatie Mobilisation for the Environment UA and Others v College van gedeputeerde staten van Limburg and Others) in relation to planning applications that may affect the Somerset Levels and Moors Ramsar protected site.

Dutch-N concerns agricultural N-pollution affecting protected heathland sites. However, the general principles involved are applicable to other pollutants or other receptors – the essential point being that where the conservation status of a protected natural habitat is unfavourable, the possibility of authorising activities which may subsequently compromise the ability to restore the site to favourable condition and achieve the conservation objectives is “necessarily limited”.

The ruling has resulted in greater scrutiny of plans or projects that will result in increased nutrient loads that may have an effect on:

- Special Protection Areas (SPA) designated under the Habitat Regulations 2017
- Special Areas of Conservation (SAC) designated under the Habitat Regulations 2017
- Sites designated under the Ramsar Convention, which as a matter of national policy¹ are afforded the same protection as if they were designated under the Habitat Regulations 2017

By informing the way in which Reg. 63 of the Habitats Regulations 2017 should apply to pollution-related matters Dutch-N has resulted in the need for greater scrutiny of the effects of plans or projects that are likely to, either directly or indirectly, increase nutrient loads to internationally important sites (i.e. SACs, SPAs and Ramsar Sites) where a reason for unfavourable condition is an

¹ NPPF para. 176.

excess of a specific pollutant. Following the Dutch N ruling, the legal difficulty in authorising plans or projects that lead to further inputs of that pollutant is clear.

Somerset Levels and Moors Protected Site(s)

The Somerset Levels and Moors are designated as an SPA under the Habitat Regulations 2017 and listed as a Ramsar Site under the Ramsar Convention. The Ramsar Site broadly covers the same area as the Somerset Levels and Moors SPA. While the SPA is designated for its international waterbird communities, the Ramsar Site is designated for its internationally important wetland features including the floristic and invertebrate diversity and species of its ditches, which is shared as a designated feature of the underpinning Sites of Special Scientific Interest (SSSIs). Further information relating to the unfavourable condition of the Ramsar Site and the underpinning SSSIs designated under the Wildlife & Countryside Act 1981 (as amended) is provided at Annex 1.

In relation to the Somerset Levels and Moors SPA, based on our current understanding, Natural England is satisfied that additional nutrients from typical new developments described in this letter are unlikely, either alone or in combination, to have a likely significant effect on the internationally important bird communities for which the site is designated. On this basis, Natural England is satisfied that the effects of additional nutrients from development on the SPA can normally be screened out of further assessment.

However, the interest features of the Somerset Levels and Moors Ramsar Site are considered unfavourable, or at risk, from the effects of eutrophication caused by excessive phosphates. Further, although improvements to the Sewage Treatment Works, along with more minor measures to tackle agricultural pollution have been secured, these will not reduce phosphate levels sufficiently to restore the condition of the Ramsar Site features. The scope for permitting further development that would add additional phosphate either directly or indirectly to the site, and thus erode the improvements secured, is necessarily limited.

Listed Wetlands of International Importance under the Ramsar Convention (Ramsar) are protected as a matter of Government policy (National Planning Policy Framework paragraph 176). Therefore in line with national policy, Natural England advises that your Authority, as the competent authority under the Habitats Regulations 2017, considers the implications of these matters on the Ramsar Site through an appropriate assessment of the implications of the plan or project in view of that site's conservation objectives. Having carried out that assessment, permission for the plan or project may only be given if the assessment allows you to ascertain that it will not have an adverse effect on the integrity of the site.

Conservation Objectives for Ramsar Sites

Site specific conservation objectives for Ramsar Sites have not been published. However, the following generic Conservation Objectives for all Ramsar Sites have previously been signed off by Natural England:

“With regard to the Ramsar Site and the wetland habitats, individual species and/or groups of species for which the site has been listed (its ‘Qualifying Features’), and subject to natural change;

Ensure that the integrity of the [Ramsar] site is maintained or restored as appropriate, and ensure that the site contributes to achieving the wise use of wetlands across the UK, by maintaining or restoring;

- The extent and distribution of qualifying habitats and habitats of qualifying species
- The structure and function of qualifying habitats and habitats of qualifying species
- The supporting processes on which qualifying habitats and habitats of qualifying species rely
- The populations of each qualifying species, and,
- The distribution of each qualifying species within the site.”

