



Development within the River Clun Catchment

September 2013

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Appendix 1 Information to be supplied with a planning application in the Clun Catchment.

Figure 1: The River Clun Catchment

1. Introduction

- 1.1 This document is one of a suite of Guidance Notes which explain the approach and procedures to be followed in order to ensure sufficient survey, protection, mitigation and enhancement where biodiversity may be affected by proposed development.
- 1.2 In particular, this document explains Shropshire Council's approach to making planning decisions for proposals in the River Clun catchment which has particular sensitivities in terms of water quality.
- 1.3 Part of the River Clun is a Special Area of Conservation (SAC). SACs are amongst the most important and sensitive sites across the European Union and are afforded the highest levels of protection under the Habitat Regulations. Although the river is important for a wide range of more common wildlife such as otters, salmon and trout, the sole feature for which the River Clun SAC is notified is the presence of the extremely rare freshwater pearl mussel (*Margaritifera margaritifera*).
- 1.4 The SAC/SSSI is assessed as being in unfavourable condition for a number of reasons including high levels of silt and nutrients, which affect the health of the pearl mussel population. A review of the monitoring data from the Environment Agency for the River Clun (2000-2011), shows that although there has been an improvement the ortho-phosphate (P) concentration, it is higher than is required for a recruiting pearl mussel population and in most of the Clun, including within the SAC, it is higher than that required to maintain adult mussels. Any additional phosphate entering the SAC is likely to make its condition worse. A major source of phosphate is waste water from houses and businesses, whether via the mains and sewage treatment works, or from cesspits, septic tanks or package treatment plants (PTP).
- 1.5 Under the Conservation of Habitats and Species Regulations 2010 and the European Habitats Directive, the Local Planning Authority, when producing a policy plan or making a planning decision, must consider if there is likely to be a significant effect on a European Protected Site. When deciding this, any other plans or projects which may also be having an effect must be considered as well – the 'in-combination test'. If such an effect is likely, then a more detailed 'Appropriate Assessment' must be carried out and recorded, to determine if the integrity of the site will be adversely affected. If, after revisions and mitigation, the adverse effect cannot be avoided, then planning permission cannot normally be granted.
- 1.6 The following guidance is provided to help those submitting planning applications in the Clun catchment to decide if their development is likely to have a significant effect on the SAC and the type of information planners will need to determine the application. Submission of the application with all the required information should speed up the planning application process.
- 1.7 Natural England are statutory consultees on any applications which might affect the SAC. If NE object to an application, and the application cannot be

modified to lift their objection, the LPA would not normally grant planning permission. NE and the EA, aware of the problems caused, have jointly commissioned a Nutrient Management Plan (NMP) to document all sources of P in the catchment, identify what information still needs to be gathered and to outline phosphate reduction measures that might be employed in future. The following information is interim guidance until the NMP has been completed (projected to be by the end of 2013)

2. Categories of development already considered likely to have no Significant effect

- 2.1 Any development that does not produce waste water
- 2.2 Any development that does not increase the volume or concentration of waste water
- 2.3 Any development that provides a betterment in terms of current waste water impacts by either improving existing water quality discharges through reduced load or decreasing volume produced (eg , separation of surface water from dirty water or up-grading of facilities)
- 2.4 Domestic extensions without significant increase in occupancy or drainage. Most of these developments include up-grading of existing facilities which, with modern design, use water more efficiently
- 2.5 Provision of a sealed system with the waste transferred outside the Clun catchment. There are no facilities to process tankered waste in the Clun catchment so waste would be not be impacting on the river.

3. Other developments

- 3.1 **It is important to note that virtually any other development in the catchment either serviced by the mains sewer or by a Package Treatment Plant (PTP) is likely to add some phosphate to the River Clun.**
- 3.2 Therefore other developments within the catchment currently have to provide more evidence to illustrate the contribution that they will make to the phosphate load in the river. At the moment, with the Nutrient Management Plan in production and with a very tight target for phosphate in the catchment (0.02mg/l) it is difficult to calculate an insignificant load of phosphate to the river (and so support a conclusion of 'likely to have no significant effect' when completing the in-combination test).
- 3.3 Below are a set of additional categories that would extend the acceptable developments between now and the completion of the NMP. Once the NMP has been published, this guidance will be revised and re-circulated.
- 3.4 Development can be split into two different impacts depending on if they are going to main sewer or not.

