

**(1) MARK ANTHONY MUDDIMAN AND RACHAEL
CAROLINE MUDDIMAN**

and

(2) EASTLEIGH BOROUGH COUNCIL

Planning obligation by Unilateral Undertaking under Section 106 of the Town and
Country Planning Act 1990 relating to the Land at Allington Manor Farm Barn, Allington
Lane, Fair Oak, Eastleigh, S050 7DE

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Unilateral Undertaking

under section 106 of the Town and Country Planning Act 1990

relating to development at Allington Manor Farm Barn, Allington Lane, Fair Oak, Eastleigh, SO50 7DE

THIS UNILATERAL UNDERTAKING AND DEED is given on 28th of March 2023
by:

PARTIES

- (1) **MARK ANTHONY MUDDIMAN AND RACHAEL CAROLINE MUDDIMAN** of Allington Manor Farm Barn, Allington Lane, Fair Oak, Eastleigh, SO50 7DE (the Owner); and

TO EASTLEIGH BOROUGH COUNCIL of Eastleigh House, Upper Market Street, Eastleigh, Hampshire, SO50 9YN (the Council)

BACKGROUND

- A The Council is the local planning authority for the purposes of s 106 of the 1990 Act for the area in which the Land and the Adjoining Land is situated and the local planning authority by whom the planning obligations in this Deed are enforceable.
- B The Owner is the freehold owner with title absolute of the Land and the Adjoining Land.
- C The Owner submitted the First Prior Notification Application and the Second Prior Notification Application to the Council and the Council granted the Original Prior Notification Permission and the Varied Prior Notification Permission which are subject to a Pre-Commencement Condition in accordance with the provisions of the GPDO which the Owner seeks to satisfy and discharge by the submission of this Unilateral Agreement and the performance and adherence to the obligations contained therein and this Unilateral Agreement is accompanied by a letter submitted by the Owners Planning Consultant.
- D The Owner has the benefit of planning permissions in relation to the Adjoining Land and intends that this Unilateral Undertaking and the provisions contained therein shall apply to the Land and the Adjoining Land as applicable.
- E The Owner has agreed that the Barn Development and the Adjoining Dwelling Development shall be carried out only in accordance with the obligations set out in this Undertaking.

IT IS AGREED THAT:

1 Defined Terms

- 1.1 In this Undertaking unless the context otherwise requires the following terms (arranged in alphabetical order) shall have the following meanings:

the 1990 Act means the Town and Country Planning Act 1990 (as amended)

Adjoining Dwelling means the existing dwelling on the Adjoining Land known as Allington Manor Farm, Allington Lane, Fair Oak, Hampshire, SO50 7DE shown for the purposes of identification coloured blue on the Plan

Adjoining Dwelling Development	means the development of the Adjoining Land for erection of 1no. five-bedroom detached dwelling following demolition of the Adjoining Dwelling and outbuildings Allington Manor Farm Allington Lane West End (subject to conditions)
Adjoining Dwelling First Permission	means the permission dated 2 nd November 1989 for the erection of a dwelling following demolition of existing at Allington Manor Farm Allington Lane West End of planning permission 31133/0 (subject to conditions) granted by the Council
Adjoining Dwelling Second Permission	means the permission dated 11 th November 2020 (planning ref F/20/88124) for the Adjoining Dwelling Development granted by the Council
Adjoining Land	means that part of the Land at Allington Lane, Fair Oak, Eastleigh registered under title number HP601638 shown for the purposes of identification edged blue on the Plan
Barn Development	means the development of the Land, being a Change of Use of Agricultural Buildings to Dwellinghouses (Class C3) in accordance with the Original Prior Notification Permission and Varied Prior Notification Permission
Drainage Certificate	means a certificate prepared by an Engineer confirming that: - • The installation of the Sewage Treatment Plant has been completed in accordance with the specification and Drainage Drawing; • the Sewage Treatment Plant is fully operational; and • The existing sewage treatment plant has been disconnected and removed
Drainage Drawing	means the drawing annexed to this deed at Annex One
Draining Management and Monitoring Plan	means the plan submitted to the Council prepared by the Engineer demonstrating how the Sewage Treatment Plant will for its lifetime be inspected, maintained and repaired so as to keep the Sewage Treatment Plant in good working order and annexed to this deed at Annex Two
The Engineer	means a suitably qualified and competent engineer being a member of the Institute of Civil Engineers as instructed by the Owner
First Prior Notification Application	means the application for planning permission for the Development submitted by or on behalf of the Owner to the Council to which the Council has allocated reference number PN/21/89866

The GPDO

The Town and Country Planning (General Permitted Development) England Order 2015

Implementation

means in respect of the relevant development as the context so permits the carrying out of any 'material operation' (as defined in s 56(4) of the 1990 Act) other than (for the purposes of this Deed and for no other purpose) operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and 'Commence Development' and 'Commenced Development' shall be construed accordingly

Index Linked

means any increase or decrease in the Retail Prices Index (excluding mortgages) (RPIx 1st April 2022) from the date of this Undertaking to the date of actual payment

Sewage Treatment Plant

means a Klargester Bioefficient +P system to be constructed in accordance with the specification and Drainage Drawing to meet the requirements set out in the Nutrients Report

Land

means the land edged Orange on the Plan registered at HM Land Registry with title number HP601637 and HP872693

New Forest Recreation Mitigation (NFRM) Contribution

means a contribution towards the NFRM project comprising measures to mitigate against likely significant adverse effects from recreational disturbance on the New Forest SPA sites as agreed by the NFRM Definitive Strategy

Nutrients Report

means the Nutrient Assessment and Budget produced by Aqua Callidus Consulting dated 26th October 2022 annexed to this deed at Annex Three

Original Prior Notification Permission

means the permission dated 31st March 2021 for Prior notification for Change of Use of Agricultural Buildings to Dwellinghouses (Class C3) under application number PN/21/89866

Owners Planning Consultant

means Wessex Planning Ltd of Meadowsweet Cottage, Morleys Lane, Ampfield, SO51 9BJ

Plan

means the plan attached to this Agreement marked 'Plan'

Planning Obligations

means those planning obligations listed at Schedule 2 being planning obligations for the purposes of Section 106 of the Act

The Pre-Commencement Condition

means the provision of Section 77 of the Conservation of Habitats and Species Regulations in so far as it relates to the mitigation of nitrates production within the Solent region

Second Prior Notification Application

means the application for planning permission for the Barn Development submitted by or on behalf of the Owner to the Council to which the Council has allocated reference number X/21/90798

Solent Recreation Mitigation Partnership (SRMP) Contribution

Means a contribution towards the SRMP project comprising measures to mitigate against likely significant adverse effects from recreational disturbance on the Solent SPA sites as agreed by the SRMP Definitive Strategy

Varied Prior Notification Permission

means the permission dated 23rd August 2021 for Variation of condition 1 (approved drawings) of the Original Prior Notification Permission (subject to conditions) granted by the Council

2 Interpretation

- 2.1 Words importing one gender shall be construed as meaning any other gender;
- 2.2 Words in the singular include the plural and vice versa;
- 2.3 References to clauses and schedules are reference to clauses and schedules within this Undertaking only;
- 2.4 A reference to a person includes a company or any legal entity.

3 Obligations and statutory powers

3.1 This Undertaking is entered into by unilateral undertaking and is a planning obligation for the purposes of s 106 of the 1990 Act and it is acknowledged by the parties that the obligations contained within it are binding on the Land and the Adjoining Land and are enforceable by the Council as local planning authority against the Owner and against their successors in title in respect of their interests in each and every part of the Land.

3.2 The Owner hereby covenants to observe and perform the Planning Obligations;

4 Land and Adjoining Land Bound

4.1 The Land and Adjoining Land is bound by the Planning Obligations.

5 Conditionality

5.1 The obligations in this Undertaking are unless otherwise specified conditional on:

5.1.1 the written approval of the Council that the Planning Obligations contained in this Undertaking satisfy or discharge the Pre-Commencement Condition in relation to the Original Prior Notification Permission and the Varied Prior Notification Permission respectively and for the avoidance of doubt in the event that this Unilateral Undertaking is not accepted by the Council as drawn it shall have no further force or effect and shall not be enforceable against any of the parties giving this Undertaking or their respective successors in title.