The conservation objectives for the Ramsar Site should also ensure consistency with the published conservation objectives for the Somerset Levels and Moors SPA.

Implications for development within the hydrological catchment of the Somerset Levels and Moors Ramsar Site

Natural England advises that, in light of the unfavourable condition of the Somerset Levels and Moors Ramsar Site, before determining a planning application that may give rise to additional phosphates within the catchment, competent authorities should undertake a Habitats Regulations Assessment proceeding to an appropriate assessment where a likely significant effect cannot be ruled out, even where the development contains pollution mitigation provisions. Note the need for an appropriate assessment of proposals that include mitigation measures designed to avoid an adverse impact is established in domestic case law² and European case law³. The appropriate assessment must rule out any reasonable doubt as to the likelihood of an adverse impact on the integrity of the site, having regard to its conservation objectives.

It has been established that a 'nutrient neutrality' approach to development is likely to be a lawfully robust solution to enable the grant of permissions that give rise to an appreciable effect. Examples of multi authority catchment solutions include the [nutrient neutrality methodology in the Solent](#), the River Avon Local Authorities phosphorous interim delivery plan to deliver phosphate neutrality, the River Axe (Devon) Nutrient Management Plan (currently in draft) and [Nitrogen Reduction in Poole Harbour Supplementary Planning Document](#). Your authority may wish to consider this approach to enable developments to proceed in the catchment that will result in additional phosphates. It is however emphasised that for such an approach to be lawful, it is likely that the measures used to offset such impacts should not compromise the ability to restore the designated site to favourable condition and achieve the conservation objectives.

Development types affected

1. Additional residential units and commercial development

Additional residential units within the catchment are likely add phosphate to the designated site via the waste water treatment effluent, thus contributing to the existing unfavourable condition and further preventing the site in achieving its conservation objectives. Natural England therefore advises that your authority carry out an appropriate assessment of planning applications that will result in a net increase in population served by a wastewater system, including new homes, student and tourist accommodation.

Provided the competent authority is satisfied that new commercial development will not significantly increase loadings at the catchment's waste water treatment works then they may be screened out from further assessment on the basis that people living in the catchment are also likely to work and use facilities in the catchment, and therefore wastewater generated by that person can be calculated using the population increase from new homes and other accommodation.

Tourism attractions (e.g. theme parks) are normally considered exceptions as these land uses attract people into the catchment and generate additional wastewater within the Somerset Levels and Moors catchment. There may also be cases where planning applications for new commercial or industrial development could result in the release of additional phosphates into the system, for

² *Gladman Developments Limited v S of S for Housing, Communities and Local Government and another* [2019] EWHC 2001 (Admin)

³ *Sweetman vs Coillte Teoranta CJEU C-323/17* ("People over Wind")

example through processes that add phosphates, or significant volumes of additional waste water to the sewage treatment works.

Where applicable, the appropriate assessment should consider the improvements to Wessex Water's sewage treatment works secured under PR19. Once up and running these improvements will significantly reduce (although not remove) the offsetting requirements for new residential development in perpetuity. However, additional more temporary measures may be required to take account of the increased nutrient loads in the interim period.

2. Infrastructure that supports agricultural intensification

Increased agricultural intensification within the catchment of the Somerset Levels and Moors Ramsar Site will also lead to increased nutrient loading. For example, planning applications for new or expanded livestock housing (e.g. cattle sheds, chicken, or pig farm facilities, etc.) are all forms of agricultural intensification that if located within the catchment are likely to increase nutrient loads to the designated site and should be subject to an appropriate assessment.

Additional considerations relating to slurry storage

The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010, abbreviated to the SSAFO regulations, require agricultural holdings to provide storage infrastructure for silage, slurry and agricultural fuel oil to a given standards, sizes and lifespan to prevent water pollution. The size of a slurry store needed by a holding is determined by factors including the number of livestock, area of uncovered yard, presence of a separator, volumes of parlour washings etc. The installation of a new slurry store, or in some cases the enlargement of an existing slurry store, requires planning permission.

