

Agenda – Legislation, Justice and Constitution Committee

Meeting Venue:	For further information contact:
Video Conference via Zoom	Gareth Williams
Meeting date: 22 February 2021	Committee Clerk
Meeting time: 09.00	0300 200 6565
	SeneddLJC@senedd.wales

In accordance with Standing Order 34.19, the Chair has determined that the public are excluded from the Committee's meeting in order to protect public health. This meeting will be broadcast live on www.Senedd.TV

Informal pre-meeting (08.30–09.00)

- 1 Introduction, apologies, substitutions and declarations of interest**
09.00
- 2 Making Justice work in Wales: Evidence session 3**
09.00–10.00 (Pages 1 – 25)
The Rt Hon Robert Buckland QC MP, Lord Chancellor and Secretary of State
for Justice

CLA(5)–06–21 – Briefing
CLA(5)–06–21 – Paper 1 – Letter from Alex Chalk MP, Parliamentary Under-
Secretary of State for Justice, 7 July 2020
CLA(5)–06–21 – Paper 2 – Letter to the Lord Chancellor and Secretary of State
for Justice, 19 June 2020

Break (10.00–10.45)



3 Justice in Wales and proposals to reform the devolved Welsh tribunals system – evidence session with the Law Commission of England and Wales

10.45–11.30

(Pages 26 – 32)

Nicholas Paines QC, Law Commissioner

Henni Ouahes, Head of Public Law and the Law in Wales, Law Commission

Sarah Smith, Law Reform Lawyer, Law Commission

CLA(5)–06–21 – Briefing 2

CLA(5)–06–21 – Paper 3 – Letter from Nicholas Paines QC, 20 January 2021

CLA(5)–06–21 – Paper 4 – Correspondence from Nicholas Paines QC, 17 December 2020

[Law Commission – Consultation on Devolved Tribunals in Wales](#)

4 Instruments that raise no reporting issues under Standing Order 21.2 or 21.3

11.30–11.35

(Pages 33 – 34)

CLA(5)–06–21 – Paper 5 – Statutory Instruments with clear reports

Affirmative Resolution Instruments

4.1 SL(5)740 – The Plant Health (Amendment) (Wales) (EU Exit) Regulations 2021

4.2 SL(5)742 – The Family Absence for Members of Local Authorities (Wales) (Amendment) Regulations 2021

5 Instruments that raise issues to be reported to the Senedd under Standing Order 21.2 or 21.3

11.35–11.40

Negative Resolution Instruments

5.1 SL(5)735 – The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021

(Pages 35 – 201)

CLA(5)–06–21 – Paper 6 – Report

CLA(5)–06–21 – Paper 7 – Regulations

CLA(5)–06–21 – Paper 8 – Explanatory Memorandum

CLA(5)–06–21 – Paper 9 – Written statement, 27 January 2021

5.2 SL(5)741 – The M4 Motorway (Junction 28 (Tredegar Park) to Junction 24 (Coldra)) (50 mph Speed Limit) Regulations 2021

(Pages 202 – 215)

CLA(5)–06–21 – Paper 10 – Report

CLA(5)–06–21 – Paper 11 – Regulations

CLA(5)–06–21 – Paper 12 – Explanatory Memorandum

5.3 SL(5)743 – The Non-Domestic Rating (Unoccupied Property) (Wales) (Amendment) Regulations 2021

(Pages 216 – 227)

CLA(5)–06–21 – Paper 13 – Report

CLA(5)–06–21 – Paper 14 – Regulations

CLA(5)–06–21 – Paper 15 – Explanatory Memorandum

Affirmative Resolution Instruments

5.4 SL(5)736 – The Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021

(Pages 228 – 288)

CLA(5)–06–21 – Paper 16 – Report

CLA(5)–06–21 – Paper 17 – Regulations

CLA(5)–06–21 – Paper 18 – Explanatory Memorandum

CLA(5)–06–21 – Paper 19 – Written statement, 27 January 2021

CLA(5)–06–21 – Paper 20 – Written statement, 3 February 2021

6 Instruments that raise issues to be reported to the Senedd under Standing Order 21.2 or 21.3 – previously considered

11.40–11.45

6.1 SL(5)695 – The Official Feed and Food Controls (Miscellaneous Amendments) (Wales) Regulations 2020

(Pages 289 – 292)

CLA(5)–06–21 – Paper 21 – Report

CLA(5)–06–21 – Paper 22 – Welsh Government response

7 Subordinate legislation that raises issues to be reported to the Senedd under Standing Order 21.7 – previously considered

11.45–11.50

7.1 SL(5)727 – The Candidate Election Expenses (Senedd Elections) Code of Practice 2021

(Pages 293 – 295)

CLA(5)–06–21 – Paper 23 – Report

CLA(5)–06–21 – Paper 24 – Welsh Government response

8 Papers to note

11.50–11.55

8.1 Letter from the Minister for Environment, Energy and Rural Affairs: The Organics (Amendment) Regulations 2021

(Page 296)

CLA(5)–06–21 – Paper 25 – Letter from the Minister for Environment, Energy and Rural Affairs, 5 February 2021

8.2 Letter from the Minister for Housing and Local Government to the Llywydd: Senedd business during the pre–election period

(Pages 297 – 299)

CLA(5)–06–21 – Paper 26 – Letter from the Minister for Housing and Local Government to the Llywydd, 9 February 2021

8.3 Letter from the Counsel General: Amendments to the UK Trade Bill

(Pages 300 – 301)

CLA(5)–06–21 – Paper 27 – Letter from the Counsel General, 10 February 2021

8.4 Welsh Government Report on the implementation of Law Commission proposals

(Pages 302 – 317)

CLA(5)–06–21 – Paper 28 – Welsh Government report

CLA(5)–06–21 – Paper 29 – Written statement, 15 February 2021

8.5 Correspondence with the Secretary of State for Wales: Sewel Convention

(Pages 318 – 323)

CLA(5)–06–21 – Paper 30 – Letter from the Secretary of State for Wales, 16 February 2021

CLA(5)–06–21 – Paper 31 – Letter to the Secretary of State for Wales, 21 January 2021

9 Motion under Standing Order 17.42 to resolve to exclude the public from the remainder of the meeting

11.55

10 Making Justice work in Wales – consideration of evidence

11.55–12.15

11 Legislative Consent Memoranda on the Domestic Abuse Bill – consideration of draft report

12.15–12.25

(Pages 324 – 333)

CLA(5)–06–21 – Paper 32 – Draft report

12 Scrutiny of regulations made under the EU (Withdrawal) Act 2018 – update

12.25–12.30

(Pages 334 – 335)

CLA(5)–06–21 – Paper 33 – Letter from the Minister for Finance and Trefnydd, 17 February 2021

Date of the next meeting – 1 March 2021

Document is Restricted



Mick Antoniw MS
Chair
Legislation, Justice and Constitution Committee
Welsh Parliament
Cardif Bay
Cardiff
CF99 1SN

MoJ ref: ADR79396

7 July 2020

Dear Mick,

INQUIRY INTO MAKING JUSTICE WORK IN WALES – DATA ON ACCESS TO JUSTICE

Thank you for your letter of 19 June to the Lord Chancellor, regarding the inquiry into Making Justice work in Wales and in particular, user needs for Welsh justice data.

As you have noted, the Justice in Wales Working Group recommended that we should undertake a review of how data collection and publishing practices reflect the distinctiveness of Wales, where possible disaggregating data to give a clear picture of how justice in Wales functions. Disaggregation of Welsh data is a matter that we have been seeking to resolve for some time, particularly the challenges involved in categorising Welsh individuals in the justice system, but I am pleased to say that we have made considerable progress.

HMCTS in Wales currently collects data on existing legacy Case Management Systems at Court and Tribunal venue level for all jurisdictions. This data can be aggregated at a local reporting level e.g. Local Justice Area or Local Family Justice Board areas, and then summarised in a top level HMCTS Wales data set, which can be used in Wales for performance monitoring against workloads and all Key Performance measures. The Ministry of Justice aggregate the data for the Office for National Statistics, which are released Quarterly.

When considering changes to the court and tribunal estate, HMCTS will always assess local data for a particular court and the surrounding area. They will consider the workload and operating costs of the court but also, through an equalities assessment, local populations and their characteristics. They will assess local journeys to court by public transport to make sure that any likely future journeys meet HMCTS' access to justice principles.

Legal Aid Provider Statistics provide legal aid data at national/regional level, so data for Wales can be isolated from the overall data for England and Wales. This is based on the provider location, not the client location. The published statistics give the type of work undertaken, covering both civil and crime billing data for completed claims. This dataset includes data from 2011/12 onwards.

With respect to family justice, we publish data at a regional level, which can be found here:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895002/Family_Data_2020_Q1.zip. This data set includes:

- The number of cases started/finishing by region and by case type (with 'count' referring the number of applications/orders etc depending on the start/end selection)
- The timeliness by region and case type and legal representation status (note that those without representation are where representation isn't recorded, rather than specifically being litigants in person)

Whilst your request does not cover prisons and probation, I thought you would find it helpful to know that HMPPS currently provides published statistics on how offender management services in the community and in custody are delivered. These statistics include key statistics relating to offenders, staff and performance against agreed service levels and measures. Where possible, for prisons, the statistics are disaggregated to the establishment level, including prisons in Wales. Similarly, statistical publications relating to community supervision are disaggregated to a regional level, including Wales. A narrative account of HMPPS in Wales, reflecting the devolved structure of the organisation and activities is provided in HMPPS Annual Report and Accounts.

One important development this year, however, has been the funding announced by Administrative Data Research to the Ministry of Justice for the Data First project. This work will provide a platform to link together data from across the justice system to help our understanding of people's experiences, including people from Wales, and will also provide greater secure access to data for researchers in Wales.

I hope this information is helpful and I would be happy to answer any follow up questions you may have in relation to the inquiry.

Thank you again for getting in touch.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Alex Chalk', is centered on a light gray, textured rectangular background.

ALEX CHALK MP

The Rt Hon Robert Buckland QC MP
Lord Chancellor and Secretary of State for Justice

19 June 2020

Dear Lord Chancellor

Inquiry into Making Justice work in Wales – data on access to justice

The Legislation, Justice and Constitution Committee is undertaking an inquiry into Making Justice work in Wales. This work follows on from the publication of the report of the Commission on Justice in Wales, and the Senedd's debate on that report in February of this year.

As you will know, the Justice Commission found that it was difficult to obtain disaggregated data on justice in Wales and noted that the Welsh Government and Ministry of Justice have agreed to 'establish a small working group to consider the user needs for Welsh justice data and how they could be met'. Further, we are aware that the joint UK Government – Welsh Government Justice in Wales Working Group recommended in 2017 that 'the Ministry of Justice should undertake a review of how its data collection and publishing practices reflect the distinctiveness of Wales, where possible disaggregating data to give a clear picture of how justice in Wales functions.'

It is important to our scrutiny function that we are able to understand how the UK Government and Welsh Government collect and use data on justice in Wales. At this stage we would be grateful to have more information from you on the UK Government's approach to managing data on access to justice in Wales, in particular changes in legal aid provision, numbers of unrepresented defendants, and court closures.

I am also writing to the First Minister of Wales, the Rt Hon Mark Drakeford MS, to seek information on the Welsh Government's approach to managing this data.



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We will shortly be having further discussions about our work programme, which will include deciding on future oral evidence sessions, and this will take into account the current virtual meeting model for Senedd Committees. It is likely that we will invite you to a future meeting as part of this inquiry, and I will ask the Clerk to liaise with your officials regarding your availability.

Yours sincerely,

A handwritten signature in black ink, reading "Mick Antoniw". The signature is written in a cursive style with a horizontal line underneath the name.

Mick Antoniw MS
Chair of the Legislation, Justice and Constitution Committee

Croesewir gohebiaeth yn Gymraeg neu Saesneg.
We welcome correspondence in Welsh or English.



Agenda Item 3

By virtue of paragraph(s) vi of Standing Order 17.42

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20 January 2021

Dear Mr Antoniw,

May I begin by wishing you and the people of Wales a happy new year.

We were very pleased that the Legislation, Justice and Constitution Committee took note, at its meeting last week, of the publication of our consultation paper on the future of devolved tribunals in Wales. The paper has opened a consultation period running until 19 March.

The operation of the devolved tribunals seems to us to be relevant to the Committee's inquiry into making justice work in Wales. We have always valued our relationship with the Committee, and so I am writing to assure you that if the Committee have any questions about the contents of the consultation paper, or our project more generally, we would be very willing to meet with you. That could involve giving evidence formally, or providing a more informal briefing session to enable Committee members to familiarise themselves with the contents of the consultation paper. Please let us know if you would like to set up a meeting.

Yours sincerely,

Nicholas Paines QC
Commissioner for Public Law and the Law in Wales



Comisiwn y Gyfraith

Diwygio'r gyfraith

Law Commission

Reforming the law

Sent on behalf of Nicholas Paines QC

The Law Commission's Consultation Paper on Devolved Tribunals in Wales

Dear Sir or Madam (for the attention of members of the Legislation, Justice and Constitution Committee) ,

I am pleased to inform you that the Law Commission's Consultation Paper on Devolved Tribunals in Wales has been published today.

The consultation paper reviews the law underpinning devolved tribunals in Wales. It makes a number of proposals to reform the system of tribunals, and asks whether consultees agree. It also seeks the views of consultees on more open questions.

Consultees are invited to respond to the paper by Friday 19 March 2021.

Versions of the consultation paper in both English and Welsh can be downloaded from our website at <https://www.lawcom.gov.uk/project/devolved-tribunals-in-wales/>. It is published alongside a summary, which is also available in both English and Welsh.

Rydw i'n falch o gael eich hysbysu bod Papur Ymgynghori Comisiwn y Gyfraith ar Dribiwnlysoedd Datganoledig yng Nghymru wedi cael ei gyhoeddi heddiw.

Mae'r papur ymgynghori'n adolygu'r gyfraith sy'n tanategu'r tribiwnlysoedd datganoledig yng Nghymru. Ynndo, mae llawer o gynigion i ddiwygio'r system o dribiwnlysoedd, gan ofyn a yw'r sawl fydd yn ymateb i'r ymgynghoriad yn cytuno â'r cynigion. Rydym hefyd yn ceisio canfod barn ymgynghoreion trwy ofyn cwestiynau mwy penagored.

Estynnwn wahoddiad i chi ymateb i'r papur ymgynghori cyn Dydd Gwener 19 Mawrth 2021.

Gellir canfod a lawrlwytho y papur ymgynghori yn y Gymraeg a'r Saesneg o'n gwefan <https://www.lawcom.gov.uk/tribiwnlysoedd-datganoledig-yng-nghymru/>. Yn ogystal â'r papur ymgynghori llawn, gellir canfod y crynodeb ar y wefan, sydd ar gael yn ddwyieithog hefyd.

Devolved Tribunals in Wales | Law Commission | Comisiwn y Gyfraith

1st Floor, Tower, Post Point 1.52, 52 Queen Anne's Gate, London, SW1H 9AG (access via 102 Petty France)

Tel: +44 (20) 3334 0443 | Web: www.lawcom.gov.uk

Email: DevolvedTribunalsWales@lawcommission.gov.uk

Statutory Instruments with Clear Reports 22 February 2021

SL(5)740 – The Plant Health (Amendment) (Wales) (EU Exit) Regulations 2021

Procedure: Affirmative

The purpose of these Regulations is to protect biosecurity and support trade by ensuring that effective phytosanitary controls continue to operate between Northern Ireland and Great Britain and within Great Britain in relation to Qualifying Goods. It facilitates the policy of unfettered market access in relation to Qualifying Goods.

This instrument makes amendments to allow movements of Qualifying Goods into Great Britain under an EU Plant Passport. Once in Great Britain, an EU Plant Passport can continue to accompany the Qualifying Goods.

Parent Act: European Union (Withdrawal) Act 2018

Date Made:

Date Laid: 02 February 2021

Coming into force date:

SL(5)742 – The Family Absence for Members of Local Authorities (Wales) (Amendment) Regulations 2021

Procedure: Affirmative

These Regulations amend the Family Absence for Members of Local Authorities (Wales) Regulations 2013 (“the 2013 Regulations”) to increase adopter’s absence entitlement for members of a local authority from 2 weeks to 26 weeks. This will result in the same periods of maternity and adopter’s absence being available under the 2013 Regulations.

The maximum period for adopter’s absence that could be prescribed by regulations was previously limited to a period not exceeding 2 weeks by section 26(3) of the Local Government (Wales) Measure 2011. This limitation was removed by section 61(4) of the Local Government and Elections (Wales) Act 2021.



The Regulations also make a number of changes to put in place for adopter's absence similar arrangement to those already in operation regarding maternity absence. Specifically, the Regulations:

- Prescribe conditions a member must satisfy in order to be eligible for adopter's absence and procedures for varying the start date and duration of absence;
- Provide that the period of adopter's absence is 26 weeks unless the member provides written notice to the contrary (under regulation 14) or brings the period of adopter's absence to an end (under regulation 17A), and makes provision about the period of absence in situations where more than one child is adopted as part of the same arrangement;
- Prescribe the period within which the adopter's absence must start;
- Provide that, subject to the new regulation 16, a member may choose the date on which adopter's absence starts;
- Prescribe how a member may bring a period of adopter's absence to an end;
- Apply to adopter's absence the same procedure for determining whether a member may undertake certain duties during their adopter's absence as applies to members wishing to undertake certain duties on maternity absence or parental absence.

Parent Act: Local Government (Wales) Measure 2011

Date Made:

Date Laid:

Coming into force date:



SL(5)735 – The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021

Background and Purpose

These Regulations make provision concerning the protection of waters against pollution by nitrates from agricultural sources.

These Regulations revoke and replace—

- (a) the Nitrate Pollution Prevention (Wales) Regulations 2013 (S.I. 2013/2506 (W. 245)) which control the application of nitrogen fertiliser in nitrate sensitive areas, and
- (b) the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010 (S.I. 2010/1493 (W. 136)) which regulate the custody and control of silage and slurry and provided the design and construction standards applicable for its storage.

The requirements under the Nitrate Pollution Prevention (Wales) Regulations 2013 applied only to holdings situated in designated Nitrate Vulnerable Zones, these requirements will now apply to all holdings in Wales. The majority of the measures in the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010 will continue to apply under these Regulations but the capacity requirements for the storage of organic manure and silage in those Regulations are superseded and mirror those in the Nitrate Pollution Prevention (Wales) Regulations 2013.

Any persons proposing to build or improve their storage facility for slurry or silage will be required to notify the Natural Resources Body for Wales (“NRBW”) 14 days before construction work is begun. This replaces the previous requirement for notification prior to the storage facility’s actual use.

Occupiers of organic holdings wishing to benefit from the exemption to the closed periods for spreading organic manure with high readily available nitrogen (regulation 20) must now submit an undertaking to the control system referred to in Article 27 of Council Regulation (EC) 834/2007 rather than register with the Advisory Committee on Organic Standards (which has now been dissolved).

Procedure

Negative

Technical Scrutiny

No points are identified for reporting under Standing Order 21.2 in respect of this instrument.



Merits Scrutiny

The following points are identified for reporting under Standing Order 21.3 in respect of this instrument.

1. Standing Order 21.3(ii) – that it is of political or legal importance or gives rise to issues of public policy likely to be of interest to the Senedd

Regulation 30 enables NRBW to serve a notice requiring a person to carry out works or take precautions or other steps, as specified in the notice. The period for compliance with such a notice is 28 days or such longer period as is reasonable in the circumstances (regulation 30(4)). Appeals against regulation 30 notices can be made to the Welsh Ministers, in accordance with regulation 31. Where such an appeal is made, regulation 31(6) provides that the period for compliance is “subject to any direction under paragraph (5)” (which amongst other things, can extend the period for compliance with any requirement) “extended so that it expires on the date on which the Welsh Ministers finally determines the appeal, or if the appeal is withdrawn, the date on which it is withdrawn”. Where an appeal is withdrawn by the appellant, the appellant would be able to prepare to comply with the notice. However, where the Welsh Ministers determine the appeal and, as such, works, precautions or other steps are required to be undertaken, there appear to potentially be circumstances where appellants are obligated to undertake works/take action on the same day as the result of their appeal is known. This may mean that appellants are either unable to comply in time with the determination, or in some circumstances, preparatory work may have been undertaken unnecessarily. The power for Welsh Ministers to “extend the period for compliance with any requirement” in regulation 31(5)(c) is therefore important to reduce the risk of this occurring.

Welsh Government response

A Welsh Government response is not required.

Legal Advisers

Legislation, Justice and Constitution Committee

12 February 2021



W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 77 (W. 20)

AGRICULTURE, WALES

WATER, WALES

**The Water Resources (Control of
Agricultural Pollution) (Wales)
Regulations 2021**

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations revoke and replace—

- (a) the Nitrate Pollution Prevention (Wales) Regulations 2013 (S.I. 2013/2506 (W. 245)) which control the application of nitrogen fertiliser in nitrate sensitive areas, and
- (b) the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010 (S.I. 2010/1493 (W. 136)) which regulate the custody and control of silage and slurry and provided the design and construction standards applicable for its storage.

These Regulations make provision concerning the protection of waters against pollution by nitrates from agricultural sources.

Principal Changes

Whereas the requirements under the Nitrate Pollution Prevention (Wales) Regulations 2013 applied only to holdings situated in designated Nitrate Vulnerable Zones, these requirements will now apply to all holdings in Wales. The majority of the measures in the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010 will continue to apply under these Regulations but the capacity requirements for the storage of organic manure and silage in those Regulations are superseded and mirror those in the Nitrate Pollution Prevention (Wales) Regulations 2013.

Furthermore, persons proposing to build or improve their storage facility for slurry or silage will be

required to notify the Natural Resources Body for Wales (“NRBW”) 14 days before construction work is begun, replacing the previous requirement for notification prior to the storage facility’s actual use.

Occupiers of organic holdings wishing to benefit from the exemption to the closed periods for spreading organic manure with high readily available nitrogen (regulation 20) must now submit an undertaking to the control system referred to in Article 27 of Council Regulation (EC) 834/2007 rather than register with the Advisory Committee on Organic Standards which has now been dissolved.

The Regulations

Part 1 of these Regulations contains introductory provisions including transitional provision for all holdings not previously within a Nitrate Vulnerable Zone which are now required to comply with the relevant provisions and requirements under these Regulations.

Part 2 of these Regulations imposes annual limits on the amount of nitrogen from organic manure that may be applied or spread.

Part 3 establishes requirements relating to the amount of nitrogen to be spread on a crop, and requires an occupier to plan in advance how much nitrogen fertilizer will be spread.

Part 4 requires an occupier to provide a risk map of the holding, and imposes conditions on how, where and when to spread nitrogen fertilizer.

Part 5 establishes closed periods during which it is prohibited to spread nitrogen fertilizer.

Part 6 makes provision for the storage of organic manure and prescribes the capacity and construction requirements for such storage systems. It provides for exemptions from the requirements for certain storage systems; for NRBW to serve notices requiring the carrying out of works or precautions for reducing the risk of pollution to controlled waters and provides an appeal process against such notices. It also requires NRBW to be notified of certain works to be carried out to such storage systems.

Part 7 specifies what records must be kept.

Part 8 requires the Welsh Ministers to review these Regulations within set time scales, including a review after two years to consider any submissions on an alternative suite of measures to those in these Regulations for preventing or reducing pollution caused by agriculture.

Part 9 of these Regulations provides for enforcement and for contravention of certain regulations to be a criminal offence. These Regulations are enforced by NRBW.

Part 10 contains miscellaneous provisions including revocations.

These Regulations repeal and re-enact (without modification) technical regulations in the Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010.

British Standard publications referred to in these Regulations can be obtained from the British Standard Institute either online at <https://shop.bsigroup.com/Contact-Us/> or by writing to BSI Customer Services, 389 Chiswick High Road, London, W4 4AL, UK.

The Welsh Ministers' Code of Practice on the carrying out of Regulatory Impact Assessments was considered in relation to these Regulations. As a result, a regulatory impact assessment has been prepared as to the likely costs and benefits of complying with these Regulations. A copy can be obtained from the Welsh Government, Cathays Park, Cardiff, CF10 3NQ.

W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 77 (W. 20)

AGRICULTURE, WALES

WATER, WALES

The Water Resources (Control of
Agricultural Pollution) (Wales)
Regulations 2021

Made 21 January 2021

Laid before Senedd Cymru 27 January 2021

Coming into force 1 April 2021

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SCHEDULE 5 — Requirements for silos

SCHEDULE 6 — Requirements for slurry storage systems

The Welsh Ministers make the following Regulations in exercise of the powers conferred by sections 92 and 219(2)(d) to (f) of the Water Resources Act 1991⁽¹⁾.

PART 1

Introduction

Title, application and commencement

1.—(1) The title of these Regulations is the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.

(2) These Regulations apply in relation to Wales.

(3) These Regulations come into force on 1 April 2021.

Transitional measures for holdings not previously in a nitrate vulnerable zone

2. In a holding or part of a holding that was not previously situated within a nitrate vulnerable zone as shown on the relevant map marked “Nitrate Vulnerable Zones Index Map 2013”⁽²⁾—

(1) 1991 c. 57. Section 92 was amended by the Environment Act 1995 (c. 25) section 120 and paragraph 128 and 144 of Schedule 22 to that Act, and by S.I. 2010/675 and S.I. 2013/755 (W. 90). There are amendments to section 219 which are not relevant to these Regulations. By virtue of article 2 of, and Schedule 1 to, the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672) functions of the Secretary of State under section 92 were transferred to the National Assembly for Wales in relation to those parts of Wales which are outside the catchment areas of the rivers Dee, Wye and Severn. In relation to those parts of Wales which are within those catchment areas, functions under section 92 are exercisable by the National Assembly for Wales concurrently with the Secretary of State. By virtue of section 162 of, and paragraph 30 of Schedule 11 to, the Government of Wales Act 2006 (c. 32) functions under sections 92 and 219 now vest in the Welsh Ministers.

(2) Under regulation 7(3) of the Nitrate Pollution Prevention (Wales) Regulations 2013 (S.I. 2013/2506) (W. 245) such a map was required to be deposited at the offices of the Welsh Government at Cathays Park, Cardiff, CF10 3NQ. The map can be viewed at <http://lle.gov.wales/catalogue/item/NitrateVulnerableZonesNVZ/?lang=en> and at the offices of the Welsh Government at Cathays Park, Cardiff, CF10 3NQ.

- (a) regulations 4 to 11, 15, 23, 27 and 33 to 43 do not apply until 1 January 2023, and
- (b) regulations 17 to 21, 25 and 26, and 28 to 31 do not apply until 1 August 2024.

Interpretation

3.—(1) In these Regulations—

“agricultural area” (“*ardal amaethyddol*”) means any agricultural land used for agricultural purposes;

“agriculture” (“*amaethyddiaeth*”) has the meaning given in section 109(3) of the Agriculture Act 1947(1);

“construct” (“*adeiladu*”) includes install;

“controlled waters” (“*dyfroedd a reolir*”) has the meaning given in section 104 of the Water Resources Act 1991;

“crop with high nitrogen demand” (“*cnwd â galw mawr am nitrogen*”) includes, but not limited to, grass, potatoes, sugar beet, maize, wheat, oilseed rape, barley, brassicas, rye and triticale;

“fertilisation plan” (“*cynllun gwrteithio*”) means a plan prepared under regulation 6(1)(c);

“grass” (“*porfa*”) means—

- (a) permanent grassland or temporary grassland (temporary means for less than four years),
- (b) that exists between the sowing and ploughing of the grass, and
- (c) includes crops under-sown with grass, but does not include grassland with 50 % or more clover;

“grazing livestock” (“*da byw sy’n pori*”) means any animal specified in Table 1 in Schedule 1;

“holding” (“*daliad*”) means all land and its associated buildings that are at the disposal of the occupier and which are used for the growing of crops in soil or rearing of livestock for agricultural purposes;

“land that has a low run-off risk” (“*tir y mae’r risg o oferu drosto yn isel*”) means land that—

- (a) has an average slope of less than 3° (3 degrees),
- (b) does not have land drains (other than a sealed impermeable pipe), and
- (c) is at least 50 metres from a watercourse or conduit leading to a watercourse;

(1) 1947 c. 48. There are amendments to subsection (3) but none is relevant.

“livestock” (“*da byw*”) means any animal (including poultry) specified in Schedule 1;

“manufactured nitrogen fertiliser” (“*gwrtaiith nitrogen a weithgynhyrchwyd*”) means any nitrogen fertiliser (other than organic manure) manufactured by an industrial process;

“manufactured phosphate fertiliser” (“*gwrtaiith ffosffad a weithgynhyrchwyd*”) means any phosphate fertiliser (other than organic manure) manufactured by an industrial process;

“nitrogen fertiliser” (“*gwrtaiith nitrogen*”) means any substance containing one or more nitrogen compounds used on land to enhance growth of vegetation and includes organic manure;

“non-grazing livestock” (“*da byw nad ydynt yn pori*”) means any animal specified in Table 2 in Schedule 1;

“notice” (“*hysbysiad*”) means notice in writing;

“NRBW” (“*CANC*”) means the Natural Resources Body for Wales;

“organic manure” (“*tail organig*”) means any nitrogen fertiliser or phosphate fertiliser derived from animal, plant or human sources and includes livestock manure;

“phosphate fertiliser” (“*gwrtaiith ffosffad*”) means any substance containing one or more phosphorus compounds used on land to enhance growth of vegetation and includes organic manure;

“poultry” (“*dofednod*”) means poultry specified in Schedule 1;

“reception pit” (“*pydew derbyn*”) means a pit used for the collection of slurry before it is transferred into a slurry storage tank or for the collection of slurry discharged from such a tank;

“sandy soil” (“*pridd tywodlyd*”) means any soil over sandstone, and any other soil where—

- (a) in the layer up to 40 cm deep, there are—
 - (i) more than 50 % by weight of particles from 0.06 to 2 mm in diameter,
 - (ii) less than 18 % by weight of particles less than 0.02 mm diameter, and
 - (iii) less than 5 % by weight of organic carbon, and
- (b) in the layer from 40 to 80 cm deep, there are—
 - (i) more than 70 % by weight of particles from 0.06 to 2 mm in diameter,
 - (ii) less than 15 % by weight of particles less than 0.02 mm diameter, and
 - (iii) less than 5 % by weight of organic carbon;

“shallow soil” (“*pridd tenau*”) is soil that is less than 40 cm deep;

“silage” (“*silwair*”) includes a crop being made into silage;

“silage effluent” (“*elifiant silwair*”) means effluent from silage;

“silo” (“*seilo*”) means a structure used for making or storing silage;

“slurry” (“*slyri*”) means liquid or semi-liquid matter composed of—

- (a) excreta produced by livestock (other than poultry) while in a yard or building (including that held in wood chip corrals), or
- (b) a mixture wholly or mainly consisting of livestock excreta, livestock bedding, rainwater and washings from a building or yard used by livestock,

of a consistency that allows it to be pumped or discharged by gravity at any stage in the handling process;

“slurry storage tank” (“*tanc storio slyri*”) includes a lagoon, a pit (other than a reception pit) or tower used for the storage of slurry;

“spreading” (“*taenu*”) includes application to the surface of the land, injection into the land or mixing with the surface layers of the land but does not include the direct deposit of excreta on to land by animals;

“watercourse” (“*cwrs dŵr*”) has the meaning given in section 221 of the Water Resources Act 1991.

(2) A reference in these Regulations to a slurry storage system includes a slurry storage tank and—

- (a) any reception pit and any effluent tank used in connection with the tank, and
- (b) any channels and pipes used in connection with the tank, any reception pit or any effluent tank.

(3) A requirement in these Regulations for a silo or slurry storage tank to conform to a British Standard (in whole or in part) is satisfied if the silo or tank conforms to a standard or specification that provides an equivalent level of protection and performance and is recognised for use in a member State, Iceland, Liechtenstein, Norway or Turkey.

PART 2

Limiting the application of organic manure

Application of livestock manure – total nitrogen limit for the whole holding

4.—(1) The occupier of a holding must ensure that, in any year beginning 1 January, the total amount of nitrogen in livestock manure applied to the holding, whether directly by an animal or by spreading, does not exceed 170 kg multiplied by the area of the holding in hectares.

(2) The amount of nitrogen produced by livestock must be calculated in accordance with Schedule 1.

(3) In calculating the area of the holding for the purposes of ascertaining the amount of nitrogen permitted to be spread on the holding, no account is taken of surface waters, any hardstanding, buildings, roads or any woodland unless that woodland is used for grazing.

Spreading organic manure — nitrogen limits per hectare

5.—(1) Subject to paragraph (2), the occupier of a holding must ensure that, in any 12 month period, the total amount of nitrogen in organic manure spread on any given hectare on the holding does not exceed 250 kg.

(2) The occupier of a holding must ensure that the total amount of nitrogen in organic manure exclusively in the form of certified compost applied to any given hectare on the holding does not exceed—

- (a) 1000 kg in any four year period if it is applied as mulch to orchard land, or
- (b) 500 kg in any two year period if it is applied to any other land.