4.0 Mains sewer

- 4.1 There are currently 7 waste water treatment works within the Clun catchment. Only two works have phosphate stripping. Of the remaining 5, they may all be able to have some phosphate stripping added to them at a later date.
- 4.2 The two largest treatment plants within the catchment, Bishop's Castle and Bucknell, currently have phosphate stripping and in terms of individual houses make the smallest contribution to the phosphate in the river of all works. They both have potential catchment transfer schemes that would remove any impact they have within the catchment. Further if catchment transfer is not possible then both will be able to be fitted with a more rigorous phosphate treatment if required within the next two rounds of the Five Year Asset Management Planning (AMP) process. **Any development of less than 10 houses, serviced by these two treatment works, is considered to be unlikely to have a significant effect on the features of interest as the impact will be picked up by actions identified in the NMP.** In the interim period, development connecting to mains sewer leading to Bucknell or Bishop's Castle sewage treatment works can be put forward for a planning decision. Development of 10 houses or more will still have to show how the contribution to the treatment works will affect the site in the interim between now and completion of any upgrade.
- 4.3 No more development can be serviced by the Clun treatment works until an extra licence is granted as it has reached its limit for Dry Weather Flow (DWF).
- 4.4 Clun, Lydbury North, Aston on Clun, Newcastle on Clun and Clunbury sewage treatment works currently have no phosphate stripping; therefore development which would go to these works would contribute the highest phosphate load of anything going to mains sewer. There are potential ways of reducing the phosphate load from these works but this would be subject to inclusion in future AMP rounds and on current trials being successful. **In the interim we must assume that there is the potential for discharges from these works to have a Significant Effect between now and the NMP completion.** Therefore, no development can be approved if proposing to connect to these sewage treatment works.

5.0 Non mains sewer (Package Treatment plants, septic tanks etc)

- 5.1 This is the area of greatest concern as the impact of Package (Private) Treatment Plants (PTP) is very difficult to calculate, being dependant on treatment type, discharge point, soil chemistry and distance to the nearest water body. Some may discharge directly to a water body where as others will discharge to soak-away. Most of the PTPs on the market are not designed to treat P but concentrate on the solid part of the waste. Discharges for these can be as high as 14mg/l of phosphate, some however, have been designed to treat phosphate and have significantly lower phosphate discharges.

- 5.2 In general, when a mains sewer is available then this is the preferred option as PTPs are not always maintained. Changes in property ownership can also lead to owners being unaware of the maintenance requirements of their systems. Recent research in the Clun catchment supports the view that a vast majority of the existing PTPs are badly maintained and in many cases ineffectual.
- 5.3 Some Package Treatment Plants discharging to water course may be acceptable (see below). This is based on size and distance criteria that have been used on other rivers in the region, appropriately scaled to the tighter phosphate target on the River Clun.

Screening criteria for discharge to water course.

Distance upstream from SAC boundary	Discharge type
Within site	Requires further assessment
Within 3km	Requires further assessment
Within 10km	All discharges less than 1m ³ /day are regarded as having no likely significant effect. Greater discharges will require further assessment.
Beyond 10km	All discharges less than 5m ³ /day are regarded as having no likely significant effect

Any 'small' discharge to non-mains river (ie: less than 1m³) within 3km of the SAC boundary will be assessed on the basis of the dilution factor. Discharges will require further assessment where *the dilution of the mean flow of the discharge by the mean flow of receiving water shows that the concentration will be changed by more than **one percent** of the concentration specified in the conservation objectives*).