Natural England advises that when your Authority is seeking to determine applications for new or enlarged slurry stores on agricultural holdings within the catchment of the Somerset Levels and Moors Ramsar Site it should, in accordance with Reg. 63 of the Habitats Regulations 2017, consider the plan or project that underlies the application for planning permission. The need for a new slurry store will in many cases be part of a broader plan or project, namely an increase in livestock numbers on the holding in question, with the slurry store being a legally necessary means of enabling that plan or project. The grant of planning permission for a new slurry store is likely to unlock the ability to intensify the use of the holding in question.

When carrying out an appropriate assessment of this sort, Natural England advises that a competent authority should proceed on the basis of an analysis of the added livestock capacity that a new slurry store would unlock. This principle has been established in decision making (see Torridge Council Appropriate Assessment under the Habitats Regulations of Planning Application 1/1041/2015/FULM: Land at Beckland Farm, Hartland).

3. Anaerobic digesters

Natural England has particular concerns relating to the potential impacts of additional anaerobic digester (AD) plants within the Somerset Levels and Moors catchment. AD plants require the input of organic matter, often in the form of farmyard manure and arable plant matter. Livestock and arable crops within the catchment are significant contributors to the elevated phosphate and unfavourable condition of the designated sites, in particular at locations where there are runoff pathways. New (or increased capacity) of AD is therefore likely to be driving local land use changes such as the production of maize, which is known to be a significant contributor to diffuse water pollution.

It follows that permitting new, or increasing the capacity of existing, AD plants through the grant of planning permission is likely to unlock land use change which is known to contribute phosphorous and sediment to the catchment watercourses. Natural England advises that the competent authorities should consider new or enlarged AD facilities as simply one aspect of a plan or project of land use change. In this regard, when an application for a new or extension to an existing AD plant is within (or within close proximity) to the catchment of the Somerset Levels and Moors Ramsar

Site, your authority should consider the risk that the development will indirectly increase the amount of phosphates entering the designated site. If an increase in the catchment's phosphate loads is considered likely then the implications of the proposals, along with any measures that may be implemented to alleviate that risk, should also be considered through an appropriate assessment.

4. Other development types

We have focused here on the main types of development that result in additional phosphates in the Somerset Levels and Moors catchment. There may be other types of development that fall into that bracket and we would welcome further discussion in that respect.

Mitigation options

Nutrient offsetting mitigation should be in place so as to avoid either permanent, or temporary increases in phosphate loads to the designated site and must be effective for the duration of the effect. In the case of new housing the duration of the effect is typically taken as in perpetuity, with the costs of maintaining, monitoring and enforcing mitigation calculated for a minimum of 80 – 125 years. It does not, however, follow that mitigation is not needed after that period, rather the expectation is the mitigation will continue indefinitely (e.g. through securing appropriate permanent land use change). In contrast, phosphate offsetting measures for agricultural intensification or AD plants need only be effective for the duration of the operation facilitated by the permission and therefore less permanent mitigation measures may be appropriate. Natural England would be happy to discuss potential phosphate mitigation options for different types of development in due course.

Note

This is the opinion of Natural England as statutory consultee to local planning authorities in relation to nature conservation and impacts of plans or projects on designated sites. It is up to individual planning authorities to take their own legal advice when exercising their statutory functions.

Natural England is keen to help your authority to understand the scope of the issues discussed above and to establish solutions which do not undermine the delivery of your plan policies. There are a number of mitigation measures which may be available to enable developments to proceed, whether on-site or off-site. We are also happy to engage directly with applicants on bespoke solutions through our Discretionary Advice Service.

If you have any queries relating to the advice in this letter please contact me on 07900 608072.

Yours sincerely

Simon Stonehouse, Natural England Wessex Team

Annex 1

Further information on the Somerset Levels and Moors Ramsar Site and SSSIs

The favourable condition of the ditches of the designated sites is in part dependent on the water quality within them. In freshwater habitats it is often the case that the abundance of nutrients, especially phosphorus (P), is a key limiting factor of excessive primary productivity, particularly algae. Excessive nutrients leading to such adverse biological effects is known as “hyper-eutrophication”. In lowland ditch systems such as the Somerset Levels and Moors, these effects are typified by the excessive growth of filamentous algal, particularly in the form of large mats on the water surface, and a massive proliferation of certain species of *Lemna*. This can adversely affect the ditch invertebrate and plant communities through a variety of mechanisms including shading, smothering and anoxia, leading to a dominance of plant species better able to deal with these conditions, with negative competitive effects on others. This can lead to a significant negative shift in habitat quality and structure which in turn affects invertebrate communities.