(3) For the purposes of paragraphs (1) and (2), the total amount of nitrogen in organic manure must be calculated by reference to the methods described in regulation 9 for establishing nitrogen content.

(4) In this regulation—

- (a) “orchard land” means land on which any fruit listed in Schedule 2 is grown;
- (b) “certified compost” means green compost or green/food compost in relation to which the supplier confirms in writing that it meets the standards set out in the publication *PAS 100:2011* on composted materials dated January 2011 and contains no livestock manure;

- (c) the occupier must retain written confirmation that the organic manure complies with subparagraph (b).

PART 3

Crop requirements

Planning the spreading of nitrogen fertiliser

6.—(1) An occupier of a holding who intends to spread nitrogen fertiliser must—

- (a) calculate the amount of nitrogen in the soil that is likely to be available for uptake by the crop during the growing season (“the soil nitrogen supply”),
- (b) calculate the optimum amount of nitrogen that should be spread on the crop, taking into account the amount of nitrogen available from the soil nitrogen supply, and
- (c) produce a plan for the spreading of nitrogen fertiliser for that growing season.

(2) In the case of any crop other than permanent grassland, the occupier must comply with paragraph (1) before spreading any nitrogen fertiliser for the first time for the purpose of fertilising a crop planted or intended to be planted.

(3) In the case of permanent grassland the occupier must comply with paragraph (1) each year beginning 1 January before the first spreading of nitrogen fertiliser.

(4) The plan must be in permanent form.

(5) The plan must record—

- (a) the reference or name of the relevant field,
- (b) the area of the field planted or intended to be planted, and
- (c) the type of crop.

(6) For the area planted or intended to be planted the plan must record—

- (a) the soil type,
- (b) the previous crop (if the previous crop was grass, whether it was managed by cutting or grazing),
- (c) the soil nitrogen supply calculated in accordance with paragraph (1) and the method used to establish this figure,
- (d) the anticipated month that the crop will be planted,
- (e) the anticipated yield (if arable), and
- (f) the optimum amount of nitrogen that should be spread on the crop, taking into account the

amount of nitrogen available from the soil nitrogen supply.

Additional information to be recorded during the year

7.—(1) Before spreading organic manure, the occupier must on each occasion calculate the amount of nitrogen from that manure that is likely to be available for crop uptake in the growing season in which it is spread.

(2) The occupier must, before spreading, record—

- (a) the area on which the organic manure will be spread,
- (b) the quantity of organic manure to be spread,
- (c) the planned date for spreading (month),
- (d) the type of organic manure,
- (e) the total nitrogen content, and
- (f) the amount of nitrogen likely to be available from the organic manure intended to be spread for crop uptake in the growing season in which it is spread.

(3) Before spreading nitrogen fertiliser, the occupier must record—

- (a) the amount required, and
- (b) the planned date for spreading (month).

Total nitrogen spread on a holding

8. Irrespective of the figure in the plan, an occupier must ensure that the total amount of—

- (a) nitrogen from manufactured nitrogen fertiliser, and
- (b) nitrogen available for crop uptake from organic manure, in the growing season in which it is spread calculated in accordance with regulation 9,

does not in any 12 month period exceed the limits set out in regulation 10.

Calculating the amount of nitrogen available for crop uptake from organic manure

9.—(1) The occupier must establish the total amount of nitrogen in livestock manure, for the purposes of regulation 8, by—

- (a) using the table in Part 1 of Schedule 3, or
- (b) sampling and analysis in accordance with Part 2 of Schedule 3.

(2) Once the total amount of nitrogen in the livestock manure has been determined, the following percentages are assumed in order to establish the

amount of nitrogen in the livestock manure that is available for crop uptake in the growing season in which it is spread.

Available percentage

<i>Type of livestock manure</i>	<i>Amount of nitrogen available for crop uptake in the growing season in which it is spread</i>
Cattle slurry	40 %
Pig slurry	50 %
Poultry manure	30 %
Other livestock manure	10 %

(3) In relation to all other organic manure, the occupier must establish the total amount of nitrogen available for crop uptake in the growing season in which it is spread, for the purposes of regulation 8—

- (a) by reference to technical analyses provided by the supplier,
- (b) to the extent that such information is unavailable, by reference to the values given in the Nutrient Management Guide (RB209)(1), or
- (c) by sampling and analysis in accordance with Part 2 of Schedule 3.

Maximum nitrogen limits by crop

10. The total amount of nitrogen permitted to be spread on any crop listed in the first column below is the figure given in the second column below, adjusted in accordance with the notes to the table and multiplied by the total area in hectares of that crop sown on the holding.

Maximum nitrogen

<i>Crop</i>	<i>Permitted amount of nitrogen (kg)^(a)</i>	<i>Standard yield (tonne/ha)</i>
Asparagus	150	n/a
Autumn or early winter sown wheat	220 ^{(b)(c)(d)}	8.0
Beetroot	350	n/a
Brussels sprouts	350	n/a
Cabbage	350	n/a
Calabrese	350	n/a
Cauliflower	350	n/a
Carrots	150	n/a

(1) <https://ahdb.org.uk/RB209>. A copy can be obtained from AHDB (the Agricultural and Horticultural Development Board).

Celery	250	n/a
Courgettes	250	n/a
Dwarf bean	250	n/a
Field beans	0	n/a
Forage maize	150	n/a
Grass	300 ^(f)	n/a
Leeks	350	n/a
Lettuce	250	n/a
Onions	250	n/a
Parsnips	250	n/a
Peas	0	n/a
Potatoes	270	n/a
Radish	150	n/a
Runner beans	250	n/a
Spring-sown wheat	180 ^{(c)(d)}	7.0
Spring barley	150 ^(c)	5.5
Sugar beet	120	n/a
Swedes	150	n/a
Sweetcorn	250	n/a
Turnips	250	n/a
Winter barley	180 ^{(b)(c)}	6.5
Winter oilseed rape	250 ^(e)	3.5

^(a) An additional 80 kg per hectare is permitted to all crops grown in fields if the current or previous crop has had straw or paper sludge applied to it.

^(b) An additional 20 kg per hectare is permitted on fields with shallow soil (other than shallow soils over sandstone).

^(c) An additional 20 kg per hectare is permitted for every tonne that the expected yield exceeds the standard yield.

^(d) An additional 40 kg per hectare is permitted to milling wheat varieties.

^(e) This is inclusive of any nitrogen that is applied as an exemption to the closed period for manufactured nitrogen fertiliser. The permitted amount may be increased by up to 30 kg per hectare for every half tonne that expected yield exceeds the standard yield.

^(f) An additional 40 kg per hectare is permitted to grass that is cut at least three times a year.

PART 4

Controlling the spreading of nitrogen fertiliser

Risk maps

11.—(1) An occupier of a holding who spreads organic manure on that holding must maintain a map of the holding (“a risk map”) in accordance with this regulation.

(2) If circumstances change the occupier must update the risk map within three months of the change.

- (3) The risk map must show—
- (a) each field, with its area in hectares,
 - (b) all surface waters,
 - (c) any boreholes, springs or wells on the holding or within 50 metres of the holding boundary,
 - (d) areas with sandy or shallow soils,
 - (e) land with an incline greater than 12°,
 - (f) land within 10 metres of surface waters,
 - (g) land within 50 metres of a borehole, spring or well,
 - (h) land drains (other than a sealed impermeable pipe),
 - (i) sites suitable for temporary field heaps if this method of storing manure is to be used, and
 - (j) land that has a low run-off risk (this is optional for an occupier who does not intend to spread manure on low run-off risk land during the storage period in accordance with regulation 29).

(4) If an occupier spreads organic manure by using precision spreading equipment up to 6 metres from surface water as permitted by regulation 14(1), the risk map must identify land within 6 metres of surface waters.

- (5) The occupier must keep a copy of the risk map.

When to spread fertiliser

12.—(1) An occupier who intends to spread nitrogen fertiliser must first undertake a field inspection to consider the risk of nitrogen getting into surface water.

(2) No person may spread nitrogen fertiliser on that land if there is a significant risk of nitrogen getting into surface water, taking into account in particular—

- (a) the slope of the land, particularly if the slope is more than 12°,
- (b) any ground cover,
- (c) the proximity to surface water,
- (d) the weather conditions,
- (e) the soil type, and
- (f) the presence of land drains.

(3) No person may spread nitrogen fertiliser if the soil is waterlogged, flooded, snow covered, frozen or has been frozen for more than 12 hours in the previous 24 hours.

Spreading manufactured nitrogen fertiliser near surface water

13. No person may spread manufactured nitrogen fertiliser within 2 metres of surface water.

Spreading organic manure near surface water, boreholes, springs or wells

14.—(1) No person may spread organic manure within 10 metres of surface water unless using precision spreading equipment in which case no person may spread organic manure within 6 metres of surface water.

(2) But livestock manure (other than slurry and poultry manure) may be spread there if—

- (a) it is spread on land managed for breeding wader birds or as a species-rich semi-natural grassland and the land is—
 - (i) notified as a Site of Special Scientific Interest under the Wildlife and Countryside Act 1981(1), or
 - (ii) subject to an agri-environment commitment entered into under Council Regulation (EC) 1698/2005(2), or Regulation (EU) 1305/2013(3),
- (b) it is spread between 1 June and 31 October inclusive,
- (c) it is not spread directly on to surface water, and
- (d) the total annual amount does not exceed 12.5 tonnes per hectare.

(3) No person may spread organic manure within 50 metres of a borehole, spring or well.

(4) For the purposes of this regulation, “precision spreading equipment” is defined as a trailing shoe, dribble bar or injector system.

Controlling how nitrogen fertiliser is spread

15.—(1) Subject to paragraph (2), any person spreading slurry must use spreading equipment with a low spreading trajectory, that is, below 4 metres from the ground.

(2) Spreading equipment with a spreading trajectory of more than 4 metres from the ground may be used on land that has a low run off risk where such equipment can achieve an average slurry application rate of not more than 2 mm per hour when it is operating continuously.

(3) Any person spreading nitrogen fertiliser must do so in as accurate a manner as possible.

(1) 1981 c. 69.

(2) EUR 1698/2005.

(3) EUR 1305/2013, as amended by S.I. 2019/748 and 764.

Incorporating organic manure into the ground

16.—(1) Any person who applies organic manure onto the surface of bare soil or stubble (other than soil that has been sown) must ensure that it is incorporated into the soil in accordance with this regulation.

(2) Poultry manure must be incorporated as soon as practicable, and within 24 hours at the latest.

(3) Slurry and liquid digested sewage sludge (that is, liquid from the treatment of sewage sludge by anaerobic digestion) must be incorporated as soon as practicable, and within 24 hours at the latest, unless it was applied using equipment of a type described in regulation 14(4).

(4) Any other organic manure (other than organic manure spread as a mulch on sandy soil) must be incorporated into the soil as soon as practicable, and within 24 hours at the latest, if the land is within 50 metres of surface water and slopes in such a way that there may be run-off to that water.

PART 5

Closed periods for spreading nitrogen fertiliser

Meaning of “organic manure with high readily available nitrogen”

17. In this Part, “organic manure with high readily available nitrogen” means organic manure in which more than 30 % of the total nitrogen content is available to the crop at the time of spreading.

Closed periods for spreading organic manure with high readily available nitrogen

18. Subject to regulations 19 and 20, no person may spread organic manure with high readily available nitrogen on land between the following dates, all inclusive (“the closed period”)—

The closed period

<i>Soil Type</i>	<i>Grassland</i>	<i>Tillage land</i>
Sandy or shallow soil	1 September to 31 December	1 August to 31 December
All other soils	15 October to 15 January	1 October to 31 January

Exemptions: crops sown before 15 September

19. Spreading organic manure with high readily available nitrogen on tillage land with sandy or shallow soil is permitted between 1 August and 15 September inclusive provided that the crop is sown on or before 15 September.

Exemptions for organic holdings

20. An occupier of a holding who has submitted his or her undertaking to the control system referred to in Article 27 of Council Regulation (EC) 834/2007⁽¹⁾ may spread organic manure with high readily available nitrogen at any time on—

- (a) crops listed in the table in Schedule 4 (permitted crops for the closed period), or
- (b) other crops in accordance with written advice from a person who is a member of the Fertiliser Advisers Certification and Training Scheme⁽²⁾,

provided that each hectare on which organic manure is spread does not receive more than 150 kg total nitrogen between the start of the closed period and the end of February.

Restrictions following the closed period

21. From the end of the closed period until the end of February—

- (a) the maximum amount of slurry that may be spread at any one time is 30 cubic metres per hectare and the maximum amount of poultry manure that may be spread at any one time is 8 tonnes per hectare, and
- (b) there must be at least three weeks between each spreading.

Times in which spreading manufactured nitrogen fertiliser is prohibited

22.—(1) No person may spread manufactured nitrogen fertiliser on land during the following periods (all dates inclusive)—

- (a) in the case of grassland, from 15 September to 15 January, or
- (b) in the case of tillage land, from 1 September to 15 January.

(2) Spreading fertiliser during these periods is permitted on the crops specified in the Table in Schedule 4, provided that the maximum rate in column 2 is not exceeded.

(3) Spreading during those periods on crops not in Schedule 4 is permitted on the basis of written advice from a person who is a member of the Fertiliser Advisers Certification and Training Scheme.

(1) EUR 834/2007, as amended by S.I. 2019/693 and 831.

(2) The scheme is administered by Basis Registration Ltd, and a list of qualified persons is available from them on request or at their website, www.basis-reg.com.

PART 6

Storage of organic manure and silage

Storage of organic manure

23. An occupier of a holding who stores any organic manure (other than slurry), or any bedding contaminated with any organic manure, must store it—

- (a) in a vessel,
- (b) in a covered building,
- (c) on an impermeable surface, or
- (d) in the case of solid manure that can be stacked in a free standing heap and that does not drain liquid from the material, on a temporary field site.

Making or storage of silage

24.—(1) Subject to paragraph (3), a person who has custody or control of silage that is being made or stored must ensure that—

- (a) the silage is kept in a silo that satisfies the requirements of Schedule 5, or
- (b) the silage is compressed into bales that—
 - (i) are wrapped and sealed into impermeable membranes, or enclosed in impermeable bags, and
 - (ii) are stored at least 10 metres from any inland freshwaters or coastal waters that effluent escaping from the bales could enter, or
- (c) if the silage is a crop being made into field silage (that is, silage made on open land by a method different from the baling method referred to in sub-paragraph (b)) or silage that is being stored on open land—
 - (i) NRW is given notice of the place where the silage is to be made or stored at least 14 days before the place is first used for that purpose, and
 - (ii) the place is at least 10 metres from any inland freshwaters or coastal waters, and at least 50 metres from the nearest relevant water abstraction point of any protected water supply source that silage effluent could enter if it escaped.

(2) For paragraph (1)(c)(ii), a water supply source is a protected water supply source if—

- (a) any relevant water abstraction from the source is licensed under Part 2 of the Water Resources Act 1991(1), or
- (b) the person making or storing the silage was aware of the source's location—
 - (i) before the making of the silage began, or
 - (ii) if the silage was made elsewhere, before it was stored on the land in question.

(3) Paragraph (1) does not apply to silage while it is stored temporarily in a container, trailer or vehicle in connection with its transport about the farm or elsewhere.

(4) A person who has custody or control of a silage bale must not open or remove the wrapping of the bale within 10 metres of any inland freshwaters or coastal waters which silage effluent could enter as a result.

(5) In this regulation—

- (a) “relevant water abstraction” means the abstraction of water for use for—
 - (i) human consumption, or
 - (ii) domestic purposes (within the meaning given by section 218 of the Water Industry Act 1991(2)) other than human consumption, or
 - (iii) manufacturing food or drink for human consumption, and
- (b) “water supply source” means inland freshwaters or ground waters from which a relevant water abstraction is made or licensed to be made.

Storage of slurry

25.—(1) Subject to paragraph (2), a person having custody or control of slurry must have a slurry storage system that satisfies the requirements of Schedule 6 and the slurry must be stored in that system.

(2) Paragraph (1) does not apply to slurry while it is stored temporarily in a tanker that is used for transporting slurry on roads or about a farm.

Exemptions to the storage requirements

26.—(1) Regulations 24(1) and 25(1) do not apply to a silo or slurry storage system—

- (a) which, before 1 March 1991, was being used for the purpose of making silage or storing slurry,

(1) 1991 c. 57.
(2) 1991 c. 56.

- (b) where it was not used before 1 March 1991 for that purpose, it was constructed before that date for such use, or
- (c) in relation to which—
 - (i) a contract for its construction, substantial enlargement or substantial reconstruction was entered into before 1 March 1991, or
 - (ii) such work was commenced before that date, andin either case the work was completed before 1 September 1991.

Temporary field sites

27.—(1) A temporary field site must not be—

- (a) in a field liable to flooding or becoming waterlogged,
- (b) within 50 metres of a borehole, spring or well or within 10 metres of surface water or a land drain (other than a sealed impermeable pipe),
- (c) located in any single position for more than 12 consecutive months, or
- (d) located in the same place as an earlier one constructed within the last two years.

(2) Solid poultry manure that does not have bedding mixed into it and is stored on a temporary field site must be covered with an impermeable material.

(3) Further—

- (a) topsoil must not be removed from the ground upon which a temporary field site is to be constructed,
- (b) a temporary field site must not be located within 30 metres of a watercourse on land identified on the risk map as having an incline of greater than 12°, and
- (c) the surface area of a temporary field site must be as small as reasonably practicable to minimise the leaching effect of rainfall.

Separation of slurry

28. Separation of slurry into its solid and liquid fractions must either be carried out mechanically or on an impermeable surface where the liquid fraction drains into a suitable receptacle.

Storage capacity

29.—(1) An occupier of a holding who keeps any of the animals specified in Schedule 1 must provide sufficient storage for all slurry produced on the holding during the storage period, and all poultry

manure produced in a yard or building on the holding during the storage period.

(2) The volume of the manure produced by the animals on the holding must be calculated in accordance with Schedule 1.

(3) A slurry store must have the capacity to store, in addition to the manure, any rainfall, washings or other liquid that enters the vessel (either directly or indirectly) during the storage period.

(4) Storage facilities are not necessary for slurry or poultry manure—

- (a) sent off the holding, or
- (b) spread on land that has a low run-off risk (provided that this is done in accordance with the restrictions on spreading in these Regulations); but in this case storage facilities for an additional one week's manure must be provided as a contingency measure in the event of spreading not being possible on some dates.

(5) For the purposes of this regulation the “storage period” (all dates inclusive) is—

- (a) the period between 1 October and 1 April for pigs and poultry;
- (b) the period between 1 October and 1 March in any other case.

Notice requiring works etc.

30.—(1) NRBW may serve, on a person who has custody or control of silage or slurry or is responsible for a silo or slurry storage system, in circumstances in which these Regulations apply, a notice (“regulation 30 notice”) requiring the person to carry out works, or take precautions or other steps, specified in the notice.

(2) The works, precautions or other steps must be, in the opinion of NRBW, appropriate, having regard to the requirements of these Regulations, for reducing to a minimum any significant risk of pollution of controlled waters.

(3) The notice must—

- (a) specify or describe the works, precautions or other steps that the person is required to carry out or take,
- (b) state the period within which any such requirement is to be complied with, and
- (c) inform the person of the effect of regulation 31.

(4) The period for compliance stated in the notice is—

- (a) 28 days, or

- (b) such longer period as is reasonable in the circumstances.

(5) A person on whom a regulation 30 notice has been served must comply with the requirements of that notice.

(6) NRBW may at any time (including a time after the period for compliance has ended)—

- (a) withdraw the notice,
- (b) extend the period for compliance with any requirement of the notice, or
- (c) with the consent of the person on whom the notice is served, modify the requirements of the notice.

(7) NRBW must withdraw the notice, extend the period for compliance, or modify the requirements of the notice if so directed by the Welsh Ministers under regulation 31(5).

Appeals against regulation 30 notices

31.—(1) A person served with a regulation 30 notice may, within the period of 28 days beginning on the day after the date on which the notice is served (or such longer period as the Welsh Ministers allow), appeal to the Welsh Ministers against the notice.

(2) An appeal under this regulation must be made by the appellant serving notice on the Welsh Ministers.

(3) The notice must contain or be accompanied by a statement of the grounds of appeal.

(4) Before determining an appeal under this regulation, the Welsh Ministers must, if requested to do so by the appellant or NRBW, afford them an opportunity of appearing before and being heard by a person appointed by the Welsh Ministers for the purpose.

(5) On determining an appeal under this regulation, the Welsh Ministers may direct NRBW to—

- (a) withdraw the regulation 30 notice,
- (b) modify any of its requirements,
- (c) extend the period for compliance with any requirement, or
- (d) dismiss the appeal.

(6) The period for compliance with a regulation 30 notice against which an appeal has been made is, subject to any direction under paragraph (5), extended so that it expires on the date on which the Welsh Ministers finally determines the appeal or, if the appeal is withdrawn, the date on which it is withdrawn.

Notice of construction etc.

32.—(1) This regulation applies to any silo or slurry storage system whose construction is to be begun on or after 28 April 2021 (“a new or improved store”).

(2) A person who proposes to have custody or control of silage or slurry that is to be kept in a new or improved store must give NRBW notice specifying the type of silo or storage system and its location, at least 14 days before work constructing the new or improved store is to be begun.

(3) In this regulation, “construction” includes substantial enlargement and reconstruction.

PART 7

Calculations and records

Recording the size of the holding

33.—(1) The occupier of a holding must maintain a record of the total size of the holding calculated in accordance with regulation 4(3).

(2) If the size of the holding changes this record must be updated within one month.

Records relating to storage of manure during the storage period

34.—(1) The occupier of a holding with livestock must maintain a record—

- (a) of the amount of manure that will be produced by the anticipated number of animals that will be kept in a building or on hardstanding during the storage period referred to regulation 29, using the figures in Schedule 1;
- (b) the amount of storage capacity (slurry vessels and hardstanding) required to enable compliance with regulation 29, taking into account—
 - (i) the amount of manure intended to be exported from the holding,
 - (ii) the amount of manure intended to be spread on land that has a low run-off risk, and
 - (iii) in the case of a slurry vessel the amount of liquid other than slurry likely to enter the vessel;
- (c) the current capacity for storage on the holding.

(2) An occupier who introduces animals on to a holding for the first time must comply with paragraph

(1) within one month of the introduction of the animals.

(3) If the amount of storage capacity changes the occupier must record the change within one week.

Annual records relating to storage

35.—(1) Before 30 April each year the occupier of a holding with livestock must record, for the previous storage period referred to in regulation 29 the number and category of animals in a building or on a hardstanding during the storage period.

(2) The occupier must also record the sites used for field heaps and the dates of use.

Record of nitrogen produced by animals on the holding

36.—(1) Before 30 April every year the occupier must make a record of—

- (a) the number and category (in accordance with the categories in Schedule 1) of animals on the holding during the previous calendar year, and
- (b) the number of days that each animal spent on the holding.

(2) The occupier must then calculate the amount of nitrogen in the manure produced by the animals on the holding during that year using the Table in Schedule 1.

(3) Alternatively, in the case of permanently housed pigs or poultry, the occupier may use—

- (a) software approved by the Welsh Ministers, or
- (b) in the case of a system of keeping livestock that only produces solid manure, sampling and analysis in accordance with Part 2 of Schedule 3.

(4) The occupier must make a record of the calculations and how the final figures were arrived at.

(5) An occupier who used software approved by the Welsh Ministers must keep a printout of the result.

Livestock manure brought on to or sent off the holding

37.—(1) Subject to paragraph (3), an occupier who brings livestock manure on to a holding must, within one week record—

- (a) the type and amount of livestock manure,
- (b) the date it is brought on to the holding,
- (c) the nitrogen content, and
- (d) if known the name and address of the supplier.

(2) An occupier who sends livestock manure off a holding must within one week record—

- (a) the type and amount of livestock manure,
- (b) the date it is sent off the holding,
- (c) the nitrogen content,
- (d) the name and address of the recipient, and
- (e) details of a contingency plan to be used in the event that an agreement for a person to accept the livestock manure fails.

(3) If the nitrogen content of the livestock manure brought on to a holding is not known, the occupier must ascertain it, as soon as is reasonably practicable after arrival, and record it within one week of ascertaining it.

(4) All nitrogen content of the livestock manure must be ascertained using either the standard figures in Part 1 of Schedule 3 or by sampling and analysis as set out in Part 2 of that Schedule.

Sampling and analysis

38. Any person using sampling and analysis to determine nitrogen content in organic manure must keep the original report from the laboratory.

Records of crops sown

39. An occupier who intends to spread nitrogen fertiliser must record within one week of sowing a crop—

- (a) the crop sown, and
- (b) the date of sowing.

Records of spreading nitrogen fertiliser

40.—(1) Subject to paragraph (3), within one week of spreading organic manure the occupier must record—

- (a) the area on which organic manure is spread;
- (b) the quantity of organic manure spread;
- (c) the date or dates;
- (d) the methods of spreading;
- (e) the type of organic manure;
- (f) the total nitrogen content;
- (g) the amount of nitrogen that was available to the crop.

(2) Subject to paragraph (3), within one week of spreading manufactured nitrogen fertiliser the occupier must record—

- (a) the date of spreading, and
- (b) the amount of nitrogen spread.

(3) Paragraphs (1) and (2) do not apply to the occupier of a holding in any calendar year in which 80 % of the agricultural area of a holding is sown with grass, and—

- (a) the total amount of nitrogen in organic manure applied to the holding, whether directly by animal or a result of spreading, is no more than 100 kg per hectare,
- (b) the total amount of nitrogen in manufactured nitrogen fertiliser applied to the holding is no more than 90 kg per hectare, and
- (c) the occupier does not bring any organic manure onto the holding.

Subsequent records

41.—(1) An occupier who has used nitrogen fertiliser must record the yield achieved by an arable crop within one week of ascertaining it.

(2) Before 30 April each year an occupier must record how any grassland was managed in the previous calendar year.

Keeping of advice

42. An occupier must keep a copy of any advice from a person who is a member of the Fertiliser Advisers Certification and Training Scheme that is relied on for any purpose under these Regulations for five years.

Duration of records

43. Any person required to make a record under these Regulations must keep it for five years.

PART 8

Monitoring and review

Monitoring and review

44.—(1) The Welsh Ministers must establish a monitoring programme to assess the effectiveness of the measures imposed by these Regulations as a means of reducing or preventing water pollution from agricultural sources.

(2) At least every four years, the Welsh Ministers must review the effectiveness of the measures imposed by these Regulations as a means of reducing or preventing water pollution from agricultural sources and if necessary revise them.

(3) When carrying out a review under paragraph (2), the Welsh Ministers must take into account—

- (a) available scientific and technical data, particularly with reference to respective nitrogen contributions originating from agricultural and other sources, and
- (b) regional environmental conditions.

Alternative measures

45.—(1) If proposals for an alternative suite of measures for delivering the outcomes in regulation 44(1) are received within 18 months of these Regulations coming into force, the Welsh Ministers must consider whether those measures would deliver the outcomes more effectively than the measures contained in these Regulations.

(2) If the Welsh Ministers are satisfied that proposals submitted under paragraph (1) would be more effective in delivering the outcomes in regulation 44(1), they must publish a statement within two years of these Regulations coming into force, explaining what action will be taken.

PART 9

Enforcement

Offences and penalties

46.—(1) Subject to paragraph (2), any person who contravenes any provision of these Regulations is guilty of an offence and liable on summary conviction, or on conviction on indictment, to a fine.

(2) A person who contravenes regulation 32 is guilty of an offence and liable on summary conviction to a fine not exceeding level 2 on the standard scale.

(3) Subject to paragraph (4) where a body corporate is guilty of an offence under these Regulations, and that offence is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of—

- (a) any director, manager, secretary or other similar person of the body corporate, or
- (b) any person who was purporting to act in any such capacity,

that person, as well as the body corporate, is guilty of the offence and liable to be proceeded against and punished accordingly.

(4) Paragraph (3) does not apply to contraventions under regulations 24(1), 24(4), 25(1), 30(5) or 32.

(5) For the purposes of this regulation, “director”, in relation to a body corporate whose affairs are managed by its members, means a member of the body corporate.

Enforcement

47. These Regulations are enforced by NRBW.

PART 10

Miscellaneous

Revocations

48.—(1) The Water Resources (Control of Pollution) (Silage and Slurry) (Wales) Regulations 2010⁽¹⁾ are revoked as follows—

- (a) in relation to a holding or part of a holding that was situated in a nitrate vulnerable zone as shown on the relevant map marked “Nitrate Vulnerable Zones Index Map 2013”⁽²⁾, on 1 April 2021;
- (b) in relation to all other holdings—
 - (i) regulations 3 and 9 on 1 April 2021
 - (ii) all remaining provisions on 1 August 2024.

(2) The following are revoked—

- (a) the Nitrate Pollution Prevention (Wales) Regulations 2013;
- (b) the Nitrate Pollution Prevention (Wales) (Amendment) Regulations 2015⁽³⁾;
- (c) the Nitrate Pollution Prevention (Wales) (Amendment) Regulations 2019⁽⁴⁾.

Consequential amendments

49.—(1) In the Environmental Permitting (England and Wales) Regulations 2016⁽⁵⁾, in Schedule 2, in paragraph 17(2)(b), for “the Nitrate Pollution Prevention (Wales) Regulations 2013” substitute “the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021”.

(2) In the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017⁽⁶⁾, in Part 2 of Schedule 2—

- (a) for paragraph 21 substitute—

(1) S.I. 2010/1493 (W. 136).
(2) Under regulation 7(3) of the Nitrate Pollution Prevention (Wales) Regulations 2013 (S.I. 2013/2506) (W. 245) such a map was required to be deposited at the offices of the Welsh Government at Cathays Park, Cardiff, CF10 3NQ.
(3) S.I. 2015/2020 (W. 308).
(4) S.I. 2019/863 (W. 155).
(5) S.I. 2016/1154.
(6) S.I. 2017/407.

“**21.** The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.”;

(b) for paragraph 24 substitute—

“**24.** The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.”

(3) In the Conservation of Habitats and Species (England and Wales) Regulations 2017⁽¹⁾, in regulation 104, omit paragraph (1)(b) and the “or” before it.

Lesley Griffiths

Minister for Environment, Energy and Rural Affairs,
one of the Welsh Ministers

21 January 2021

⁽¹⁾ S.I. 2017/1012.

SCHEDULE 1

Regulations 3, 4, 29, 34 and 36

Amount of manure, nitrogen and phosphate produced by grazing livestock and non-grazing livestock

Table 1

Grazing livestock

<i>Category</i>	<i>Daily manure produced by each animal (litres)</i>	<i>Daily nitrogen produced by each animal (grams)</i>	<i>Daily phosphate produced by each animal (grams)</i>
Cattle			
Calves (all categories except veal) up to 3 months:	7	23	12.7
Dairy cows—			
from 3 months and less than 13 months:			
from 3 months and less than 13 months:	20	95	34
from 13 months up to first calf:	40	167	34
After first calf and—			
annual milk yield more than 9000 litres:	64	315	142
annual milk yield between 6000 and 9000 litres:	53	276	121
annual milk yield less than 6000 litres:	42	211	93
Beef cows or steers ^(a) —			
from 3 months and less than 13 months:			
from 3 months and less than 13 months:	20	91	33
from 13 months up to first calf:	26	137	43

months and less than 25 months:			
From 25 months—			
females or steers for slaughter:	31	137	60
females for breeding—			
weighing 500 kg or less:	32	167	65
weighing more than 500 kg:	45	227	86
Bulls			
Non-breeding, 3 months and over:	26	148	24
Breeding—			
from 3 months and less than 25 months:	26	137	43
from 25 months:	26	132	60
Sheep			
From 6 months up to 9 months old:	1.8	5.5	0.76
From 9 months old to first lambing, first tugging or slaughter:			
After lambing or tugging ^(b)			
—			
weight less than 60 kg:	3.3	21	8.8
weight from 60 kg:	5	3	10.0
Goats, deer and horses			
Goats:	3.5	41	18.8
Deer—			
breeding:	5	42	17.6
other:	3.5	33	11.7

Horses:	24	58	56
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^(a) Castrated male.

^(b) In the case of a ewe, this figure includes one or more suckled lambs until the lambs are aged six months.

Table 2

Non-grazing livestock

<i>Category</i>	<i>Daily manure produce d by each animal (litres)</i>	<i>Daily nitrogen produced by each animal (grams)</i>	<i>Daily phosphate produced by each animal (grams)</i>
Cattle			
Veal calves:	7	23	12.7
Poultry^(a)			
Chickens used for production of eggs for human consumption—			
less than 17 weeks:	0.04	0.64	0.47
from 17 weeks (caged):	0.12	1.13	1.0
from 17 weeks (not caged)	0.12	1.5	1.1
Chickens raised for meat:	0.06	1.06	0.72
Chickens raised for breeding—			
less than 25 weeks:	0.04	0.86	0.78
from 25 weeks:	0.12	2.02	1.5
Turkeys—			
male:	0.16	3.74	3.1
female:	0.12	2.83	2.3
Ducks:	0.10	2.48	2.4
Ostriches:	1.6	3.83	18.5
Pigs			
Weight from 7 kg and less than 13 kg:	1.3	4.1	1.3
Weight from 13 kg and less than 31 kg:	2	14.2	6.0
Weight from 31 kg and less than 66 kg—dry fed:	3.7	24	12.1

liquid fed: Weight from 66 kg and— Intended for slaughter—	7.1	24	12.1
dry fed:	5.1	33	17.9
liquid fed:	10	33	17.9
sows intended for breeding that have not yet had their first litter:	5.6	38	20
sows (including their litters up to a weight of 7 kg per piglet) fed on a diet supplemented with synthetic amino acids:	10.9	44	37
sows (including their litters up to a weight of 7 kg per piglet) fed on a diet without synthetic amino acids:	10.9	49	37
breeding boars from 66 kg up to 150 kg:	5.1	33	17.9
breeding boars, from 150 kg	8.7	48	28

^(a) Note: all figures for poultry include litter.

