

## Written evidence submitted by Sea horse environmental (FR0087)

### Environment, Food and Rural Affairs Committee – Farming rules for water inquiry – CCm Technologies submission

#### Background to CCm Technologies

[CCm Technologies](#) is an award-winning clean tech company which optimises resource use through **Carbon Capture and Utilisation (CCU) solutions**, including the **production of net zero carbon fertilisers** (see Sustainable Markets Initiative's RE:TV short video [here](#) for further information) which allow a wide range of businesses to **generate commercial value** from captured carbon and other agricultural and industrial waste streams while also **delivering improved sustainability**. It is commercially viable without any Government subsidies.

CCm's technology converts captured carbon dioxide and other waste streams (such as Ammonia and Phosphate) into stable value-added materials with multiple uses across global priority sectors of food/agriculture, advanced materials and energy storage.

Oxford-based CCm Technologies was established in 2011. It is a member of HRH The Prince of Wales's [Sustainable Markets Initiative](#) and a signatory of its recently launched [Terra Carta](#), and also received the [Solar Impulse Foundation](#) Efficient Solutions Label. CCm has also been selected as one of the businesses to take part in the Government's Small Business Research Initiative.

#### Questions:

- 1. What impact, if any, is the EAs implementation of Farming Rules for Water preventing farmers from spreading organic fertiliser?**

Spreading the organic matter in the autumn is not the issue; it is the pollution that derives from the activity that is the challenge. NO<sub>2</sub>, Ammonia and Phosphates runoff to soils and emissions to atmosphere can be stabilised by CCm's process technology, which includes drying the organic, reducing the harmful aerial and groundwater contamination stabilising the organic.

- 2. Are there changes that should be made to the rules - or how they are applied?**

If the materials/sludges can be stabilised and shown to be less harmful and indeed beneficial to soils, then they should be allowed to be spread in the normal way.

- 3. What are the best ways of preventing agricultural diffuse pollution?**

CCm's process technology stabilises the Nitrogen (N) and Phosphates (P), providing the Environment Agency (EA) with certainty that unwanted pollution by third parties can be restricted, particular in the crucial autumn and winter months.

The process produces predictable dry end-products (15-20% dry matter content) that significantly reduces run-off and leaching to surface- and ground- waters (in excess of 50% reduction).

Due to the increased water retentive characteristics of CCm materials, the product can also be considered as a soft engineering mechanism in the autumn and winter to reduce the potential for flooding.

These characteristics are underpinned by the traceability of the products and their exact nutrient content and their capacity for more targeted and predictable delivery. The targeted delivery can directly result in increased durable soil Carbon content, accompanied by immediate quantifiable biofloral/faunal responses. In addition to these benefits, the farmer will continue to receive the nutrient and organic benefits.

The stabilised sludges will also trigger Scope 3 Carbon emissions savings as a direct result of reduced transport costs. 80% of biosolids generated by the water industry are recycled to agricultural land in the UK, estimated to be around 3.5 million tonnes per annum (or 170,000 truckloads). This is applied to about 150,000 hectares per annum, or 1.3% of the UK's agricultural land. (Source: Assured Biosolids)