The vast majority of the ditches within the Ramsar Site and the underpinning SSSI's are classified as being in unfavourable condition due to excessive P and the resultant ecological response, or at risk from this process.

The sources of P, commonly assessed in the form of phosphates, derive from diffuse water pollution (such as agricultural leaching) and point discharges (such as from Waste Water Treatment Works) within the catchment. Phosphorus levels are frequently 2-3 times higher than the target for total phosphorus set out within the Conservation Objectives underpinning the Ramsar Site. There is widespread evidence of biological harm linked to eutrophication in the form of increasing blooms of *Lemna* and filamentous algae that are threatening the integrity of the biological communities that should be specially protected under the Ramsar designation. This view is reinforced by the Environment Agency's Water Framework Directive (WFD) assessment of water bodies across the Somerset Moors, which is that many are at significantly less than 'Good' status for phosphate. Specifically, Water Framework Directive (WFD) phosphate limits of 100µg/l are exceeded across the Somerset Levels and Moors Catchment. River catchments which lie within the wider Somerset Levels are currently classified as *Poor Ecological Status* under the WFD.

Somerset Levels and Moors Sites of Special Scientific Interest

[Catcott Edington and Chilton Moors SSSI](#) [Curry and Hay Moors SSSI](#) [King's Sedgemoor SSSI](#) [Moorlinch SSSI](#) [Shapwick Heath SSSI](#) [Southlake Moor SSSI](#) [Tealham and Tadham Moors SSSI](#) [West Moor SSSI](#) [West Sedgemoor SSSI](#) [Westhay Heath SSSI](#) [Westhay Moor SSSI](#) [Wet Moor SSSI](#)



Appendix C

Location Plan





Appendix D

Phosphorous Budget Calculator Output

Stage 1

User Inputs

Date of first occupancy:	01/01/2024
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	2
Wastewater treatment works:	Wells STW
Wastewater treatment works P permit (mg TP/litre):	2

A nutrient permit is changing for the selected WwTW as of 01/01/2025. Therefore, two nutrient budgets will be calculated for the loading before and after the 2025 WwTW permit upgrade.

Post 2025 WwTW P permit:

1

mg TP/litre

Stage 1 Calculated Loading

Post-2025 Stage 1 Nutrient Loading

Additional population	4.8	people
Wastewater by development	576	litres/day
Annual wastewater TP load	0.19	kg TP/yr

Pre-2025 Stage 1 Nutrient Loading

Annual wastewater TP load:

0.38

kg TP/yr

Stage 2

User Inputs

Catchment:	Brue and Axe
Soil drainage type:	Impeded drainage
Annual average rainfall (mm):	900.1 - 950
Within Nitrate Vulnerable Zone (NVZ):	No

Existing land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Commercial/industrial urban land	0.04	0.05
Total:	0.035	0.05

Stage 3

User Inputs

New land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Residential urban land	0.04	0.06
Total:		0.035

0.06

Stage 4

Calculated Outputs

Post-2025 Annual Nutrient Budget

The total annual phosphorus load to mitigate is:

0.25 kg TP/year

Pre-2025 Annual Nutrient Budget

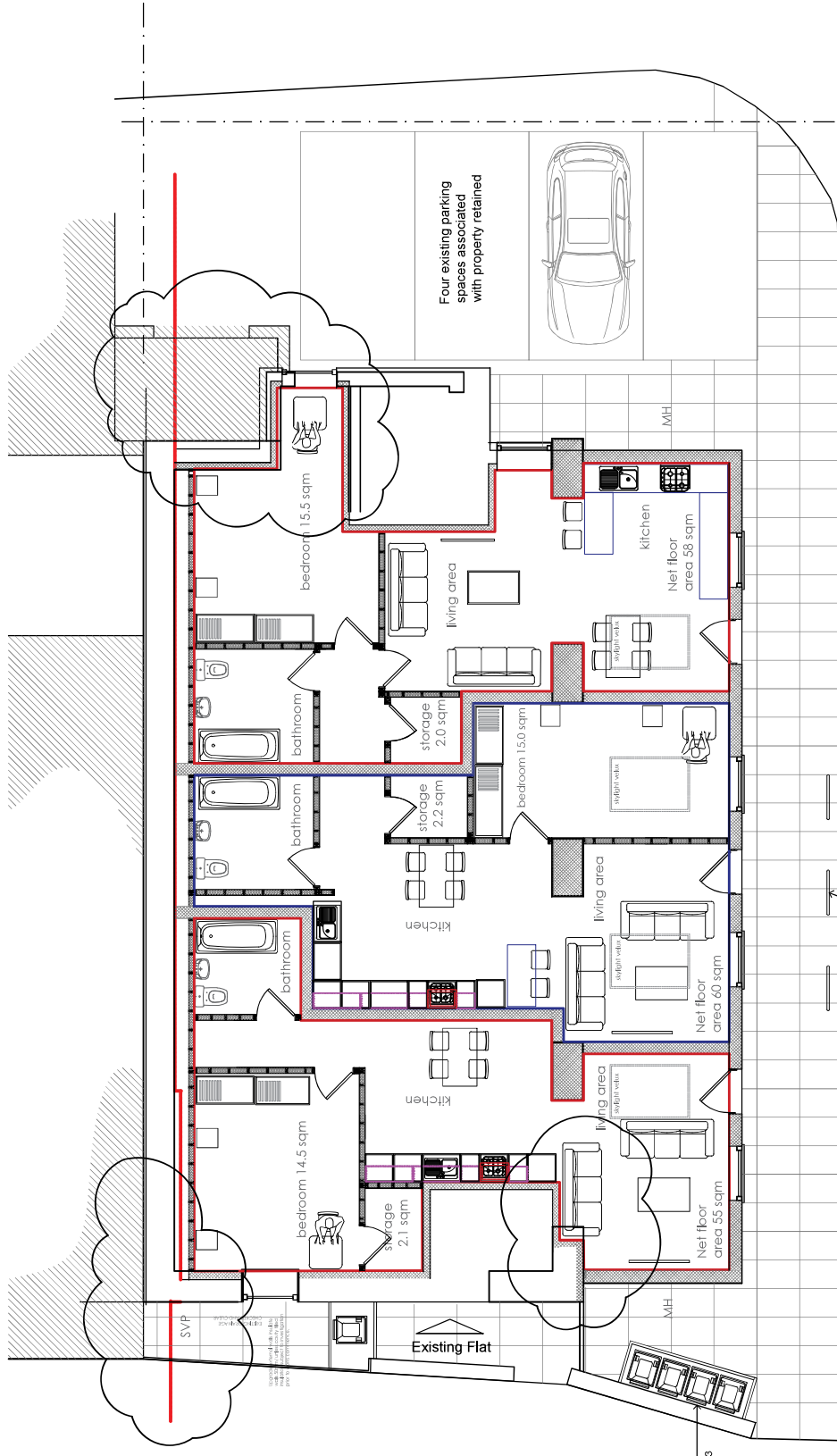
The pre-2025 annual phosphorus load to mitigate is:

0.48 kg TP/year



Appendix E

Plan and Project Details



Scale 1:100



THE OLD CHAPEL



Appendix F

Designated Sites Summary Characteristics

Somerset Levels and Moors SPA

Table 7: Summary characteristics of the Somerset Levels and Moors SPA (refer to Natural England website 'European Site Conservation Objectives for Somerset Levels & FA Moors SPA' for further information ¹⁹)

