Business engagement assessment

Title of proposal	Amendments to landspreading standard rules
Lead regulator	Environment Agency
Contact for enquiries	Clive Humphreys

Date of assessment	October 2015	Stage of assessment	Discussion
Net cost to business (EANCB)[1]:	-£0.68m	Commencement date	Spring 2016
Which area of the UK will be affected by the change(s)?	England	Price and present value base years	Price base year 2015 / present value base year 2016
Does this include implementation of Red Tape Challenge commitments?	No	Is this directly applicable to EU or other international legislation?	No

Brief outline of proposed change in regulatory action

In November 2014 we consulted on amendments to mobile plant standard rules SR2010 No.4, No.5 and No.6 which authorise the spreading of waste on land for agricultural benefit or ecological improvement, and site-based standard rules SR2010 No.17 for the storage of waste. The original proposals have been revised following the consultation process.

For the land spreading mobile plant standard rules we now propose to:

1. Amend storage quantity limits so that they apply per deployment rather than per permit.
2. Retain the maximum storage limit of 3,000 tonnes at any one time but restrict the storage of non-stackable wastes to a maximum of 1250 tonnes. The proposal to reduce maximum storage time from 12 months to 6 months will not be taken forward at this time. Require storage of digestate within 200m of a designated site to be covered.
3. Allow deployments for continuously managed areas of land in excess of 50 hectares.
4. Restrict (but not ban) the spreading of high readily available nitrogen wastes within groundwater safeguard zones designated for nitrates.
5. Prevent spreading occurring in frozen or waterlogged conditions.
6. Introduce a requirement to notify the Environment Agency of intention to commence spreading.
7. Revise the list of acceptable wastes and add a number of new wastes.
8. Minor amendments to existing definitions and wording to provide greater clarity and consistency.

For the site-based standard rules for storage we propose to increase the waste types to include all non-hazardous wastes listed in the land spreading mobile plant standard rules.

Please see the consultation response document for more information about the proposed change.

[1] EANCB takes the net present value of the proposal and works out what this is on an annual basis.

Why is the change proposed? Evidence of the current problem?

Storage: Many permit holders are operating in contravention of conditions in the standard rules, in particular:

- relying on storage of up to 3,000 tonnes per deployment rather than per permit
- storing waste other than at the place of use ie in storage hubs
- storing waste for multiple deployments in a shared facility

These practices have increased environmental risk and contributed to pollution incidents. The cause of this market failure is inadequate investment in waste storage infrastructure. Our greatest concern is the inappropriate storage of liquid and non-stackable waste which has the greatest potential to cause harm when it escapes. To rectify the situation while maintaining a focus on the main risks we propose a relaxation of standard rules to allow 3,000 tonnes of storage per deployment while restricting the amount of non-stackable waste. To prevent the storage of waste in 'hub' facilities, a practice which is already outside the scope of the current permit, we will provide additional clarification on storage criteria and continue to pursue non-compliant permit holders.

Nitrogen emissions: Nitrogen enrichment of sensitive habitats is a recognised problem and action is required to limit nitrogen deposition if we are to comply with the Habitats Directive. Requiring cover for high RAN wastes close to sensitive receptors offers a proportionate means of achieving this.

Pre-notification: Spreading occurs over a short period in the life of a deployment. We have a legal duty to periodically inspect spreading activities and to do this we need to know when the activity is likely to take place. There is an inherent unfairness in relying on voluntary disclosure of spreading dates. To overcome this problem pre-notification of the intention to spread will be required for all deployments.

Groundwater safeguard zones: The Water Framework Directive requires us to take appropriate measures to control or prevent water pollution. Activities that compromise the quality of water abstracted for potable supply can cause significant additional treatment costs for water companies and ultimately water customers. We believe that controls in the current standard rules offer insufficient protection to groundwater quality when measured against these considerations.

Deployments in excess of 50 hectares: The current 50 hectare limit acts as a disincentive to the spreading of low volume and low application rate wastes. If we are able to process deployments of over 50 hectares without significant additional cost we feel it is appropriate to offer this to operators.

Revised list of wastes: It is beneficial to amend the list of waste to reflect developments in the sector and to include new waste types where they are demonstrated to be capable of beneficial use.

Spreading in adverse conditions: These restrictions are included in landspreading exemptions and the Code of Good Agricultural Practice (COGAP). They are basic to pollution prevention measures and warrant inclusion in the permit.

Broadening of digestate storage permit to permit storage of other wastes: Offering standard rules for the bulk storage of wastes destined for landspreading will reduce costs for operators. It will facilitate the move from bulk storage under deployments to storage in dedicated storage facilities.

Which types of business will be affected? How many are affected?

The businesses that will be affected are current and future holders of standard permits SR2010 Nos. 4, 5 and 6 for landspreading activities and standard permit SR2010 No.17 for storage.

