

Maria Phipps
Ty Coch Caravan & Camp site
St Brides
Wentlooge
Newport
NP10 8SR

Ebost/Email:
luke.burton@naturalresourceswales.gov.uk

Date: 06/04/20

Dear Mrs Phipps.

On the 24 February 2020 two evidential water quality samples were taken at your site. The first sample taken was of wastewater entering your 'pond' from your 'cess pit and aeration chamber' and the second sample taken was of effluent leaving your 'pond' into a nearby ditch. Results of the samples are contained within Appendix 1.

The water quality samples were taken whilst there were a small number of people staying at your site and following a period of very heavy rainfall. Meaning the site was not at full capacity and the 'pond' wastewater was highly diluted. The wastewater is therefore likely to have far higher level of contaminants (Biochemical Oxygen Demand, Suspended Solids, Ammoniacal Nitrogen etc.) during peak season.

Below is Natural Resources Wales' pre-application advice and guidance following the results of the above-mentioned water quality samples. This is the last advice and guidance Natural Resources Wales will provide. Other sources of advice and guidance including private or academic sector consultancies are available.

For clarity: *Packaged wastewater treatment plants* are prefabricated factory-built wastewater treatment installation which accept domestic wastewater and treat it to a declared quality. *Wastewater treatment systems* are two or more types of wastewater treatment system often used together, one downstream of the other, to achieve the quality of effluent legally required for a site.

Natural Resources Wales require any *packaged wastewater treatment plant* installed to comply with British Standard BS EN 12566-3:2005. Non-BS EN 12566-3:2005 package sewage treatments installed must be proven capable of operating to an equivalent level of performance to BS EN 12566-3:2005. *Packaged wastewater treatment plants* conforming to BS EN 12566-3:2005 must be capable of producing a minimum effluent discharge quality of 20/30/20 (Biochemical Oxygen Demand/Suspended Solids/Ammoniacal Nitrogen in mg/l).

Because your place of installation is within the Gwent Levels Site of Special Scientific Interest your *wastewater treatment system* must produce a higher effluent discharge quality than required by BS EN 12566-3:2005 and certain types of waste water treatment

system are deemed unsuitable. Natural Resources Wales require any *wastewater treatment system* installed to be capable of producing an effluent discharge quality of ≤ 5 mg/l Biochemical Oxygen Demand, ≤ 30 mg/l suspended solids, ≤ 2 mg/l Ammoniacal Nitrogen and 0 mg/l phosphate. We are also unlikely to permit water discharges to ground at this location, and we will only permit water discharges to watercourses (i.e. reens, drainage ditches) with tertiary treatment.

The results of the water quality samples taken demonstrate that your current wastewater treatment system: the 'cess pit and aeration chamber' and 'pond' is not capable of achieving a minimum effluent discharge quality of 20/30/20 (Biochemical Oxygen Demand/Suspended Solids/Ammoniacal Nitrogen in mg/l) as required for treatment plants conforming to BS EN 12566-3:2005, or, the effluent discharge quality required for the Gwent Levels Site of Special Scientific Interest.

When looking at the sample results, bear in mind that the site was not at full capacity and the 'pond' wastewater was highly diluted by rainfall. Meaning the sample results would likely have a much higher quantity of contaminants during peak season. Also consider that the current point of discharge to the environment is when the wastewater enters the 'pond' as it is unlined and in direct connectivity with surrounding groundwater.

In order to protect the Gwent Levels Site of Special Scientific Interest we insist the following requirements are met for any wastewater treatment system:

- Install a wastewater treatment system at least large enough to deal with your maximum wastewater flow. You may decide to install a system that is oversized, to allow for future changes to your site. However, the system should not be too oversized, as it might not treat the wastewater to the required quality. Any wastewater treatment system should be sized using the latest version of *British Water Flows and Loads* which provides detailed information on sewage production figures and sizing calculations
- Any wastewater treatment system installed must be capable of producing an effluent discharge quality of ≤ 5 mg/l Biochemical Oxygen Demand, ≤ 30 mg/l suspended solids, ≤ 2 mg/l Ammoniacal Nitrogen and 0 mg/l phosphate
- All wastewater discharged to surface water must first undergo primary, secondary and tertiary treatment
- Discharge of wastewater to groundwater is deemed unsuitable and unlikely to be permitted. I apologise on behalf of Natural Resources Wales if there has been any confusion on this point. But our change of requirement comes from further information and consideration of this in discussing the issue with colleagues in other departments
- If a septic tank is used it must comply with Standard EN12566-1 for prefabricated septic tanks, and EN 12566-4 for septic tanks assembled at your site from prefabricated kits

- Packaged wastewater treatment plants must meet British Standard BS EN 12566-3:2005
- Constructed wetlands / reedbeds must be designed and constructed in compliance with BS 6297:2007+A1:2008 and guidance referred to within BS 6297:2007+A1:2008
- Pre-fabricated tertiary treatment units e.g. reed bed units must comply with BS EN 12566-7 Small wastewater treatment systems for up to 50 PT Pre-fabricated tertiary treatment units

Please confirm to me via email within the next 20 working days of this letter what *wastewater treatment system* you intend to install with evidence that the relevant requirements listed above can be met. Following that we can discuss timescales for installation of said system considering the current Covid-19 pandemic and your environmental permit application.

When you come to apply for an environmental permit for your wastewater treatment system you will be required to demonstrate via suitable evidence that the relevant requirements listed above have been met. You will need to complete application forms Part B6.5 and provide an application fee of £125.

For further information on wastewater treatment systems refer to guidance [here](#) and [here](#).

All communication between us will now only be undertaken via email, so to avoid issues around interpretation as occurred with the Anti-Pollution Works Notice and pumping of wastewater into the pond. Please also see the new Anti-Pollution Works Notice.

Should you have any queries relating to this letter, please email me.

Regards,

L. Burton

Luke Burton
Swyddog yr Amgylchedd / Environment Officer
Cyfoeth Naturiol Cymru / Natural Resources Wales
Tim Amgylchedd - Casnewydd, Blaenau Gwent a Caerffili / Environment Team – Newport,
Blaenau Gwent and Caerphilly

Appendix 1

Date/ Time (sampled)	Sampling remark	0085 / BOD ATU	0092 / COD as O2	0111 / Ammoni a(N)	0116 / N Oxidise d	0117 / Nitrate -N	0118 / Nitrite -N	0135 / Sld Sus@105 C	0172 / Chloride Ion	0180 / Orthopho spht	3683 / N Inorgani c
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
24/02/202 0 10:15	ADHOC 20346 PIPE INTO POND NGR ST2794681284	35	110	13.5	0.6	0.5544	0.0456	40	22	1.62	14.1
24/02/202 0 10:20	ADHOC 20345 PIPE INTO 'REEN/DITCH' NGR ST2798181289	4.64	46.6	16.8	0.28	0.2698	0.0102	17	24.9	2.31	17.08

BOD – Biochemical Oxygen Demand

COD – Chemical Oxygen Demand

Sld SUS – Suspended solids

Inorganic c – Inorganic Carbon