SCHEDULE 2 Regulation 5

Fruit species

<i>Botanical Name</i>	<i>Common Name</i>
Cydonia oblonga	Quince
Malus domestica	Apple
Mespilus germanica	Medlar
Morus spp.	Mulberry
Prunus armenaica	Apricot
Prunus avium	Sweet cherry
Prunus cerasus	Sour (cooking) cherry
Prunus ceracifera	Cherry plum
Prunus domestica	Plum
Prunus domestica subsp. insititia	Damson, Bullace
Prunus persica	Peach
Prunus persica var. nectarina	Nectarine
Prunus x gondouinii	Duke cherry
Prunus spinosa	Sloe
Pyrus communis	Pear
Pyrus pyrifolia	Asian pear

SCHEDULE 3

Regulations 9, 36 and 37

Calculating nitrogen in organic manure

PART 1

Standard Table

Total amount of nitrogen in livestock manure

<i>Manure other than slurry</i>	<i>Total nitrogen in each tonne (kg)</i>
Manure other than slurry from—	
cattle:	6
pigs:	7
sheep:	7
ducks:	6.5
horses:	7
goats:	6
Manure from laying hens:	19
Manure from turkeys or broiler chickens:	10
<i>Slurry</i>	<i>Total nitrogen in each cubic metre (kg)</i>
cattle:	2.6
pigs:	3.6
Separated cattle slurry (liquid fraction)—	
strainer box:	1.5
weeping wall:	2
mechanical separator:	3
Separated cattle slurry (solid fraction):	4
Separated pig slurry (liquid fraction):	3.6
Separated pig slurry (solid fraction):	5
Dirty water:	0.5

PART 2

Sampling and analysis of organic manure

Slurry and other liquid and semi-liquid organic manure

1.—(1) In relation to slurry and other liquid and semi-liquid organic manure, at least five samples, each of 2 litres, must be taken.

(2) Subject to sub-paragraph (3), the five samples must be taken from a vessel, and—

- (a) if reasonably practicable, the slurry must be thoroughly mixed before the samples are taken, and
- (b) each sample must be taken from a different location.

(3) If a tanker used for spreading is fitted with a suitable valve, the samples may be taken while spreading, and each sample must be taken at intervals during the spreading.

(4) Whether taken as described in sub-paragraph (2) or (3), the five samples must be poured into a larger container, stirred thoroughly and a 2 litre sample must be taken from that container and poured into a smaller clean container.

(5) The 2 litre sample produced in accordance with sub-paragraph (4) must then be sent for analysis.

Solid manures

2.—(1) In relation to solid manures, the samples must be taken from a manure heap.

(2) At least ten samples of 1 kg each must be taken, each from a different location in a heap.

(3) Each sub-sample must be taken at least 0.5 metres from the surface of the heap.

(4) If samples are being collected to calculate compliance with the whole farm limit for pigs and poultry, four samples for analysis must be taken in a calendar year (one taken in each quarter) from manure heaps not more than 12 months old.

(5) The sub-samples must be placed on a clean, dry tray or sheet.

(6) Any lumps must be broken up and the sub-samples must be thoroughly mixed together.

(7) A representative sample of at least 2 kg must then be sent for analysis.

SCHEDULE 4

Regulations 20 and 22

Permitted crops for the closed period

<i>Crop</i>	<i>Maximum nitrogen rate (kg/hectare)</i>
Oilseed rape, winter ^(a)	30
Asparagus	50
Brassica ^(b)	100
Grass ^{(a)(c)}	80
Over-wintered salad onions	40
Parsley	40
Bulb onion	40

^(a) Nitrogen must not be spread on crops after 31 October.

^(b) An additional 50 kg of nitrogen per hectare may be spread every four weeks during the closed period up to the end of harvest.

^(c) A maximum of 40 kg of nitrogen per hectare may be spread at any one time.

SCHEDULE 5 Regulation 24

Requirements for silos

1. The requirement to be satisfied in relation to a silo is that it complies with the following provisions of this Schedule.

2. The base of the silo must—

- (a) extend beyond any walls of the silo,
- (b) be provided at its perimeter with channels designed and constructed so as to collect any silage effluent that escapes from the silo, and
- (c) have adequate provision for the drainage of that effluent from those channels to an effluent tank through a channel or pipe.

3. The capacity of the effluent tank must not be less than—

- (a) in the case of a silo with a capacity of less than 1,500 cubic metres, 20 litres for each cubic metre of silo capacity, and
- (b) in the case of a silo with a capacity of 1,500 cubic metres or more, 30 cubic metres plus 6.7 litres for each cubic metre of silo capacity in excess of 1,500 cubic metres.

4.—(1) The base of the silo must be—

- (a) designed in accordance with the code of practice for design of concrete structures for retaining aqueous liquids published by the British Standards Institution and numbered BS 8007: 1987(1), or
- (b) constructed using appropriate hot-rolled asphalt in accordance with the code of practice for selection and use of construction materials published by the British Standards Institution and numbered BS 5502: Part 21: 1990(2).

(2) The base of the silo, the base and walls of its effluent tank and channels and walls of any pipes must be impermeable.

5. The base and walls of the silo, its effluent tank and channels and the walls of any pipes must, so far as reasonably practicable, be resistant to attack by silage effluent.

6. No part of the silo, its effluent tank or channels or any pipes may be situated within 10 metres of any

(1) Publication date: 30 October 1987. ISBN 0-580-16134-X.

(2) Publication date: 31 December 1990. ISBN 0-580-18348-3.

inland freshwaters or coastal waters into which silage effluent could enter if it were to escape.

7. If the silo has retaining walls—

- (a) the retaining walls must be capable of withstanding minimum wall loadings calculated on the assumptions and in the manner indicated by paragraph 15.6 of the code of practice on buildings and structures for agriculture published by the British Standards Institution and numbered BS 5502: Part 22: 2003⁽¹⁾,
- (b) the silo must at no time be loaded to a depth exceeding the maximum depth consistent with the design assumption made in respect of the loadings of the retaining walls, and
- (c) notices must be displayed on the retaining walls in accordance with paragraph 18 of that code of practice.

8. Subject to paragraph 9, the silo, its effluent tank and channels and any pipes must be designed and constructed so that with proper maintenance they are likely to continue to satisfy the requirements of paragraphs 2 to 5 and, if applicable, paragraph 7(a) for at least 20 years.

9. If any part of an effluent tank is below ground level, the tank must be designed and constructed so that it is likely to continue to satisfy the requirements of paragraphs 4 and 5 for at least 20 years without maintenance.

⁽¹⁾ Publication date: 10 June 2003. ISBN 0-580-38654-6.

SCHEDULE 6 Regulation 25

Requirements for slurry storage systems

1. The requirements to be satisfied in relation to a slurry storage system are as follows.

2. The base of the slurry storage tank, the base and walls of any effluent tank, channels and reception pit, and the walls of any pipes, must be impermeable.

3. The base and walls of the slurry storage tank, any effluent tank, channels and reception pit, and the walls of any pipes, must be protected against corrosion in accordance with paragraph 7 of the code of practice on buildings and structures for agriculture published by the British Standards Institution and numbered BS 5502: Part 50: 1993(1).

4. The base and walls of the slurry storage tank and of any reception pit must be capable of withstanding characteristic loads calculated on the assumptions and in the manner indicated by paragraph 5 of the code of practice on buildings and structures for agriculture published by the British Standards Institution and numbered BS 5502: Part 50: 1993.

5.—(1) Any facilities used for the temporary storage of slurry before it is transferred to a slurry storage tank must have adequate capacity to store—

- (a) the maximum quantity of slurry that (disregarding any slurry which will be transferred directly into a slurry storage tank) is likely to be produced on the premises in any two day period, or
- (b) a lesser capacity that NRBW agrees in writing is adequate to avoid any significant risk of pollution of controlled waters.

(2) Where slurry flows into a channel before discharging into a reception pit and the flow of slurry out of the channel is controlled by means of a sluice, the capacity of the reception pit must be adequate to hold the maximum quantity of slurry that can be released by opening the sluice.

6. In the case of a slurry storage tanks with walls made of earth, the tank must have at least 750 mm of freeboard and 300 mm of freeboard in all other cases.

7. No part of the slurry storage tank or any effluent tank, channels or reception pit may be situated within 10 metres of any inland freshwaters or coastal waters into which slurry could enter if it were to escape unless

(1) Publication date: 15th April 1993. ISBN 0-580-22053-2.

precautions are taken that NRBW agrees in writing are adequate to avoid any significant risk of pollution of controlled waters.

8. The slurry storage tank and any effluent tank, channels, pipes and reception pit must be designed and constructed so that with proper maintenance they are likely to continue to satisfy the requirements of paragraphs 2 to 4 for at least 20 years.

9. If the walls of the slurry storage tank are not impermeable, the base of the tank must—

- (a) extend beyond the walls;
- (b) be provided with channels designed and constructed so as to collect any slurry that escapes from the tank;
- (c) have adequate provision for the drainage of the slurry from those channels to an effluent tank through a channel or pipe.

10.—(1) Subject to sub-paragraph (3), if the slurry storage tank or any effluent tank or reception pit is fitted with a drainage pipe there must be two valves in series on the pipe with each valve separated from the other by a minimum distance of 1 metre.

(2) Each valve must be capable of shutting off the flow of slurry through the pipe and must be kept shut and locked in that position when not in use.

(3) Sub-paragraph (1) does not apply in relation to a slurry storage tank that drains through the pipe into another slurry storage tank if the other tank is of equal or greater capacity or if the tops of the tanks are at the same level.

Explanatory Memorandum to the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021.

This Explanatory Memorandum has been prepared by the Department for Economy, Skills and Natural Resources and is laid before Senedd Cymru in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1.

Minister/Deputy Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021. I am satisfied that the benefits justify the likely costs.

Lesley Griffiths MS

Minister for Environment, Energy and Rural Affairs

27 January 2021

1. Description

The Regulations establish measures to protect the environment from pollution caused by agricultural activities.

The Regulations impose limits on the amount of nitrogen from fertilisers which may be applied to land; a requirement to undertake nutrient management planning; controls on where, when and how nutrients are applied and ensures the storage of manure is appropriate for it to be utilised efficiently. The Regulations also includes provisions to include a review of proposals (if any are submitted within 18 months of the Regulations coming into force) on an alternative suite of measures to those in these Regulations to prevent or reduce pollution caused by agriculture.

2. Matters of special interest to the Legislation, Justice and Constitution Committee.

None

3. Legislative background

The Regulations are made using the powers conferred by sections 92 and 219(2)(d) to (f) of the Water Resources Act 1991.

The Regulations make provision in accordance with Council Directive 91/676/EEC concerning the protection of waters against pollution by nitrates from agricultural sources (OJ No. L 375, 31.12.91, p. 1) and aspects of Directive 2000/60/EC establishing a framework for Community action in the field of water policy (OJ No. L 327, 22.12.2000, p. 1).

Sections 92 of the Water Resources Act 1991 gives the Welsh Ministers the power to make regulations for preventing and controlling any poisonous, noxious or polluting matter for the purpose of preventing or controlling the entry of the matter into any controlled waters.

Functions of the Secretary of State under section 92 and section 219 were transferred to the National Assembly for Wales under article 2 of, and Schedule 1 to, the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672). As regards section 92, functions were transferred in relation to those parts of Wales which are outside the catchment areas of the rivers Dee, Wye and Severn. In relation to those parts of Wales which are within those catchment areas, functions under section 92 are exercisable by the National Assembly for Wales concurrently with the Secretary of State. By virtue of section 162 of, and paragraph 30 of Schedule 11 to, the Government of Wales Act 2006 functions under sections 92 and 219 now vest in the Welsh Ministers.

These Regulations are being made under the negative resolution procedure in accordance with section 219(1) of the Water Resources Act 1991.

4. Purpose and intended effect of the legislation

Agricultural activities are one of the main causes of water pollution and ammonia emissions which are detrimental to public health, the environment, biodiversity and the economy. While many farms in Wales operate to high standards, comply with the regulatory baseline and follow good practice guidance, many do not. The Regulations target agricultural activities which present a risk of pollution to reduce the level of environmental pollution caused by poor practice.

The Regulations will protect water (and air quality) from poor agricultural practice by reducing losses of pollutants from nutrients across the whole of Wales. Currently, regulations for the protection of the environment from agricultural pollution are limited. In the absence of an improved regulatory baseline, detrimental impacts on the environment and the resilience of ecosystems necessary to enhance and protect biodiversity and public health will continue to occur. Wales' agricultural industry may also be harmed if the regulations are not introduced, particularly where compliance or regulatory equivalence is necessary for trade purposes. The regulations will fulfil existing requirements under the Nitrates Directive and Water Framework Directive to minimise this risk.

The Regulations will enable more efficient use of nutrients and enable the agricultural industry to demonstrate improved production standards. The Regulations will also protect farms performing to good or high standards from the reputational damage to the industry caused by poor practice elsewhere.

The measures in the Regulations are expected to reduce losses of pollutants to the environment each year by approximately 2,000 tonnes, an environmental benefit equating to £300m. This including nitrates, phosphorus, ammonia and nitrous oxide. The biggest impact on nitrate losses is attributed to increased slurry storage, phosphorus and nitrous oxide losses from not spreading at high risk times and ammonia from integrating fertiliser and manure applications. Due to the large range of potential environment costs associated with these pollutants and the variability of farm types and practices, there can be no certainty of the cost benefit ratio. While the impact of the measures will be minimal for farms already compliant with existing regulations and which follow good practice guidance, the greatest costs are attributed to those businesses not compliant with existing regulatory measures and which do not follow good practice recommendations. In this respect, the Regulations are proportional and aligned to the polluter pays principle.

Regulatory Impact Assessment

Introduction

This report is an impact assessment of a potential policy change to implement measures to address agricultural pollution in Wales.

Wales' natural resources are among our most valuable assets. They provide essential services including food, water and land. These are as fundamental to the long-term success of our economy as they are to the quality of our natural environment and the well-being of our communities. These resources are under pressure from challenges, including agricultural pollution.

A significant proportion of Wales' nutrient input to the environment originates from diffuse pollution, individual small sources of pollution which collectively cause a significant impact. Agricultural activities are one of the main causes of water pollution and ammonia emissions which are detrimental to public health, the environment, biodiversity and the economy.

Acute point-source pollution incidents also effect water quality and can cause significant losses in biodiversity in large stretches of the aquatic ecosystem. It can take many years for full recovery to be achieved following large scale incidents, if at all.

While the primary intention of the proposal is to reduce water pollution from agriculture the approach will be advantageous to other policy aims such as reduced atmospheric emissions. The proposed measures are designed to avoid pollution swapping and prevent or minimise increased losses of nutrients to the environment (including greenhouse gases, phosphorus and ammonia) as a result of measures primarily focussed on reducing losses of nitrogen.

The following key policy options are considered in this impact assessment, with the measures under each option listed in Table 1-1:

- **Option 1** – Doing nothing: 2.4% of Wales remains designated as Nitrate Vulnerable Zones (NVZs).

There would be no change to the existing situation. This option provides the baseline against which the costs and benefits of the following options will be assessed.

Option 2 - Apply measures to the whole of Wales with a review clause to consider the introduction of earned autonomy.

- **Option 3** – Designate additional areas as NVZs (8% of Wales).
- **Option 4** – Introduce regulations across the whole of Wales; with 8% designated as NVZ and different measures elsewhere; with a review clause for earned autonomy.

Table 1-1 Measures and spatial applicability under the different policy options

	Option 2	Option 3	Option 4	
	All Wales	Proposed NVZ Area	Proposed NVZ Area	Rest of Wales
Use a fertiliser recommendation system	✓	✓	✓	✓
Integrate fertiliser and manure nutrient supply	✓	✓	✓	✓
Do not apply manufactured fertiliser to high-risk areas	✓	✓	✓	
Avoid spreading manufactured fertiliser to fields at high-risk times	✓	✓	✓	
Increase the capacity of farm slurry stores to improve timing of slurry applications (<i>5-month storage requirement</i>)	✓	✓	✓	
Increase the capacity of farm slurry stores to improve timing of slurry applications (<i>4-month storage requirement</i>)				✓
Do not apply manure to high-risk areas	✓	✓	✓	✓
Do not spread slurry or poultry manure at high-risk times	✓	✓	✓	✓
Do not spread FYM to fields at high-risk times	✓	✓	✓	✓

For each of these options, it was assumed that compliance with the measures would increase from the current practice (which may be compliance with existing regulation and is described within this report) to full compliance with the new measures.

The impacts of adding the following measures to option 4 were also considered:

- Do not apply manufactured fertiliser to high-risk areas
- Avoid spreading manufactured fertiliser to fields at high-risk times (no person may spread nitrogen fertiliser if the soil is waterlogged, flooded, snow covered, frozen or has been frozen for more than 12 hours in the previous 24 hours and weather conditions must be taken into account – no closed period applies).

However, the definition of ‘high risk times’ for fertiliser applications in this report (see Section 2.2.4) negated the need to model these measures, as option 4 with the measures included is effectively the same as option 2.

The costs and environmental impacts of implementing the measure ‘high risk times’ for applications of manufactured fertiliser are very uncertain as they will mainly depend on

soil and weather conditions in early spring (i.e. February and March). If fertiliser applications are delayed until after the end of March there is an increased risk that crop yields will be affected as a result of sub-optimal crop nutrient supply. In order to assess the uncertainty associated with implementing the 'high risk times' measure, two options were considered, for each scenario where option 'a' avoided fertiliser applications between October and March and option 'b' avoided fertiliser applications between October and February.

The options considered reflect the requirements of European Directives, including the Nitrates Directive and Water Framework Directive, as well as retained EU Law and the responses to relevant published consultations. The responses to the consultation on the Review of the Designated Areas and Action Programme to Tackle Nitrate Pollution in Wales were the key element of the policy development. Responses to other related consultations, including on the storage of silage and slurry and the sustainable management of natural resources were also considered.

The consultations referred to can be accessed using the following links:

<https://gov.wales/nitrate-vulnerable-zones-wales>

<https://gov.wales/review-water-resources-control-pollution-silage-slurry-and-agricultural-fuel-oil-wales-regulations>

<https://gov.wales/taking-forward-wales-sustainable-management-natural-resources>

Consultation with stakeholders has taken place through the Wales Land Management Forum sub-group on agricultural pollution, as well as with individual stakeholders. This includes affected individuals and internal consultation with Welsh Government officials to ensure policy alignment.

Minutes of meetings of the Wales Land Management Forum sub-group and a progress report on the work of the sub-group can be found using the following link:

<https://naturalresources.wales/guidance-and-advice/business-sectors/farming/wales-land-management-forum-sub-group-on-agricultural-pollution/?lang=en>

The resulting regulations will be reviewed every four years but this will be dependent on our future relationship with the European Union over the coming months and years. The Welsh Government will continue to work with stakeholders, including the Wales Land Management Forum sub-group, as part of the review process.

1 Methodology and Assumptions

1.1 Methodology

A modelling approach was used to estimate the potential effects of different policy scenarios on pollutant loads as well as farm costs. The modelling work consisted of two main parts:

- a) Using the Farmscoper tool (Gooday et al., 2014) to predict the effects of the proposed measures on pollutant losses as well as on farm costs as relevant to each policy option.
- b) Using the MANNER-NPK tool (Nicholson et al., 2013) to model the effects of avoiding high risk times for high available N manures (cattle slurry, pig slurry, broiler litter and layer litter) in accordance with the proposed measures.

Three additional components of work were undertaken to fully account for the costs of measures and monetise the estimated pollutant reductions:

- a) Estimate the costs associated with increased slurry storage capacity
- b) Estimate the costs associated with record keeping and manure and nutrient planning
- c) Review the damage costs associated with the different pollutants

The range of potential implementation and damage costs was accounted for with a sensitivity analysis. For some of the key measures (either those with significant costs or greater uncertainty in the costs), high, medium and low cost estimates were produced. The review of damage costs also produced a central estimate and upper and lower bounds for each pollutant. The sensitivity analysis thus considered the consequences of using the high, medium or low implementation costs, and the high, medium and low environmental damage costs.

The pollutants considered are nitrate, phosphorus, ammonia and nitrous oxide. The assessment considers the management of livestock manures only and not other organic materials (e.g. biosolids, digestate and compost)¹. The assessment does not specifically consider the impacts of the measures on organic farming as this makes up a very small proportion of the agricultural land in Wales.

1.1.1 Farmscoper

The Farmscoper model is a decision support tool used to assess diffuse agricultural pollutant loads on a farm and quantify the impacts of farm pollution mitigation options on these losses. It was developed by ADAS with Defra and EA funding and has been used both internally within those organisations and in a number of external projects looking at the impacts of regulation and agri-environment schemes (e.g. Gooday et al., 2015; Collins and Zhang, 2016; Gooday and Whitworth 2017; Collins et al., 2018; Elliott et al., 2019).

The tool allows for the creation of unique farming systems, based on combinations of livestock, cropping and manure management, and the assessment of the cost and effect

¹. The N loading from other organic materials (e.g. biosolids, digestate and compost) is estimated at less than 3% of total N inputs (BSFP, 2018).

of one or more mitigation methods from a library of over 100 methods contained within the tool, many based upon the Mitigation Method User Guide (Newell-Price et al., 2011). The tool can be used to simulate losses from multiple farming systems, to allow predictions at catchment scale or larger. A more detailed description of the model is presented in Appendix 1.

The Farmscoper tool was parameterised using June Agricultural Survey (JAS) data from 2018 for Wales. The JAS was used to determine average cropping and livestock for different farm types and sizes. The farm types considered were the 9 robust farm types (RFT), with the Cattle and Sheep LFA RFT further subdivided into Specialist Sheep, Specialist Beef and Mixed; the farm sizes considered were based on standard labour requirement. Separate farms were made for land inside and outside of the proposed NVZ area. The total number of farms in Wales, by type and size, is shown in Table 1-1. Additional management information for these farms was taken from national stratified surveys including the 1st and 2nd Welsh Farm Practice Surveys (Anthony et al., 2011; Anthony et al., 2016), the Defra Farm Practice Surveys and the British Survey of Fertiliser Practice.

Table 1-1: Number of farms in Wales by farm type and farm size (based on standard labour requirement)

	Hobby	Small	Medium	Large	Total
Cereal	304	62	25	29	420
General Cropping	76	19	9	23	127
Horticulture	769	27	9	25	830
Specialist Pig	220	2	2	1	225
Specialist Poultry	981	32	28	52	1,093
Dairy	188	205	307	914	1,614
LFA – Specialist Sheep	2,162	863	535	1,126	4,686
LFA – Specialist Beef	816	138	24	31	1,009
LFA – Mixed Livestock	3,803	1,066	627	860	6,356
Lowland Cattle and Sheep	1,750	403	156	191	2,500
Mixed Livestock	892	110	48	119	1,169
Other	4,285	336	94	63	4,778
Total	16,246	3,263	1,864	3,434	24,807

Pollutant losses were calculated for each of these different farms under each of the soil and climate zones recognised by Farmscoper, with the results expressed as losses per

hectare. These losses were then mapped back on to the LPIS field parcels (where every field parcel had been assigned to a farm type, size, climate and soil type and either inside or outside the proposed NVZ area).

The LPIS dataset contained information for 610,000 field parcels, covering a total area of 1.69m hectares. For 545,000 of these parcels, a farm ID was provided, for 23,470 different farms. Of these farms, 14,663 could be directly linked to JAS farms (which accounted for 1.20m hectares). A further 5,898 farms (62,759 fields; 0.18m hectares) were joined to JAS farms by matching as close as possible the LPIS area of a farm with the JAS area for all unmatched farms, with matches constrained by the Small Area (a spatial designation) allocated to each JAS farm and the Easting and Northing provided. A total of 4,246 of the JAS farms (out of 24,807) were unaccounted for, and these were classed as either 'other' or hobby farms (which accounted for over 85% of the unmatched JAS farms) which have low nutrient use and very few livestock. In the creation of the 'average' farms used in the Farmscoper modelling, the livestock numbers were scaled to ensure the total livestock numbers across Wales (and within the proposed NVZ area) remainder close to the JAS totals when distributed across the LPIS parcels. Although there is some uncertainty about the accuracy of the mapping of the farm data, the methodology was designed to preserve JAS livestock numbers and LPIS land areas. As the results in this report are being summarised at national (or proposed NVZ) scale, the spatial uncertainty has limited impact on the overall modelled outputs.

Changes in pollutant losses predicted by Farmscoper due to measure implementation depend on (i) the effectiveness of the measures at reducing pollution and (ii) the current (and future) uptake of the measures. Parameterisation of these values are based upon the scoring system shown in Table 1-2, with a central value selected that represents the range within which the impact or implementation is expected to be², - the values selected to parameterise the different mitigation measures are described in the following sub-sections. Farmscoper uses a source apportionment coordinate system, so the impact of a mitigation measure may be targeted at one (or more) of the coordinates – for example buffer strips may reduce losses by 50% in surface runoff, but have no impact on losses in drain flow or to groundwater.

² This could reflect, for example the uncertainty in survey data or its applicability, or the variation in evidence for effect. The use of a scoring system allows for easy comparison between the different pollutants and multiple mitigation methods within Farmscoper.

Table 1-2 Confidence ranges and central values used by Farmscoper for estimating current implementation of measures and impact potential

Category	Implementation or Impact (%)	Uncertainty Range	Description
A	-	-	None
B	2	0 to 10	Very Low
C	10	2 to 25	Low
D	25	10 to 50	Moderate
E	50	25 to 80	High
F	80	50 to 95	Very High
G	100	100	Total

1.1.2 MANNER-NPK

The MANNER-NPK model (details presented in Appendix 2) is a decision support tool designed to show the impact of different application timings and methods on losses of nitrate, ammonia and nitrous oxide (Nicholson et al., 2013). MANNER-NPK was used to model the impacts on N loss of introducing the closed period for spreading high N available manure (cattle slurry, pig slurry, broiler litter and layer litter) across the whole of Wales or relevant NVZ areas. The MANNER-NPK decision support tool is recognised as the industry standard tool for estimating crop available nutrient supply, nitrate leaching and ammonia volatilisation losses following manure applications. It was used to derive the 'look up' tables in AHDB's Nutrient Management Guide (AHDB, 2020) which detail crop available N supply from contrasting manure application timings and methods

1.2 Description of measures

1.2.1 Use a fertiliser recommendation system

Description

Use a recognised fertiliser recommendation system (e.g. RB209, PLANET and other supplementary guidance) to plan manufactured fertiliser applications to all crops; do not exceed recommended rates. Time fertiliser applications to minimise the risk of nutrient losses (e.g. avoid autumn N use and manage early spring applications to drained soils). Use a professional FACTS (Fertiliser Advisers Certification and Training Scheme) qualified adviser.

Fertiliser recommendation systems take account of the following factors: soil nutrient supply (based on soil analysis), winter rainfall, previous cropping and soil type, crop nutrient requirements for a given soil and climate, crop requirement for nutrients at various growth stages, the amount of nutrients supplied to the crop by added organic manures and by previous manure applications, soil pH and the need for lime. A good

fertiliser recommendation system ensures that the necessary quantities of nutrients are available when required for uptake by the crop. Nutrients are only applied when the supply of nutrients from all other sources is insufficient to meet crop requirements. As a result, the amount of excess nutrients in the soil is reduced to a minimum. Use of a recommendation system should also ensure that the soil is in a sufficiently fertile state to maximise the efficient use of nutrients already in the soil, or supplied from other sources such as fertilisers/organic manures. Maintaining an appropriate balance between different nutrients (i.e. NPK) is also important to maximise the efficient uptake of all nutrients and reduce environmental losses to a minimum.

(i) Nitrogen

Most agricultural soils require applications of nitrogen from fertiliser and/or organic materials on an annual basis to ensure optimum crop growth. Most of the mineral nitrogen in the soil is present as nitrate, which is mobile in the soil. Any nitrate that is present in the soil at the start of the winter is unlikely to be taken up by crops as growth slows due to cold temperatures and reduced light intensity. When excess winter rainfall occurs, and water drains through the soil the nitrate is at risk of being lost from the soil by leaching.

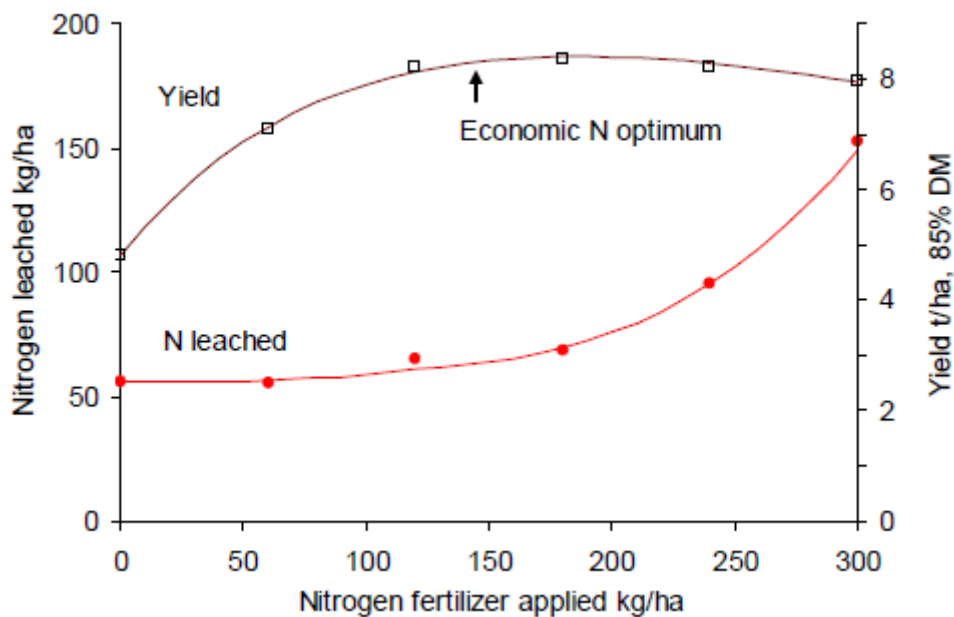


Figure 1-1: Impact of manufactured fertiliser nitrogen applications on winter wheat yields and nitrate leaching losses (Lord and Mitchell, 1998)

Nitrogen applications to arable crops that supply less than economic optimum will result in sub-optimal crop yields and quality whilst applications that exceed crop requirement will increase the risk of nitrate leaching (Figure 1-2; Lord and Mitchell, 1998; Figure 2-2 Johnson et al., 2011).

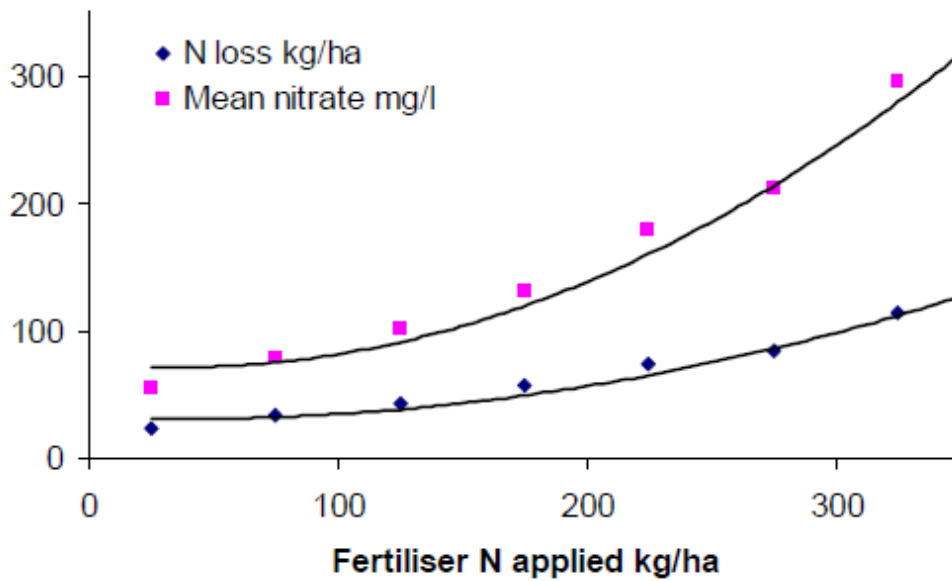


Figure 1-2: The effect of nitrogen fertiliser applications on drainage water nitrate concentrations and nitrate leaching losses (Johnson *et al.*, 2011)

Nitrous oxide emissions occur from soils as a result of the microbially mediated processes of nitrification and denitrification. Factors that affect nitrous oxide emissions include soil moisture content, temperature and mineral nitrogen content. Generally nitrous oxide emissions are related to nitrogen inputs from manures and fertilisers with elevated emissions where nitrogen supply exceeds crop requirement (Figure 1-3; Cardenas *et al.*, 2010).