5.1.2 the written approval of the Council that they accept the enhanced benefit of the Nutrients

Report provisions applying to the replacement dwelling on the Adjoining Land and the Adjoining Dwelling Second Permission by virtue of the covenants by the Owner as detailed in this Unilateral Undertaking; and

5.1.3 Implementation of the earliest of:

- the Original Prior Notification Permission;
- the Varied Prior Notification Permission; and/or
- the Adjoining Dwelling Second Permission.

6 Liability

6.1 Upon parting with all or any interest in the Land or Adjoining Land no party shall have liability for the breach of any covenant or Planning Obligation in this Undertaking other than in respect of any breach by it at the time when it held such an interest.

6.2 Nothing in this Undertaking shall prohibit or limit the right to develop any part of the Land or Adjoining Land in accordance with a planning permission (other than the Original Prior Notification Permission, Varied Prior Notification Permission or the Adjoining Dwelling Second Permission) granted (whether or not on appeal) after the date of this Undertaking.

7 Indexation and interest

7.1 The Solent Recreation Mitigation Partnership (**SRMP**) Contribution and New Forest Recreation Mitigation (NFRM) Contribution if applicable shall be Index Linked.

8 Miscellaneous

8.1 This Undertaking shall be registered as a local land charge by the Council;

8.2 Notwithstanding the provisions of the Contracts (Rights of Third Parties) Act 1999 nothing in this Undertaking confers or purports to confer any right to enforce any of the terms of this Undertaking on any person who is not a party hereto;

8.3 Any notice served pursuant to this Undertaking shall be deemed to be served correctly if served to the above addresses by registered post and in the case of the Council addressed to the Executive Head of Planning and Economy and in the case of the Owner addressed to Mr and Mrs Muddiman.

8.4 This Undertaking is governed by the laws of England and Wales.

9 Costs

9.1 The Owner shall, on completion of this Undertaking, pay the Council's legal costs of £350 and a monitoring fee of £500.

This Undertaking has been executed as a deed and delivered on the date stated at the beginning of this Undertaking.

1. The first part of the report deals with the general situation of the country and the results of the survey.

2. The second part of the report deals with the results of the survey in the different regions of the country.

3. The third part of the report deals with the results of the survey in the different sectors of the economy.

4. The fourth part of the report deals with the results of the survey in the different social groups.

5. The fifth part of the report deals with the results of the survey in the different administrative regions.

6. The sixth part of the report deals with the results of the survey in the different economic sectors.

7. The seventh part of the report deals with the results of the survey in the different social groups.

8. The eighth part of the report deals with the results of the survey in the different administrative regions.

9. The ninth part of the report deals with the results of the survey in the different economic sectors.

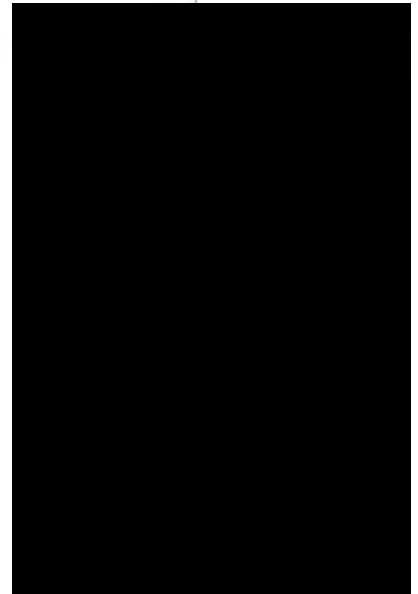
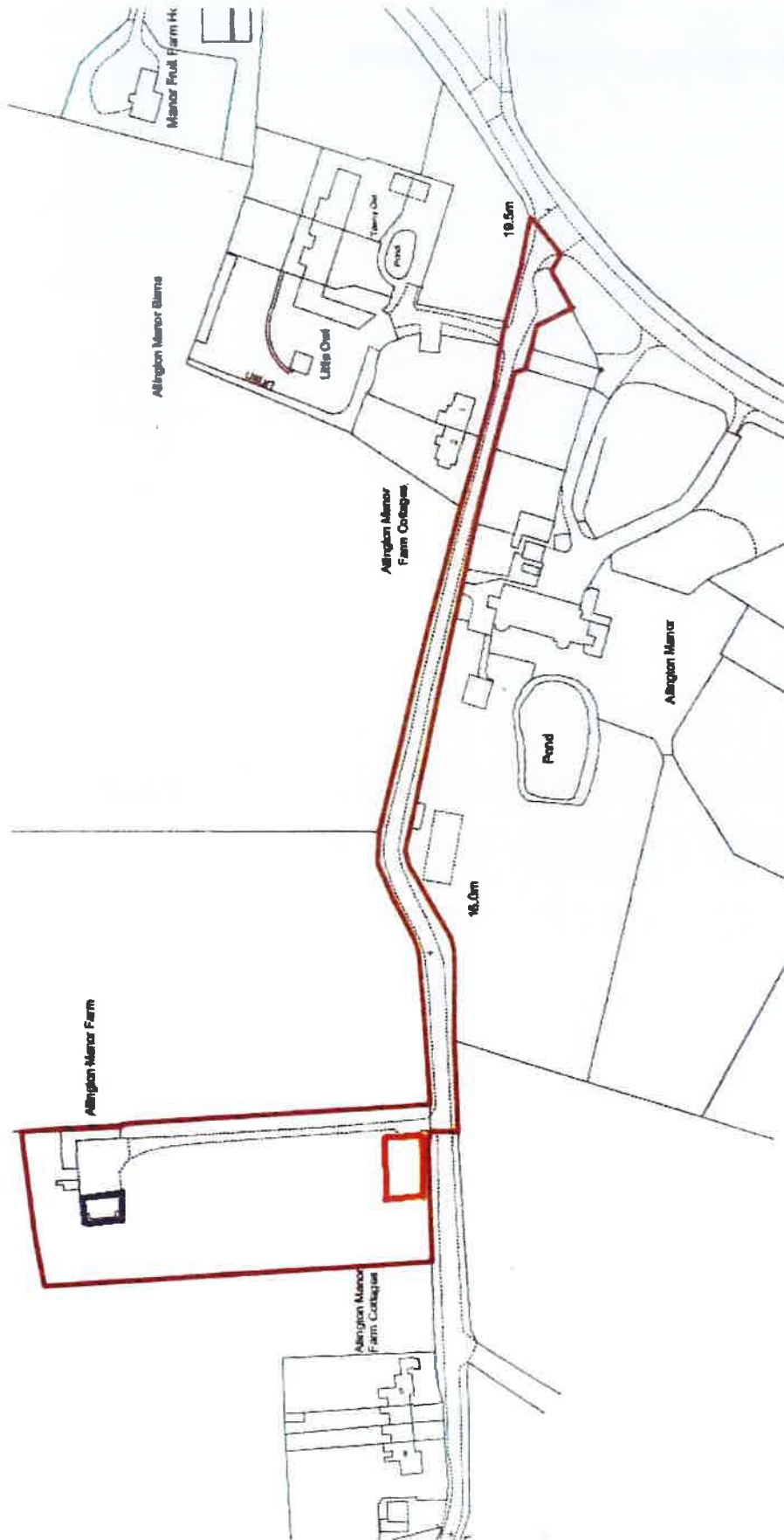
10. The tenth part of the report deals with the results of the survey in the different social groups.