(Normal domestic water consumption = 136 litres per head per day. Average house occupancy rate = 2.35 people per house, 136*2.35 = 320 litres per house so equates to approx. 3 houses. Application of higher water design standards could increase the size of the population serviced by a 1m³ discharge- (Numbers from STWater)

- 5.4 Package Treatment Plants (PTP) or septic tanks that discharge to ground or soakaway may be acceptable. For PTPs that are discharging to ground or soakaways, evidence must be presented to show that phosphate will not enter watercourses. Evidence will need to be provided that:
- the soak away goes to land that is not under drained,

- the land is not considered to be at risk of fertilizer run-off,
- the soil has a low P index,
- the land has a degree of permeability that will ensure the soak-away is effective.

(See list of required information to be submitted with planning applications, Appendix 1)

6.0 Summary of development categories covered by this interim guidance note which can be considered for planning permission.

- A. Any development that does not produce waste water
- B. Any development that does not increase the volume or concentration of waste water
- C. Any development that provides a betterment in terms of current waste water impacts.
- D. Domestic extensions without significant increase in occupancy or drainage.
- E. Provision of a sealed system with the waste transferred outside the Clun catchment,
- F. All development of less than 10 houses that goes to either Bucknell or Bishop's Castle treatment works.
- G. Some Package Treatment Plants discharging to water course may be acceptable if they meet the criteria.
- H. .All developments where PTP or septic tank discharge can be shown to successfully go to ground

Appendix 1

Information to be supplied with a planning application in the Clun Catchment.

Will the development produce waste water?

If the answer is No then give reasons and no further action is required.

New housing or other accommodation

How many people will be living in the property?

How many bedrooms will be in the property?

Will the development be connected to a mains sewer?

If Yes, which sewage treatment works will waste water be drained to?

If No, how will waste water be treated? (See below).

Modification (e.g. extensions) or demolition and replacement of existing buildings

How many people live in the existing property?

How many bedrooms does the existing property have?

How many people will live in the modified/new building(s)?

How many bedrooms will the modified/new building(s) have in total?

Is the existing building(s) connected to the mains sewer?

If Yes, which sewage treatment works is waste water drained to?

Will this change for the new development and if so, how?

If No, how is waste water treated? Please provide details of the current provision for waste water treatment and the proposed method of treatment (See below for types of information required.)

Sealed Unit, emptied regularly and taken out of catchment.

Provide make, design specification, volume, frequency of emptying, receiving Sewage Treatment Works and evidence that they will accept the waste.

Package Treatment Plant or septic tank

Provide make, design specification, volume and details of discharge with respect to phosphate.

Will the discharge be to water course or ground?

Water course (PTP only)

How many cubic metres will be discharged per day?

What is the exact location of the discharge point on the water course? (Please provide a map.)

Ground

- Please give the name/location and distance away from the discharge point of any watercourses within 500m.
- Has the PTP been designed to treat P and what is the P discharge in milligrammes per litre (mg/l)?
- What is the maintenance regime for the equipment?
- At what distance and location are the nearest land drains (if within 100m)?
- Has the land sufficient permeability to ensure the soak-away is effective (give workings and results of percolation tests as outlined in 'Approved document H, Drainage and Waste Disposal, The Building Regulations 2010, H2.'
- What is the current land use of the area surrounding the drainage field or soakaway – is it:
 - ❖ Permanent pasture (for more than 20 years)
 - ❖ Domestic garden for more than 20 years
 - ❖ Arable, ley or pasture (the latter for less than 20 years),
 - ❖ Other land use – please describe.
- If the land use is arable, ley or other recent grassland, what is the P index of the soil? If you have described a different land use to the above we will let you know if the P index needs to be submitted.
- Does the land have a Nutrient/Manure Management Plan? If so please submit a copy with your application.
- Please complete form FAD1 (see below), providing full calculations, and submit it, together with an accurate, annotated drawing and location plan for the soakaway/drainage field, with the planning application. The drawing should state the make, model and capacity of the proposed package sewage treatment plant.