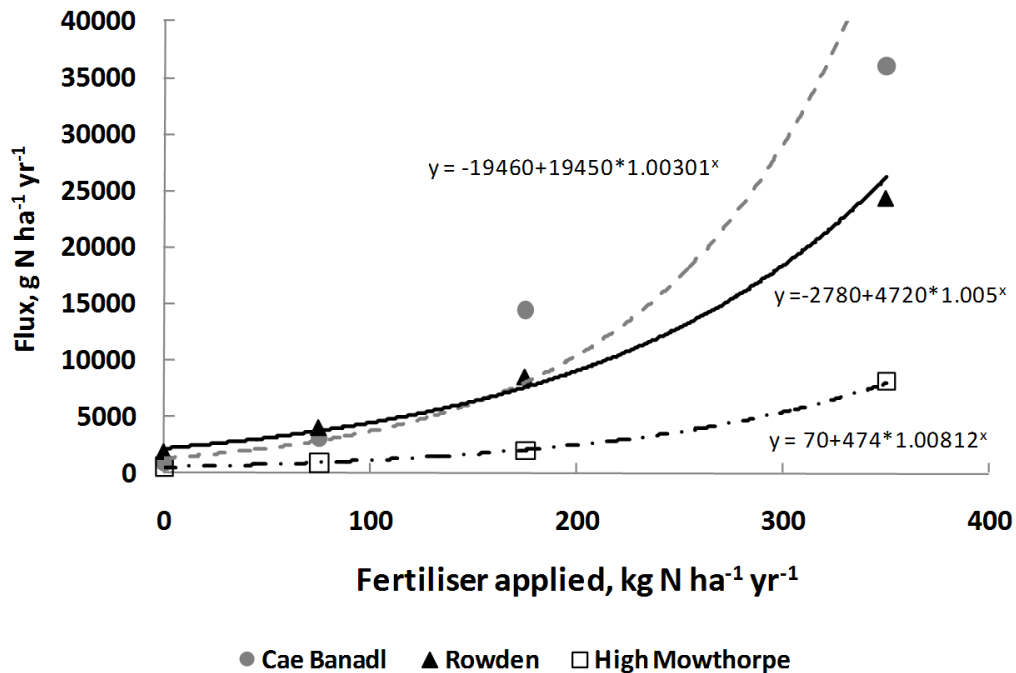


Figure 1-3: The effect of manufactured fertiliser nitrogen application rate on nitrous oxide emissions at 3 contrasting grassland sites (Cardenas *et al.*, 2010).

(ii) Phosphorus

A large proportion of phosphorus (P) in soils is bound in forms that are not readily available to the plant or at risk of leaching to water (i.e. fixed or residual P), because of the strong affinity that some soil substances (clays, iron-Fe/aluminium-Al/calcium-Ca) have for P (Holford, 1997). Consequently, managing crop available P supply is based on maintaining sufficient amounts in the soil for the needs of a crop rotation rather than an individual crop.

AHDB's Nutrient Management Guide (RB209) uses a soil P index system (based on the Olsen extractable P levels in topsoil) to provide guidance on P supply from manufactured fertilisers and organic materials. For grassland and most arable crops the target soil P index is 2 (16-25 mg/l Olsen P). For soils below the target index it is recommended to apply P at rates that exceed crop offtake to ensure optimum crop yields and to build up soil reserves. Where soils are at target index, fertiliser rates should match crop offtake to maintain soil fertility at optimum levels and where soil P levels are above target index, P fertiliser applications are not recommended as they represent an unnecessary cost and increase the risk of P losses to water (Figure 1-4; Poulton *et al.*, 2013, Heckrath *et al.*, 1995 Withers *et al.*, 2017).

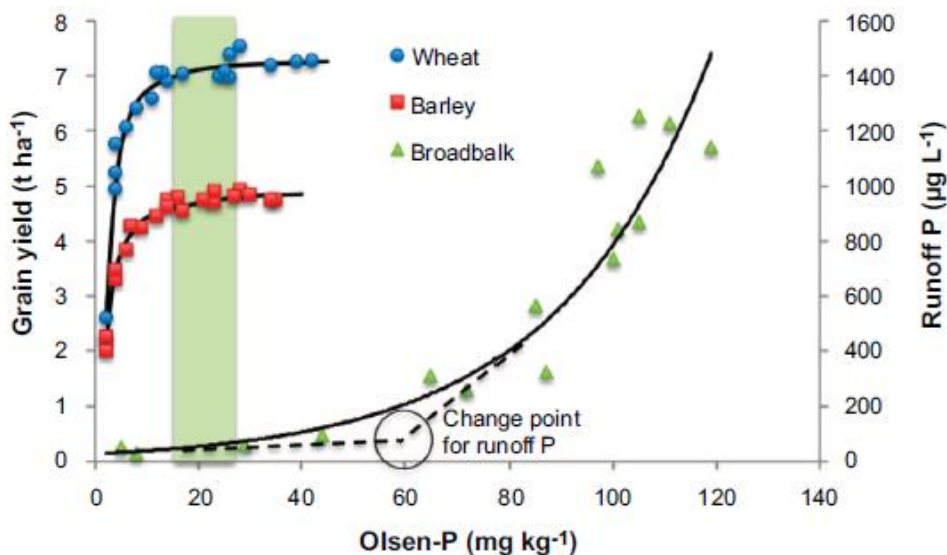


Figure 1-4: The impact of Olsen extractable P levels on crop yields and soluble P losses to water (Poulton *et al.*, 2013, Heckrath *et al.*, 1995). Graph taken from Withers *et al.*, (2017).

The extent to which soil is saturated with P will influence the risk of P losses to water. The soil saturation capacity depends on the quantities and forms of Fe, Al and Ca present in the soil and P is more strongly bound in the order Fe>Al>Ca (Withers, 2011). Risks of P loss to water have been reported to greatly increase once P saturation exceeds a threshold of 20-30% (Heckrath *et al.*, 1999, Kleinman *et al.*, 2000; Nair *et al.*, 2004). P saturation threshold broadly equates to Olsen soil P indices of 3, 4 and 5 for sand, loam and clay soils, respectively. Consequently, soils with P indices above these levels represent an increased risk of P losses to water.

At the farm level, the impact of fertiliser recommendation schemes on increasing nutrient use efficiency and reducing diffuse pollution will vary depending on the current level of nutrient use. Data from the British Survey of Fertiliser Practice (2018) indicate 88% of tillage land and 52% of grassland in England and Wales received applications of manufactured fertiliser nitrogen in 2017. Fertiliser phosphate was applied to only 44% of tillage land and 30% of grassland in England and Wales.

The survey data suggest that this method is likely to have a small overall impact on fertiliser use. The average field rates for nitrogen reported in BSFP are similar to those typically recommended in AHDB's Nutrient Management Guide (RB209) for arable crops and application rates on grass are typically lower than those recommended in RB209 (Figure 1-5; Figure 1-6). Also, data suggest that applications of phosphate and potash fertiliser have declined over recent years (Figure 1-7) with little scope for further reductions.

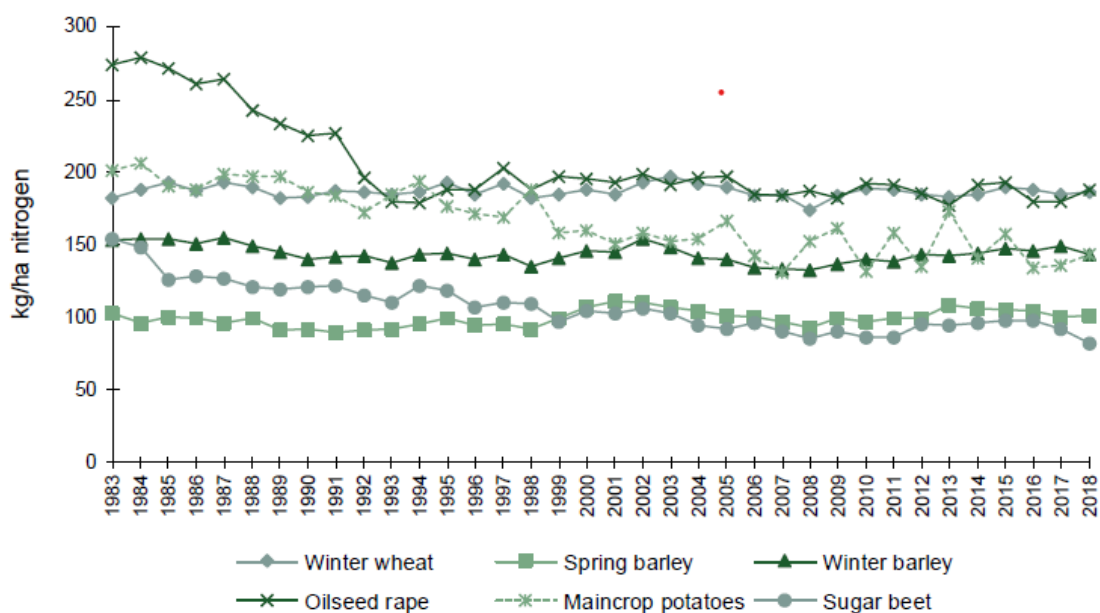


Figure 1-5: Average nitrogen fertiliser rates applied to tillage crops across England and Wales (Taken from BSFP, 2018)

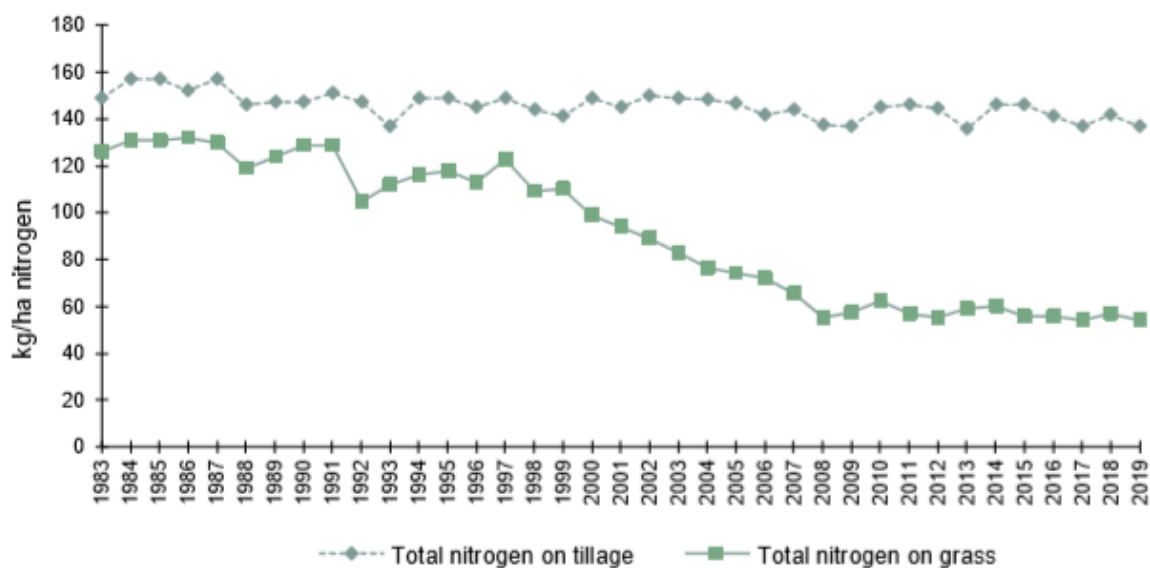


Figure 1-6: Total nitrogen fertiliser use across tillage and grassland in Great Britain (BSFP, 2019)

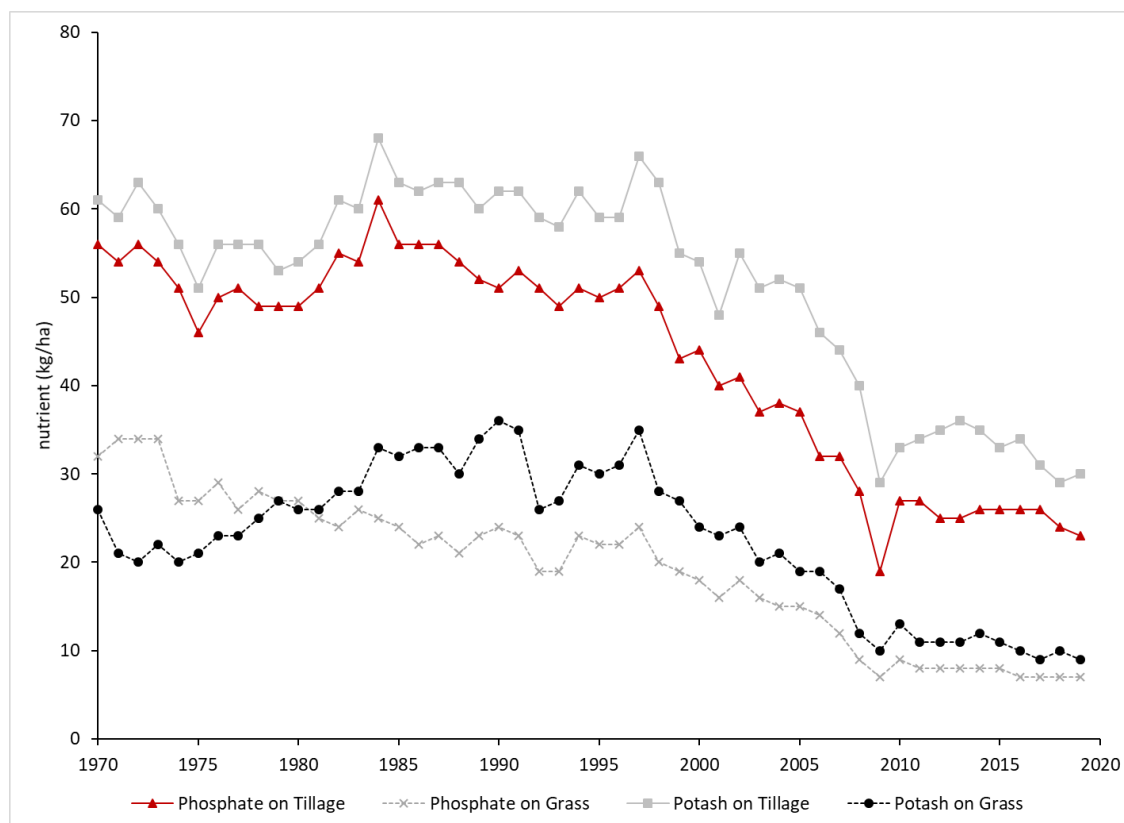


Figure 1-7: Average field phosphate and potash rate across England and Wales (BSFP, 2019)

Anthony et al (2012) reported that the majority of farmers in Wales either used their own knowledge (64%) or took professional advice (35%) when estimating fertiliser requirements and that only 4% claimed to use RB209 or any software directly

themselves revealing scope for improvement. Anthony et al (2016) reported that 39-57% of surveyed farmers in Wales used a fertiliser recommendation system.

Based on expert knowledge, responses to the survey and modelling results it was determined that the use of a fertiliser recommendation systems would result in no reduction in phosphorus losses and between a 5 – 10% reductions in nitrate losses from arable and grassland systems. These calculations were based on the following assumptions:

- For manufactured phosphorus the use of a fertiliser recommendation system was interpreted as ensuring a balance of annual fertiliser input and crop off-take to maintain an appropriate soil phosphorus index.
- For nitrogen it was assumed that the use of a recommendation system would enable an improvement in the precision of applications rather than a reduction in the quantity applied. The NITCAT and N-CYCLE models (Lord, 1992; Scholefield et al., 1991) were then used to calculate the effect of a 25% reduction in the average error in estimating optimum nitrogen for the crops on each of representative farm types.

After discounting livestock manure phosphorus input-offtake balances were all negative and indicated that fertiliser applications could not be reduced in the absence of manures. There was, therefore, no direct impact of this mitigation method on the use of manufactured phosphorus fertiliser.

Anthony et al., (2012) conclude that more precise use and application of manufactured nitrogen fertiliser is likely to reduce nitrate losses from the combined fertiliser and soil nitrogen supply by between 5 and 10% for both arable and grassland.

Newell Price *et al.*, (2011) suggested that the use of fertiliser recommendation systems had the potential to reduce nitrogen and phosphorus losses to water and ammonia and nitrous oxide emissions to air by c.5%.

Williams et al., (2017) suggest that where excess nutrients are applied implementing a nutrient management plan can reduce fertiliser costs and risks of water and air pollution. However, where insufficient nutrients are applied a nutrient management plan may lead to increased fertiliser use which may increase absolute losses to the environment but reduce losses per unit of production. Information from Welsh Farm Practice Survey (Anthony 2012) reported 43% of farmers have a soil nutrient plan suggesting there was scope to improve the precision of fertiliser application rates for each year.

Representation in Modelling

Based on the information described above, Farmscoper assumes that losses associated with nitrogen fertiliser will be reduced by 10%, whilst those with phosphate fertiliser by 2%, reflecting the lower potential for changes in P fertiliser usage.

Farmscoper assumes that improvements in nutrient use efficiency that come from matching crop available nutrient supply to crop demand and soil nutrient status, ensuring optimal fertiliser timings and the maintenance of soil pH at target levels will reduce average fertiliser inputs by 5% on arable farms and increase average

productivity of grassland by 10% compared with baseline, which equates to savings of approximately £5 ha⁻¹ and £11 ha⁻¹ respectively.

Current implementation of this measure in Farmscoper is assumed to be 50% as a baseline, with rates higher inside NVZ areas and lower on extensive grazing systems. This is based on Defra Farm Practice Survey (2012), which found 16% and 48% of farmers use the Tried and Tested paper based planning system or PLANET software, respectively, and the 2nd Welsh farm Practice Survey (Anthony et al., 2016) which found 57% of Dairy farmers used a fertiliser recommendation system, but only 40% of cattle and sheep farmers did.

1.2.2 Integrate fertiliser and manure nutrient supply

Description

Organic materials are valuable sources of plant nutrients and if used effectively they can reduce the need for applications of manufactured fertilisers to meet optimum crop needs (Table 1-3). Fertiliser recommendation systems (e.g. RB209, PLANET, MANNER-*NPK* and other supplementary guidance) provide guidance on how to make full allowance of the nutrients applied in organic manures and reduce manufactured fertiliser inputs accordingly. Laboratory analysis of manures can provide better understanding of manure nutrient contents and supply. MANNER-*NPK* information on application rates, timings and methods can be used to quantify crop available nutrient supply and provide estimates of nitrogen losses to water and air following application.

The nitrogen fertiliser replacement value of organic manures can be increased by applying manures in spring to reduce nitrate leaching losses. For slurries, the use of precision application techniques can reduce ammonia emissions and ensure that applications are spread evenly across known bout widths. In order to maximise the nitrogen value of slurry and poultry manures it is usually necessary to apply them in spring to minimise nitrate leaching losses. The use of low emission spreading techniques such as trailing hose on arable land and trailing shoe and shallow injection of grassland will reduce ammonia losses and further increase the nitrogen value of slurry.

For solid manures it is likely that applications will supply more phosphate and potash than is used by a crop in a single year. Consequently, annual applications of manure to the same field can increase soil P contents to levels where there is an increased risk of P losses to water. Targeting manure applications to fields where soil P and K status are below target indices will maximise manure fertiliser replacement values.

Table 1-3: Nutrients supplied by spring application timings of different organic materials (based on typical manure analysis figures in AHDB's Nutrient Management Guide (RB209))

Manure type	Application Rate (t/ha)	Crop Available N (kg/ha)	Total P ₂ O ₅ (kg/ha)	Total K ₂ O (kg/ha)	Crop Available SO ₃ (kg/ha)
Pig Slurry	35	63	63	84	12
Pig FYM	35	25	210	280	30
Cattle Slurry	40	36	48	128	10
Cattle FYM	40	24	128	320	14
Poultry Manure	8	72	200	144	38
Biosolids Cake	20	33	360	12	24

The impact of this measure on reducing diffuse pollution will depend to what extent farmers are already accounting for nutrients supplied by organic materials when planning their manufactured fertiliser use. The BSFP (2019) suggests that where farmers have used organic materials manufactured fertiliser nitrogen and phosphate applications were reduced by c. 20 kg/ha N and c.15 kg/ha P₂O₅, respectively.

The savings in nitrogen fertiliser use as a result of integrating manures into nutrient management plans will represent an annual saving once the method has been adopted. However, the P and K value of the manure applications will depend on the P and K status of the soil. Where soils are deficient in P and K i.e. at soil index 0 and 1, then the available crop P and K fraction of the manure should be accounted for. When soils are P and K index 3, there is no requirement for fertiliser P and K for grass and arable crops, consequently the P and K applied by the manures will have no value. Information from the PAAG suggest that c. 30% of soils in Wales exceed target levels and will not require annual P and K inputs from either manufactured fertilisers or organic materials to support optimum crop growth.

In order to identify the maximum and minimum cost benefit for this measure two scenarios (i) accounting for manure N only and (ii) accounting for all manure nutrients have been assessed for each option.

Representation in Modelling

Farmscoper assumes that fertiliser losses could be reduced by up to 25%, depending upon the amount of manure applied relative to the amount of fertiliser currently used. Farmscoper assumes a saving is made due to reduced fertiliser usage, which is estimated at £6 per tonnes of FYM and £3 per m³ of slurry and £28 per tonne of poultry manure. These figures are based on current fertiliser prices for nitrogen, phosphorus and potash, assumed nitrogen efficiency and nutrient availability. However, there is uncertainty surrounding the fertiliser replacement value of the manure. It is possible to account for the nitrogen fertiliser replacement value of the manures as in the vast majority of agronomic situations annual applications of nitrogen are required for optimal crop growth. In contrast the phosphate and potash value of the manure applications will

depend on the supply of these nutrients from the soil with no requirement for manufactured fertiliser P and K inputs to arable and grass crops when soils are at or above soil index 3 and for horticulture, potatoes and maize crops when soils are at or above index 4. Accounting for only the nitrogen in manures reduces the savings in slurry to £0.6 per m³ and poultry manure to £4 per tonne. There is not assumed to be a reduction in the number of fertiliser applications, which could result in an additional cost saving.

The 2nd Welsh Farm Practice Survey (Anthony et al., 2016) found that the percentage of farmers using professional advice or manure testing, and standard values such as RB209 to assess the nutrient value of spread manures was 19 and 11% respectively. However, the majority of farmers (73%) assessed the nutrient value of spreads manures using own knowledge and experience, whereas 20% of farms did not assess at all. Of these, 50% solely rely on own knowledge or experience when assessing the nutrient value of spread manures. The Defra Farm Practice Survey (2012) found 57% of farms assess or calculate the value of their manures, and only 24% tested the nutrient content by taking samples. Based on this current implementation of this measure in Farmscoper is assumed to be 50% as a baseline, with rates higher inside NVZ areas and lower on extensive grazing systems. Information provided by Menter a Busnes (Cate Barrow, Pers |comm) suggest that since 2016 c. 3,000 nutrient management plans have been completed via Farming Connect. This may suggest that the 50% baseline in Farmscoper is an underestimation of the implementation of this measure. However, details of farm type, size and nutrient use for the farms and information on whether farmers are following the plans is not available.

1.2.3 Do not apply manufactured fertiliser to high-risk areas

Description

Do not apply manufactured fertiliser to field areas where there is a significant risk of fertiliser getting into surface water. This could include sloping land or areas where there are direct flow paths to watercourses, for example, areas with a dense network of open drains, wet depressions (flushes) draining to a nearby watercourse, or areas close to road culverts/ditches. The risk of pollution is reduced by not applying fertiliser at any time to hydrologically well-connected areas where it could easily be transferred to a watercourse. Not applying fertiliser to crops will significantly reduce yields as there will be insufficient crop available nutrient supply to support optimum crop growth.

The following evidence suggests that 'high risk areas' occupy approximately 5% of the agricultural area:

- Compaction due to machinery: Anthony et al (2012a) found this was reported on 25% of dairy farms and 10% of cattle and sheep farms. The compacted area within such fields is estimated at 1-2% of the total area.
- Poaching from livestock: Gooday et al (2015) reviewed a range of evidence which suggested that 3% of field areas had visible poaching damage from livestock. Observations suggest that an area of poaching around a livestock feeder or trough can cover 20m around the feeder, which equates to c2% of a 5-ha field.
- Anthony et al (2012b) surveyed areas of soils with tile drainage and the area of land affected by evidence of drain failure. The proportion of land affected by sustained waterlogging ranged from 2% on arable farms to 13% on upland cattle

and sheep farms. As a proportion of all soils (not just those with tile drainage), the affected area would be a smaller percentage.

There are no surveys which provide information on the amount of fertiliser applied to steeply sloping land. In this study it is assumed that nationally very small amounts of fertiliser are applied to steeply sloping land due to the practicalities involved, and so any additional impacts from avoiding these areas have not been accounted for.

Representation in Modelling

Farmscoper assumes losses associated with fertiliser on the 'high risk areas' are entirely negated.

The 2nd Welsh Farm Practice Survey (Anthony et al., 2016) found a baseline of 56% of dairy farmers had a soil nutrient management plan, but only 25% of cattle and sheep farms in SDAs. Farms in Glastir, Tir Gofal or Tir Cynnal were more likely to have soil nutrient management plans. Farmscoper assumes a baseline of 50% of 'high risk areas' are avoided, with values greater inside NVZs and lower on cattle and sheep farms.

Farmscoper assumes a 50% yield reduction for arable crops and 30% reduction in grass yields over 5% of the agricultural area as a result of implementing this measure, which equates to £210 ha⁻¹ and £600 ha⁻¹ for high risk areas on grassland and arable land respectively. There would also be the need to identify high risk areas, typically through the creation of a nutrient management plan. Costs of this are dealt with separately (see Section 1.4.1).

1.2.4 Avoid spreading manufactured fertiliser to fields at high-risk times

Description

Do not spread manufactured fertiliser at times when there is a high-risk of surface runoff or rapid movement to field drains i.e. when soils are 'wet'. Do not spread N fertiliser between September and February when there is little or no crop uptake and there is a high-risk of nitrate leaching loss (unless there is a specific crop requirement during this period).

Fertiliser timing affects the potential for mobilisation of nutrients from land to water. Avoiding spreading fertiliser to fields at high-risk times reduces the availability of N and P for loss in surface runoff or drain flow. Surface runoff is most likely to occur when rain falls on sloping ground, when soils are 'wet', frozen or snow covered. The rapid preferential flow, through the soil, of N and P from applied fertilisers is most likely to occur from (drained) soils when they are 'wet' and rainfall follows soon after application. Avoiding N fertiliser application in the autumn/winter reduces the amount of nitrogen available for leaching by over-winter rainfall.

The risks of water pollution following application of manufactured fertilisers will vary according to soil type which controls the pathway for water and nutrient loss and on the soil moisture content. Nitrate is mobile in soils and is at risk of being leached from the soil when drainage occurs. Phosphorus is more immobile in soils and the risks of phosphorus leaching is highest when soils are saturated with P or where rapid transfer of P from the soil to water occurs following applications of fertiliser P or organic manures.

On sandy soils (which occupy less than 5% of Wales; Figure 1-8), drainage occurs slowly over winter by piston displacement in the unsaturated phase, with wetting fronts moving to depth at rates of a few metres a year depending on drainage volumes and the pore volume of the soil and base rock. Consequently, the highest risk of water pollution on sandy soils is following nitrogen fertiliser applications in the autumn/winter period when the nitrate supplied is unlikely to be taken up by crop growth.

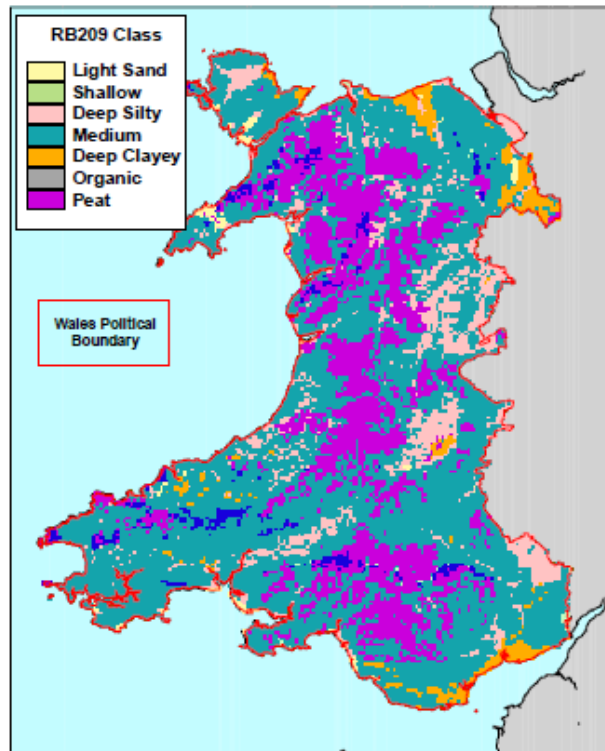


Figure 1-8: RB209 soil classification for Wales

On undrained clay and medium loam soils, surface runoff is likely to occur in rapid response to rainfall events, because of the impermeable nature of the soil matrix (Goss *et al.*, 1978). Where an effective drainage system is present, much of the water that would otherwise be lost as surface runoff, will move rapidly from the soil surface through macropores that have developed naturally or have been created through the installation of pipe drains, mole drains or subsoiling fissures, with transit times influenced by rainfall volume and intensity (Goss *et al.*, 1983). On these soil types which occupy the majority of the productive land in Wales (Figure 1-8) the highest risk of water pollution following fertiliser application is likely to be when soils have a soil moisture deficit of less than 10mm – i.e. drainage will occur when hydrologically effective rainfall (i.e. rainfall-evapotranspiration) exceeds 10mm.

As part of this study the IRRIGUIDE water balance model (Bailey and Spackman, 1996) was used to quantify high risk times by estimating daily soil moisture deficits for two soil types (sandy loam and clay loam), two crop types (grass and winter wheat) for 9 locations chosen to be representative of contrasting agroclimatic zones across Wales (i.e. Aberystwyth, Llangefni, Bangor, Wrexham, Fishguard, Haverfordwest, Welshpool, Newport Pembrokeshire and Newport Gwent). The model was run using 30 year (1987-2018) average climate data for each site. The model uses information on volumetric

moisture content, crop cover, rooting depth and weather data to estimate evapotranspiration and soil drainage.

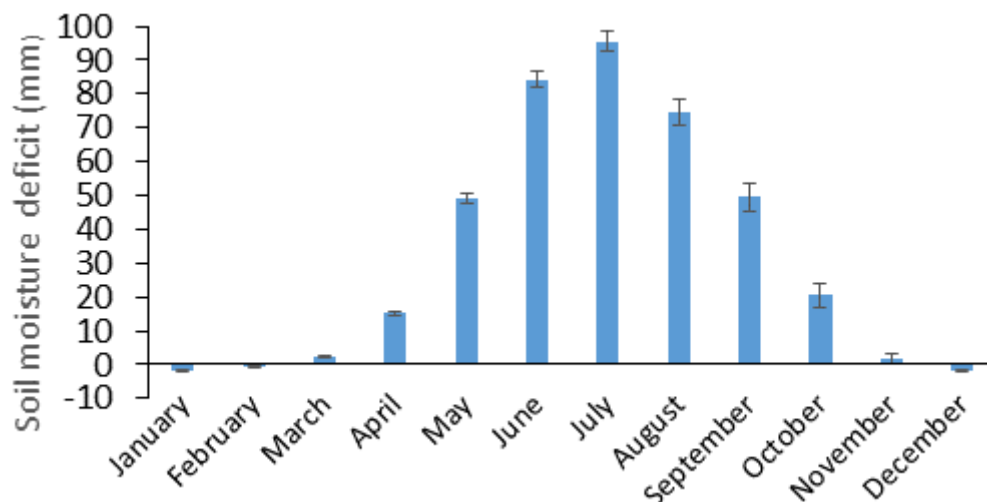


Figure 1-9: Average estimated monthly soil moisture deficit in Wales (based on 30 year average climate data from 9 sites across Wales)

The model runs indicate that, on average, soils across Wales were close to field capacity at the end of February (i.e. soil moisture deficit close to 0) with soil moisture deficits of less than 10 mm predicted at the end of March (Figure 1-9). There was some annual variation in soil moisture deficit at the end of March. In 6 years out of 30 (1990, 1997, 2002, 2003, 2012 and 2019) soil moisture deficits greater than 10 mm were predicted at the end of March. These drier years contrasted with 6 years (1992, 1994, 2006, 2009, 2010 and 2015) when soils were at field capacity or drainage was occurring at the end of March. There was little difference in estimated soil moisture deficits between soil and crop types reflecting the low growth rates during the winter months for grass and arable crops. This suggests that applying fertiliser during February and March could be considered 'high risk'.