**SCHEDULE 1
PLAN**

[Attach a copy of the plan showing the extent of the Land and Adjoining Land]



"Plan"



SCHEDULE 2

1 FINANCIAL CONTRIBUTIONS

- 1 The Owner hereby covenants with the Council to make the following contributions to the Council prior to occupation of the Barn Development of the Site:-
 - 1.2 To pay to the Council the relevant "Solent Recreation Mitigation Partnership (SRMP) Contribution" for each Dwelling permitted pursuant to the Planning Permission which based on the submitted Planning Application shall consist of;
 - 1.2.1 1 x £864 (Eight Hundred and Sixty-Four pounds) for a 4 bedroom or more dwelling
 - 1.3 To pay to the Council the relevant "New Forest Recreation Mitigation (NFRM) Contribution" for each Dwelling permitted pursuant to the planning permission which based on the submitted Planning Application shall consist of;
 - 1.3.1 1 x £2,200 (Two Thousand Two Hundred pounds) for a 4 bedroom or more dwelling

2. NON-IMPLEMENTATION OF EXISTANT PERMISSION RELATING TO THE ADJOINING LAND

- 2.1 The Owner submits this Unilateral Undertaking to satisfy the Pre-Commencement Condition as required by the GPDO and by way of consideration agrees and undertakes not to complete the dwelling permitted by the Adjoining Dwelling First Permission which is an extant permission relating to the Adjoining Land.

3 DRAINAGE

- 3.1 The Owner covenants to:
 - 3.1.1 install the Sewage Treatment Plant in accordance with the Drainage Management and Monitoring Plan;
 - 3.1.2 submit to the Council the Drainage Report together with evidence that each of the dwellings have a predicted mains water consumption of no more 110 litres per person per day prior to Occupation of the Barn Development and/or the Adjoining Dwelling Development;
 - 3.1.3 ensure that the Sewage Treatment Plant connects to and serves both the Barn Development and the Adjoining Dwelling Development; and
 - 3.1.3 maintain and monitor the Sewage Treatment Plant in perpetuity in accordance with the Drainage Management and Monitoring Plan.
- 3.2 The Owner covenants that in the event they Implement the Adjoining Dwelling Second Permission they will construct the development in accordance with the Nutrients Report and the Owner shall connect the replacement dwelling permitted by the Adjoining Land Second Planning Permission to the new Sewage Treatment Plant rather than utilising the existing drainage apparatus to achieve nitrate mitigation for the Barn Development. The drainage relating to the dwelling erected pursuant to the Adjoining Dwelling Second Permission shall be managed and monitored in perpetuity in accordance with Drainage Management and Monitoring Plan to maintain sufficient nitrate levels and neutrality for both sites.

4. The Owner undertakes not to occupy or permit occupation of the Barn Development until the Adjoining Dwelling Second Permission has been Commenced and the Sewage Treatment Plant has been constructed in accordance with the Nutrients Report in place of the existing sewage apparatus on the Land as approved by the Adjoining Dwelling Second Permission (and for the avoidance of doubt the Adjoining Dwelling Second Permission shall be read and construed accordingly).

5. The Owner covenants not to occupy or permit occupation of the Barn Development until all of the obligations in this Schedule 2 have been complied with.

Signed as a deed by MARK ANTHONY MUDDIMAN	[Redacted]
In the presence of:	[Redacted]
Signature of witness	[Redacted]
Name (in BLOCK CAPITALS)	[insert name] [Redacted]
Address	[insert address] Joss Legal Solutions Ltd 445 Fair Oak Road Fair Oak Eastleigh Hampshire SO50 7AJ 02380 200 606
Signed as a deed by RACHAEL CAROLINE MUDDIMAN	[Redacted]
In the presence of:	[Redacted]
Signature of witness	[Redacted]
Name (in BLOCK CAPITALS)	[insert name] [Redacted]
Address	[insert address] Joss Legal Solutions Ltd 445 Fair Oak Road Fair Oak Eastleigh Hampshire SO50 7AJ 02380 200 606

of the Board of Directors
of the Corporation
and the Board of Directors
of the Corporation
and the Board of Directors
of the Corporation

[Signature]

(a) the Board of Directors
of the Corporation
and the Board of Directors
of the Corporation
and the Board of Directors
of the Corporation

Annex One



Notes

1. Ground mounted Solar panels - details to be finalised.
2. Air source heat pump - final position TBA with the appointed specialist.
3. Dashed line represents the existing house and outbuildings to be replaced.
4. Proposed replacement dwelling.
5. Dashed lines represent the exposed foundations of the previously implemented permission.
6. Proposed new trees and planting - design TBA.
7. Proposed replacement entrance gates - details TBA.
8. Existing access track.
9. Driveway to be laid out to prevent direct views to the dwellings.



0 20 40 60M

DETAILED PLAN 1:500 @ A3.

Annex Two



Package Treatment Plant Monitoring and Maintenance Plan

Project Allington Manor Farm Barn, Fair Oak.

By Louise Cutts

Date 27 August 2022

1 Schedule of Maintenance

- 1.1 This schedule of maintenance will be carried out in perpetuity.
- 1.2 The foul drainage facilities comprising a Klargest Bioficient+P Treatment Plant will be the responsibility of the homeowner upon completion of the development and should be operated in accordance with manufacturer's recommendations and the Environment Agency's General Binding rules for Small Sewage Discharges in England.
- 1.3 The system must be installed, operated and maintained in accordance with the manufacturer's specification together with the following requirements in perpetuity.
- 1.4 The Package Treatment Plant will be checked at least once a month for signs of pollution by the homeowner. This will be completed by checking for any sewage smells, signs that sewage is not draining properly such as pooling of water around the Package Treatment Plant or drainage field.
- 1.5 Water quality testing at the outfall of the Package Treatment Plant will be undertaken every three months for the first year of operation to establish a suitable base line and ensure the plant is operating within the limits defined in the manufacturer's specification. After the first year of operation the water quality shall be tested at least once a year in perpetuity.
- 1.6 The Package Treatment Plant will be regularly emptied of sludge at a timescale no greater than once a year by a suitably qualified company and should include sampling for total nitrates and plant efficiency during annual servicing.
- 1.7 Any waste or sludge from the unit will be removed and disposed of by a suitably registered company.
- 1.8 The homeowner will be responsible for retaining records of water quality testing and any works undertaken on the Package Treatment Plant which will include any invoices, bill or receipts for any works done to empty, maintain or repair it.

2 Transfer of Ownership of Package Treatment Plant

- 2.1 If the property is sold or there is a change of ownership the responsibility of operator will pass to the new homeowner. A written notice stating that a Package Treatment Plant serves the site and a description of the wastewater system including full details of maintenance requirements in accordance with the latest Environment Agency General Binding Rules (or equivalent) must be provided.
- 2.2 Where the property is sold or there is a change of ownership / operator the following shall be provided to the persons responsible for the ongoing management and maintenance of the foul drainage system:
- A description of the treatment system and drainage system
 - The location of the main parts of the treatment system, drainage system and discharge point
 - Details of any changes made to the treatment system and drainage system
 - Details of how the treatment system and drainage system should be maintained, and the maintenance manual if there is one
 - Maintenance records
 - Water Quality Testing results
- 2.3 Where the system is replaced or decommissioned (should a connection to the foul public sewer become viable at some stage with a lower total nitrate value) the existing Package Treatment Plant should be decommissioned by an appropriately qualified person to ensure that pollutants do not enter the groundwater.

3 Repairs and Replacement of Package Treatment Plant

- 3.1 Any replacement of the Package Treatment Plant will be with a system that is equivalent or has a greater treatment efficiency than the Klargester Bioficient + P Treatment Plant (81.7%), which will apply in perpetuity.
- 3.2 Any replacement Package Treatment Plant should be supported by at least two years of recorded data to ensure that total nitrates generated from the wastewater effluent at the site are equivalent to or lower than that agreed with the original planning permission.
- 3.3 Any replacement Package Treatment Plant will also be confirmed with the Local Authorities Building Control department to ensure compliance with Building Regulations and the relevant British Standards.
- 3.4 The Package Treatment Plant will be replaced at intervals determined by the manufacturer but typically would be undertaken every 15-20 years. This should be determined by the suitably qualified and competent person undertaking the ongoing maintenance of the

Package Treatment Plant or when there is an indication that the recorded performance may be reaching / below an efficiency of 81.7%.