Foul Drainage Assessment Form (FDA1)

Please note: this form should be used for planning related queries only and cannot be used when applying for a Consent to Discharge.

APPLICANT DETAILS
Name
Address
Telephone No/e-mail

This form should be used in order to establish whether non-mains drainage, either a new system or connection to an existing system, would be acceptable, your answers to the following questions will be taken into consideration. It is important that you provide full and accurate information. Failure to do this will delay the processing of your application.

You must provide evidence that a connection to the public sewer is not feasible.

Other than very exceptionally, providing non-mains drainage as part of your Planning or Building Regulation application will not be allowed unless you can prove that a connection to the public sewer is not feasible. Non-mains drainage systems are not considered environmentally acceptable in publicly sewered areas. Please note that the existence of capacity or other operating problems with the public sewer are not valid reason for non-connection where this is reasonable in other respects.

Where connection to the public sewer is feasible, agreements may need to be obtained either from owners of land over which the drainage will run or the owners of the private drain.

Government guidance contained within DETR Circular 03/99/ WO 10/99 'Planning requirements in respect of the use of non-mains sewerage incorporating septic tanks in new development' gives a hierarchy of drainage options that must be considered and discounted in the following order:

- 1 Connection to the public sewer
- 2 Package sewage treatment plant (which can be offered to the Sewerage Undertaker for adoption)
- 3 Septic Tank
- 4 If none of the above are feasible a cesspool

You must respond to all the following questions, if you wish to submit additional information please do so, marked clearly "Additional Information". **In some cases you will be required to provide a further assessment in accordance with the requirements of DETR Circular 03/99/ WO 10/99 (see Guidance Note 1).**

Mains connection

	YES	NO
<p>Have you provided a written explanation of why connection to the mains sewer is impractical with this form?.</p> <p><i>This should include a scaled map showing the nearest mains connection point - check with your local sewerage undertaker.</i></p>		

Non-mains connection

Please provide a plan with dimensions that clearly shows the location of the whole system in relation to the proposed development and the position of the key elements e.g. septic tank, drainage fields and points of discharge.

1. Existing system

	YES	NO
Do you intend to use an existing non-mains foul drainage system?		
<p>If YES, does the system already have a Consent to Discharge issued by the Environment Agency?</p> <p><i>(In the case of a cesspool write N/A) Please provide Consent reference number.....</i></p>		

2. Discharge

	YES	NO
Do you propose to use a cesspool? <i>If yes go to Q4</i>		
<p>Do you intend to use a system that discharges solely to watercourse? (see Guidance Note 2)</p> <p><i>If yes go to Q8.</i></p>		
<p>Alternatively, will all, or any part of, the discharge go to soakaway? (see Guidance Note 2) - this would include systems that combine a soakaway with a high level overflow to watercourse? <i>If yes go to Q3.</i></p>		
Have you considered having your system adopted by the sewerage undertaker? (See		

Guidance Note 6).		
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3. Water abstraction	YES	NO
Do you receive your water from the public mains supply? <i>If yes go to Q5</i>		
If not, where do you get your water supply from?		

4. Cesspools <i>(For methods other than cesspools write N/A)</i>	YES	NO
Have you provided written justification for the use of a cesspool in preference to more sustainable methods of foul drainage disposal? <i>(see Guidance Note 3)</i>		

5. Ground Conditions <i>(For cesspools write N/A)</i>	YES	NO
Have you submitted a copy of the percolation test results with this form <i>(see Guidance Note 4)</i> ? If NO please explain the justification for not undertaking or submitting these tests.		
Is any part of the system in land which is marshy, water logged or subject to flooding?		
Will the soakaway be located on artificially raised, made-up ground or ground likely to be contaminated? <i>If yes please provide details as additional information.</i>		
Have you submitted the results of a trial hole at the site to establish that the proposed drainage field will be above any standing groundwater <i>(see Guidance Note 5)</i> ?		