There are few studies that have investigated the impact of fertiliser application timings by date on crop yields. Generally, the guidance provides information to ensure that sufficient nitrogen is applied to support crop growth at critical points in the growing season. E.g. In cereals, when the crop is growing rapidly between growth stages 30 and 39 (Stem extension and Flag leaf emergence; Figure 1-10) which usually occurs between the end of March to the middle of May depending on soil and weather conditions.

Growth stages



Figure 1-10: Growth stages for Winter wheat (taken from AHDB's Wheat Growth Guide (www.ahdb.org.uk/wheatgg))

For winter wheat, AHDB's Nutrient Management Guide recommends that '*where more than 120kg/ha N is required 40 kg/ha N should be applied between mid-February and early March. The balance of the application should be applied in one or two dressings during early stem extension. Where more than 120 kg N/ha remains to be applied, half should be applied at the start of stem extension (not before April) and half at least two weeks later (not after early May)*'.

Information provided by ADHB's Wheat Growth Guide suggests that delaying fertiliser applications until early April is unlikely to have a significant impact on wheat yields in most years. Similarly, on grassland soil and weather conditions are likely to have more significant impact on grass growth than delaying fertiliser applications until early April. However, where weather conditions prevent uptake of nitrogen in April and May (e.g. continued period of dry weather following application) there is a risk that cereal and grass yields will be reduced.

Delaying fertiliser applications until the end of March is likely to significantly affect crops established in late winter/early spring which have a requirement for fertiliser to be applied in the seed bed. For example, early potatoes, which are typically planted in south-west Wales at the end of January or beginning of February would be particularly disadvantaged if the measure prevented fertiliser applications in February. The crop is usually grown on c. 500-1000 ha.

Representation in Modelling

In order to assess the uncertainty of this measure on operational costs and environmental benefits yields two versions of this measure were modelled for each option. For Option 'a' fertiliser applications were not allowed from October to March, and Option 'b' fertiliser applications were not allowed between October to February.

Surveys suggest that a small amount of N and P fertiliser is applied before March (c. 6% of total applications; BSFP, 2018), so the impacts of this restriction window (to end of February) on losses to water were small – a 2% reduction in N and P losses in runoff or drain flow shortly after application (as opposed to residual losses post-harvest for nitrogen, which will be unchanged). With the restrictions lengthened into March, reductions a 10% reduction in nutrient losses from fertiliser applications during this period was assumed.

As the modelling that underpins Farmscoper is based upon fertiliser timing information derived from the British Survey of Fertiliser Practice, current implementation is captured in the modelling and so the implementation of the mitigation measure is set to 0.

With restrictions on fertiliser applications to the end of February, it was assumed that crop yields were unaffected, so there was no cost associated with option b. With restrictions to the end of March (option a), Farmscoper assumes a 10% reduction on crop yields one year in 10 to reflect yield reductions that may occur from sub-optimal crop available nutrient supply early in the growing season.

1.2.5 Increase the capacity of farm slurry stores to improve timing of slurry applications

Description

Expand slurry storage facilities for the collection and storage of slurry, to allow spreading at times when there is a low-risk of runoff and when there is an actively growing crop to utilise nutrients applied in the slurry. The storage provides increased flexibility in land application timing, so there will be fewer occasions when a lack of storage forces slurry applications to occur when there is a high-risk of nitrate leaching, surface runoff or drainflow to water i.e. when soils are 'wet'.

The current statutory requirement for farmers outside Nitrate Vulnerable Zones is to comply with the Water Resources (Control of Pollution) (Silage, Slurry and Agriculture Fuel Oil) (Wales) Regulations 2010 (SSAFO) which require storage of 4 months excreta production and an allowance for the highest rainfall expected in 5 years (M5). This method assumes that increasing slurry storage capacity to 5 months excreta production plus M5 rainfall will reduce the likelihood that slurry will be applied to land under conditions which are likely to increase the risk of water pollution.

Representation in Modelling

Farmscoper assumes that losses of ammonia from manure storage will be increased by 25% due to the increased amount of manure being stored being increased by 25% (there is potentially a marginal further increase due to the increased surface area of the store), but losses of ammonia from manure spreading will consequently be decreased.

The impacts of improved timing of manure applications, facilitated by the increased storage, are described in Section 1.2.7.

The costs of implementing this measure were calculated separately (see Section 1.4.2).

1.2.6 Do not apply manure to high-risk areas

Description

Do not apply manure to field areas where there is a high-risk of direct loss to watercourses, e.g. directly adjacent to a watercourse, borehole or road culvert, to shallow soils over fissured rock or widely cracked soils over field drains, to areas with a dense network of open (surface) drains, spring lines or wet depressions (flushes). These areas have a high-risk of rapid transport of manure-borne pollutants to watercourses, so manure applications (particularly of slurry) should be avoided wherever possible.

'Avoiding high risk areas' for manure applications is assumed to affect the same area as for fertiliser applications i.e. 5% of the agricultural area. However, it is assumed that there is no impact on crop yields as a result of introducing this measure as the likelihood that manures were the sole source of nutrient inputs to support crop growth in these areas is small.

Representation in Modelling

Farmscoper assumes short term incidental losses associated with manure on the 'high risk areas' are reduced by 80%. Losses are not entirely negated (unlike not applying fertiliser to high risk areas) as the manure will still be applied somewhere.

To avoid double counting costs from reduced yields associated with sub-optimal nutrient supply from both this measure and 'Do not apply manufactured fertiliser to high-risk areas', and the difficulty in determining what proportions of crop nutrient demands are met by fertiliser or manure (within these high risk areas), the potential yield penalty has been attributed solely to 'Do not apply manufactured fertiliser to high-risk areas. In this study, the only costs implementing this measure are associated with the need to identify high risk areas, typically through the creation of a manure management plan. Costs of this are dealt with separately (see Section 1.4.1).

Implementation of this mitigation measure is 80%, with higher rates inside NVZ areas and lower rates on cattle and sheep farms. The Defra Farm Practice Survey (2012) found 65% of grazing livestock farms and 90% of dairy farms had a manure management plan. The 2nd Welsh Farm Practice Survey (Anthony et al., 2016) found a baseline of 83% of dairy farmers had a manure management plan, but only 50-60% of cattle and sheep farms. Farms in Glastir, Tir Gofal or Tir Cynnal were more likely to have soil nutrient management plans.

1.2.7 Do not spread slurry or poultry manure at high-risk times

Description

Do not apply slurry or poultry manure to fields at times when there is a high-risk of surface runoff e.g. in winter when soils are 'wet' or frozen hard, or when heavy rain is expected in the next few days. Do not apply slurry or poultry manure to fields at times when there is a high-risk of rapid percolation to field drains e.g. in winter and spring when soils are 'wet'. Do not apply slurry or poultry manure to fields late in the growing season (i.e. autumn/early winter) when there is no crop to utilise the added N. Slurries and poultry manures have 'high' readily available N contents (>30% of total N).

As is the case for manufactured fertiliser applications the risks of nitrate and phosphorus losses to water following slurry applications will vary according to soil and crop type, soil moisture content and rainfall in the days/weeks after application. Data reported by Chambers et al. (2000) suggest that up to 20% of total nitrogen supplied by slurry and poultry manure applied to free- draining soils before the establishment of winter cereals can be lost by nitrate leaching (Figure 1-11). Similarly nitrate leaching following autumn applications to grassland were 15% of total N applied compared with less than 5% from late winter/early spring timings (Figure 1-12). Nitrate leaching occurs following slurry / poultry manure applications in autumn/early winter as a result of readily available N being added to the soil at a time when there is little N uptake by crops. The amount of N lost by leaching is controlled by the amount of readily available N supplied and the

volume of drainage after application. Nitrate leaching losses from farmyard manure are lower than from slurry and poultry manure applications reflecting their lower readily available N content.

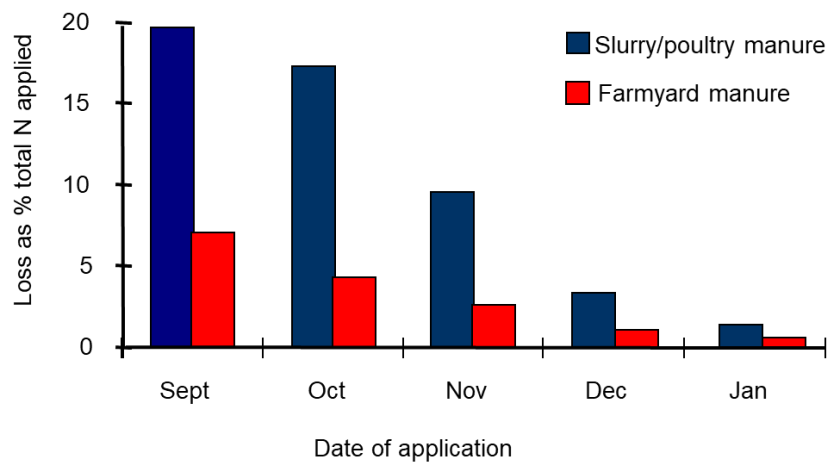


Figure 1-11: Nitrate leaching losses following contrasting application timings of slurry/poultry manure and farmyard manure to free-draining arable soils

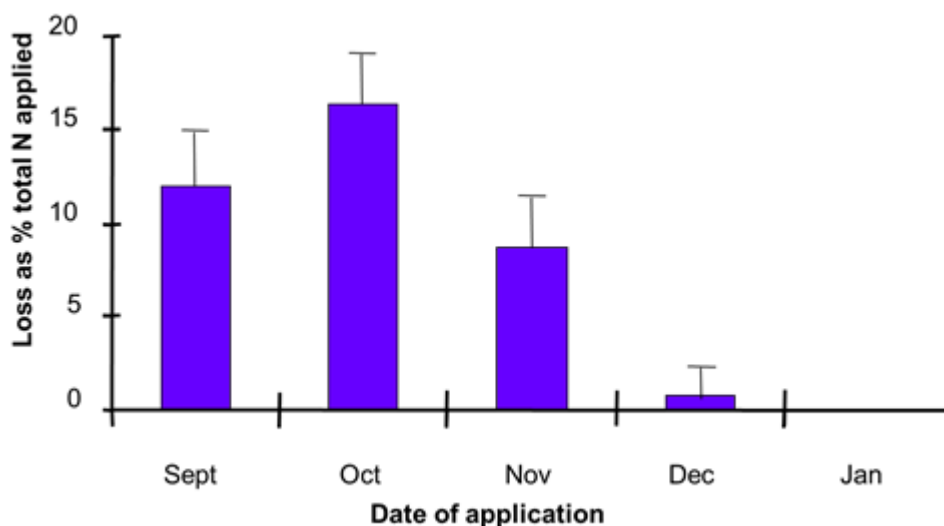


Figure 1-12: Nitrate leaching losses following contrasting cattle slurry applications to free draining grassland soils (Chambers et al., 2000)

On clay and medium soils the risks of water pollution are greatest when slurry applications are made to soils that are 'wet'. Defra project WQ0118 investigated the effect of contrasting slurry application timings on drainage water quality at three sites in England over 4 drainage seasons. The project showed that when slurries were applied to soils with moisture deficits of less than 10 mm, and rainfall occurred within 2 weeks of application, drainflow ammonium-N and phosphorous concentrations increased (Figure 1-13 and Figure 1-14) and contaminated drainage water was observed (Figure 1-15).

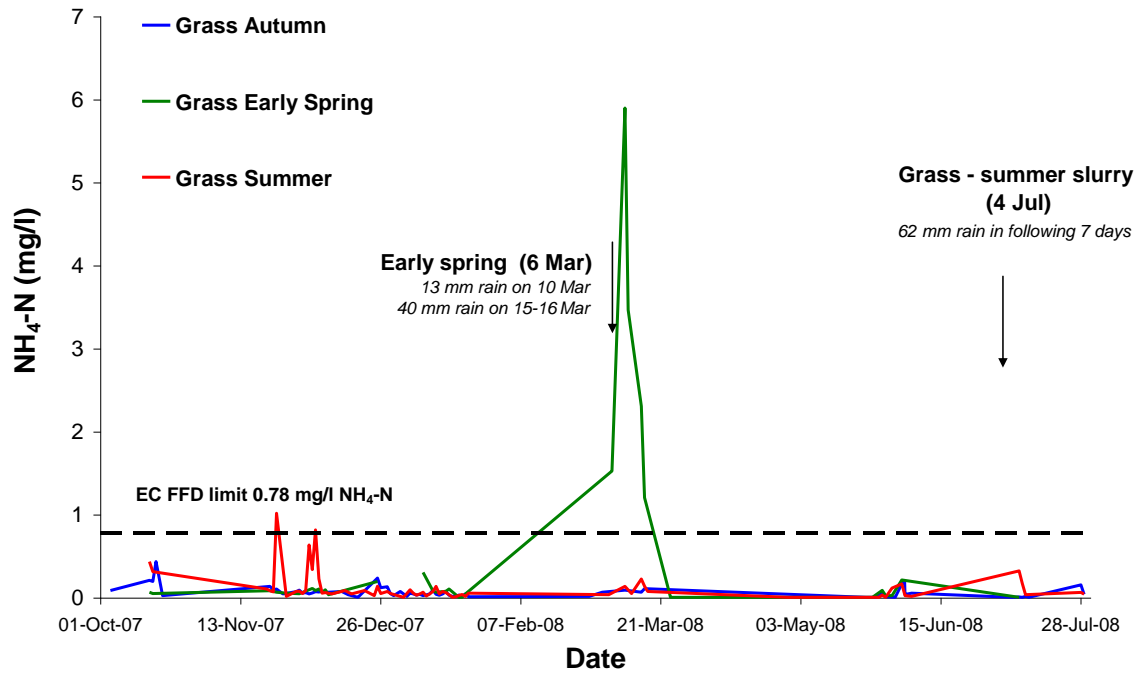


Figure 1-13: Ammonium-N concentrations in drainage water following contrasting slurry application timings to drained clay soils (Defra project WQ0118)

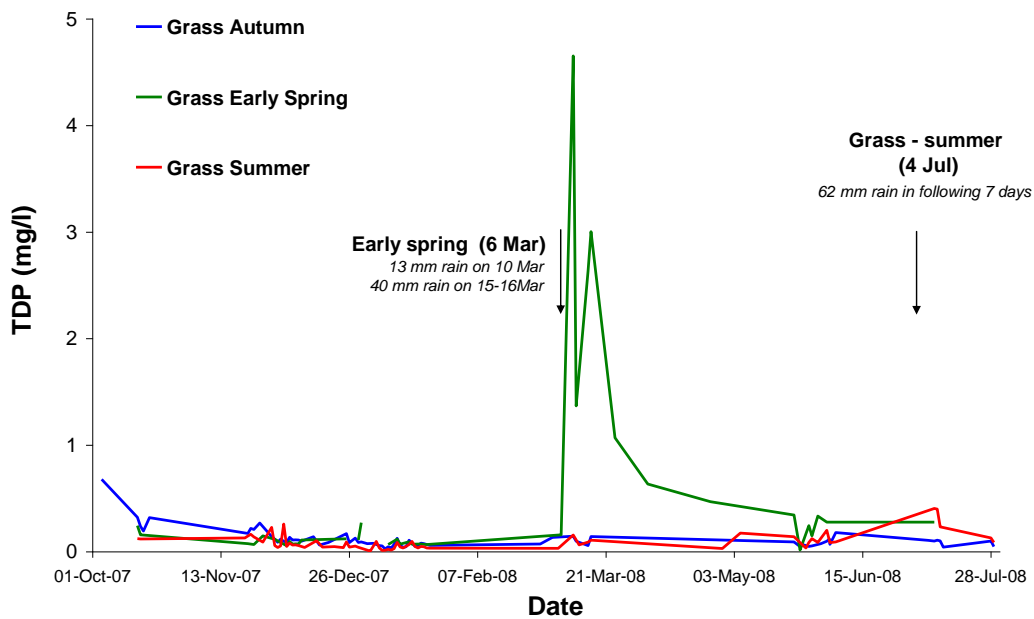


Figure 1-14: Total dissolved phosphorus concentrations in drainage water following contrasting slurry application timings to drained clay soils (Defra project WQ0118)

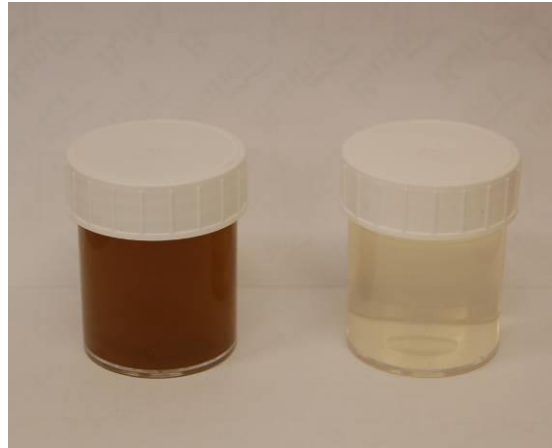


Figure 1-15: Drainage water samples 10 days after March slurry application to drained clay soils with c.10mm soil moisture deficit.

The project suggested that in order to minimise the risks of diffuse water pollution, over-winter slurry storage capacity should be sufficient to prevent applications to soils when soil moisture deficits were below 20 mm (Table 1-4).

Table 1-4: Risk management guidelines for slurry application timing (from Defra project WQ0118)

Soil moisture deficit (mm)	Risk
>20	Low
10-20	Moderate
<10	High

The IRRIGUIDE (Bailey and Spackmann, 1996) modelling carried out as part of this study suggests that soil moisture deficits across Wales at the end of March were c.10mm which suggests that slurry applications in March would pose a high risk of ammonium-N and phosphorous contamination of surface waters. As the risks of nitrate leaching losses are greatest following autumn application timings it can be suggested that high risks times for water pollution for slurry and poultry manure applications run from the beginning of October until the end of March. This indicates that in order to minimise the risks of applying slurry at high risk times 6 months storage capacity is required.

Information from Natural Resources Wales (Andrew Chambers, Pers Comm) suggest that there were 180 and 160 surface water pollution incidents from agriculture in 2018 and 2019, respectively. Some of these incidents are likely to be caused by failures of slurry management including leaking slurry stores and the application of slurry to soils when there is a high risk of runoff or drainage water contamination which may be a result of insufficient storage capacity. Increasing slurry storage capacity to 6 months is likely to reduce the risk of point source as well as diffuse water pollution.

Representation in Modelling

The impacts of this measure for nitrate, ammonia and nitrous oxide were calculated using the MANNER model, which explicitly accounted for the impacts of changing timing

from a baseline distribution of timing derived from the British Survey of Fertiliser Practice. The MANNER modelling is described in more detail in the Appendix.

For phosphorus, Farmscoper assumed a reduction in short term losses from manure of 50%.

The costs of this measure are solely associated with additional storage to facilitate improved manure timing, which are calculated separately (see Section 1.4.2).

1.2.8 Do not spread farmyard manure to fields at high-risk times

Description

Avoid spreading (straw-based) FYM to fields at times when there is a high-risk of surface runoff or drain flow, for example, where rain falls shortly after applying FYM to 'wet' soils i.e. those with a soil moisture deficit of less than 10mm. There is a risk of pollution if solid manures are spread under conditions where heavy rain following application could transport nutrients to surface water systems. The high dry matter content and low readily available nutrient content of farmyard manure result in a lower risk of pollution than following applications of slurry. It will not add sufficient water to the soil to initiate surface runoff or preferential flow to field drains; 'Fresh' FYM has a higher content of readily available N, and generally presents a greater risk of pollution than 'old' FYM that has been stored for several months.

Representation in Modelling

Farmscoper assumes a reduction in short term losses from manure of 25%.

As the modelling that underpins Farmscoper is based upon manure application timing information derived from the British Survey of Fertiliser Practice, current implementation is captured in the modelling and so the implementation of the mitigation measure is set to 0.

There are no significant costs associated with this measure.

1.3 Assumptions Used for Cost and Benefit Estimates

1.3.1 Variables of Interest

Some policy scenarios will increase capital costs to farmers as well as farmers' time input and operational costs. There are also potential benefits to farmers from reduced manufactured fertiliser costs. The environmental savings for fertiliser nitrogen were estimated as part of savings in operational costs within the environmental modelling. The environmental benefits from increased manure nutrient use efficiency include potential reductions in three types of pollution: (i) Greenhouse Gas (GHG) emissions to air; (ii) ammonia emissions to air; and (iii) nitrate-N and total phosphorus losses to water.

1.3.2 Societal Benefits – Water

An estimated 3.8 billion m³ of water is used in Wales each year with the majority used for electricity generation and public water supply (Morris, J. & Camino, M., 2011). The value of the water used in Wales each year has been estimated at £57million based on Natural Resources Wales standard unit charges of c. £15/1000m³. In addition, Wales has 11 lowland and 10 upland wetland sites (inland marshes and peat bogs) covering

3,458 ha which provide flood control, recreation and bio-diversity benefits which have been estimated to be worth c. £643/ha per year giving a value of c.£2.2 million/year. Wales is also an important provider of freshwater fishing activities with market value for fishing rights of £90 million. The freshwater fishing industry also supports an estimated 700 jobs (Maule, G. 2018).

Water pollution from agriculture affects different stakeholders (Defra, 2014) including:

- Water companies must use costly processes to remove agricultural pollutants to produce safe drinking water
- Members of the public obtain reduced recreational value from use of watercourses, e.g. angling
- Members of the public suffer increased risk of illness when bathing
- Members of the public obtain reduced non-use benefits from watercourses due to ecosystem damage from agricultural water pollution and eutrophication of freshwater and marine water
- Commercial shellfisheries and fish farms suffer an increased risk of contaminated produce from unclean water and therefore a loss of sales
- The tourism sector could suffer losses from beaches that are closed due to failing bathing water standards
- Other farmers suffer loss of revenue due to potential health risks if polluted water is abstracted unknowingly and applied to sensitive crops, such as salad. Poor water quality may also prohibit the planting of certain crops

The value of economic benefit from reducing agricultural pollution has been reported in a number of studies. Metcalf et al (2012) surveyed households from across England and Wales in order to assign a value to the implementation of measures to meet Water Framework Directive targets for water quality. The study suggested the value placed on improving water quality ranged between £2,263 to £39,168 per km² depending on the population density (areas with higher population densities put greater value on the measures) the location of the improvement and the ecological scope of that improvement.

Estimates derived from information reported by O’Gorman and Bann (2008) suggested that in Wales, costs associated with agriculture’s contribution to bathing water failures and the impacts of less than good quality river water were c.£1.5 million/year.

Defra (2016) suggest that it is inappropriate to assign single average figures to describe the environmental benefit of reductions in agricultural water pollution due to the geographic and temporal variation in pollutant concentrations. The damage caused by the pollutant will also vary according to the size of the water catchment, the degree to which it is used by humans or supports wildlife and the baseline water quality. It is suggested that a range of values is used to quantify the economic impacts of reductions in nutrient losses to water.

There are a range of environmental damage costs reported for nitrate and phosphorus loss to water in different environmental impact assessments. Defra 2016 quote a central value of 33p/kg (range 0-48p/kg) for nitrate and £19.89/kg (range £4.20-£35.06/kg) for phosphorous. In contrast, figures reported in Defra project LM0304) suggest central

values of 43p/kg (range 24-62p/kg) for nitrate and £12.79 for phosphorus (range £2.77-£22.66/kg).

In this project we have chosen to use the figures recently published in Defra’s Enabling Natural Capital Approach (ENCA) Databook which gives central values of 97p per kg (range 69p-£1.26/kg) for nitrate and £30.00 (range 26.66 to 33.34 /kg) for phosphorus. The ENCA methodology sets the standard for studies quantifying the impacts of agricultural practices on Natural Capital.

1.3.3 Societal Benefits – Air

Carbon

GHG emissions is measured as the equivalent amount of carbon dioxide (CO_{2e}). Methane (CH₄) and Nitrous Oxide (N₂O) are converted to CO_{2e} using their respective conversion factors of 25 and 298. The standard unit used is equivalent tonnes (tCO_{2e}).

The carbon valuation methodology evolved over time. In December 2007, the approach to carbon valuation adopted the use of the shadow price of carbon (SPC) as the basis for incorporating carbon emissions in cost-benefit analysis and impact assessments. It is based on estimates of the lifetime damage costs associated with greenhouse gas emissions, known as the social cost of carbon (SCC), and it takes more account of uncertainty compared to the SCC approach adopted previously.

GHG values are based on the economic cost of mitigating a unit of carbon. The carbon value will vary depending on the sector from which the emissions occur. There are two types of sectors: the traded sector (which is defined as those activities covered by the EU Emissions Trading System (EU ETS) with a market price for carbon) and non-traded sector (which included all other sectors not covered by the EU ETS). Agriculture is included in the non-traded sector.

The changes in GHG emissions from the agricultural sector are valued at the non-traded carbon prices published by The Department for Business, Energy & Industrial Strategy (BEIS; Table 1-5).

Table 1-5: Non-traded carbon prices for year 2021-2040 (£/CO_{2e}t) in 2018 prices.

Year	Low	Central	High
2021	35	70	106
2022	36	72	107
2023	36	73	109
2024	37	74	111
2025	38	75	113
2026	38	76	114
2027	39	77	116
2028	39	79	118

2029	40	80	120
2030	40	81	121
2031	44	88	132
2032	48	96	144
2033	52	103	155
2034	55	111	166
2035	59	118	178
2036	63	126	189
2037	67	133	200
2038	70	141	211
2039	74	148	223
2040	78	156	234

Source: BEIS modelling.

Ammonia

Various valuation methodologies have been used for air quality appraisals, which include: impact pathways approach (IPA), damage cost approach (a set of monetary impact values per tonne of emission), activity costs approach (monetary value per KWh energy used) and abatement costs approach.

Abatement costs approach should be used when the policy/project is expected to push emission concentrations above legal limits. This approach is used to assess the cost of offsetting measures (the "abatement cost") only for the amount of air quality that breaches the relevant obligation.

Activity costs approach is often used in policies associated with fuel consumption, particularly when change in fuel is known but changes in pollutant emissions are unknown.

IPA is the best practice approach but resource intensive. This approach is best suited for project that are more than £50million with the main objective of the policy or project being changes in air quality.

Damage cost method is an approach developed by Defra to enable proportionate analysis when assessing relatively small impacts on air quality (NPV <£50m). This approach is deemed to be most appropriate to be used in this appraisal assessing the impact of policy changes in NVZ regulations.

Damage costs are a set of impact values, measured as per tonne of emission by pollutant, which are derived using the more detailed IPA in order to estimate the societal costs associated with small changes in pollutant emissions. The damage cost methodology has evolved over the years and currently includes values for impacts on human health, productivity, amenity, environmental health and ecosystem services.

Defra updates and publishes ammonia damage cost prices each year, the most recent published (2020) range of ammonia price (central value) is £7,923 with a range from £1,521 to £24,476 in 2017 prices. The damage cost value for ammonia in the previous year (2019) was £6,064 (central value) with a range between £1,133 and £18,867. The increase in ammonia value reflects the most recent re-evaluation of damage costs relating to human health and the inclusion of wider ecosystem service impact.

The most recent ammonia damage cost data (2020) was used in this appraisal.

1.3.4 Summary of prices used for valuation of environmental benefits

For valuation of GHG emission savings, the central cost of carbon for non-traded GHG emissions in the UK is used (£68 per tonne of CO₂e in 2019), the full range of the monetary cost estimate is £34-£102 per tonne of CO₂e in 2019 (Table 1-6). The central estimate of forecast prices for carbon has been used for each year over the period from 2021-2040. Similarly, the damage cost estimate associated with ammonia emissions fall over a large range. The central estimate used in the analysis is £7,923 per tonne but the full range is £1,521 to £24,476 per tonne in 2017 prices. The central value of these estimates has been used to quantify the environmental benefits in terms of reduced ammonia, phosphorus, nitrate-N and GHG emission savings as well as the low and high end values to illustrate the value range of environmental benefits.

Table 1-6: Variables impacted on and their monetary value

Pollutant	Central Value (£/t)	Value Range (£/t)	Data source
GHG	£68	£34-£102	Non-traded CO ₂ values in 2018 prices. Source: Department for Business, Energy and Industrial Strategy. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793632/datatables-1-19.xlsx (Table 3)
Ammonia	£7,923*	£1,521-£24,476	Defra Air Quality Damage Cost Guidance (2020). National averages in 2017 prices. https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance
Nitrate-N	£970	£690-£1,260	ENCA services databook
Phosphorus	£30,000	£26,660-£33,340	ENCA services databook

*Ammonia value increased significantly from year 2018 because of a re-evaluation of the damage costs, especially relating to human health and the inclusion of wider ecosystem service costs.

As the prices for different pollutants were based on different reference year, the prices were then adjusted to the 2018 price base year (which is the latest base year that was used across all pollutant prices from various valuation sources in the table above) using Gross Domestic Product (GDP) deflator for this appraisal.

The analysis assumes that there is full compliance with the measures. Should compliance be less than that, then costs and benefits will both be less but the net monetary effect will be in the same direction.

1.4 Costs of implementing measures

For most of the mitigation measures, costs of implementation were taken from the Farmscoper modelling. However, costs of record keeping and for slurry storage were calculated separately as described in the following sub-sections.

1.4.1 Administrative cost of record keeping and nutrient planning

The completion of records and plans required by the proposed measures is likely to add additional administrative costs to farm business. For some farms the measures will have little or no impact as they may already be keeping records as part of existing land management or farm assurance schemes.

The estimates for the administrative costs associated with nutrient management planning are based on a number of assumptions as outline below:

- Farmer's time is costed at £20 per hr³.
- 74% of dairy farms, 55% of cattle and sheep farms (outside of SDAs) and 46% of cattle and sheep farms (inside of SDAs) already have a soil nutrient plan (Anthony et al., 2016).
- 40 hrs is the typical time to create a nutrient management plan (Johnson et al., 2012). Because of the large proportion of farms in Wales that are small, this value was scaled by farm size. This value was assumed to represent a farm of 24 to 40 ESU (Economic Size Units; Table 3-5), with the time scaled by average area for the other farms sizes (resulting in 6 hours for the smaller farms and 70 hours for the largest farms). This suggests that the average cost of a farmer produced nutrient management plan was £800/farm (range £130-£1400) which is lower than typical charge of between £1,000 and £2000 for plan produced by a FACTS qualified adviser (Mel Holloway, Pers Comm).
- Average annual time is an additional 20 hours from the survey (Johnson et al., 2012). This value was also scaled by farm size which was equivalent to £400/farm which is lower than the £700-£900/farm typically charged by a FACTS qualified adviser (Mel Holloway, pers comm.).

³ £20/hr is judged to be representing the average cost rate. The hourly rate is ranging from £12.11 (farm managers' time) to £40/hr using a consultant. £12.11 is the average hourly rate for managers and proprietors in agriculture and horticulture in Wales [source: Office for National Statistics (ONS), 2019. Earnings and hours worked, region by occupation by four-digit SOC: ASHE Table 15.5a -Hourly pay - Gross (£) - For all employee jobs]. According to Nix 2020 pocket guide (p.168), farm management cost at Grade 6 is £15.96/hr.

- 71% of manure on dairy farms, 19% on cattle and sheep farms (outside of SDAs) and 11% on cattle and sheep farms (inside of SDAs) is managed as slurry (Anthony et al., 2012a).
- Half of the farms with slurry storage would need professional planning to build or expand their facilities. The cost of this would be £3,500 per application (Kenny Dhillon, pers comm).
- Current impacts of NVZs have been ignored due to the small proportion of farmers within the existing areas (and as these may have been included in the survey figures used)

Costs were calculated by farm type and farm size (Table 1-7) using European Size Units (ESU), and accounting for those farms inside the existing NVZ area.

The overall costs for slurry storage and associated costs for applying for planning permissions, as well as planning time for nutrient management plan are the same for Option 2 and Option 4 (Table 1-8). The extra time put into nutrient management planning comes from the requirement of implementing the measure 'using a fertiliser recommendation system' by farm both inside and outside NVZs. The estimated costs for planning include: £4.3m (before discounting) for on-going additional planning on all farms and £4m (before discounting) upfront costs for those farms currently without a plan. There is a further cost of £3.5m (before discounting) in planning fees for the additional slurry storage facilities.

For option 3 (Table 1-9), the costs are lower and include: £0.13m (before discounting) for on-going additional planning on all farms and £0.09m (before discounting) upfront costs for those farms currently without a plan. There is a further cost of £0.16m (before discounting) in planning fees for the additional slurry storage facilities.