There are currently 349 holders of standard rules SR2010 No.4, 5 and 6. Because we have proposed that storage quantity limits will apply per deployment rather than per permit we do not anticipate any significant increase in numbers.

There are currently 4 digestate storage permits SR2010 No17. We anticipate a significant increase in the number of these permits.

How will the changes impact these businesses?

The net cost of the proposed change (present value, time period 10 years, discount rate 3.5%) is estimated to be -£0.68m.

See annex B for details.

Impact on small businesses

The landspreading sector is diverse and consists of both small and medium sized businesses as well as a few larger organisations. The changes proposed do not impact disproportionately on businesses of a certain size.

It is common for permit holders to employ the services of consultants to prepare applications and to assist with permit compliance. The costs of this have been included in the estimates above.

Annex A: costs and savings summary table

All figures are stated as £k

	Year 1 savings	Year 1 costs	Annual savings	Annual costs
1. Storage per deployment	3,768			
2. (ii) Cost of new facilities		1,232	60	
2. (iii) Cost of permits		122		25
2. (iv) Transport costs				
2. (v) Cover for high RAN				
2. (vi) Avoided pollution costs			224	
3. Deployments greater than 50ha			47	
4. Groundwater safeguard zones		10		
5. Adverse conditions				
6. New waste types	300		86	
7. Pre-notification				26
8. Minor amendments				
Total	4,068	1,364	417	51

Year 1 saving: £2,704k

Annual saving: £366k

Annex B: cost implications of proposed changes

1. Move to storage limit per deployment rather than per permit

There is widespread non-compliance with the storage limit of 3,000 tonnes per permit. To continue to operate under a standard rules permit, and in the absence of any change to the rules, operators would need to obtain a large number of additional mobile plant permits to achieve the necessary storage capacity. In pre-consultation discussions it was clear that stakeholders wanted the standard rules to be amended to provide storage on a 'per deployment' basis. We have accommodated this within the consultation.

The financial benefit to business of moving to this model is the avoided cost of obtaining additional permits, ie the external cost (company time and/or consultant time) and Environment Agency permit application fee. The 2010 exemption review calculated the external cost of obtaining a standard permit as £1,356. The application fee of a mobile plant permit is £700. The total cost of obtaining a permit would therefore be £2,056 at 2010 values. Applying a 14% correction on external costs for inflation over the intervening period (based on historic CPI data) gives a value of £1,546. There has been a 3% increase in the application charge to £720 over the same period. This gives a current figure of £2,266.

The total number of mobile plant permits is 349. Of these only 216 are active, ie have current deployments. The number of deployments submitted in the 2014/15 financial year was 2,434. Based on a 10% sample of 2014/15 deployments it is estimated that 75% of deployments involve storage in excess of 1,500 tonnes.

The first deployment for each of the 216 active permits will definitely comply with the 3,000 tonne storage limit.

2,434 - 216 = 2,218 deployments remaining to be allocated between 216 permits.

For these operators (holding the 216 permits), 75% of these 2,218 will involve storage greater than 1,500 tonnes meaning a second permit would be required. On this basis an additional 1,663 permits are required.

1,663 permits @ £2,266 = £3,768,358.

So the total avoided cost realised by moving from 'storage per permit' to 'storage per deployment' is approximately £3,768 million. This is a one off saving realised in the first year.

2. **Changes to the provisions for temporary storage of waste prior to spreading**

(i) Non-stackable wastes displaced from storage at place of use

Based on the 10% sample of 2014/15 deployments we estimate that a total of 240 deployments involve the storage of non-stackable wastes in a manner which would no longer comply with the revised standard rules.

This figure of 240 includes a number of deployments where subsequent compliance assessment has revealed the storage facility is being used as a hub for multiple deployments, or is being used continuously for the storage of wastes. These storage facilities already require a site permit and we are in the process of informing operators. A conservative estimate is that one third of the 240 deployments fall into this category, leaving 160 deployments where new storage arrangements will need to be adopted.

A further 20 deployments are held by a company whose permit has since been revoked. This reduces the figure to 140.

An estimated 20 deployments involve quantities where it is likely to be more cost effective to amend operating practices than to obtain a site based permit, eg quantities of up to 1,500 tonnes. These deployments are also excluded, giving a total of 120.

(ii) Cost of new storage facilities

The cost of establishing a storage facility will vary with design, location and size. Existing storage facilities are typically earth banked lagoons or lined and covered lagoons ranging from 1,500 cubic metres upwards.

Using 2010 costings for a 1,500 m^3 slurry store from '[Cost effective slurry storage strategies on dairy farms]' derived from Nix), applying a 14% inflation adjustment and scaling with size.