6. Available Land	YES	NO
Is the application site plus any available area for a soakaway less than 0.025 hectares (250m ²)?		

7. Siting of drainage field/soakaway discharge from a septic tank or package treatment plant or other secondary treatment..

You may need to make local enquiries to get a full answer to these questions.

	YES	NO
Will it be at least 10m from a watercourse, permeable drain or land drain?		
Will it be at least 50m from any point of abstraction from the ground for a drinking water supply (e.g. well, borehole or spring)? <i>This includes your own or a neighbour's supply.</i>		
Are there any drainage fields/soakaways within 50m ? <i>This includes any foul drainage discharge system (other than the subject of this application) on either your own or a neighbour's property..</i>		
Will it be at least 15m from any building?		
Will there be any water supply pipes or underground services within the disposal system, Other than those required by the system? <i>(For cesspools write N/A)</i>		
Will there be any access roads, driveways or paved areas within the disposal area? <i>(For cesspools write N/A)</i>		

8. Siting of treatment plant, septic tank or cesspool

	YES	NO
Is it at least 7m from the habitable part of a building?		
Will there be vehicular access for emptying within 30m ?		
Can the plant, tank or cesspool be maintained or emptied without the contents being taken Through a dwelling or place of work?		

9. Expected flow

Please estimate the total flow in litres per day <i>(see Guidance Note 4)</i> .	
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10. Maintenance

How do you propose to maintain the system?
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Declaration

I declare that the above information is factually correct.

Name	Signature	Date

GUIDANCE NOTES:

- 1) This form is for use with **DETR Circular 03/99 (WO Circular 10/99) 'Planning Requirements in Respect of the Use of Non-Mains Sewerage Incorporating Septic Tanks in New Development' (the Circular)**. It is intended to help Local Planning Authorities establish basic information about your system and decide whether you need to submit a more detailed site

assessment in accordance with Annex A of the Circular. If a detailed site assessment is requested but not submitted, your planning application might be refused.

- 2) In addition to Planning Permission and Building Regulation approval **you may also require Consent to Discharge from the Environment Agency. Please note that the granting of Planning Permission or Building Regulation approval does not guarantee the granting of a Consent to Discharge. Upon receipt of a correctly filled in application form the Agency will carry out investigations It can take up to 4 months before the Agency is in a position to grant consent or not.**
- 3) The use of cesspools is an option of last resort as set out in the non-mains drainage hierarchy of preference in DETR Circular 03/99/WO 10/99. This is echoed in the Building Regulations 2000 (approved document part H). The Circular notes at Annex A paragraph 8 that cesspools give rise to environmental, amenity and public health problems as a result of *“frequent overflows due to poor maintenance, irregular emptying, lack of suitable access for emptying and even through inadequate capacity.”* In addition to this the requirement for frequent emptying is usually by contractor involving road transport with associated environmental costs. For these reasons, the use of cesspools cannot be considered a long-term foul sewage disposal solution. In view of the environmental risks associated with their use, any proposal to use cesspools must be fully justified to the Local Planning Authority
- 4) Typical flows

Property	Litres per person per day		Property	Litres per person per day
Domestic	180		Offices	50/100
Hotels, B&Bs	200 (dependant on		Factories	50/100
Restaurants	30-12		Public Houses	12
Campsites	75		Caravans	180
Dayschool	50		Rest Homes	350
Boarding School	200		Hospitals	450

Loadings should be assessed using ‘British Water’ CoP, Flows and Loads-3. Domestic housing up to 3 bedrooms should have a minimum population of 5P, with 1P for each additional bedroom over 3.