The cost assessments assume that farms that are under 8 ESUs have low levels of nutrient inputs from fertilisers or manures and do not need detailed nutrient management plans. These farms are defined in the NVZ guidance as:

- In the calendar year have 80% of the agricultural area of the holding is in grass
- The total amount of nitrogen in organic manure applied to the holding, whether directly by animal or as a result of spreading is no more than 100 kg/ha N
- The total amount of nitrogen in manufactured fertiliser nitrogen applied to the holding is less than 90 kg/ha N
- No organic manures are brought on to the holding

Table 1-7: Number of active farms in Wales by farm type and farm size (defined by Economic Size Units) from 2019 June Agricultural Survey Data

Farm Type	< 8	8 - 24	24 - 40	40 - 100	> 100	Total Number of Active Farms
Cereal	128	59	60	71	102	420
General cropping	47	30	12	22	16	127
Horticulture	644	28	40	31	87	830
Dairy	104	1,086	34	341	49	1,614
Cattle and Sheep LFA	5,322	316	1,531	1,707	3,175	12,051
Cattle and Sheep Lowland	1,279	56	276	231	658	2,500
Mixed	769	79	80	127	114	1,169
Pigs	213	2	3	1	6	225
Poultry	955	79	12	39	8	1,093
Other	4582	5	22	8	161	4,778
Total	14,043	1,740	2,070	2,578	4,376	24,807

Table 1-8: Additional Planning requirements, by farm type, using data from June Agricultural Survey and other assumptions listed above (Option 2 & Option 4), Excluding Farms <8 ESU

Farm Type	Total Number of Active Farms outside existing NVZ area	Fraction of Farms with Existing Plan	Total Time for Ongoing Planning (hrs)	Total Number of Farms Requiring New Plan	Total Upfront Time for New Plan (hrs)	Proportion of Farms with Slurry	Total Number of Farms with Slurry	Total Number of Farms Requiring Planning
Cereal	254	0.55	5,693	114	5,124	0	0	0
General cropping	76	0.55	2,025	34	1,823	0	0	0
Horticulture	168	0.55	3,306	76	2,975	0	0	0
Dairy	1,377	0.74	44,425	358	23,101	0.71	978	489
Cattle and Sheep LFA	6,561	0.46	126,869	3,543	137,018	0.11	722	361
Cattle and Sheep Lowland	1,051	0.55	19,044	473	17,140	0.19	200	100
Mixed	367	0.55	8,836	165	7,953	0.15	55	28
Pigs	8	0.55	183	4	164	0.15	1	1
Poultry	130	0.55	3,940	59	3,546	0.15	20	10
Other	187	0.55	2,635	84	2,371	0	0	0
Total	10,179		216,955	4,909	201,214		1,975	987

Table 1-9: Additional Planning requirements, by farm type, using data from June Agricultural Survey and other assumptions listed above (Option 3), Excluding Farms <8 ESU

Farm Type	Total Number of Active Farms outside new NVZ area	Fraction of Farms with Existing Plan	Total Time for Ongoing Planning (hrs)	Total Number of Farms Requiring New Plan	Total Upfront Time for New Plan (hrs)	Proportion of Farms with Slurry	Total Number of Farms with Slurry	Total Number of Farms Requiring Planning
Cereal	18	0.55	412	8	371	0	0	0
General cropping	19	0.55	495	9	447	0	0	0
Horticulture	3	0.55	100	2	90	0	0	0
Dairy	104	0.74	3,447	27	1,792	0.71	74	37
Cattle and Sheep LFA	24	0.46	385	15	416	0.11	3	1
Cattle and Sheep Lowland	69	0.55	1,047	31	942	0.19	13	7
Mixed	21	0.55	540	9	486	0.15	3	2
Pigs	1	0.55	30	0	27	0.15	0	0
Poultry	3	0.55	36	1	32	0.15	0	0
Other	3	0.55	36	1	32	0	0	0
Total	260		6,528	104	4,635		94	47

1.4.2 Slurry storage costs

Slurry storage volumes were calculated by integrating total livestock counts for Wales from the 2018 June Agricultural Survey, with livestock properties and management practice data in order to calculate annual average slurry storage requirements by month.

Initial excreta volumes by livestock type were taken from NVZ guidance documents. This excreta was apportioned by month between fields, yards and housing. Excreta in housing was apportioned between solid manure and slurry systems according to results of the 2nd Welsh Farm Practice Survey (Anthony et al., 2016), which found over 70% of manure on dairy farms was managed as slurry, but only 10-20% on cattle and sheep farms. There was no solid manure generated on yard areas - excreta deposited was either managed as slurry, dirty water or simply not collected (based on data in 1st Welsh Farm Practice Survey (Anthony et al., 2012a), which found approximately 62% was collected in slurry stores on dairy farms and 20% on cattle and sheep farms).

The contribution of rainfall to slurry storage requirement was based on the highest rainfall expected in 5 years (M5) assuming annual rainfall for Wales of 1460mm. An area of yard was specified per animal, by livestock type (0.9 m² per sheep, 4.3 m² for beef cattle and 6.4 m² for dairy cattle; Webb et al., 2001), with a proportion of this area roofed and guttered. Any rain falling on the un-covered area was assumed to be sent to slurry store, dirty water or uncollected as per fractions mentioned above. T1460 mm. For dairy animals, an additional allowance of 25 litres per day per cow was made for water used in washing the dairy parlour, which was all assumed to be sent to the slurry store. This allowed for a total volume of slurry generated per month to be calculated, and thus storage capacity required to store manure for a specified period. From this, a surface area of the slurry storage could be determined, and this allows for the calculation of additional volume of material to be managed resulting from rain falling into the storage facility (which was assumed to be uncovered). With all calculations undertaken on a monthly basis, the impacts of storing an additional month or two of material can be determined.

Understanding the current level of slurry storage capacity in Wales is difficult because of the lack of detailed survey data. Surveys of slurry storage capacity in England and Wales (Smith *et al.*, 2000; 2001; 2001) reported average capacities of 3.5 months for pig slurry; 3.3 months for beef slurry; and 3.8 months for dairy slurry. These values include the effect of some farms reporting no slurry storage. Natural Resources Wales (NRW) have recently (2019) surveyed slurry storage capacity on 230 dairy farms in Wales (Andrew Chambers, *pers. comm.*). The milking herd size weighted average storage capacity was a comparable 4.1 months. As the Water Resources (Control of Pollution) (Silage, Slurry and Agriculture Fuel Oil) (Wales) Regulations 2010 (SSAFO) require 4 months excreta production and an allowance for the highest rainfall expected in 5 years (M5) the baseline assumed that farms were complying with SSAFO regulations.

Previous studies calculating slurry storage requirements have followed Defra and Welsh guidance at the time which recommended using average annual rainfall to calculate the contribution that rainfall made to slurry storage volumes. Following consultation with Welsh Government the contribution of rainfall to slurry storage

requirement in this study was calculated using M5 rainfall which is typically c. 10-20% higher than average rainfall.

The calculated baseline and additional storage capacity and additional costs required to increase slurry storage capacity to comply with the measures: (i) 'Increase the capacity of farm slurry stores to improve timing of slurry applications' – i.e. 5 months storage and (ii) 'Do not spread slurry or poultry manure at high-risk times' – i.e. 6 months storage are given in Table 1-10. The costs for above ground stores (i.e. constructed with a concrete base with either steel or concrete walls) has been assumed at £50/m³ and the cost of earth-banked lagoon stores has been assumed at £40/m³ (Nix, 2019). It is likely that costs will vary between farms according to the configuration of the farm steading, and availability of labour and materials etc.

Table 1-10: Capital costs of increasing slurry storage requirements (50% of yard area roofed).

Area	Slurry storage volume			Additional storage requirement		Additional Costs Above ground tank		Additional costs Lagoon	
	Baseline +	5 months	6 months	5 months	6 months	5 months	6 months	5 months	6 months
	Million m ³					£ million			
NVZ	0.91	1.08	1.27	0.17	0.35	8.53	17.92	6.82	14.32
92% of Wales	5.53	6.51	7.61	0.98	2.07	49.02	103.7	39.21	82.96
All Wales	6.45	7.60	8.88	1.15	2.43	57.54	121.7	46.03	97.30

+ Baseline assume compliance with SSAFO

For the whole of Wales baseline slurry storage capacity estimates were c. 6.5 million m³ compared with c.7.6 million for 5 months storage and c.8.9 million for 6 months storage with dairy slurry accounting for c.85%, beef slurry 15% and pig slurry less than 1% of total volumes. The cost of the additional storage was estimated at between 46 million and 57 million for 5 months and £97 million and £122 million for 6 months storage, respectively (Table 1-10).

Costs of the additional storage requirement in the NVZ area were estimated at between £6 million and £8million for 5 months and £14 million and £18 million for 6 months storage respectively. For the area outside the proposed NVZ area the costs of additional were estimated at between £39 million and £49 million for 5 months and £83 million and £104 million for 6 months storage respectively. The lower costs associated with additional requirements in these areas compared to the whole of Wales reflect the smaller number of animals and consequently lower slurry volumes.

Yard runoff and water running from roofs can make a significant contribution to slurry storage capacity requirements, especially in areas of high rainfall. Baseline estimates assume that 50% of dirty yard areas are covered and no allowance is made for water collected from roofed areas. The assumptions are based on evidence from Defra farm practice survey (2006) which states that 40% of concrete yards are uncovered and Aitken et al. (2001) reported that rainfall falling on 65% of yards produced contaminated runoff.

The estimates that yard runoff water contributes around 20% of total annual slurry volumes collected. Further estimates of slurry storage capacity and capital costs were carried out with the area of dirty yard roofed increased to 75%. The additional capital costs associated with roofing the yards was estimated based on a cost of £80/m² (Nix, 2019; confirmed by Charles Bentley, Pers Comm.) and the slurry storage costs were adjusted to account for the lower storage requirement. The reduction in slurry spreading costs as a result of the reduced yard runoff component was also quantified.

The capital costs of increasing the area of roofed yard from 50% to 75% was estimated at £115 million for the whole of Wales, £15 million for the proposed NVZ area and £100 million for the area outside the proposed NVZ (Table 1-11). The additional roofing reduced the capital cost of an additional 5 months slurry storage by c.£15 million for all Wales, c£14 million for the area outside the proposed NVZ and c.£0.5 million for the NVZ area. Additional roofing reduced the capital cost of an additional 6 months storage by c. £17 million for all Wales, c£15 million for the area outside the proposed NVZ area and c.£2million for the NVZ area. Overall costs of roofing increased capital costs for 6 months storage by c. £97 million for the whole of Wales, £83 million for the area outside the proposed NVZ and c.£14million for the proposed NVZ area. Roofing increased overall capital costs for 5 months storage by c.£100 million for the whole of Wales, £86 million for the area outside the proposed NVZ and £15million in the proposed NVZ area. The additional capital costs were partly offset by savings in annual slurry spreading costs of £135k/ year in the proposed NVZ area, £900k/year in the area outside the proposed NVZ area and £1million/ year across the whole of Wales.

Table 1-11: Capital costs for slurry storage capacities and increasing covered yard area to 75% (costs based on average of tin tank and earth banked lagoon)

Area	5 months capacity			6 months capacity		
	Roof	Storage	Total	Roof	Storage	Total
NVZ	15	7	22	15	16	31
92% of Wales	100	31	131	100	77	177
All Wales	115	37	152	115	103	218

1.4.3 Sensitivity analysis of cost and benefit assessments

The range of potential implementation and damage costs was accounted for with a sensitivity analysis. For the following measures with the most significant costs and greatest uncertainty high, medium and low cost estimates were produced:

- Do not spread slurry or poultry manure at high-risk times,
- Integrate fertiliser and manure nutrient supply
- Do not apply manufactured fertiliser to high-risk areas
- Avoid spreading manufactured fertiliser to fields at high-risk times

The review of damage costs also produced a central estimate and upper and lower bounds for each pollutant. The sensitivity analysis thus considered the consequences of using the high, medium or low implementation costs, and the high, medium and low damage costs.

For the uncertainty analysis, the high, medium and low costs for do not spread slurry and poultry manure at high risk times were represented by:

- High: Increasing the covered dirty yard area from 50% to 75% and rebuild 50% of slurry stores to hold 6 months slurry production
- Medium: Increasing the covered dirty yard area from 50% to 75% and extend slurry storage capacity from 4 to 6 months
- Low: Extend slurry storage capacity from 4 to 6 months.

The high medium and low costs for increase slurry storage were represented by:

- High: Increasing the covered dirty yard area from 50% to 75% and rebuild 50% of slurry stores to hold 5 months slurry production
- Medium: Increasing the covered dirty yard area from 50% to 75% and extend slurry storage capacity from 4 to 5 months
- Low: Extend slurry storage capacity from 4 to 5 months.

For Integrate fertiliser and manure nutrient supply:

- High: Only the crop available N in manure is accounted for
- Medium: The crop available N in manure is accounted for, and 30% of the available P and K
- Low: All of the available N, P and K is accounted for

For Do not apply manufactured fertiliser to high-risk areas:

- High: areas occupy 10% of fields
- Medium: areas occupy 5% of fields
- Low: areas occupy 2% of fields

For Avoid spreading manufactured fertiliser to fields at high-risk times:

- High: 10% yield loss occurs 1 year in 5
- Medium: 10% yield loss occurs 1 year in 10
- Low: 10% yield loss occurs 1 year in 15

1.5 Time horizon and discounting rate

The costs and benefits of the policy scenarios are assessed over a 20-year period (which is assumed as the lifetime of slurry stores) from year 2021 to year 2040. The non-amortised value of capital costs was used in the NPV calculations, assuming zero residual value at the end of the 20-year policy period.

A discounting rate of 3.5% was used in this impact assessment in line with the HMT's Green Book⁴ guidance to estimate the Net Present Value (NPV) of costs and benefits of different policy scenarios. The initial year is 2021.

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

2.1 Pollutant source apportionment

Figure 2-1 to Figure 2-4 show the apportionment of national annual average agricultural pollutant losses predicted by Farmscoper, which reveal the major sources of pollution and help explain why certain types of measures may or may not have the potential to achieve sizeable impacts. For example, fertiliser is a greater source of losses of nitrate losses than it is phosphorus (18% compared to 10%; Figure 2-1), so measures targeting fertiliser have a greater potential to reduce nitrate losses. Measures controlling surface runoff losses could have greater impacts on phosphorus (where runoff is the source of 38% of the losses; Figure 2-3) than nitrate, where they contribute only 11%. Slurry is the source of 14% of nitrate losses, but only 6% of phosphorus (Figure 2-4).

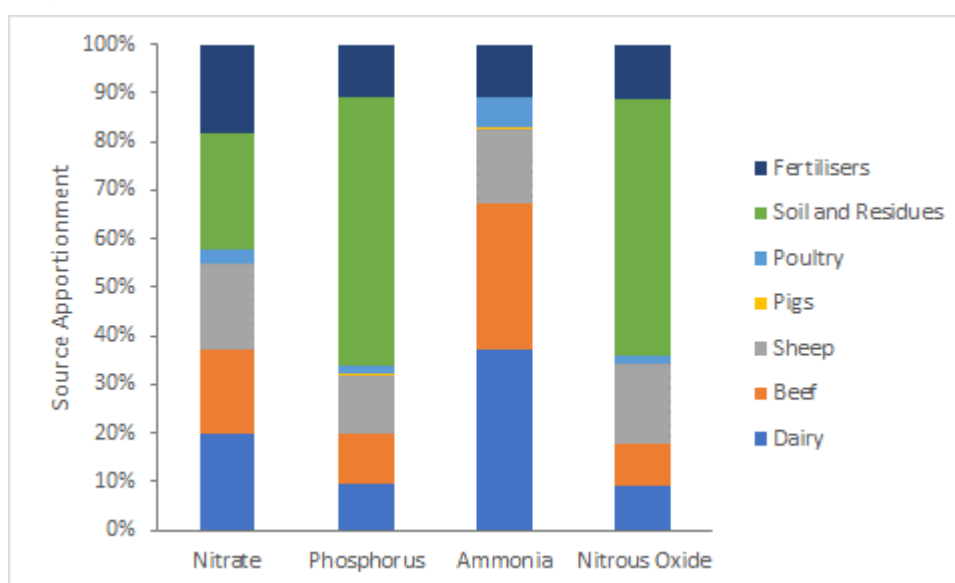


Figure 2-1 Apportionment of national annual average pollutant losses by source

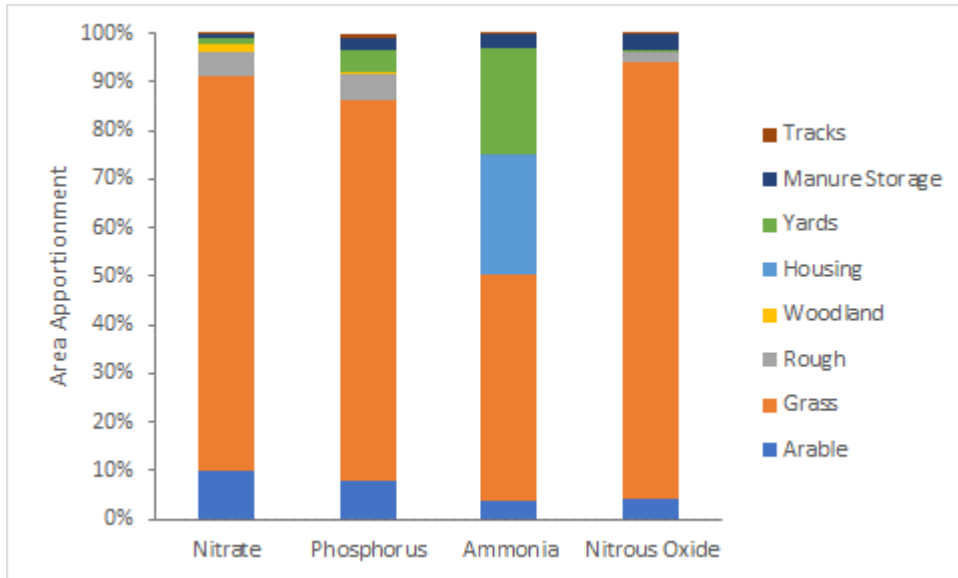


Figure 2-2 Apportionment of national annual average pollutant losses by area

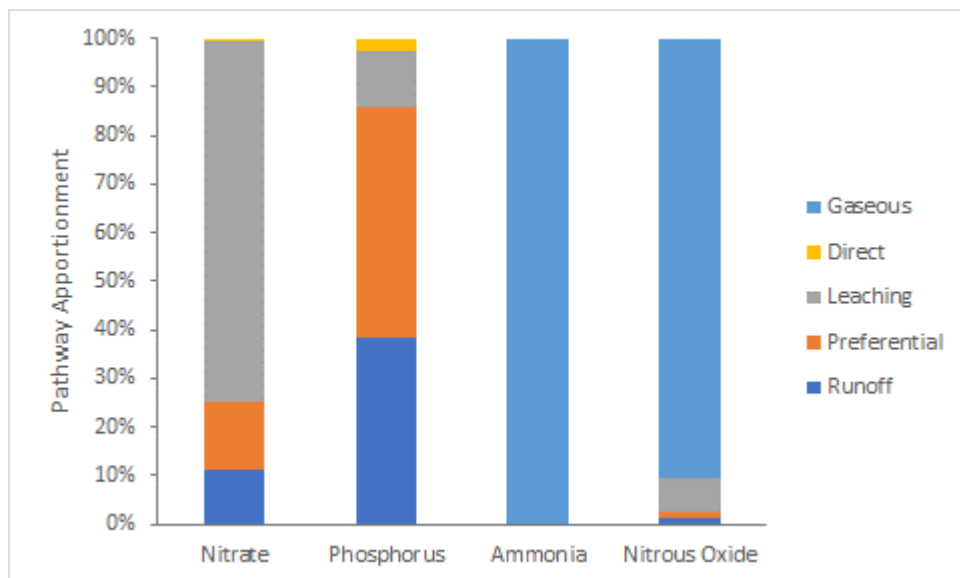


Figure 2-3 Apportionment of national annual average pollutant losses by pathway

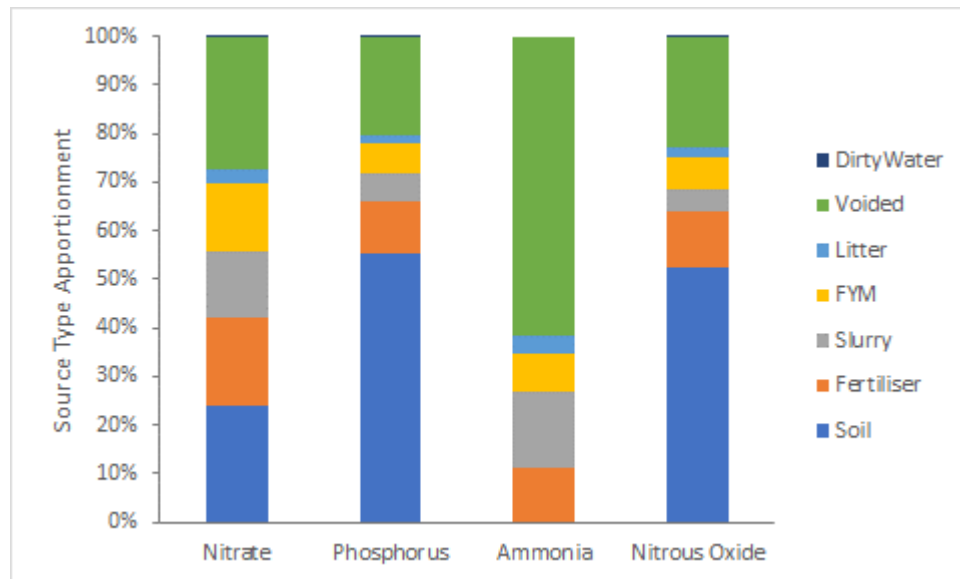


Figure 2-4 Apportionment of national annual average pollutant losses by source type

2.2 Impacts of Individual Measures

2.2.1 Pollutant Reductions

When the Option 2 measures are implemented individually across the whole of Wales, the percentage reductions in the national agricultural pollutant loads are relatively small, generally less around 1% (Table 2-1). Not spreading slurry/poultry manure at high risk times has the biggest impact, with a reduction of 3.6% on phosphorus losses. Integrate fertiliser and manure nutrient supply and using a fertiliser recommendation have the biggest impacts on ammonia and nitrous oxide emissions (0.6-0.8% reductions) due to reduced fertiliser usage. Not applying FYM to high risk areas has limited impact at national scale due to the relatively small contribution of incidental manure losses to the total load (Figure 2-4) and the fact that the manure is still applied somewhere on the farm. Increasing the capacity of slurry stores and avoiding spreading manure at high risk times results in an increase in ammonia emissions, although these are not as great as the savings achieved in other measures.

For the Option 3 measures, the reductions (Table 2-2; expressed relative to the pollutant load in the proposed NVZ area) are lower than those achieved nationally. This reflects the higher current implementation of these measures within the current NVZ area. However, avoiding spreading slurry and poultry manure at high risk times has a slightly greater impact, reflecting the greater contribution of these as a pollutant source in the NVZ area.

The reductions achieved by the Option 4 measures are the same as the Option 2, except for Do not apply manufactured fertiliser to high-risk areas and Avoid spreading manufactured fertiliser to fields at high-risk times. In Option 4

these two measures only apply within the proposed NVZ area, and so the impact on national pollutant loads is very small.

Table 2-4 shows the impacts of Option 2, but as a percentage reduction in the contribution to the national load from the source being targeted (e.g. the impact of Use a fertiliser recommendation system is expressed as a percentage of the pollutant load attributable to fertilisers). Use a fertiliser recommendation system and Integrate fertiliser and manure nutrient supply reduce losses from fertiliser by about 5%, less for phosphorus as phosphorus fertiliser use is already low with little room for further reductions. Avoid spreading manufactured fertiliser to fields at high-risk times has a 10% reduction in phosphorus, but a much smaller reduction in nitrate – this is because most of the fertiliser loss for nitrate occurs post-harvest and so is less sensitive to the timing of application. Not spreading slurry or FYM at high risk times achieves greater reductions in losses attributable to manure for phosphorus than nitrate – this is because applications of manure result in nitrate losses in the following years (due to organic nitrogen in the manures) and these losses are not sensitive to application timing.

Table 2-1: Percentage change in pollutant losses following full implementation of individual measures required by Option 2, expressed relative to losses for the whole of Wales under current practice (%).

Measure	Nitrate	P	NH ₃ -N	N ₂ O
Use a fertiliser recommendation system	1.3	0.1	0.7	0.8
Integrate fertiliser and manure nutrient supply	1.1	0.5	0.6	0.7
Do not apply manufactured fertiliser to high-risk areas	0.3	<0.1	0.3	0.3
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March)	0.1	1.1	0.2	<0.1
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February)	<0.1	0.5	0.1	<0.1
Increase the capacity of farm slurry stores to improve timing of slurry applications	*	*	-0.2	*
Do not apply manure to high-risk areas	<0.1	<0.1	0.0	<0.1
Do not spread slurry or poultry manure at high-risk times	1.3	3.6	-0.1	0.1
Do not spread FYM to fields at high-risk times	0.4	1.0	0.0	0.8

* Increased slurry storage facilitates changing manure application timing, so the N, P and N₂O impacts of this measure are included under 'Do not spread slurry or poultry manure at high-risk times'.

Table 2-2: Percentage change in pollutant losses following full implementation of individual measures required by Option 3, expressed relative to losses within the proposed NVZ area under current practice (%).

Measure	Nitrate	P	NH ₃ -N	N ₂ O
Use a fertiliser recommendation system	0.7	0.1	0.4	0.5
Integrate fertiliser and manure nutrient supply	0.7	0.3	0.3	0.5
Do not apply manufactured fertiliser to high-risk areas	0.2	<0.1	0.2	0.2
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March)	0.1	0.9	0.2	<0.1
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February)	<0.1	0.5	0.1	<0.1
Increase the capacity of farm slurry stores to improve timing of slurry applications	*	*	-0.3	*
Do not apply manure to high-risk areas	<0.1	<0.1	0.0	<0.1
Do not spread slurry or poultry manure at high-risk times	1.7	3.1	-0.1	0.2
Do not spread FYM to fields at high-risk times	0.3	1.2	0.0	1.0

* Increased slurry storage facilitates changing manure application timing, so the N, P and N₂O impacts of this measure are included under 'Do not spread slurry or poultry manure at high-risk times'.

Table 2-3: Percentage change in pollutant losses following full implementation of individual measures required by Option 4 expressed relative to losses for the whole of Wales under current practice (%).

Measure	Nitrate	P	NH ₃ -N	N ₂ O
Use a fertiliser recommendation system	1.3	0.1	0.7	0.8
Integrate fertiliser and manure nutrient supply	1.1	0.5	0.6	0.7
Do not apply manufactured fertiliser to high-risk areas (within proposed NVZ area only)	<0.1	<0.1	<0.1	<0.1
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March) (within proposed NVZ area only)	<0.1	<0.1	<0.1	<0.1
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February) (within proposed NVZ area only)	<0.1	<0.1	<0.1	<0.1
Increase the capacity of farm slurry stores to improve timing of slurry applications	*	*	-0.2	*
Do not apply manure to high-risk areas	<0.1	<0.1	0.0	<0.1
Do not spread slurry or poultry manure at high-risk times	1.3	3.6	-0.1	0.1
Do not spread FYM to fields at high-risk times	0.4	1.0	0.0	0.8

* Increased slurry storage facilitates changing manure application timing, so the N, P and N₂O impacts of this measure are included under 'Do not spread slurry or poultry manure at high-risk times'.

Table 2-4: Percentage change in the component of the pollutant losses targeted by each measure, following full implementation of individual measures required by Option 2, expressed relative to losses for the whole of Wales under current practice (%).

Measure	Component	Nitrate	P	NH ₃ -N	N ₂ O
Use a fertiliser recommendation system	Fertiliser	6.9	1.3	6.7	6.8
Integrate fertiliser and manure nutrient supply	Fertiliser	5.9	4.9	5.6	6.0
Do not apply manufactured fertiliser to high-risk areas	Fertiliser	1.9	0.4	2.6	2.4
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March)	Fertiliser	0.6	10.0	2.0	0.1
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February)	Fertiliser	0.3	2.0	1.0	<0.1
Increase the capacity of farm slurry stores to improve timing of slurry applications	Slurry	*	*	-1.5	*
Do not apply manure to high-risk areas	Manure	<0.1	0.2	0.0	<0.1
Do not spread slurry or poultry manure at high-risk times	Slurry / Poultry	8.2	50.0	-0.3	2.0
Do not spread FYM to fields at high-risk times	FYM	2.9	15.9	0.0	12.4

* Increased slurry storage facilitates changing manure application timing, so the N, P and N₂O impacts of this measure are included under 'Do not spread slurry or poultry manure at high-risk times'.

2.2.2 Costs of Implementation

For Option 2, the 'increased slurry storage' measure (to 5 months) is responsible for increases in one-off capital costs from the baseline of £52m to £311m (Table 2-5) due to investment costs associated with extending/building new slurry storage (Section 3.4.2), with the range in costs resulting from assumptions about roofing yard areas and what proportion of storage can be extended rather than rebuilt. Do not spread slurry or poultry manure at high-risk times is assumed to require 6 months storage, so costs are even higher (up to £360m).

'Integrating fertiliser and manure nutrient management' resulted in reduced annual costs of between £25million and £5 million depending on whether the NPK value of the manures is accounted for or just the N value (see Section 2.2.2). Use of a fertiliser recommendation system resulted in reduced costs reflecting assumed improvements in the efficiency of fertiliser use. All other measures are associated with increased annual costs – the most costly measures being 'avoiding spreading manufactured fertiliser at high risk times' and 'avoiding spreading manufactured fertiliser to high risk areas' (an increase of £12.2 and £9.8m respectively for the Medium cost scenario), due to the yield penalties associated with applying sub-optimal fertiliser inputs. There are up front planning costs of £7.5m, with a £4.3m annual cost for those farms currently not keeping records or nutrient planning.

The costs for Option 3 (Table 2-6) are much lower, reflecting both the smaller area to which the measures are applied and the fact that implementation of most measures is higher within the existing NVZ area (and so is assumed to be part of the baseline). However, increased slurry storage could still cost over £50m due to the large number of cattle within the proposed NVZ area.

Costs for Option 4 (Table 2-7) are the same as for Option 2 (Table 2-5) except for Do not apply manufactured fertiliser to high-risk areas and Avoid spreading manufactured fertiliser to fields at high-risk times, which only apply within the proposed NVZ area and so costs are as per Table 2-6.

Table 2-5: Cost of implementation for full implementation of individual measures required by Option 2 across the whole of Wales, expressed relative to current practice. For some measures, high, medium and low cost estimates have been produced, as described in the relevant sections.

Measure	Range	Upfront capital costs	Annual operational costs	One-off planning costs
Use a fertiliser recommendation system ¹	-	-	-£8.8m	-
Integrate fertiliser and manure nutrient supply ¹	H	-	-£5.0m	-
	M	-	-£11.0m	-
	L	-	-£25.0m	-
Do not apply manufactured fertiliser to high-risk areas ¹	H	-	£19.6m	-
	M	-	£9.8m	-
	L	-	£3.9	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March)	H	-	£18.3m	-
	M	-	£12.2m	-
	L	-	£6.1m	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February)	H	-	£6.1m	-
	M	-	-	-
	L	-	-	-
Increase the capacity of farm slurry stores to improve timing of slurry applications	H	£311m ³	£5.1m ^{2,3}	-
	M	£152m ³	£1.9m ^{2,3}	-
	L	£52m ³	£1.0m ^{2,3}	-
Do not apply manure to high-risk areas ¹	-	-	-	-
Do not spread slurry or poultry manure at high-risk times ¹	H	£360m ³	£6.1m ^{2,3}	-
	M	£206m ³	£3.0m ^{2,3}	-
	L	£109m ³	£2.2m ^{2,3}	-
Do not spread FYM to fields at high-risk times	-	-	-	-
<i>Nutrient planning and record keeping</i>	-	-	£4.3m	£4.0m
<i>Planning permission for new slurry storage</i>	-	-	-	£3.5m

¹ All of these measures would require some form of nutrient planning and/or record keeping, which has been costed separately

² Operational costs are assumed to be 2% of the capital costs

³ These costs for these two measures would not be additive. The costs assume a mix of lagoons and steel tanks

Table 2-6: Cost of implementation for full implementation of individual measures required by Option 3 across proposed NVZ area, expressed relative to current practice. For some measures, high, medium and low cost estimates have been produced, as described in the relevant sections.

Measure	Range	Upfront capital costs	Annual operational costs	One-off planning costs
Use a fertiliser recommendation system ¹	-	-	-£0.5m	-
Integrate fertiliser and manure nutrient supply ¹	H	-	-£0.5m	-
	M	-	-£1.1m	-
	L	-	-£2.5m	-
Do not apply manufactured fertiliser to high-risk areas ¹	H	-	£1.4m	-
	M	-	£0.7m	-
	L	-	£0.3m	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March)	H	-	£1.4m	-
	M	-	£0.9m	-
	L	-	£0.5m	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February)	H	-	£0.5m	-
	M	-	-	-
	L	-	-	-
Increase the capacity of farm slurry stores to improve timing of slurry applications	H	£43m ³	£0.7m ^{2,3}	-
	M	£22m ³	£0.3m ^{2,3}	-
	L	£8m ³	£0.2 ^{2,3}	-
Do not apply manure to high-risk areas ¹	-	-	-	-
Do not spread slurry or poultry manure at high-risk times ¹	H	£52m ³	0.9 ^{2,3}	
	M	£30m ³	0.4 ^{2,3}	
	L	£16m ³	0.3 ^{2,3}	
Do not spread FYM to fields at high-risk times	-	-	-	-
<i>Nutrient planning and record keeping</i>	-	-	£0.13m	£0.09m
<i>Planning permission for new slurry storage</i>	-	-	-	£0.16m

¹ All of these measures would require some form of nutrient planning and/or record keeping, which has been costed separately

² Operational costs are assumed to be 2% of the capital costs

³ These costs for these two measures would not be additive. The costs assume a mix of lagoons and steel tanks

Table 2-7: Cost of implementation for full implementation of individual measures required by Option 4 across the whole of Wales or the proposed NVZ area, expressed relative to current practice. For some measures, high, medium and low cost estimates have been produced, as described in the relevant sections.