Name of European Site and its EU Code	Somerset Levels and Moors SPA EU Site Code UK9010031 (NB: The boundary of this site coincides with the Somerset Levels and Moors Ramsar Site)
European Site size	6,395 ha
Description of European Site	The Somerset Levels and Moors contain the largest area of lowland wet grassland in England: 21% of the resource. Huge flocks of migratory waterfowl arrive in winter; more than at any other inland site in the UK. Its importance is year-round as it is one of the UK's most important breeding areas for Lapwing, Curlew, Redshank and Snipe: wading birds that depend on extensively grazed wet grassland. Meadows with more than 60 species in a single field and ditches supporting a unique assemblage of rare invertebrates add to its diversity. The floodplain's surviving biodiversity is recognised by a series of statutory designations. There are 17 Sites of Special Scientific Interest reflecting the national importance of 7,300 ha for lowland wet grassland, breeding wader populations and aquatic invertebrates. Twelve of the SSSIs, covering almost 6,400 ha, have been classified as important for wintering wildfowl and designated a Special Protection Area under the EC Birds Directive. The tiers of conservation designations are completed by recognition under the Ramsar Convention that the best habitats on the floodplain are notable for rare aquatic invertebrates and wintering waterbirds, making it one of the world's premier wetlands. The accumulation of designations makes it easy to lose sight of the fact that together they cover only 12% of the area of the floodplain. While they have helped attract limited investment to protect their biodiversity, little attention and few resources are given to the remainder, optimistically known as the "wider wetland". Much of the area outside the designated sites is a farmed grassland monoculture: too dry at critical times of the year to support wetland wildlife. This does not mean that it will always be of substantially lower value for wildlife. Promoting sustainable flood management and farming practices tailored to a wetland environment would rapidly reverse past losses and provide greater protection for the SPA.
Qualifying Features of the European Site	Qualifying individual species listed in Annex I of the Wild Birds Directive (article 4.1) Non-breeding (overwintering): • A037 <i>Cygnus columbianus bewickii</i>; Bewick's swan • A140 <i>Pluvialis apricaria</i>; European golden plover Qualifying individual species not listed in Annex I of the Wild Birds Directive (article 4.2)

¹⁹ Natural England website 'European Site Conservation Objectives for Somerset Levels & Moors SPA' (includes Somerset Levels and Moors SPA Conservation Objectives Supplementary Advice 2019/03/12, Somerset Levels and Moors Conservation Objectives 2019/02/14, and Somerset Levels and Moors SPA Citation 2014/09/26). <http://publications.naturalengland.org.uk/publication/4598158654963712>

	Non-breeding (overwintering): • A052 <i>Anas crecca</i>; Eurasian teal • A142 <i>Vanellus vanellus</i>; Northern lapwing Qualifying assemblage of species (Article 4.2) • Waterbird assemblage (In addition to the Annex 1 and 2 species above the assemblage included Gadwall <i>Anas strepera</i>, Wigeon <i>Anas penelope</i>, Shoveler <i>Anas clypeata</i>, Pintail <i>Anas acuta</i>, Snipe <i>Gallinago gallinago</i> and Whimbrel <i>Numenius phaeopus</i>) NB: Since notification there has been a substantial increase in numbers. The representation of species exceeding national and international population thresholds in the assemblage has changed with eight species exceeding the international threshold (Golden Plover <i>Pluvialis apricaria</i>, Teal <i>Anas crecca</i>, Lapwing <i>Vanellus vanellus</i>, Gadwall <i>Anas strepera</i>, Wigeon <i>Anas penelope</i>, Shoveler <i>Anas clypeata</i>, Pintail <i>Anas acuta</i> and Mute Swan <i>Cygnus olor</i>), and five exceeding the national threshold (Bittern <i>Botaurus stellaris</i>, Little Egret <i>Egretta garzetta</i>, Ruff <i>Philomachus pugnax</i> and Green Sandpiper <i>Tringa ochropus</i>). Note: This SPA is ecologically linked to the Severn Estuary SPA with bird species notified as mobile qualifying features using either the inland or coastal European Sites as alternative winter feeding grounds according to the weather conditions
Names of component Site of Special Scientific Interest (SSSIs)	The SPA is comprised of 12 SSSIs located across the Somerset Levels and Moors floodplain. • Catcott Edington and Chilton Moors SSSI • Curry and Hay Moors SSSI • King's Sedgemoor SSSI • Moorlinch SSSI • Shapwick Heath SSSI • Southlake Moor SSSI • Tealham and Tatham Moors SSSI • West Moor SSSI • West Sedgemoor SSSI • Westhay Heath SSSI • Westhay Moor SSSI • Wet Moor SSSI
European Site Conservation Objectives	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and, • The distribution of the qualifying features within the site