- 5) You should refer to **DTLR Building Regulations 2000 Section H2 Waste Water Treatment and Cesspools** with regard to the general requirements for construction of non mains sewerage systems. **Sections 1.33 to 1.38** deal with the test requirements for trial holes and percolation tests and for convenience the text of these sections is repeated below:
 - 1.33 A trial hole should be dug to determine the position of the standing ground water table. The trial hole should be a minimum of 1m² in area and 2m deep, or a minimum of 1.5m below the invert of the proposed drainage field pipework. The ground water table should not rise to within 1m of the invert level of the proposed effluent distribution pipes. If the test is carried out in summer, the likely winter groundwater levels should be considered. A percolation test should then be carried out to assess the further suitability of the proposed area.
 - 1.34 Percolation test method – A hole 300mm square should be excavated to a depth of 300mm below the proposed invert level of the effluent distribution pipe. Where deep drains are necessary the hole should conform to this shape at the bottom, but may be enlarged above the 300mm level to enable safe excavation to be carried out. Where deep excavations are necessary a modified test procedure may be adopted using a 300mm earth auger. Bore the test hole vertically to the appropriate depth taking care to remove all loose debris.

- 1.35 Fill the 300mm square section of the hole to a depth of at least 300mm with water and allow it to seep away overnight.
- 1.36 Next day, refill the test section with water to a depth of at least 300mm and observe the time, in seconds, for the water to seep away from 75% full to 25% full level (i.e. a depth of 150mm). Divide this time by 150mm. The answer gives the average time in seconds (Vp) required for the water to drop 1mm.
- 1.37 The test should be carried out at least three times with at least two trial holes. The average figure from the tests should be taken. The test should not be carried out during abnormal weather conditions such as heavy rain, severe frost or drought.
- 1.38 Drainage field disposal should only be used when percolation tests indicate average values of Vp of between 12 and 100 and the preliminary site assessment report and hole tests have been favourable. This minimum value ensures that untreated effluent cannot percolate too rapidly into groundwater. Where Vp is outside these limits effective treatment is unlikely to take place in a drainage field. However, provided that an alternative form of secondary treatment is provided to treat the effluent from the septic tanks, it may still be possible to discharge the treated effluent to a soakaway.

Further details about drainage fields are contained in **BS6297:2007+A1:2008 'Code of practice for the design and installation of drainage fields for use in wastewater treatment'**.

6) Developers may requisition a sewer from the Sewerage Undertaker to connect their development to the public sewer. Should this not be feasible on the grounds of cost and practicability, on site treatment in the form of package plants and their associated sewers (If constructed to an acceptable standard) can be offered to the sewerage undertaker for adoption. This approach is in support of advice from the Government described in DETR Circular 3/99 and WO 10/99. Developers are urged to discuss their requirements with the Sewerage Undertaker at the earliest possible opportunity.

7) Glossary

Package treatment plant

A package treatment plant is a system which offers varying degrees of biological sewage treatment and involves the production of an effluent which will be disposed of to ground via a soakaway or direct to a watercourse. There are many varieties of package plant but all involve settling the solids before and/or after a biological treatment stage and all use electricity. Package treatment plants usually treat sewage to a higher standard than septic tanks but are vulnerable in the event of power failures. This may make their use inappropriate in some circumstances e.g. holiday accommodation where occupation and maintenance are irregular.

Septic tank

A septic tank is a two or three chamber system, which retains sewage from a property for sufficient time to allow the solids to form into sludge at the base of the tank, where it is partially broken down. The

remaining liquid in the tank then drains from the tank by means of an outlet pipe.

Effluent from a septic tank is normally disposed of by soakage into the ground, provided that the

disposal does not generate a pollution risk to surface waters or groundwater resources (underground

water). The most commonly used form of soakaway is a subsurface irrigation area, comprising a

herringbone pattern of land drains laid in shallow, shingle filled trenches. The soakaway drains should

be located at as shallow a depth as possible, usually within 1 metre of the ground surface

Cesspool

A cesspool is a covered watertight tank used for receiving and storing sewage and has no outlet. It relies

on road transport for the removal of raw sewage and is therefore the least sustainable option for

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sewage disposal. Because of this, a cesspool is best regarded as a temporary measure pending a more satisfactory solution, such as the provision of mains drainage. It is essential that a cesspool is, and remains, impervious to the ingress of groundwater or surface water and has no leaks.