3.5 The Package Treatment Plant will be suitably repaired or replaced by a competent person should any of the following issues occur or be identified:

- Leaks
- Cracks in tank walls or pipes
- Blocked pipes
- Signs that the effluent is not draining properly, pools of water around the drainage point
- Sewage smells
- A failed motor
- A failed pump
- A failed electrical supply

4 Maintenance Schedule

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Check area around Package Treatment Plant / Drainage Field and foul drainage pipework for any sewage smells or signs that sewage is not drainage correctly.	Monthly or as required
	Foul water pipework – jetting / rodding	Annually
	Maintenance / Servicing by competent and suitably qualified person in accordance with manufacturers guidance and latest Environment Agency requirements.	Annually
	Sampling of total nitrates / water quality from discharge of Package Treatment Plant	Every Three Months in the first year and then Annually
Corrective Maintenance / Replacement	Repairs to Package Treatment Plant.	As required or During Annual Service.
	Repairs or replacement of components forming part of the foul drainage system or Package Treatment Plant where any leak, crack in tank wall, blocked pipe, failed motor, pump or electrical supply is identified.	As required or During Annual Service.
	Replacement of unit with a similar compliant or superior unit with a total nitrate efficiency of greater than 81.7% and in meeting latest Environment Agency and British Standard requirements.	Minimum of every 15-20 years.
	Replacement of Drainage Field	Minimum of every 25 years.

Table 1: Schedule of Regular and Corrective Maintenance

5 Maintenance Summary

Inspection / Action Required	Biobubble Unit	Water Quality Testing	Connecting foul pipework, outfall, point of discharge / soakaway	Drainage Field
Monthly	✓		✓	✓
3 Months		✓ (First Year)		
1 Year	✓	✓	✓	✓
15-20 Years	✓			
25 Years				✓

Table 2: Drainage System Maintenance Summary

Annex Three



Nutrient Assessment & Budget

Allington Manor Farm Barn Eastleigh, Hants

Reference: 22156

Issue: **Date:**

1 26/10/2022 *To NE 16/03/2022 methodology with
replacement NE calculator June 2022*

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Appendices

A	Existing & Proposed Site Layouts
B	Wastewater Treatment Information
C	Nutrient Assessment & Mitigation
D	Conditions & Limitations

1. Introduction

- 1.1 Instructions were received from Wessex Planning to undertake an assessment of the nutrient impact for the proposed conversion of a barn at Allington Manor Farm, Eastleigh, Hants to form 1 dwelling
- 1.2 This assessment has been undertaken by A P Traves BSc CEng MStructE MCiHT.
- 1.3 The client's attention is drawn to the conditions and limitations contained in Appendix D.

2. Development Description & Location

- 2.1 The site comprises a 0.21 Ha land parcel to the south of the farmhouse containing the barn and associated open yard space. The barn location is indicated on Hampshire Design Co location plan 240B-DP0-001 contained in Appendix A of this report.
- 2.2 The barn parcel is to be converted for residential use. The proposed layout is indicated on Hampshire Design Co block plan 240B-DP0-002 contained in appendix A of this report. The spatial relationship to the adjacent existing farmhouse parcel can also be seen.

3. Background to Nitrogen Nutrient Assessment

- 3.1 The background to the issue is set out in current Natural England Advice note version 5 of June 2020 -Achieving Nutrient Neutrality for New Development in The Solent Region (NEv5). Reference should be made to NEv5 for a more in depth understanding which is summarised in the following paragraphs. Reference should also be made to Natural England- Nutrient Neutrality Generic Methodology dated 1 February 2022 (NE-gen1). Whilst NE-gen1 provides update on the calculation approach NEv5 is still current as this contains the catchment specific guidance on mitigation location. NE- gen1 was issued to LPAs on 16 March 2022 inclusive of a defective NE calculator (16/3/2022). This calculator was replaced (20/4/2022) and again in June 2022 which is current.
- 3.2 The Solent water environment is internationally important and is protected under the Water Environment Regulations and the Conservation of Habitats and Species Regulations, as well as national protections. There are high levels of nitrogen and phosphorus nutrients in these waters and the evidence indicates these nutrients are causing eutrophication of the waters (excess mats of dense green algae which deplete oxygen as these subsequently decay)
- 3.3 The total nutrient content comes from a number of component parts:
 - i. Agricultural use of fertilisers, particularly in the latter half of the 20th century
 - ii. General coastal background content
 - iii. Nitrate within final discharge from sewage treatment works
 - iv. Diffuse urban rainfall runoff from urban surfaces
- 3.4 Since the late 1980's and early 1990's the agricultural sector has reduced the nitrogen content in applied fertiliser by around 35%. However, the Chalk aquifers which underly the region and which are the dominant source of river flows into The Solent contain a massive amount of legacy nitrogen mainly in the form of soluble nitrate, from decades of previous agricultural practice. It is anticipated that it will take decades from now for the nitrogen content in groundwater to gradually reduce.
- 3.5 Nitrate in treated sewage is the natural product of the breakdown of ammonia contained in human waste. Historic practice was that the permitted concentration of ammoniacal nitrogen in the treated discharge was limited so that the ammonia to nitrate conversion occurred at the treatment works and took up oxygen within the works and did not subsequently take up oxygen from out of the waters into which discharge was made to protect the receiving waters from deoxygenation ,ie that the discharge made would have a low Biological Oxygen Demand (BOD).

- 3.6 It has been recognised by the Environment Agency, water companies and OFWAT for some time that improvement of the Total Nitrogen (TN) content of discharge needs to be addressed. The water industry works in 5 year spending cycles/programmes referred to as Asset Management Plans (AMPs) and these three parties agree between them how much investment (which comes from increases in sewage bills) can be made in any AMP and what will be delivered in terms of improvement for the investment permitted (affordable). Since the beginning of AMP4 in 2005 Southern Water have begun to systematically upgrade existing treatment works to provide 'nitrogen stripping'. This process has to be artificially 'forced' by careful and continuous control of the treatment process to create a low oxygen environment which 'debonds' the oxygen from the nitrate and stimulates the emission of gaseous nitrogen into the atmosphere (which is 78% nitrogen). This nitrogen release is thus stripped from the effluent that discharges into the receiving waters. It is not practicable to strip 100% of the nitrogen from the sewage, and the upgraded treatment works typically operate to a new TN permit level of around 10 mg/L compared to typical value of around 27 mg/L for traditional works without TN permit limits.
- 3.7 Treatment works upgrades are difficult and complex to plan and deliver in the context of three of the main constraints:
- There is little space at most works for the finished new infrastructure
 - The existing works has to continue to operate during the upgrade and there is little room for this and the working space needed to construct the new infrastructure.
 - The investment cashflow is regulated by OFWAT against bill increases and notwithstanding this there are a finite number of specialists to plan and deliver this so there can only be a limited rate at which the upgrades are delivered.
- The economies of scale and immediate proximity to The Solent has dictated that it is the large coastal treatment works which have been prioritised by Southern Water in AMPs4-6 from 2005-2019. AMP7 investment and construction programme for 2020-2025 is now underway.
- 3.8 Wastewater Treatment Works (WwTW) upgrade programme is ongoing but in short it is not realistic to simply add a TN limit to existing permits as there will be no immediate change in performance of existing WwTWs. The upgrade programme will take decades to eventually deliver across the board improved TN performance.
- 3.9 The NE-gen1 methodology is aimed at planning permissions for proposed developments and does not address agricultural practice or the water industry AMP process. The NE-gen1 methodology is built off a single fundamental premise. This assumes that persons at work or using non-residential offices and commercial/retail premises must also live in the catchment. In the round this is a reasonable basis on which to look at the total sewage volume. However in zero rating commercial development from nitrogen loading it inherently means that residential developers fund the nitrogen nutrient mitigation of all non-residential commercial development in the region.
- 3.10 As set out in paragraph 3.4 there is a massive amount of largely agricultural legacy nitrogen in the Chalk aquifer below the region which forms the base flow to the rivers flowing into The Solent. The drinking water supplies in southern Hampshire are drawn from this groundwater and these rivers, and this typically contains 7-8 mg/L of nitrogen that does not stem from the proposed developments. The previous NEv2 methodology did not recognise that this represents around 85% of the nitrogen returned to the water environment from upgraded WwTWs and around 30% from traditional WwTWs. NEv5 gives a 2 mg/L allowance ie about 20% on upgraded WwTW effluent and 7% on traditional WwTW discharges. Whilst this is only partial recognition it is better that the previous NEv2 that made no recognition at all. In effect residential developers will therefore also be funding the mitigation of the unrecognised legacy nitrogen predominantly from historic agricultural practices. The 2 mg/L value is still contained within the NE-gen1 assessment spreadsheet but is no longer as transparent as it was previously.