Store construction	**2009 cost / m^3**	**2015 cost / m^3**	**1,500 m^3 (1.0)**	**3,000 m^3 (0.8)**	**5,000 m^3 (0.7)**	**10,000 m^3 (0.6)**
Clay lined lagoon	£5	£5.70	£8,550	£13,680	£19,950	£34,200
HDPE lined lagoon	£17	£19.38	£29,070	£46,512	£67,830	£116,280
Slurry bag	£29	£33.06	£49,590	£79,344	£115,710	£198,360
Steel tower	£34	£38.76	£58,140	£93,024	£135,660	£232,560
Concrete store	£39	£44.46	£66,690	£106,704	£155,610	£266,760

There are 120 deployments where the waste will be displaced.

120 x 3,000 tonnes = 360,000 tonnes

However the average tonnage for deployments affected by the changes is approximately 2,250 tonnes or 75% of the 3,000 tonne limit. So the quantity actually displaced is 270,000 tonnes.

Assume that 75% of operators continue to utilise the 1,250 tonnes of storage available under the deployment while the other 25% rely only on storage under a site permit.

90 x 1,250 = 112,500 tonnes which may still be stored under deployments.

270,000 – 112,500 = 157,500 tonnes to be accommodated in permitted site facilities.

Based on current evidence, facilities will predominantly be lined or unlined lagoons and 50% will require covers. A range of sizes between 3,000 tonnes and 15,000 tonnes is assumed with an average size of approximately 5,000 tonnes. On this basis 32 site based facilities will be required. Some are already constructed and simply require permitting, eg redundant slurry stores, so assume 28 will be newly constructed. Virtually all are expected to be earth banked or lined lagoons at £19,950 and £67,830 respectively. An average cost of £44,000 is assumed.

28 new facilities at £44,000 give a one off construction cost of £1,232,000 realised in the first year.

The decommissioning of 30 existing storage facilities, ie the 25% who do not utilise the 1,250 tonnes of storage under the deployment, will generate savings which can be offset against the cost of new facilities.

So 30 temporary storage facilities will no longer need to be established and maintained at the place of use. A conservative estimate of the saving by not using the storage facility is taken as £2,000 per deployment.

30 @ £2,000 = £60,000

The cost of establishing temporary storage facilities is incurred annually so the saving achieved by reducing the number of facilities is also an annual saving.

(iii) Cost of permits for new site based storage facilities

The SR2010 No.17 application charge is £1,630 plus external application costs of £1,546 = £3,176.

32 new permits required @ £3,176 = £101,632.

In addition there will be a cost of demonstrating technical competent status which will vary according to individual operator circumstance. The technical competence requirements for mobile plant permits are very similar (4 out of 6 qualifications are common to both). Assume a maximum of £400 per facility. However one technically

competent person can cover multiple facilities so it's likely that no more than 20 new technically competent persons will be required so 20 @ £400 = £8,000

The total cost of obtaining site based storage permits and obtaining technical competence is £121,632. This is a one off cost realised in the first year.

The annual subsistence charge for SR2010 No.17 is £780.

32 permits @ £780 = £24,960. This is an annual cost.

(iv) Transport and handling costs

The additional costs of transport and handling are acknowledged. They will be highly dependent upon existing practice and the location of new storage facilities. It is not possible to quantify the additional costs with any accuracy. It should be assumed that the operators will adapt their business model to minimise the additional transport costs.

(v) Cost of covering high RAN wastes in temporary stores

The provision of storage under deployments supposes that stores are temporary and mobile, and repeated use of a store in the same location will require a site permit. Since the requirement to cover is limited to high RAN wastes within 200 metres of a designated site, it is assumed that operators will choose to locate storage outside the 200 metre limit rather than cover the waste. We therefore assume no significant additional costs.

(vi) Avoided pollution incident and clean up costs

The cost to business of incidents which result in pollution or non-compliance will vary significantly according to the circumstances in each case. Typical costs would be analogous with the slurry case study in the AMEC[2] report which gives a figure of £56,000.

Assume 4 avoided incidents per annum at £56,000 per incident = £224,000 per annum saving.

3. **Deployments for areas greater than 50 hectares**

Low volume wastes such as ash and gypsum are the most obvious beneficiaries. The number of ash and gypsum deployments per annum is currently relatively low because of higher deployment costs per tonne. Assuming this proposal benefits operators to the extent that 10 fewer deployments are required at the medium charge band of £780 - this represents a saving of £7,800 per annum.

[2] Development of a methodology to calculate the cost of pollution incidents AMEC Report 2013 case study No. 5.

It is recognised that other waste streams such as digestate used as nitrogen fertilisers on large arable fields may also benefit. Assume conservatively an uptake of 5% on 2,000 deployments, giving 100 deployments which will be reduced to only 50.

Saving of 50 deployment charges @ £780 = £39,000

Total saving of £46,800 per annum.