Appendix G

Phosphate Credit Allocation

2023/0096/FUL
12/2/2024

BRUE AND AXE CATCHMENT AREA PHOSPHOROUS CREDITS CERTIFICATE OF ALLOCATION

We hereby certify that

a total of	0.25 kg/TP/yr of Credit
------------	-------------------------

has been allocated from the Phosphorous Mitigation Scheme at Manor Farm, Prestleigh, Shepton Mallet, Somerset to provide Phosphorous Mitigation for

development comprising	Convert the ground floor from Commercial (E) to Residential (C3).
on land at	The Old Chapel Bakery Union Street Wells Somerset BA5 2PU
pursuant to planning permission	2023/0096/FUL
Local Planning Authority	Somerset Council


.....
For and on behalf of Manor Farm Mendip Ltd
Dated 12th February 2024



**MANOR
FARM
MENDIP**

Manor Farm Mendip Limited, Farcet Road, Pondersbridge, Huntingdon, Cambridgeshire, PE26 2TP



**MANOR
FARM
MENDIP**

INVOICE

Manor Farm Mendip Ltd
Farcet Road, Pondersbridge
Huntingdon
PE26 2TP

Payment by 5th Feb

INVOICE #

114

DATE

23/01/2024

INVOICE TO

VAT Number

434703312

TERMS

14 days

DESCRIPTION	QTY (Kg)	PRICE/Kg	Total
Manor Farm Brue and Axe catchment phopshate credits			-
Old Chapel, Wells, 2023/0096/FUL	0.25		
Reservation Fee already paid	20%	4,000.00	
Remaining allocation fee to be paid	80%		16,000.00
			-
			-
			-
			-
			-
Thank you for your business!			
Natwest Bank			
Sort code - 01-00-85			
Account Number - 15404676			
SUBTOTAL			16,000.00
VAT			20.000%
VAT			3,200.00
TOTAL			£ 19,200.00

If you have any questions about this invoice, please contact
Angus Collett (angus.collett@bng.eco, 07971140072)



**MANOR
FARM
MENDIP**

INVOICE

Deposit

Manor Farm Mendip Ltd
Farcet Road, Pondersbridge
Huntingdon
PE26 2TP

INVOICE #

105

DATE

08/09/2023

INVOICE TO

VAT Number

434703312

TERMS

14 days

DESCRIPTION	QTY (Kg)	PRICE/Kg	Total
Manor Farm Brue and Axe catchment phopshate credits			-
Old Chapel, Wells, 2023/0096/FUL	0.25	80,000.00	20,000.00
Reservation Fee	20%	16,000.00	4,000.00
			-
			-
			-
			-
			-
			-
			-
Thank you for your business!			
SUBTOTAL			4,000.00
VAT			20.000%
VAT			800.00
TOTAL			£ 4,800.00

Natwest Bank

Sort code - 01-00-85

Account Number - 15404676

If you have any questions about this invoice, please contact
Angus Collett (angus.collett@bng.eco, 07971140072)



INVOICE



Invoice Date
26 May 2023

Invoice Number
eg23-3644

Reference
eg230081 Phosphates,
Wells

VAT Number
811280075

Environmental Gain
Limited
Unit 8
Westway Farm
Bishop Sutton
Bristol
BS39 5XP
UNITED KINGDOM

Description

Description	VAT	Amount GBP
Nutrient Neutrality Calculation and Mitigation Advice	20%	750.00
	Subtotal	750.00
	TOTAL VAT 20%	150.00
	TOTAL GBP	900.00

Due Date: 25 Jun 2023

Environmental Gain Ltd reserves the right to charge a rate of 6% above Bank of England base rate for late payment.

Please pay electronically to

Account Name: Environmental Gain Ltd: ✓

HSBC

Sort Code: 40-44-43 ✓ 33

Account No: 01673459 ✓

Should you have any queries related to this invoice please contact us at accounts@engain.com. 01225 459564

HSBC