- 3.11 Natural England nitrogen assessment methodology NE-gen1 considers nitrogen for:
- 1) Land use with regard to nitrogen contained in surface water run-off and infiltration,
 - 2) Sanitation with regard to nitrogen content in the final treated discharge from the WwTW serving the development.

The assessment compares pre and post development quantities on nitrogen for the land use (1) and sanitation (2) to establish a final figure and then adds a 20% buffer to this.

- 3.11 Natural England advise the NE-gen1 methodology is advised for all types of development that would result in a net increase in population served by a wastewater system, including new houses, student accommodation, tourism attractions and tourist accommodation.

- 3.12 The site lies within the Itchen catchment. In March 2022 Natural England added a phosphorus neutrality requirement to development affecting the freshwater fluvial Itchen catchment. Similarly to nitrogen nutrients, impact comprises (1) a land use/surface water runoff component and (2) a sanitation component. Increased phosphorus nutrient levels in these waters has potential to generate algal blooms which can reduce oxygen levels in the water and cause death of aquatic organisms. Similarly to nitrogen nutrients the two principal sources are agricultural fertilisers including a large agricultural legacy effect on the massive volumes of groundwater stored in the local Chalk aquifers which feed the local rivers; and human habitation discharges from WwTWs and PTPs.

4. Derivation of Sewage Load

- 4.1 The NEv5 methodology used a blunt 2.4 average household occupancy and 110 litres per person per day (LPD) for housing.

- 4.2 NE-gen1 now recognises that water consumption on sites varies:

- Building Regulations maximum 125 LHD
- Building Regulations higher standard 110 LHD
- Higher standard by water efficiency calculation

NE-gen1 directs that the level of proposed water usage is increased by 10 LPD *"to account for changes to less water efficient fittings through the lifetime of the development"*. This direction is contrary to the industry direction of travel, Southern Water's own water supply policies which NE recognise in their February 2022 advice note regarding water neutrality within the Sussex North Water Supply Zone and associated Frequently Asked Questions document (December 2021) in which this demonstrates explicit awareness of Southern Water's Target 100 *"to reduce water consumption in Southern Water's whole water supply area in the long term (not just Sussex North), as set out in their Water Resources Management Plan."* The evidence therefore points to a long term reduction in use NOT a long term increase.

- 4.3 There is a further fundamental error in that sewage load is less than not equal to water use. Water efficiency calculations include a 5 LPD for external use that is not returned to the sewer so does not form part of the sewage load. In water metered properties sewage bills are calculated at 95% of the water supply volume in recognition of this.

- 4.4 The calculations attached to this report have been undertaken on the basis of 110 LPD unless a water efficiency calculation has been provided to us and is attached. A +10 LPD has been added as directed by Natural England. The liability and accountability for the impact of this direction rest with Natural England as current evidence set out in 4.2 and 4.3 above indicates their current approach is unsound.

5. Wastewater Treatment Works

- 5.1 The site is remote from the public foul water sewer network.

- 5.2 The existing dwelling is served by a septic tank.

5.3 It is proposed to install new Package Treatment Plants (PTP). One to serve the foul water load from the existing dwelling and one to serve foul water load from the proposed barn conversion.

5.4 It is proposed to install new Klargester Bioficient +P treatment plant (PTPs), which have a certified performance of 11.6 mg/L TN and 0.4 mg/L TP. The associated performance certification is contained in Appendix B

6. Land Use Component

6.1 The change in land use at the barn parcel from commercial to residential will generate a small change from the land use component as a result of the proposed development.

7. Nutrient Assessment

NITROGEN

7.1 The NE-gen 1 sewage loading, PTP performance for TN and land use component are included in the calculations contained in Appendix C.

7.2 The calculations can also include the 2 mg/L allowance in water supply from NEv5 discussed in paragraph 4.41. For the awareness of the LPA the actual nitrogen content removed from the environment in the water supply from the environment but not recognised in NEv5/NE-gen1 in most cases in the Solent area is very significantly greater than the NE methodology acknowledges. The water supply at this location is however made from outside the Solent catchment so no deduction has been included.

7.3 The calculations demonstrate an existing nitrogen discharge of 9.92 KgTN/yr (unbuffered) from the existing dwelling on the current septic tank, and a post development discharge of 3.26 KgTN/yr (unbuffered) for the existing and proposed dwellings served by the proposed Klargester Bioficient +P. The proposed development would therefore yield a **net nitrogen reduction of 6.66 KgTN/yr (unbuffered)**. Application of the 20% buffer to nutrient reductions is not applicable.

PHOSPHORUS

7.4 The NE-gen 1 sewage loading, PTP performance for TP and land use component are included in the calculations contained in Appendix C.

7.5 There is no deductible allowance for TP in the water supply to the site.

7.6 The calculations demonstrate an existing phosphorus discharge of 1.22 KgTP/yr (unbuffered) from the existing dwelling on the current septic tank, and a post development discharge of 0.24 KgTP/yr (unbuffered) for the existing and proposed dwellings served by the proposed Klargester Bioficient +P. The proposed development would therefore yield a **net phosphorus reduction of 0.98 KgTN/yr (unbuffered)**. Application of the 20% buffer to nutrient reductions is not applicable.

8. Mitigation

NITROGEN

8.1 NEv5 Figure 1 subdivides the overall Solent catchment into 6 sub catchments. A copy of this Figure is contained in Appendix C.

8.2 The site lies in the Itchen subcatchment. However NEv5 paragraph 5.42 states that for discharges to the ground mitigation land should be within the same catchment at the outfall location of the PTP. The development site and proposed PTP are in the same catchment and inherently meet mitigation location requirements.

- 8.3 **The proposed development will yield a net nitrogen nutrient reduction of 6.66 KgTN/yr and the proposed development therefore exceeds the balance point to achieve neutrality and no mitigation is required.**

PHOSPHORUS

- 8.4 Whereas the Itchen and Test catchments are interchangeable with respect to nitrogen nutrient mitigation as both discharge to the Southampton Water section of the Solent as the impacted receptor, for phosphorus the receptor is the Itchen SAC which would limit a phosphorus mitigation site to the freshwater fluvial catchment of the Itchen.
- 8.5 The site lies in the Itchen subcatchment. However NEv5 paragraph 5.42 states that for discharges to the ground mitigation land should be within the same catchment at the outfall location of the PTP. The development site and proposed PTP are in the same catchment and inherently meet mitigation location requirements.
- 8.6 **The proposed development will yield a net phosphorus nutrient reduction of 0.98 KgTN/yr and the proposed development therefore exceeds the balance point to achieve neutrality and no mitigation is required.**

INFORMATIVE

- 8.7 A drainage schematic plan is contained in Appendix C.

Appendix A

MapServe

This map is a reproduction of the original map and is not a substitute for the original map. It is intended for use as a reference only and should not be used for any other purpose. The map is not to scale and is not a substitute for a professional survey. The map is not to be used for any other purpose. The map is not to be used for any other purpose.