Measure	Range	Upfront capital costs	Annual operational costs	One-off planning costs
Use a fertiliser recommendation system ¹	-	-	-£8.8m	-
Integrate fertiliser and manure nutrient supply ¹	H	-	-£5.0m	-
	M	-	-£11.0m	-
	L	-	-£25.0m	-
Do not apply manufactured fertiliser to high-risk areas (within proposed NVZ area only) ¹	H	-	£1.4m	-
	M	-	£0.7m	-
	L	-	£0.3m	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of March) (within proposed NVZ area only)	H	-	£1.4m	-
	M	-	£0.9m	-
	L	-	£0.5m	-
Avoid spreading manufactured fertiliser to fields at high-risk times (to End of February) (within proposed NVZ area only)	H	-	£0.5m	-
	M	-	-	-
	L	-	-	-
Increase the capacity of farm slurry stores to improve timing of slurry applications	H	£311m ³	£5.1m ^{2,3}	
	M	£152m ³	£1.9m ^{2,3}	
	L	£52m ³	£1.0m ^{2,3}	
Do not apply manure to high-risk areas ¹	-	-	-	-
Do not spread slurry or poultry manure at high-risk times ¹	H	£360m ³	£6.1m ^{2,3}	-
	M	£206m ³	£3.0m ^{2,3}	-
	L	£109m ³	£2.2m ^{2,3}	-
Do not spread FYM to fields at high-risk times	-	-	-	-
<i>Nutrient planning and record keeping</i>	-	-	£4.3m	£4.0m
<i>Planning permission for new slurry storage</i>	-	-	-	£3.5m

¹ All of these measures would require some form of nutrient planning and/or record keeping, which has been costed separately

² Operational costs are assumed to be 2% of the capital costs

³ These costs for these two measures would not be additive. The costs assume a mix of lagoons and steel tanks

2.3 *Impacts of Options*

The overall reductions in annual average pollutant loads due to the different options are shown in Table 2-8. Option 2 results in a 1,326 tonne reduction in annual nitrate losses. Option 3 results in a reduction approximately 10% of that achieved by Option 2, despite the measures only being applied in 8% of Wales – reflecting the greater pollutant pressures found inside the proposed NVZ areas. Reductions for Option 4 are 85-90% of those for Option 2 for nitrate, phosphorus and nitrous oxide, but only 70% for ammonia. This is because the two measures only applied within the NVZ area under Option 4 (Do not apply manufactured fertiliser to high-risk areas and Avoid spreading manufactured fertiliser to fields at high-risk times) have a bigger affect on ammonia losses than the other pollutants (see Table 2-1) reflecting the impact that urea applications have on ammonia emissions..

The Implementation costs (before discounting) for the High, Medium and Low cost scenarios are shown in Table 2-9 to Table 2-11. Option 4 results in a saving in annual operational costs for all three scenarios, but Options 2 and 3 only result in operational cost savings under the low cost scenario (where there is an optimistic assumption about the use of P and K in manures and thus the potential to reduce annual fertiliser costs). Implementing option b leads to savings in operational costs for both the medium and low cost scenarios where there are no yield penalties from delaying fertiliser applications. Upfront capital costs are as per the costs for Do not spread slurry or poultry manure at high-risk times in Table 2-5 to Table 2-7, as the construction of 6 months storage are the only capital costs. The planning costs do not vary with the cost scenarios.

Table 2-8: Reduction annual average pollutant loads (in tonnes) for the three options

Pollutant	Opt. 2a	Opt. 2b	Opt. 3a	Opt. 3b	Opt. 4a	Opt. 4b
Nitrate	1,326	1,311	136	135	1,207	1,206
Phosphorus (TP)	50	46	5	4	42	42
Ammonia (NH ₃ -N)	343	318	32	30	246	243
Nitrous Oxide (N ₂ O)	319	318	31	31	287	287

Table 2-9: Cost of implementation for the three options (High cost scenario), before discounting

Costs	Opt. 2a	Opt. 2b	Opt. 3a	Opt. 3b	Opt. 4a	Opt. 4b
Upfront capital costs ¹	£360m	£360m	£52m	£52m	£360m	£360m
Annual operational costs	£34.5m	£22.3m	£2.8m	£1.9m	-£0.6m	-£1.5m
One-off planning costs	£7.5m	£7.5m	£0.3m	£0.3m	£7.5m	£7.5m

¹ the average of assuming all extra slurry storage capacity was lagoons and all extra slurry storage capacity was above ground tanks.

Table 2-10: Cost of implementation for the three options (Medium cost scenario), before discounting

Costs	Opt. 2a	Opt. 2b	Opt. 3a	Opt. 3b	Opt. 4a	Opt. 4b
Upfront capital costs ¹	£206m	£206m	£30m	£30m	£206m	£206m
Annual operational costs	£9.5m	-£2.7m	£0.5m	-£0.4m	-£11m	-11.8m
One-off planning costs	£7.5m	£7.5m	£0.3m	£0.3m	£7.5m	£7.5m

¹ the average of assuming all extra slurry storage capacity was lagoons and all extra slurry storage capacity was above ground tanks.

Table 2-11: Cost of implementation for the three options (Low cost scenario,) before discounting

Costs	Opt. 2a	Opt. 2b	Opt. 3a	Opt. 3b	Opt. 4a	Opt. 4b
Upfront capital costs ¹	£109m	£109m	£16m	£16m	£109m	£109m
Annual operational costs	- £17.2m	- £23.3m	-£1.8m	-£2.3m	-£26m	-27.0m
One-off planning costs	£7.5m	£7.5m	£0.3m	£0.3m	£7.5m	£7.5m

¹ the average of assuming all extra slurry storage capacity was lagoons and all extra slurry storage capacity was above ground tanks.

2.4 Overall Cost-Benefit Assessments

2.4.1 Environmental benefits

The environmental benefits are monetised by multiplying the change in tonnes of emission levels (Table 2-8) by the monetary value per tonne for GHG emissions, ammonia emissions and nitrate-N and Phosphorus leaching (Table 1-6).

The values were calculated using high, low and central prices for environmental pollutants from Table 1-6. Over a 20-year period, the total environmental benefits (central value, not discounted) are estimated at £304m for Option 2a, £30m for Option 3a and £262m for Option 4a, with the majority of the benefits coming from reductions in GHG emissions (Table 2-12). The environmental benefits of implementing option b (i.e. high-risk times for fertiliser application October-February) results in reduced environmental benefit mainly as a result of higher predicted ammonia emissions to air and phosphorus losses to water. Nitrate losses to water were predicted to be unchanged. (see Table 3 13).

Table 2-12: Changes in environmental benefits (relative to baseline) for NPK scenario, £m before discounting

Pollutant	Reductions in Emissions relative to baseline (£m), before discounting		
	Option 2a	Option 3a	Option 4a
Nitrate-N	28 (20-36)	3 (2-4)	25 (18-33)
Ammonia	56 (11-172)	5 (1-16)	40 (8-123)
GHG	188 (94-282)	18 (9-28)	169 (85-254)
Phosphorus	33 (29-36)	3 (2.7-3.3)	27 (24-30)
Total	304 (153-526)	30 (15-51)	262 (135-440)

Note: Central values are presented, with the range of values in brackets.

Table 3 13: Changes in environmental benefits (relative to baseline) for NPK scenario, £m before discounting for 'b' options

Pollutant	Reductions in Emissions relative to baseline (£m), before discounting		
	Option 2b	Option 3b	Option 4b
Nitrate-N	28 (20-36)	3 (2-4)	25 (18-33)
Ammonia	51 (10-159)	5 (1-15)	39 (8-121)
GHG	187 (94-281)	18 (9-27)	169 (85-254)
Phosphorus	30 (27-33)	2.6 (2.3-2.9)	27 (24-30)
Total	297 (150-509)	29 (14-49)	261 (135-439)

Note: Central values are presented, with the range of values in brackets.

2.4.2 Net Present Value calculations

The additional costs of the proposed measures to the whole of Wales (Option 2) is largely comprised of the additional capital cost for farm infrastructure associated with constructing/expanding slurry storage and roofing dirty yards of £110-£360m in the first year and associated planning permission cost for this storage at £3.5m. The extra time input from farmers is estimated to cost £4.0 million in the first year (for those farms currently without nutrient plans) and £4.3m per year to implement and maintain the plans for all farms. The costs of improving slurry management infrastructure are the same for Option 4.

The NPVs were calculated for all three policy options using high, medium and low estimates for both environmental benefit values (prices for environmental pollutants)⁵ and costs (including capital costs and annual operational costs). This is to illustrate the impact of uncertainty on NPVs and how they will change when estimates for costs and benefits move from central values to upper and lower bounds.

For each option, a total of nine possible combinations of high, medium and low estimates of costs and benefits were compared. Table 2-134 to Table 2-156 show the ranges of NPV estimates for options 2ab, 3ab and 4ab at high, medium and low cost levels and environmental benefit prices.

Detailed NPV calculations for all policy options using central estimates of costs and benefits are shown in Table 2-167. (for all 'a' options) and Table 3.18 (for all 'b' options). The detailed NPV calculations for all the remaining scenarios are presented in Appendix 4.

The central estimates (both costs and environmental benefit prices are at medium levels) suggest that Option 4a and Option 4b give highest NPVs (benefits-costs). Option 4a has a total NPV of £121 million compared with £133m for Option 4b. Option 2a has the highest cost (NPV of -£140million) however, the NPV for option 2b is £28 million, reflecting predicted reductions in annual operational costs (net cost of £9.5m for Option 2a to a net saving of £2.7m for option 2b) from the lower predicted impact on crop yields associated with Option 2b.

When testing for NPV changes using upper and lower bounds of cost and benefit values, Option 4 provides the highest NPVs (benefits-costs) for majority of the cases. The exceptions are when NPVs are estimated using low or medium environmental benefit prices and high estimates for capital and operation costs, in which case Option 3b provides the highest NPV (least net cost).

When capital and operational costs are at low levels, the total NPV for Option 2a and Option 2b is similar to that of Options 4a and 4b, with Options 3a and 3b giving the lowest NPV.

⁵ Environmental emissions used central estimates. Sensitivity of estimates on environment emissions was discussed qualitatively in Section 2.

Table 2-134: NPVs (relative to baseline) by option (£m), medium capital and operational costs.

NPV (Benefits-Costs), £m	Option 2a	Option 2b	Option 3a	Option 3b	Option 4a	Option 4b
NPV (LOW environmental benefit prices)	-243.6	-72.6	-27.8	-15.4	33.4	46.1
NPV (MEDIUM environmental benefit prices)	-140.0	28.2	-17.7	-5.6	120.7	133.1
NPV (HIGH environmental benefit prices)	21.6	183.3	-2.6	8.8	251.6	263.4

Table 2-145: NPVs (relative to baseline) by option (£m), high capital and operational costs

NPV (Benefits-Costs), £m	Option 2a	Option 2b	Option 3a	Option 3b	Option 4a	Option 4b
NPV (LOW environmental benefit prices)	-752.5	-581.5	-81.7	-69.3	-266.6	-253.9
NPV (MEDIUM environmental benefit prices)	-648.9	-480.7	-71.6	-59.5	-179.3	-166.9
NPV (HIGH environmental benefit prices)	-487.4	-325.7	- 56.5	- 45.1	-48.3	-36.3

Table 2-156: NPVs (relative to baseline) by option (£m), low capital and operational costs

NPV (Benefits-Costs), £m	Option 2a	Option 2b	Option 3a	Option 3b	Option 4a	Option 4b
NPV (LOW environmental benefit prices)	234.3	318.5	19.1	25.8	352.1	359.1
NPV (MEDIUM environmental benefit prices)	337.8	419.3	29.1	35.5	439.4	446.1
NPV (HIGH environmental benefit prices)	499.4	574.4	44.2	50.0	570.3	576.3

Table 2-167: NPV calculations (£m) using central estimates, for 'a' options

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	206.4	17.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	
Option 3a	30.3	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Option 4a	206.4	-3.4	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	
Benefits (£m)																						
Option 2a		12.5	12.6	12.7	12.8	12.9	13.0	13.2	13.3	13.4	13.5	14.2	14.9	15.6	16.3	17.0	17.8	18.5	19.2	19.9	20.6	
Option 3a		1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	
Option 4a		10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	12.2	12.8	13.5	14.1	14.8	15.4	16.0	16.7	17.3	18.0	
NPV (Benefits-Costs)																						
Option 2a	-206.4	-4.4	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	3.2	3.6	3.9	4.2	4.5	4.7	5.0	5.2	5.4	5.6	-140.0
Option 3a	-30.3	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-17.7
Option 4a	-206.4	13.6	20.2	19.6	19.0	18.5	17.9	17.4	16.9	16.4	15.9	15.8	15.7	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.5	120.7

Table 2-18: NPV calculations (£m) using central estimates, for 'b' options

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	206.4	4.8	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	
Option 3b	30.30	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Option 4b	206.4	-4.3	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	-11.8	
Benefits (£m)																						
Option 2b		12.1	12.2	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.8	14.5	15.3	16.0	16.7	17.4	18.1	18.8	19.5	20.2	
Option 3b		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	2.0	
Option 4b		10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	12.2	12.8	13.5	14.1	14.7	15.4	16.0	16.7	17.3	17.9	
NPV (Benefits-Costs)																						
Option 2b	-206.4	7.1	13.9	13.5	13.2	12.8	12.5	12.1	11.8	11.5	11.2	11.3	11.4	11.5	11.5	11.5	11.6	11.6	11.6	11.5	11.5	28.2
Option 3b	-30.3	1.2	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	-5.6

Affordability

Table 3-10 shows that in the medium cost scenario, additional annual operating costs across farm businesses is estimated to range from £9.5m (Option 2) to -£11m (a cost-saving in Option 4). To put these figures into context, the latest Aggregate Agricultural Account⁶ shows Total Income from Farming in Wales in 2019 was £261m.

While looking at the aggregate impact may provide an indication of affordability, it will ultimately be decided at the individual farm level. Data from the annual Farm Business Survey⁷ shows there is significant variation in annual income levels both between and within farm types. Table 4.1 shows average farm business income across Wales by main farm type for the period 2012-13 to 2018-19. Throughout the period, farm incomes have tended to be highest (on average) across dairy farms, although even here there have been significant variations across the period reflecting milk price fluctuations.

Table 4.1 Average Farm Incomes in Wales, 2012-13 to 2018-19

Average farm business income per farm								£ per farm
Farm type	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	% change (2017-18 to 2018-19)
At current prices								
Dairy	45,100	77,000	70,200	32,800	31,300	82,400	46,600	-43%
Cattle & sheep (LFA)	21,600	19,200	22,100	21,900	23,100	26,900	18,900	-30%
Cattle & sheep (lowland)	27,200	28,600	27,000	16,300	22,700	24,000	17,100	-29%
All farm types	26,600	29,300	29,000	22,200	24,500	34,600	23,600	-32%
In real terms at 2017-18 prices (a)								
Dairy	49,900	83,600	74,900	34,800	32,500	83,900	46,600	-44%
Cattle & sheep (LFA)	23,900	20,900	23,600	23,200	24,000	27,400	18,900	-31%
Cattle & sheep (lowland)	30,000	31,000	28,800	17,300	23,600	24,400	17,100	-30%
All farm types	29,400	31,900	30,900	23,600	25,400	35,300	23,600	-33%

Source: Farm Business Survey

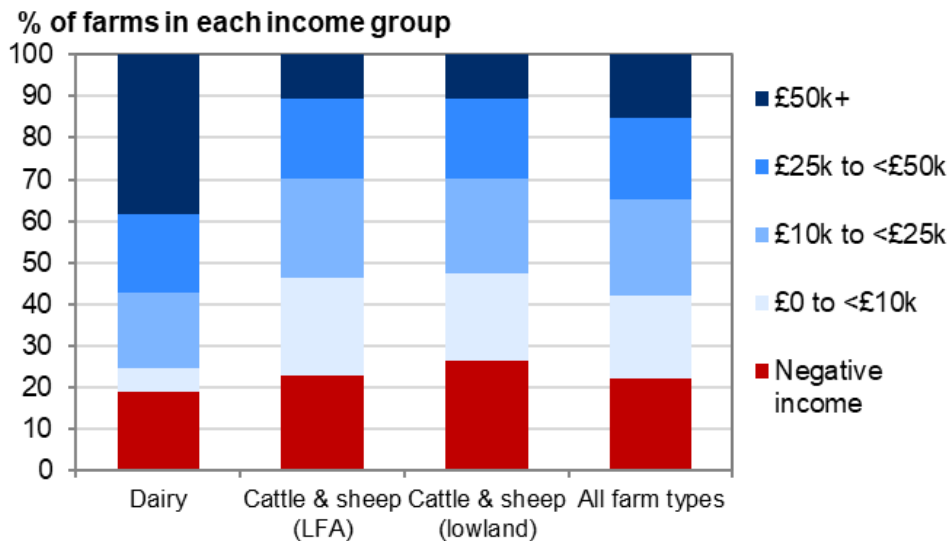
(a) GDP deflators are used here to uprate figures for 2017-18 (and earlier) to 2018-19 prices.

Chart 5.1 splits average farm business income for each of the main farm types into broad income bands. As the table shows, there are farms from each farm type in each of the income bands. The percentage of farms making £50,000+ is highest amongst dairy farms (38%), however, 19% of dairy farms were also reported to have negative farm business income in 2018-19.

Chart 5.1 Variation in farm business income by farm type, 2018-19

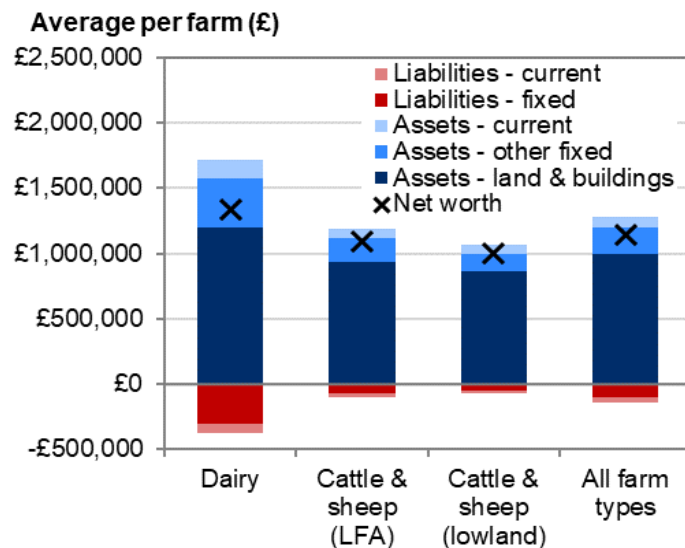
⁶ <https://llyw.cymru/sites/default/files/statistics-and-research/2020-04/allbwn-ac-incwm-cyfun-amaethyddol-2019-924.pdf>

⁷ <https://gov.wales/sites/default/files/statistics-and-research/2019-12/farm-incomes-april-2018-march-2019-209.pdf>



Another potential indicator of affordability is net worth. Net worth subtracts the value of total liabilities from total assets, and represents the wealth of a farm if all of their liabilities were called in. Businesses with a higher net worth are likely to be more resilient, at least in the short term, to fluctuations in their income. Such farms can draw on these reserves, or borrow against them, to support the business if the financial position of the farm deteriorates. As with farm income, average net worth is higher on dairy farms than other farm types. It is worth making the point again however that there is a likely to be significant variation in the net worth of individual farm businesses within each farm type. Chart 5.2 shows the average net worth by farm type.

Chart 5.2 Average net worth by farm type, 2018-19



LFA farms tend to be extensive and the costs associated with not being able to spread in high risk areas and at high risk times, the two greatest costs aside from storage, are less relevant as the use of manufactured fertiliser tends to be lower and they have less manure to spread and an increased area on which to apply it. The cost of slurry storage

isn't applicable to sheep farms in the main. If cattle are housed then slurry storage will be needed but at reduced cost as stocking levels tend to be lower.

The greater costs will be associated with dairy and more intensive beef due to bigger stores to accommodate increased slurry production. The yield penalties associated with the spreading restrictions are likely to be greater as these farms are more dependent on maximising the utilisation of grass as opposed to feed imports which increase costs.

In summary, the greatest costs will be associated with dairy, which, the data suggests, is the sector best able to accommodate those costs (on average). Intensive lowland sheep and in particular beef, because of storage requirements, may face greater pressures due to lower incomes. LFA beef will also be impacted by storage costs but less so by yield penalties.

As stated above, there are large variances in farm incomes both between farm types and within farm types, this affects a farms ability to absorb the additional capital cost and/or ongoing operating cost.

The RIA has assumed that the full capital cost of increasing slurry storage will be incurred by the farm business, however, this does not reflect the funding which may be provided through the Rural Development Programme for Wales. While regulatory compliance cannot be funded, it is possible to provide funding for investments in advance. The Welsh Government has already provided funding for investments which would aid compliance with the proposed regulations. If additional funding is provided, it would be possible to grant aid up to 40% of the costs associated with the slurry storage requirements. While this would not affect the NPV calculation, it could shift between £10.4m and £12.8m of the upfront capital cost from farm businesses to Government for Option 2.

Infraction risk

Due to the obligation to remain compliant with European Union Directives and Water Framework Directive, while the United Kingdom remains a Member State, risks are associated with non-compliance in respect of Options 1 and 4. An infraction risk is also associated with Option 2 in relation to compliance and enforcement risks.

Under the Treaty on the Functioning of the European Union (TFEU), when the Commission refers a Member State to the Court of Justice of the European Union for having infringed EU law, the Court may impose financial sanctions in two situations (Brussels, 20.2.2019 C(2019) 1396 final):

- When the Court has ruled that a Member State infringing EU law has not yet complied with an earlier judgment finding that infringement (Article 260(2) TFEU);
- When a Member State has failed to fulfil its obligation to notify measures transposing a Directive adopted under a legislative procedure (Article 260(3) TFEU).

In both cases, the sanction is made up of a lump sum payment, to penalise the existence of the infringement itself, and a daily penalty payment, to penalise the continuation of the infringement after the Court's judgment. The Commission proposes an amount for the financial sanctions to the Court, which takes the final decision.

Infraction penalties take into consideration the following key factors:

- importance of the rules breached and the impact of the infringement on general and particular interests;
- the period the EU law has not been applied; and
- the country's ability to pay, ensuring that the fines have a deterrent effect.

The resulting method of calculation is summed up by the following general formula:

$$Dp = (Bfrap \times Cs \times Cd) \times n$$

where: Dp = daily penalty payment; Bfrap = basic flat-rate amount "penalty payment" (3,105 EUR); Cs = coefficient for seriousness (from 1 to 20); Cd = coefficient for duration (from 1 to 3); n = factor taking into account the capacity to pay of the Member State concerned (n = 3.5).

The potential daily penalty for Wales ranges from 10,868 EUR to 652,050 EUR.

The potential lump sum penalty for Wales is 8,987,000 EUR.

Over a 20 year period the total penalty could range from 88,323,400 EUR to 4,768,952,000 EUR.

The Welsh Government has no contingency budget in place to deal with infraction penalties and would need to pay any fines in accordance with the rates applicable to the UK as a MS. It is UK Government policy that any non-compliance issue which fall under Wales' responsibility would need to be paid by the Welsh Government.

Example of infraction penalties applied:

Case C-304/02, Commission v French Republic. In this judgment of 12 July 2005, the ECJ ordered a Member State to pay both a periodic penalty payment and a lump sum fine for a serious and persistent failure to comply with Community law.

The case concerned compliance by France with Community measures for fisheries conservation. France had infringed Community law by letting undersized fish be offered for sale. Following inspection at certain French ports in the course of 11 years, the Commission took the view that France was still not yet complying fully with its obligations. Undersized fish were still offered for sale, and the French authorities maintained a lax attitude in enforcing EC rules.

The ECJ ordered France to pay a penalty payment of EUR 57 761 250 for each period of six months, from the 12 July 2005 onwards, taking into account the duration and the seriousness of the infringement and its ability to pay, and a lump

sum of EUR 20 000 000. With this amount, the ECJ took into account the persistence of the breach of obligations and the public and private interests at issue.

Additional impacts

The proposed measures have the potential to impact upon individuals, communities, tenant farmers, allied industries. These impacts are discussed further in the Welsh Government's Integrated Impact Assessment. A summary is included in Appendix 6.

3 SUMMARY

Improvements in slurry management are likely to require significant capital investment (ranging between £8million and £360 million for the different options) to achieve compliance with the measures 'improve slurry storage capacity' and do not spread slurry and poultry manure at high risk times.

Slurry storage requirement can be reduced by improving the management of dirty water e.g. by roofing dirty yards and by covering slurry stores (which can also reduce ammonia emissions). The outputs from this study suggest that capital costs of roofing yards are not balanced by reductions in slurry storage requirement or savings in slurry spreading costs. There are other benefits from roofing yards such as reduced risks of yard runoff directly polluting surface waters and improvements in production efficiency which are not included in this study.

The modelled outputs suggest that the measures 'Use a Fertiliser Recommendation System' and 'Integrate fertiliser and manure nutrient supply' will lead to savings in operational costs as a result of savings in manufactured fertiliser use and increased crop yields. The savings are predicted to outweigh the additional time and administrative costs associated with setting up and maintaining nutrient management plans.

The measure 'Do not apply fertilisers to high risk areas' was predicted to have high operational costs largely reflecting reduced crop yields as a result of sub-optimal nutrient supply to these areas.

Operational costs associated with Option 'a' were predicted to be high as a result of potential impacts on crop yields of delaying fertiliser applications until April. Operational costs associated with Option 'b' were predicted to increase only under the high cost scenarios, reflecting the lower impact of delaying fertiliser applications until the end of February on crop yields

In this study 'high risk times' for slurry and manufactured fertiliser applications were defined as the beginning of October (to reduce risks of nitrate leaching losses), until soils had a moisture deficit of greater than 10 mm in the spring to reduce the risk of P and ammonium contamination of surface and drainage waters. Information from modelling work carried out as part of this study indicates that soils across Wales typically do not have soil moisture deficits until late March/ early April. Consequently, the measure 'do not apply slurry at high risk times' required 6 months slurry storage capacity (October to March).

Net present values (NPVs) were calculated for all three policy options using high, medium and low estimates for both environmental benefit values (prices for environmental pollutants) and costs (including capital costs and annual operational costs). This is to illustrate the impact of uncertainty on NPVs and how they will change when estimates for costs and benefits move from central values to upper and lower bounds.

The central estimates (both costs and environmental benefit prices at medium levels) suggest a total NPV of £28 million (net benefit) for option 2b, £121 million for Option

4a and £133m for Option 4b, compared to net costs of £17.7m for Option 3a and £5.6m for 3b, and £140 million for Option 2a. The higher NPV of 'b' options reflect the lower operational costs compared with 'a' options.

Option 4 shows the highest NPV benefits as a result of not including the measures do not apply fertilisers at high risk times and to high risk areas outside the proposed NVZ areas which have significant annual operational costs (central estimates of £9.8 million and £12.2 million respectively for whole Wales).

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APPENDIX 1. DETAILS ON FARMSCOPER

Description

FARMSCOPER is a decision support tool used to assess diffuse agricultural pollutant loads on a farm and quantify the impacts of farm pollution mitigation options on these. The tool allows for the creation of unique farming systems, based on combinations of livestock, cropping and manure management, and the assessment of the cost and effect of one or more mitigation methods from a library of over 100 methods contained within the tool, many based upon the Mitigation Method User Guide (Newell-Price et al., 2011).

The initial version of Farmscoper was developed under Defra Project WQ0106 (Gooday and Anthony, 2010) as a policy support tool for cost-effectiveness assessments of pollution mitigation and is further described in Gooday et al. (2014a). The tool was further enhanced under Defra Project FF0204 (ADAS et al., 2012) and again under Defra Project SCF0104 (Gooday et al. 2014b), which added a clear calculation of the costs of measure implementation and allowed the tool to be applied at catchment to national scale.

Pollutant loss coefficients were calculated using a suite of existing national model frameworks used for government policy support (including PSYCHIC (Davison et al., 2008) and NEAP-N (Lord and Anthony, 2000)) applied at 1km² resolution using local soil, climate and other environmental data and required assumptions on farm management. The results were then summarised for 3 soil types and 6 climate zones to populate the database that underpins Farmscoper. Farmscoper queries this database to determine the pollutant losses and apportionment for the farming system being represented, multiplying the relevant coefficients by the cropping area, volume or livestock excreta or fertiliser used as appropriate. A simplified description of Farmscoper is shown in Figure . The coefficients are expressed as a function of a complex coordinate system that allows for the quantification of the impacts of mitigation methods on the calculated pollutant loads, for example a mitigation method may only reduce losses of dairy slurry in the surface runoff pathway. The NEAP-N losses were disaggregated into the source-apportionment system used by Farmscoper using outputs from other more process based nitrate-leaching models (N-CYCLE (Scholefield et al., 1991), NITCAT (Lord, 1992), MANNER (Nicholson et al., 2013) and EDEN (Gooday et al., 2008)).

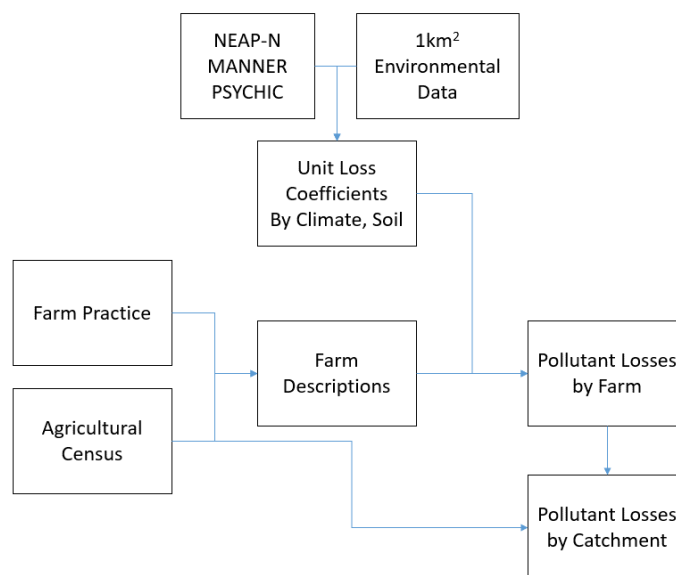


Figure A1-1: A simplified description of how pollutant export coefficients were calculated for use in Farmscoper and then used to calculate pollutant losses.

Table A1-1: The coordinate system used within Farmscoper to provide source apportionment and allow the targeting of mitigation methods.

Source	Area	Pathway	Type	Time scale	Form
Dairy	Arable	Runoff	Soil	Short	Particulate
Beef	Grass	Preferential	Fertiliser	Medium	Dissolved
Sheep	Rough	Leaching	FYM	Long	Gas
Pigs	Yards	Gaseous	Slurry		Gas Indirect
Poultry	Housing	Direct	Litter		
Chemical	Tracks		Voided		
Land	Fords		Enteric		
	Field Storage		Dirty		
	Steading		Water		
	Storage				
	Woodland				

Previous validation of Farmscoper

As Farmscoper is effectively a meta-model of the PSYCHIC and NEAP-N models, the accuracy of Farmscoper's predictions can be assessed by comparing outputs with those of the source models. This was undertaken for the Water Management Catchments in England using data for 2010 (Figure 2; Gooday et al., 2015). Farmscoper outputs have also been directly compared against monitored data (e.g. Zhang et al., 2015).