4. **Prohibit spreading in groundwater zones (GSgZs) for nitrate:**

The original proposal to prohibit spreading of high readily available nitrogen wastes in GSgZs has been revised to allow spreading subject to meeting the following conditions.

The rules shall limit the storage and spreading of high RAN wastes in groundwater SGZs designated for nitrate to:

- periods outside the NVZ closed periods for spreading organic manure with high readily available nitrogen
- application rates of ≤ 50m^3/ha, with a minimum 3 week gap between applications
- maximum application rate of 250 kg total n per any given hectare

This revised proposal represents best practice, something we would expect operators to be adhering to already. Therefore the financial impact should be minimal.

The area of land newly affected by the proposed restrictions, ie land in a GSgZ but outside a source protection zone 1, has been calculated as 1,994 km^2 which is equivalent to 1.5% of the land area of England. GSgZs are concentrated in certain parts of the country (east Yorkshire, north Lincolnshire, Cheshire, Hertfordshire, Kent, Hampshire, Cambridge and Thetford, the North and South Downs, Weymouth, Wells and Exeter). Large parts of the country are wholly unaffected by this proposal.

Individual GSgZs tend to be small because they are focused on the most vulnerable parts of catchments. No land is more than 4 miles from the edge of a GSgZ so any additional haulage costs to move materials outside of a GSgZ will be relatively small. If the waste is already being transported then only the time and mileage costs are relevant.

On a pro-rata basis we expect 36 deployments per year to be within a GSpZ (1.5% of 2,434). If one third do not involve high RAN wastes this leaves 24 deployments.

As there will no longer be a complete prohibition on spreading we believe the majority of operators will seek to manage their spreading on their existing landbank

within the new limitations. We have assumed that 18 of the remaining deployments will be adapted and managed to ensure they comply with the limitations.

In the case of the remaining 6 deployments the waste will be diverted to be spread at locations outside the GSgZ. This will require operators to identify and secure land on which to spread that is outside of a GSgZ.

We consider it likely that initially there will be some additional costs to those operators located in or adjacent to a GSgZ as they adapt practices to manage storage and spreading in accordance with the new restrictions.

On this basis we estimate that these will be no more than £10,000 in the first year falling to zero thereafter.

The restrictions on spreading are designed to secure improvements in water quality, and specifically a reduction in nitrates in groundwater. Removing nitrate from water is expensive - it involves significant capital investment and operating expenditure. Water industry sources quote examples of £4 million to construct and commission a nitrate removal plant. Avoiding or reducing the need for such expenditure represents a saving which is acknowledged but not included in these calculations.

5. **Restrictions on spreading in adverse conditions**

No associated costs as we are assured that this does not take place (COGAP).

6. **Update the list of acceptable wastes**

The inclusion of a number of new wastes in the mobile plant standard rules avoids the need for operators to obtain a separate bespoke permit. Some of the waste types and codes being added are spread in significant quantities (animal by-products, reprocessed gypsum, compost and digestate containing sewage sludge and washwaters).

A specific technical assessment of the additional waste type is needed to support a bespoke permit application. The combined cost of this assessment together with the application charge and other external costs are estimated at £10,000 for each bespoke permit.

Representations previously made in support of the current regulatory position suggest a reasonable degree of uptake so the number of bespoke permits avoided by adding these wastes is likely to be significant; we have assumed 30 bespoke permits.

30 bespoke permits @ £10,000 represent a saving of £300,000.

All deployments made under bespoke permits are charged at the higher rate. Adding these wastes to the standard rules means that they will in many cases benefit from lower deployment charges. The average number of deployments submitted for each

active standard permit is 11 per annum so for 30 permits this represents 330 deployments. If 110 deployments fall into each of the low medium and high risk deployment bands there will be a saving of £85,800 per annum. (110 x 570) + (110 x 210) + (110 x 0).

Particle board has been removed from the list of acceptable wastes as the variability in composition and quality makes it unsuitable for inclusion in the standard rules. Because of these quality issues we understand there to be little or no spreading of waste containing particle board so the cost of this change is considered negligible.

7. **Require pre-notification of the intention to commence spreading**

Each deployment will require at least one communication, and if spreading is split or plans need to be changed then there is potential for multiple notifications. We will assume an average 3 notifications per deployment. The 2,434 deployments will therefore generate 7,302 notifications.

The cost of a telephone call or email is assumed to be an absolute maximum of £3.50 (includes time and call charge), giving a total cost of £25,557 per annum.

8. **Minor amendments to existing definitions and wording to provide greater clarity and consistency**

Financial impacts are considered to be insignificant. The main changes are that:

- definitions are provided for continuously managed areas of land, European site, frozen, groundwater safeguard zone; groundwater source protection zone; high readily available nitrogen wastes, steeply sloping and waterlogged
- some phrases or words have been amended to improve readability and consistency
- references to legislation have been updated where necessary