100053143

Allington Manor Farm

Allington Manor Barns

Manor Fruit Farm House

Allington Manor
Farm Cottages

Allington Manor
Farm Cottages

Allington Manor

Allison

18.5m

18.0m

1.0m

Pond

Little Owl

Three Owl

Post



HDC

Mr & Mrs M. Muddiman
The Barn,
Allington Lane, Fair Oak
Eastleigh, SO50 7DE

LOCATION PLAN

100053143
1:25000
1:25000
1:25000

Feb 21

1. The drawings are the property of Hampshire Design and should not be reproduced without their written permission.
 2. The Client/Designer shall be made up of the Owner/Designer.
 3. The Designer shall be responsible for all the work shown on the drawings.
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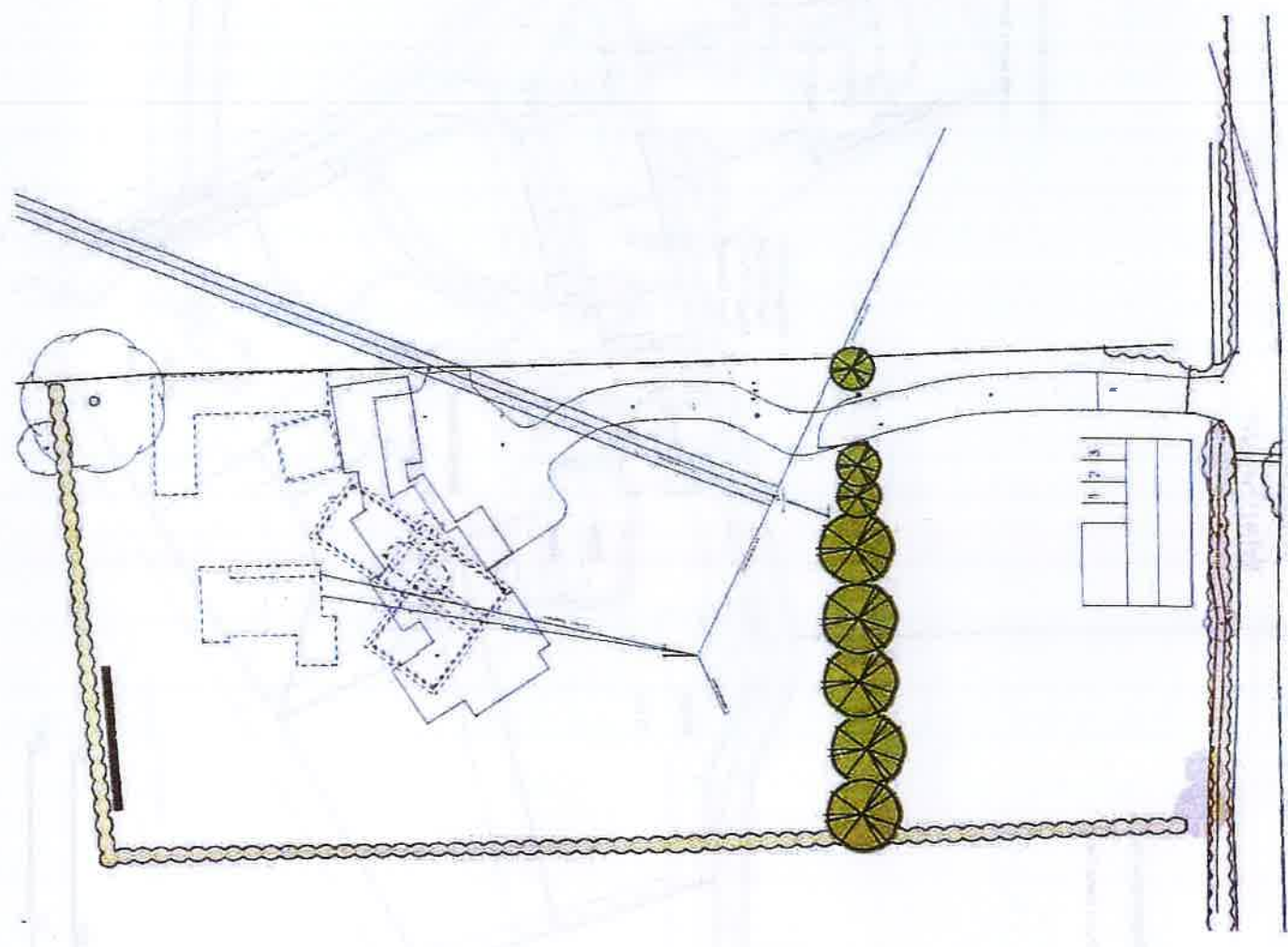


Mr & Mrs M. Middleham
 The Barn
 Allington Lane, Fair Oak
 Eastleigh, SO50 7DE

BLOCK PLAN

1:500 Scale

10/03/2010



0 20 40 M

Appendix B



Prüfinstitut für
Abwassertechnik
GmbH

PERFORMANCE RESULTS

Kingspan Environmental Limited
College Road North, Aston Clinton, Aylesbury, HP22 5EW, UK

EN 12566-3, Annex B

Small wastewater treatment systems for up to 50 PT

Small wastewater treatment system BioFicient+P
Moving-bed-biofilm reactor with phosphate precipitation

Test report PIA2016-246B46

Nominal organic daily load	0.23 kg BOD ₅ /d		
Nominal hydraulic daily load	0.75 m ³ /d		
Material	Polyethylene		
Treatment efficiency (nominal sequences)		Efficiency	Effluent
	COD	94.0 %	42 mg/l
	BOD ₅	95.1 %	15 mg/l
	N _{tot} *	81.7 %	11.6 mg/l
	NH ₄ -N*	93.0 %	2.4 mg/l
	P _{tot}	93.4 %	0.4 mg/l
	SS	94.6 %	21 mg/l
Electrical consumption	1.3 kWh/d		

*determined for temperatures $\geq 12^{\circ}\text{C}$ in the bioreactor

Performance tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
Hergenrather Weg 30
52074 Aachen, Germany

This document replaces neither the declaration
of performance nor the CE marking.



Notified Body
No. 1739



Certified according to
ISO 9001:2008



Deutsche
Akkreditierungsstelle
D-PL-17732-01-00

Prüfinstitut für Abwassertechnik GmbH
[Signature]
Geprüft - tested - teste

Elmar Lancé

May 2016

Appendix C

Development site details

Date (dd/mm/yyyy):

26/10/2022

Site Name:

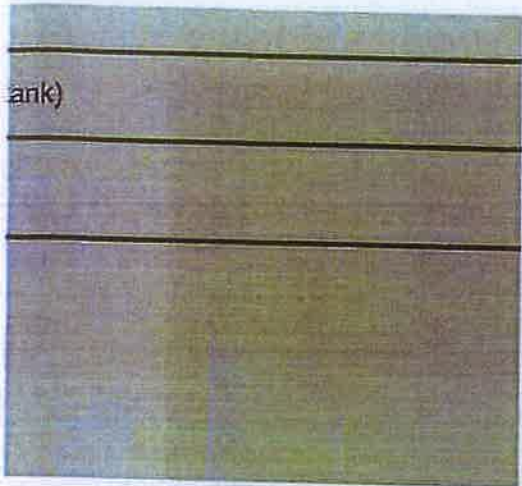
Allington Manor Farm Barn (existing septic t

Planning Application number:

V/22/93029

Site Address:

Allington Lane, Eastleigh



10/10/2014	10/10/2014
10/10/2014	10/10/2014
10/10/2014	10/10/2014
10/10/2014	10/10/2014

Stage 1

User Inputs

Date of first occupancy:	02/01/2022
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	1
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Septic Tank default
Wastewater treatment works P permit (mg TP/litre):	11.6
Wastewater treatment works N permit (mg TN/litre):	94.3

Stage 1 Calculated Loading

Stage 1 Nutrient Loading

Additional population	2.4	people
Wastewater by development	288	litres/day
Annual wastewater TP load	1.22	kg TP/yr
Annual wastewater TN load	9.92	kg TN/yr

Stage 4

Calculated Outputs

Annual Nutrient Budget

The total annual phosphorus load to mitigate is:

1.46 kg TP/year

The total annual nitrogen load to mitigate is:

11.9 kg TN/year

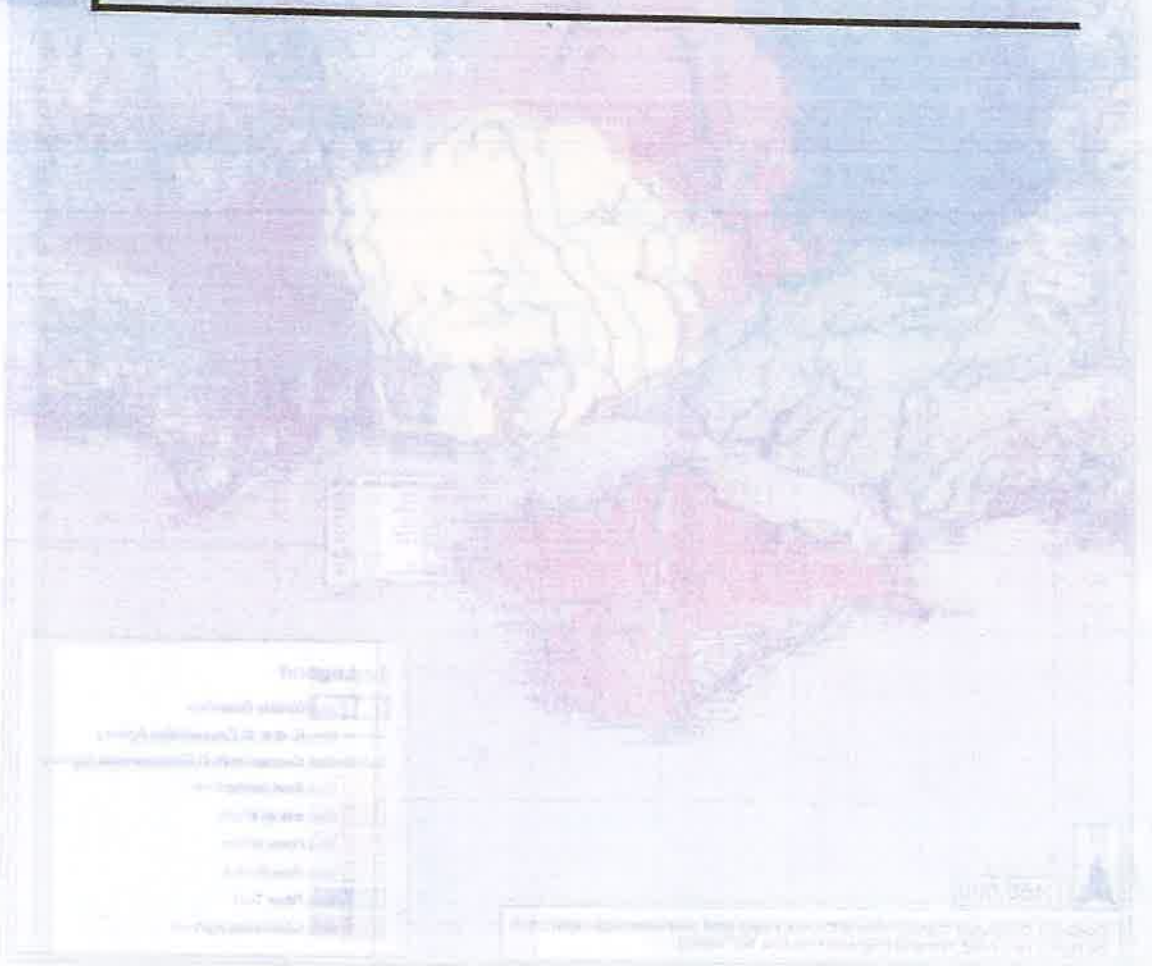
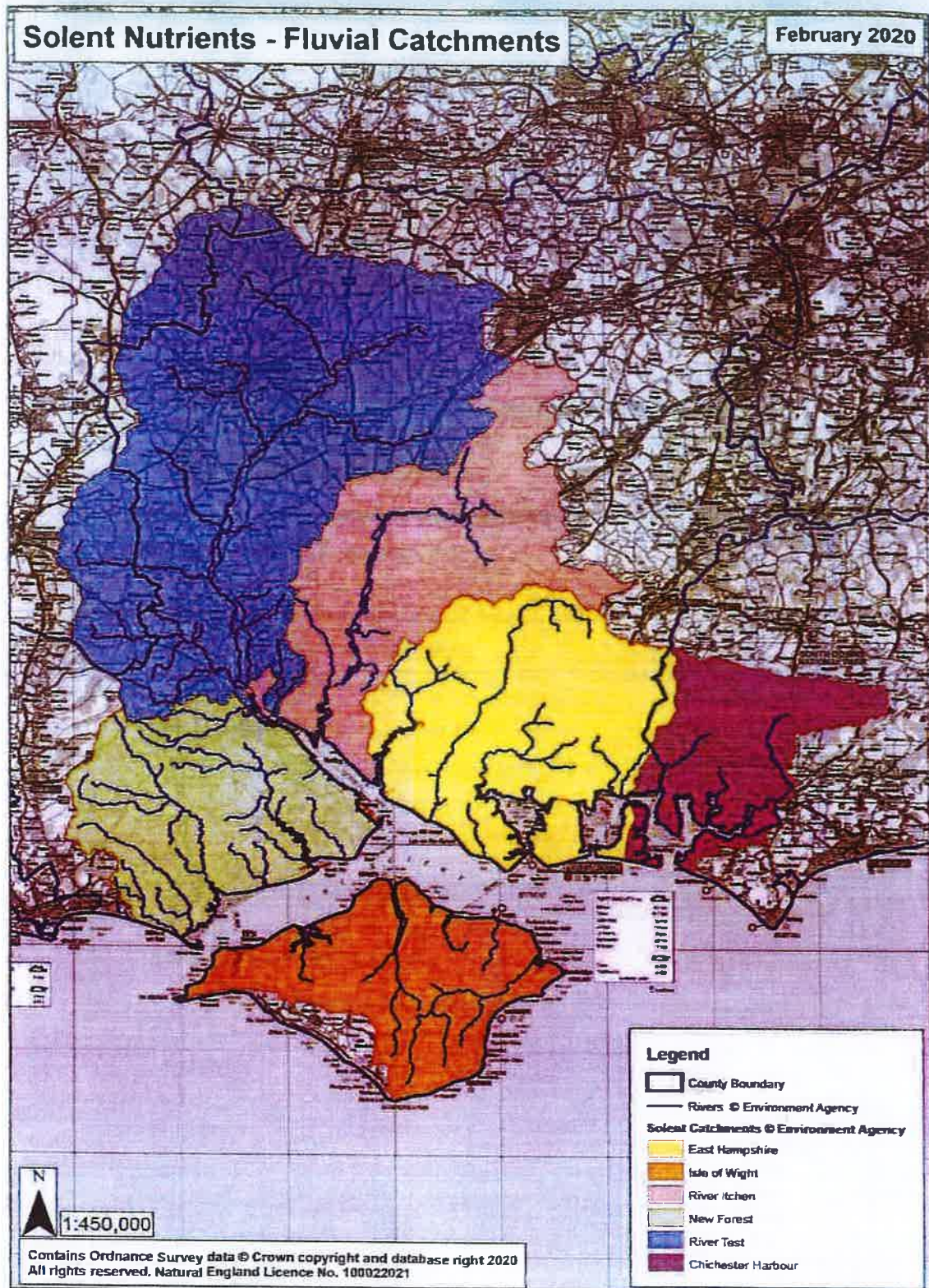


Figure 1 Solent Catchment Area *Contains public sector information licensed under the Open Government Licence v3.0*



Development site details

Date (dd/mm/yyyy):

26/10/2022

Site Name:

Allington Manor Farm Barn (PTPs)

Planning Application number:

V/22/93029

Site Address:

Allington Lane, Eastleigh

Stage 1

User Inputs

Date of first occupancy:	02/01/2022	
Average occupancy rate:	2.40	
Water usage (litres/person/day):	120	
Development Proposal (dwellings/units):	2	
Include deductible acceptable loading?	Yes	
Wastewater treatment works:	Package Treatment Plant user defined	
Wastewater treatment works P permit (mg TP/litre):	Please enter value in cell to the right:	0.4
Wastewater treatment works N permit (mg TN/litre):	Please enter value in cell to the right:	11.6

Stage 1 Calculated Loading

Additional population	4.8	people
Wastewater by development	576	litres/day
Annual wastewater TP load	0.08	kg TP/yr
Annual wastewater TN load	2.02	kg TN/yr

Stage 2

User Inputs

Catchment:	Itchen
Soil drainage type:	Impeded drainage
Annual average rainfall (mm):	750.1 - 800
Within Nitrate Vulnerable Zone (NVZ):	Yes

Existing land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Open urban land	0.21	0.17
Total:	0.21	0.17



**Annual nitrogen
nutrient export
(kg TN)**

1.79



1.79



Stage 3

User Inputs

New land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Residential urban land	0.21	0.33
Total:	0.21	0.33

**Annual nitrogen
nutrient export
(kg TN)**

3.03

3.03

Stage 4

Calculated Outputs

The total annual phosphorus load to mitigate is:

0.28 kg TP/year

The total annual nitrogen load to mitigate is:

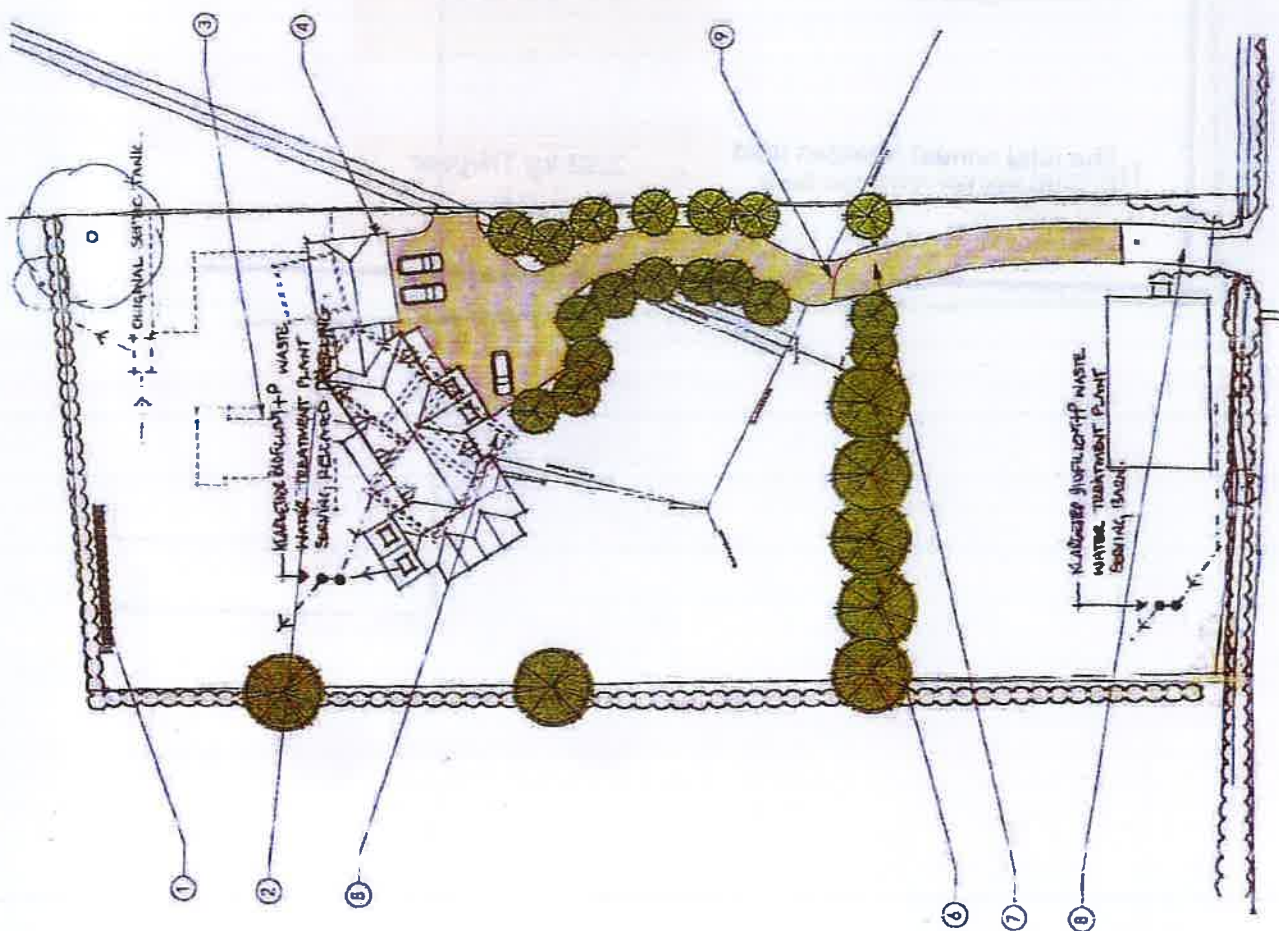
3.92 kg TN/year

Notes

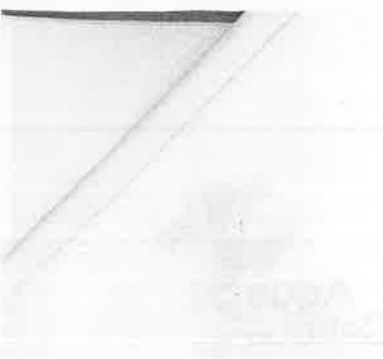
1. Ground mounted Solar panels - details to be finalised.
2. Air source heat pump - final position TBA with the appointed specialist.
3. Dashed line represents the existing house and outbuildings to be replaced.
4. Proposed replacement dwelling.
5. Dashed lines represent the exposed foundations of the previously implemented permission.
6. Proposed new area and planting - design TBA.
7. Proposed replacement entrance gates - details TBA.
8. Existing access track.
9. Driveway to be laid out to prevent direct views to the dwellings.



0 20 40 60 M



DRAINAGE PLAN 1:500 @ A3



Appendix D

CONDITIONS AND LIMITATIONS OF NITROGEN NUTRIENT ASSESSMENT May 2020

Aqua Callidus Consulting Ltd is constituted as a limited liability company in accordance with the Companies Act 1989 (with registered number 11390910 and with its registered office at Kintyre House, 70 High Street, Fareham, Hants, PO16 7BB).



1. The report is confidential to the clients stated in the report and has been prepared to their instructions for their own purposes and it is not permitted to disclose this report to other parties (except NHBC, Local Authority, the Client's own Solicitors and Professional Advisers) without the prior consent of Aqua Callidus Consulting Ltd.
2. This report has been prepared by Aqua Callidus Consulting Ltd, with all reasonable skill, care and diligence within the terms of contract with the Client incorporated in our Standard Terms of Business.
3. The copyright of this report remains the property of Aqua Callidus Consulting Ltd.
4. Aqua Callidus Consulting Ltd disclaims any responsibility to the Client and others in the respect of any matters outside the scope of this report.
5. No liability for the contents of this report is accepted to any parties other than the client stated in the report.
6. Unless stated otherwise the nitrogen assessment is based on site specific information provided by the client and manufacturers and wastewater companies public information on the performance of wastewater treatment plants and works. No liability is accepted for the accuracy of such third party information.
7. Unless stated otherwise the nitrogen assessment is undertaken as a desktop assessment and no site visit has been made.