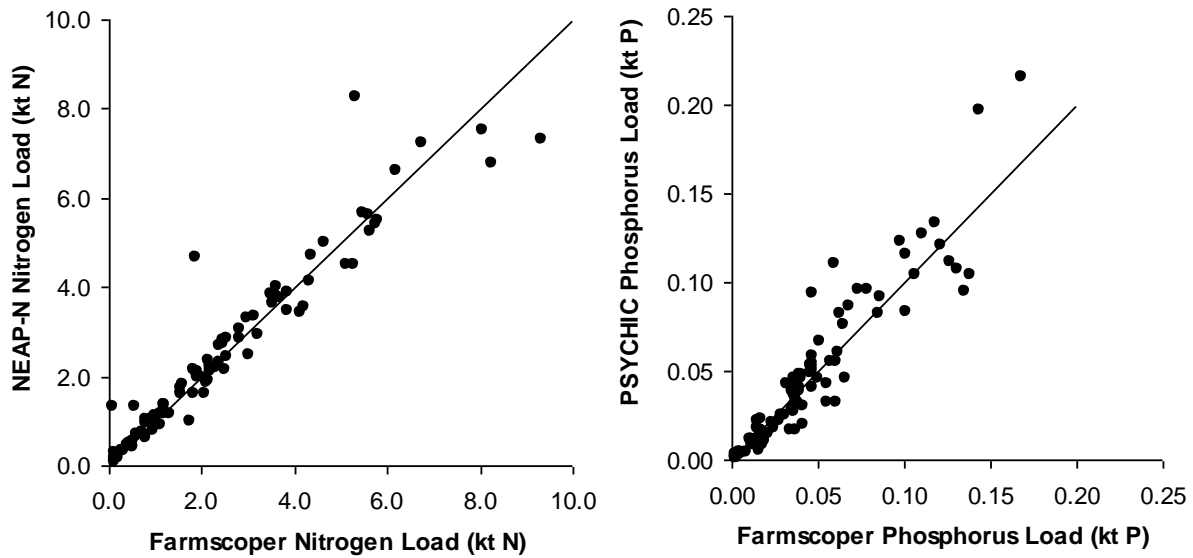


Figure A1-2: Comparison of agricultural nitrogen and phosphorus loads predicted by Farmscopers for the 91 Water Management Catchments in England against loads predicted by the NEAP-N and PSYCHIC models for those same catchments. All model simulations used 2010 June Agricultural Census data (from Gooday et al., 2015).

The equations within PSYCHIC were derived from, and calibrated against, experimental research data, but the catchment scale pollutant load predictions from PSYCHIC are not calibrated. Instead, these outputs have been verified against available catchment scale water quality measurements to show that outputs capture the spatial variations resulting from differences in input data. Initial verification of PSYCHIC was included in Stromqvist et al., 2008. Subsequent verification of outputs has included comparison of pollutant loads against data from the Harmonised Monitoring Scheme (Figure ; Gooday et al., 2015) and Environment Agency monitoring data.

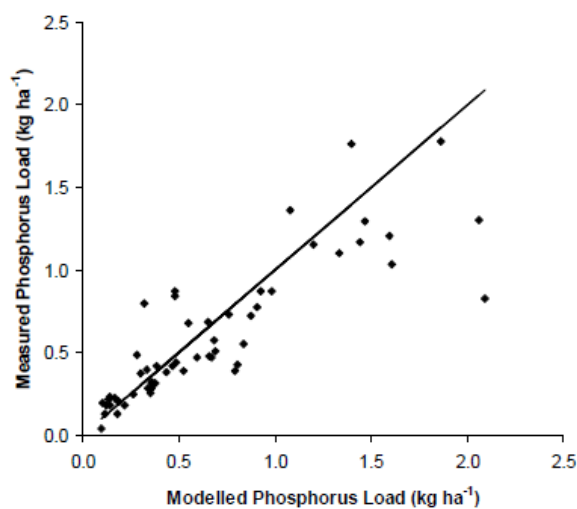


Figure A1-3: Comparison of modelled and measured phosphorus loads for the HMS monitoring catchments in Scotland (from Gooday et al., 2015).

The accumulated catchment scale predictions of nitrate loss from NEAP-N have been validated against observed water quality data (e.g. Anthony et al., 2011; Gooday et al., 2015). The most recent validation of NEAP-N outputs was undertaken in the generation of data for 2014, with nitrate loads compared against Harmonised Monitoring Scheme data for the period 2008-2012 and a regression equation derived to allow a comparison of predicted nitrate concentrations with Environment Agency data covering the period 2008-2012 for a further 301 sites.

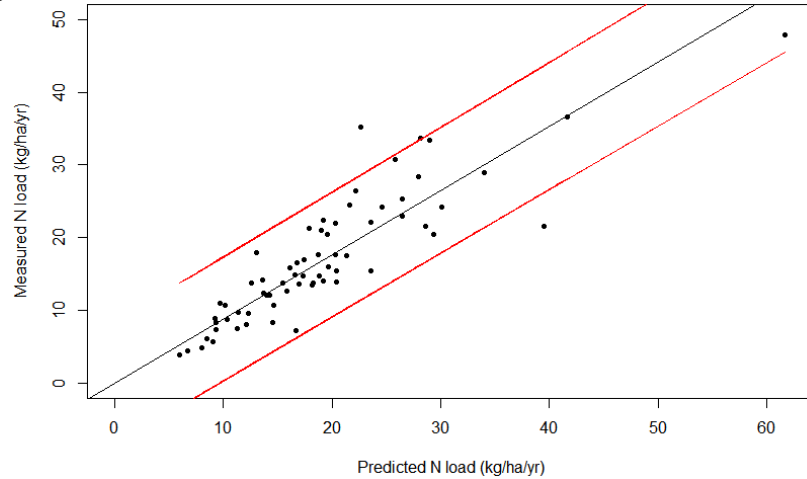


Figure A1-4: Comparison of annual average measured nitrate loads (2008-2012) and predicted loads (2014) for 66 HMS sites across England and Wales (from Lee et al., 2017)

APPENDIX 2. MANNER-NPK MODELLING

Methodology

MANNER-NPK is a decision support tool designed to show the loss of pollutants from agricultural land after organic manure applications (Nicholson et al., 2013). MANNER was used to model the impacts on nitrate, nitrous oxide and ammonia losses due to changes in application timing of high N available manure (cattle slurry, pig slurry, broiler litter and layer litter). MANNER has been used previously to model the impacts of introducing a manure spreading closed period in England using a similar methodology to that described below (DEFRA project WT0932).

There are two key stages to the MANNER modelling: batch running of the MANNER model to represent all possible parameters (e.g. climate, soils, manure types, application methods) at a 5x5 km scale and a weighting of the results of these outputs to represent management under current practice and modified practice due to avoiding high risk times.

The batch runs of MANNER were performed using local climate for each 5km square in Wales, for:

- 3 land use types (spring sown, winter sown and grass)
- 2 soil types (sandy/shallow and other)
- 4 application methods (bandsread, broadcast, deep injection, shallow injection)
- 4 incorporation delays (not incorporated, < 1 week, < 24 hours, < 2 Hours)

The crop choices reflect the major land uses in Wales and represent different risks due to crop cover and over-winter nitrogen uptake. The soil types reflect those used in the definitions of NVZ closed periods.

MANNER simulations were undertaken for a unit of manure applied on the 1st and 15th of each month to give a predicted pollutant loss under each combination of month, climate, soil type, land use and application conditions.

Losses for each month were then weighted by the proportion of grassland, winter sown crop and spring sown crop in each 5km square, and the proportion of each soil type in each square. They were also weighted according to the proportion of each manure type applied by crop type by each of the four application methods and incorporation delays using data derived from the British Survey of Fertiliser Practice (BSFP; Table A2-1 and Table A2-2), using data for 2008-2010. Data on timings of manure application by month and crop type were also derived from the same source (Table **Table** A2-3). For cattle slurry, data specifically for Wales was used, but for other manure types results were based on data for England and Wales (due to there being very few records of application in Wales alone).

Manure volumes were derived from the results of the Farmscoper modelling, with volumes totalled for each 5 km square, including the proportions inside and outside of the proposed NVZ areas.

High risk times were defined as the NVZ closed periods for sandy/shallow soils and the NVZ closed periods and the months of February and March for other soils (reflecting the high risks of phosphorus loss in these month as described in Section 1.2.7). In order to model the impacts of avoiding high risk times, the timing data in Table **Table** A2-3 was adjusted so that any slurry or poultry manure currently spread during these times was redistributed amongst the other months in the year according to the original proportion spread in each month. This resulted in a new set of weightings for each manure type, soil type and land use combination (Table A2-4 and Table A2-5)

Table A2-1: Current manure application methods by manure type and crop types (%).

Application Method	Band spread	Broadcast *	Deep injection	Shallow injection
Broiler/Turkey Litter				
Winter	0	100	0	0
Spring	0	100	0	0
Grass	0	100	0	0
Cattle slurry				
Winter	0	100	0	0
Spring	2	95	1	2
Grass	5	87	3	5
Layer Hen Manure				
Winter	0	1	0	0
Spring	0	1	0	0
Grass	0	1	0	0
Pig slurry				
Winter	45	55	0	0
Spring	11	87	0	2
Grass	16	85	0	0

*For Cattle Slurry spread on Grass, Broadcast is the sum of Broadcast, Rotating boom and Not available

Table A2-2: Current manure incorporation rates (%) for winter and spring sown crops receiving manure in either the winter or spring. Manure applied to grassland is never incorporated.

Incorporation Delay	Broiler / Turkey Litter	Cattle slurry	Layer Hen Manure	Pig slurry
	Winter Crop, Dec-Jun			
Over 1week or never*	97	61	62	85
Within 1 week of spreading†	3	0	0	10
Within 24 hours of spreading‡	0	39	36	5
Within 6 hours of spreading§	0	0	1	0.00
Winter Crop, July-Nov				
Over 1week or never*	7	7	7	7
Within 1 week of spreading†	15	15	15	15
Within 24 hours of spreading‡	40	40	40	40
Within 6 hours of spreading§	38	38	38	38
Spring Crop, Dec-Jun				
Over 1week or never*	17	34	4	11
Within 1 week of spreading†	17	25	24	55
Within 24 hours of spreading‡	41	35	47	30
Within 6 hours of spreading§	26	7	25	3
Spring Crop, Jul-Nov				
Over 1week or never*	96	96	96	96
Within 1 week of spreading†	3	3	3	3
Within 24 hours of spreading‡	0	0	0	0
Within 6 hours of spreading§	0	0	0	0

*Survey results not incorporated, incorporated more than 1 week after spreading and don't know

†Survey result: 3-5 days

‡Survey result: 6-12 hours

§Survey result: Less than 2 hours

Table A2-3: Current manure application timings (%). From BSFP data 2008-2010. Welsh data used for cattle slurry, English and Welsh data combined for other manure types. Note that each row totals to 100%

	January	February	March	April	May	June	July	August	September	October	November	December
Cattle Slurry												
Spring sown	1	34	14	45	4							2
Winter sown		26	17	3				17	30	7		
Grass	12	19	23	13	6	9	6	4	2	3	2	2
Pig Slurry												
Spring sown	36	5	12	37	2					1	5	2
Winter sown	0		8	32	6	0	6	13	22	11	1	0
Grass	2	23	9	29	6	6	12	1		6	3	2
Layer Manure												
Spring sown	7	8	36	38	1			1		0	9	0
Winter sown	0	1	2	0		0	2	45	40	9		
Grass			35	20		19	7	5	13			1
Broiler Litter												
Spring sown	10	16	34	23	9			4	2		1	1
Winter sown		10	10	0			0	38	29	12		
Grass		29	46	9	1	11			2	2		

Table A2-4: Predicted manure application timings (%) to avoid high risk times for sandy/shallow soils. Note that each row totals to 100%

	January	February	March	April	May	June	July	August	September	October	November	December
Cattle Slurry												
Spring sown	1	35	14	46	4				1			
Winter sown		57	36	6								
Grass	13	21	25	14	6	10	6	4	13			
Pig Slurry												
Spring sown	40	5	13	40	3				40			
Winter sown	1		16	61	11	1	11		1			
Grass	2	26	11	33	7	7	14	1	2			
Layer Manure												
Spring sown	8	9	41	42	1				8			
Winter sown	1	21	28	6		5	40		1			
Grass			41	23		22	9	6				
Broiler Litter												
Spring sown	11	18	37	25	10				11			
Winter sown		49	51	0			0					
Grass		30	48	9	1	11						

Table A2-5: Predicted manure application timings (%) to avoid high risk times for other soils. Note that each row totals to 100%

	January	February	March	April	May	June	July	August	September	October	November	December
Cattle Slurry												
Spring sown				92	8							
Winter sown				6				34	60			
Grass				32	14	22	14	9	4	4		
Pig Slurry												
Spring sown				94	6							
Winter sown				40	7	0	7	17	28			
Grass				50	11	11	21	1		5		
Layer Manure												
Spring sown				96	2			2				
Winter sown				0		0	3	51	46			
Grass				31		30	11	7	21			
Broiler Litter												
Spring sown				61	23			10	5			
Winter sown				0			0	57	43			
Grass				39	4	46			7	4		

Table A2-6 summarises the changes in the nitrogen, ammonia and nitrous oxide losses due to avoiding applications at high risk times. Nitrate losses are reduced by almost 0.4 kt, which equates to 1.3% of national agricultural losses of nitrate. Nitrous oxide losses are also reduced, but are less significant as part of the overall total. Ammonia losses increase, as more manure is applied to dry soils in the summer and it cannot be incorporated (particularly poultry manure, where more is applied to arable crops and so could have been incorporated previously).

The results are sensitive to the assumption that manure currently spread in the closed period will be spread in the other months in proportion to the original distribution, and that there will be no change in the proportions going to the different crop types or changes in application or incorporation method. This approach has been used in previous studies into the environmental impacts of introducing closed periods (DEFRA project WT0932; Lord *et al.* 2009).

Table A2-6: Total N applied in manure and change in pollutant losses from manure due to avoiding high risk times.

	N Applied (kg)	Change in Loss (kg)		
		NO ₃	NH ₃	N ₂ O
Proposed NVZ				
Cattle Slurry	13,199,534	264,368	-152	10,389
Pig slurry	82,134	4,051	-36	160
Broiler litter	2,379,625	44,040	-7,280	1,876
Layer litter	1,392,770	42,456	-3,197	1,732
Total	17,054,063	354,915	-10,665	14,156
Non-NVZ				
Cattle Slurry	2,075,685	44,446	-126	1,749
Pig slurry	5,752	269	-2	11
Broiler litter	31,714	819	-166	35
Layer litter	28,647	1,230	-113	51
Total	2,141,798	46,765	-407	1,845
Grand Total	19,195,862	401,680	-11,072	16,002

Appendix 3 Detailed slurry storage volumes and capital costs

Table A3-1: Slurry storage volumes and costs of additional slurry storage capacity (All Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	5.54	6.54	7.65	1.00	2.11	50.08	105.7	40.06	84.57
Beef	0.90	1.04	1.21	0.14	0.31	7.34	15.63	5.87	12.51
Pigs	0.01	0.02	0.02	<0.01	<0.01	0.12	0.27	0.10	0.22
Total	6.45	7.60	8.88	1.15	2.43	57.54	121.7	46.03	97.30

* Assumes compliance with SSAFO regs.

Table A3-2: Slurry storage volumes and costs of additional slurry storage capacity across non NVZ areas (92% of Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	4.69	5.53	6.47	0.84	1.78	42.11	88.98	33.69	71.19
Beef	0.83	0.97	1.12	0.14	0.29	6.79	14.47	5.43	11.57
Pigs	0.01	0.01	0.02	<0.01	<0.01	0.12	0.25	0.09	0.20
Total	5.53	6.51	7.61	0.98	2.07	49.02	103.7	39.21	82.96

* Assumes compliance with SSAFO regs

Table A3-3: Slurry storage volumes and costs of additional slurry storage capacity across proposed NVZ areas (8% of Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	0.85	1.01	1.19	0.16	0.33	7.97	16.74	6.37	13.39
Beef	0.06	0.07	0.08	0.01	0.02	0.55	1.16	0.44	0.91
Pigs	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.01	0.02
Total	0.91	1.08	1.27	0.17	0.35	8.53	17.92	6.82	14.32

* Assumes compliance with SSAFO regs.

Table A3-4: Slurry storage volumes and costs of additional slurry storage capacity (All Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	5.49	6.23	7.29	0.74	1.80	37.11	90.15	29.69	72.12
Beef	0.89	0.93	1.09	0.04	0.20	2.33	10.22	1.86	8.17
Pigs	0.01	0.02	0.02	0.01	0.01	0.13	0.27	0.10	0.22
Total	6.39	7.18	8.41	0.79	2.01	39.55	100.6	31.65	80.49

* Assumes compliance with SSAFO regs.

Table A3-5: Slurry storage volumes and costs of additional slurry storage capacity across non NVZ areas (92% of Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	4.65	5.26	6.15	0.62	1.51	30.80	75.40.	24.64	60.32
Beef	0.82	0.87	1.02	0.04	0.19	2.45	9.75	1.96	7.80
Pigs	<0.01	<0.01	0.02	<0.01	<0.01	0.12	0.25	0.09	0.20
Total	5.47	6.13	7.19	0.66	1.70	33.37	85.40	26.79	68.32

* Assumes compliance with SSAFO regs

Table A3-6: Slurry storage volumes and costs of additional slurry storage capacity across proposed NVZ areas (8% of Wales)

Livestock type	Slurry storage volumes (million m ³)			Additional storage capacity required (million m ³)		Additional costs Above ground tank (£m)		Additional costs Lagoon (£m)	
	Baseline*	5 months	6 months	5 months	6 months	5months	6 months	5months	6 months
Dairy	0.81	0.96	1.13	0.15	0.32	7.65	16.10	6.13	12.88
Beef	0.05	0.07	0.08	0.01	0.02	0.50	1.09	0.40	0.87
Pigs	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total	0.86	1.03	1.21	0.16	0.34	8.15	17.19	6.54	13.75

* Assumes compliance with SSAFO regs.

APPENDIX 4. DETAILED NPV TABLES

Table A4-1: Detailed NPV calculations for 'a' options, high capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	360.0	42.0	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	
Option 3a	51.5	3.1	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
Option 4a	360.0	6.9	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
Benefits (£m)																						
Option 2a		6.3	6.4	6.4	6.5	6.5	6.6	6.7	6.7	6.8	6.8	7.2	7.5	7.9	8.2	8.6	9.0	9.3	9.7	10.0	10.4	
Option 3a		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	
Option 4a		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.3	7.6	7.9	8.2	8.5	8.9	9.2	
NPV (Benefits-Costs)																						
Option 2a	-360.0	-34.5	26.3	25.4	24.4	23.6	22.7	21.9	21.1	20.4	19.7	18.7	17.9	17.0	16.2	15.5	14.8	14.1	13.4	12.8	12.1	-752.5
Option 3a	-51.5	-2.4	-2.1	-2.0	-1.9	-1.8	-1.8	-1.7	-1.7	-1.6	-1.5	-1.5	-1.4	-1.3	-1.3	-1.2	-1.1	-1.1	-1.0	-1.0	-0.9	-81.7
Option 4a	-360.0	-1.4	5.7	5.6	5.4	5.3	5.1	5.0	4.9	4.8	4.6	4.7	4.7	4.8	4.8	4.9	4.9	4.9	4.9	4.9	4.9	-266.6

Table A4-2: Detailed NPV calculations for ‘b’ options, high capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	360.0	29.8	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
Option 3b	51.5	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
Option 4b	360.0	6.0	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	
Benefits (£m)																						
Option 2b		6.2	6.2	6.3	6.3	6.4	6.4	6.5	6.5	6.6	6.6	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	
Option 3b		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	
Option 4b		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.2	7.6	7.9	8.2	8.5	8.8	9.2	
NPV (Benefits-Costs)																						
Option 2b	-360.0	-22.9	15.1	14.5	14.0	13.4	12.9	12.5	12.0	11.6	11.1	10.5	-9.9	-9.4	-8.8	-8.3	-7.8	-7.4	-6.9	-6.5	-6.1	-581.5
Option 3b	-51.5	-1.5	-1.2	-1.2	-1.2	-1.1	-1.1	-1.0	-1.0	-1.0	-0.9	-0.9	-0.8	-0.8	-0.7	-0.7	-0.6	-0.6	-0.5	-0.5	-0.5	-69.3
Option 4b	-360.0	-0.5	6.6	6.4	6.2	6.0	5.9	5.7	5.6	5.4	5.3	5.3	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.3	-253.9

Table A4-3: Detailed NPV calculations for ‘a’ options, high capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	360.0	42.0	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	
Option 3a	51.5	3.1	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
Option 4a	360.0	6.9	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
Benefits (£m)																						
Option 2a		12.5	12.6	12.7	12.8	12.9	13.0	13.2	13.3	13.4	13.5	14.2	14.9	15.6	16.3	17.0	17.8	18.5	19.2	19.9	20.6	
Option 3a		1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	
Option 4a		10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	12.2	12.8	13.5	14.1	14.8	15.4	16.0	16.7	17.3	18.0	
NPV (Benefits-Costs)																						
Option 2a	-360.0	-28.5	20.5	19.7	18.9	18.2	17.5	16.8	16.2	15.5	14.9	13.9	13.0	12.1	11.2	10.4	-9.7	-9.0	-8.3	-7.6	-7.0	-648.9
Option 3a	-51.5	-1.8	-1.5	-1.4	-1.4	-1.3	-1.3	-1.2	-1.2	-1.1	-1.1	-1.0	-0.9	-0.8	-0.8	-0.7	-0.6	-0.6	-0.5	-0.5	-0.4	-71.6
Option 4a	-360.0	3.6	10.6	10.3	10.0	9.8	9.5	9.3	9.0	8.8	8.6	8.7	8.9	9.0	9.1	9.1	9.2	9.3	9.3	9.3	9.3	-179.3

Table A4-4: Detailed NPV calculations for 'b' options, high capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	360.0	29.8	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
Option 3b	51.5	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
Option 4b	360.0	6.0	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	
Benefits (£m)																						
Option 2b		12.1	12.2	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.8	14.5	15.3	16.0	16.7	17.4	18.1	18.8	19.5	20.2	
Option 3b		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	2.0	
Option 4b		10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	12.2	12.8	13.5	14.1	14.7	15.4	16.0	16.7	17.3	17.9	
NPV (Benefits-Costs)																						
Option 2b	-360.0	-17.1	-9.4	-9.0	-8.6	-8.2	-7.9	-7.5	-7.2	-6.8	-6.5	-5.8	-5.2	-4.5	-3.9	-3.4	-2.9	-2.4	-1.9	-1.5	-1.1	-360.0
Option 3b	-51.5	-1.0	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.0	0.0	-51.5
Option 4b	-360.0	4.5	11.4	11.1	10.8	10.5	10.2	10.0	9.7	9.5	9.2	9.3	9.4	9.5	9.6	9.7	9.7	9.7	9.8	9.8	9.8	-360.0

Table A4-5: Detailed NPV calculations for 'a' options, high capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	360.0	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	
Option 3a	51.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
Option 4a	360.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
Benefits (£m)																						
Option 2a		22.2	22.4	22.6	22.7	22.9	23.1	23.2	23.4	23.6	23.7	24.8	25.9	26.9	28.0	29.1	30.1	31.2	32.3	33.3	34.4	
Option 3a		2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	
Option 4a		18.4	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.5	19.7	20.7	21.6	22.6	23.6	24.5	25.5	26.4	27.4	28.4	29.3	
NPV (Benefits-Costs)																						
Option 2a	-360.0	-11.9	-11.3	-10.8	-10.3	-9.8	-9.3	-8.9	-8.5	-8.1	-7.7	-6.7	-5.7	-4.9	-4.0	-3.3	-2.5	-1.9	-1.2	-0.6	-0.1	-487.4
Option 3a	-51.5	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1	-0.1	-0.0	0.1	0.1	0.2	0.2	0.3	-56.5
Option 4a	-360.0	18.3	17.8	17.3	16.9	16.4	16.0	15.6	15.2	14.8	14.4	14.5	14.7	14.8	14.9	15.0	15.0	15.0	15.1	15.0	15.0	-48.3

Table A4-6: Detailed NPV calculations for 'b' options, high capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	360.0	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
Option 3b	51.50	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
Option 4b	360.0	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	
Benefits (£m)																						
Option 2b		21.4	21.6	21.8	21.9	22.1	22.3	22.4	22.6	22.7	22.9	24.0	25.0	26.1	27.2	28.2	29.3	30.4	31.4	32.5	33.6	
Option 3b		2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	
Option 4b		18.3	18.4	18.6	18.7	18.9	19.0	19.2	19.3	19.5	19.6	20.6	21.5	22.5	23.5	24.4	25.4	26.4	27.3	28.3	29.3	
NPV (Benefits-Costs)																						
Option 2b	-360.0	-0.9	-0.7	-0.5	-0.4	-0.2	-0.1	0.1	0.2	0.3	0.4	1.1	1.8	2.4	3.0	3.5	4.0	4.5	4.9	5.3	5.6	-325.7
Option 3b	-51.5	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	-45.1
Option 4b	-360.0	19.1	18.6	18.1	17.6	17.1	16.7	16.2	15.8	15.4	14.9	15.1	15.2	15.3	15.4	15.5	15.5	15.5	15.5	15.5	15.4	-36.6

Table A4-7: Detailed NPV calculations for ‘a’ options, low capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	109.5	-9.8	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	
Option 3a	16.1	-1.5	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	
Option 4a	109.5	-19.0	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	
Benefits (£m)																						
Option 2a		6.3	6.4	6.4	6.5	6.5	6.6	6.7	6.7	6.8	6.8	7.2	7.5	7.9	8.2	8.6	9.0	9.3	9.7	10.0	10.4	
Option 3a		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	
Option 4a		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.3	7.6	7.9	8.2	8.5	8.9	9.2	
NPV (Benefits-Costs)																						
Option 2a	-109.5	15.6	22.1	21.4	20.7	20.0	19.4	18.8	18.2	17.6	17.1	16.7	16.4	16.1	15.8	15.4	15.1	14.8	14.5	14.2	13.9	234.3
Option 3a	-16.1	2.1	2.2	2.2	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.4	19.1
Option 4a	-109.5	23.7	29.9	28.9	28.0	27.1	26.2	25.4	24.6	23.8	23.0	22.4	21.9	21.3	20.8	20.3	19.8	19.3	18.8	18.4	17.9	352.1

Table A4-8: Detailed NPV calculations for ‘b’ options, low capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	109.5	-15.9	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	
Option 3b	16.1	-2.0	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Option 4b	109.5	-19.5	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	
Benefits (£m)																						
Option 2b		6.2	6.2	6.3	6.3	6.4	6.4	6.5	6.5	6.6	6.6	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	
Option 3b		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	
Option 4b		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.2	7.6	7.9	8.2	8.5	8.8	9.2	
NPV (Benefits-Costs)																						
Option 2b	-109.5	21.3	27.6	26.7	25.9	25.0	24.2	23.5	22.7	22.0	21.3	20.8	20.3	19.9	19.4	19.0	18.5	18.1	17.7	17.3	16.9	318.5
Option 3b	-16.1	2.5	2.7	2.6	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	25.8
Option 4b	-109.5	24.1	30.4	29.4	28.4	27.5	26.6	25.8	24.9	24.1	23.3	22.8	22.2	21.7	21.1	20.6	20.1	19.6	19.1	18.6	18.2	359.1

Table A4-9: Detailed NPV calculations for ‘a’ options, low capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	109.5	-9.8	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	
Option 3a	16.14	-1.5	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	
Option 4a	109.5	-19.0	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	
Benefits (£m)																						
Option 2a		12.5	12.6	12.7	12.8	12.9	13.0	13.2	13.3	13.4	13.5	14.2	14.9	15.6	16.3	17.0	17.8	18.5	19.2	19.9	20.6	
Option 3a		1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	
Option 4a		10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	12.2	12.8	13.5	14.1	14.8	15.4	16.0	16.7	17.3	18.0	
NPV (Benefits-Costs)																						
Option 2a	-109.5	21.5	27.9	27.0	26.2	25.4	24.7	23.9	23.2	22.5	21.8	21.5	21.3	21.0	20.8	20.5	20.2	19.9	19.6	19.3	19.0	337.8
Option 3a	-16.1	2.6	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	29.1
Option 4a	-109.5	28.6	34.7	33.7	32.6	31.6	30.6	29.6	28.7	27.8	26.9	26.5	26.0	25.5	25.1	24.6	24.1	23.7	23.2	22.8	22.3	439.4

Table A4-10: Detailed NPV calculations for 'b' options, low capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	109.5	-15.9	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	
Option 3b	16.14	-2.0	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Option 4b	109.5	-19.5	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	
Benefits (£m)																						
Option 2b		12.1	12.2	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.8	14.5	15.3	16.0	16.7	17.4	18.1	18.8	19.5	20.2	
Option 3b		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	2.0	
Option 4b		10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	12.2	12.8	13.5	14.1	14.7	15.4	16.0	16.7	17.3	17.9	
NPV (Benefits-Costs)																						
Option 2b	-109.5	27.1	33.2	32.2	31.2	30.3	29.3	28.4	27.5	26.7	25.9	25.5	25.1	24.7	24.3	23.9	23.5	23.1	22.7	22.3	21.9	419.3
Option 3b	-16.1	3.1	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	35.5
Option 4b	-109.5	29.1	35.2	34.1	33.0	32.0	31.0	30.0	29.1	28.2	27.3	26.8	26.3	25.8	25.4	24.9	24.4	23.9	23.5	23.0	22.6	446.1

Table A4-11: Detailed NPV calculations for ‘a’ options, low capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	109.5	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3	
Option 3a	16.14	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	
Option 4a	109.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	
Benefits (£m)																						
Option 2a		22.2	22.4	22.6	22.7	22.9	23.1	23.2	23.4	23.6	23.7	24.8	25.9	26.9	28.0	29.1	30.1	31.2	32.3	33.3	34.4	
Option 3a		2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	
Option 4a	-	18.4	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.5	19.7	20.7	21.6	22.6	23.6	24.5	25.5	26.4	27.4	28.4	29.3	
NPV (Benefits-Costs)																						
Option 2a	-109.5	38.2	37.0	35.9	34.9	33.8	32.8	31.8	30.9	30.0	29.1	28.8	28.5	28.3	28.0	27.7	27.3	27.0	26.7	26.3	26.0	499.4
Option 3a	-16.1	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	44.2
Option 4a	-109.5	43.3	42.0	40.7	39.4	38.2	37.1	35.9	34.8	33.8	32.7	32.3	31.8	31.4	30.9	30.4	30.0	29.5	29.0	28.5	28.0	570.3

Table A4-12: Detailed NPV calculations for 'b' options, low capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	109.5	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	-23.4	
Option 3b	16.14	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Option 4b	109.5	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0	
Benefits (£m)																						
Option 2b		21.4	21.6	21.8	21.9	22.1	22.3	22.4	22.6	22.7	22.9	24.0	25.0	26.1	27.2	28.2	29.3	30.4	31.4	32.5	33.6	
Option 3b		2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	
Option 4b		18.3	18.4	18.6	18.7	18.9	19.0	19.2	19.3	19.5	19.6	20.6	21.5	22.5	23.5	24.4	25.4	26.4	27.3	28.3	29.3	
NPV (Benefits-Costs)																						
Option 2b	-109.5	43.3	42.0	40.7	39.5	38.3	37.1	36.0	34.9	33.8	32.8	32.4	32.0	31.6	31.2	30.8	30.4	29.9	29.5	29.1	28.6	574.4
Option 3b	-16.1	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	50.0
Option 4b	-109.5	43.7	42.4	41.1	39.8	38.6	37.4	36.3	35.2	34.1	33.0	32.6	32.1	31.6	31.2	30.7	30.2	29.7	29.2	28.7	28.3	576.3

Table A4-13: Detailed NPV calculations for ‘a’ options, medium capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	206.4	17.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	
Option 3a	30.3	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Option 4a	206.4	-3.4	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	
Benefits (£m)																						
Option 2a		6.3	6.4	6.4	6.5	6.5	6.6	6.7	6.7	6.8	6.8	7.2	7.5	7.9	8.2	8.6	9.0	9.3	9.7	10.0	10.4	
Option 3a		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	
Option 4a		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.3	7.6	7.9	8.2	8.5	8.9	9.2	
NPV (Benefits-Costs)																						
Option 2a	-206.4	-10.3	-3.0	-2.8	-2.7	-2.5	-2.4	-2.3	-2.2	-2.0	-1.9	-1.6	-1.3	-1.1	-0.8	-0.6	-0.3	-0.1	0.1	0.3	0.4	-243.6
Option 3a	-30.3	-0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-27.8
Option 4a	-206.4	8.6	15.3	14.9	14.4	14.0	13.5	13.1	12.7	12.3	11.9	11.7	11.6	11.4	11.2	11.0	10.8	10.6	10.4	10.3	10.1	33.4

Table A4-14: Detailed NPV calculations for 'b' options, medium capital and operational costs, low environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	206.4	4.8	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	
Option 3b	30.3	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Option 4b	206.4	-4.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	
Benefits (£m)																						
Option 2b		6.2	6.2	6.3	6.3	6.4	6.4	6.5	6.5	6.6	6.6	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	
Option 3b		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	
Option 4b		5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.3	6.6	6.9	7.2	7.6	7.9	8.2	8.5	8.8	9.2	
NPV (Benefits-Costs)																						
Option 2b	-206.4	1.3	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.5	6.5	6.5	-72.6
Option 3b	-30.3	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-15.4
Option 4b	-206.4	9.5	16.2	15.7	15.2	14.7	14.3	13.8	13.4	13.0	12.6	12.4	12.2	11.9	11.7	11.5	11.3	11.1	10.9	10.7	10.5	46.1

Table A4-15: Detailed NPV calculations for ‘a’ options, medium capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	206.4	17.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	
Option 3a	30.30	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Option 4a	206.4	-3.4	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	
Benefits (£m)																						
Option 2a		12.5	12.6	12.7	12.8	12.9	13.0	13.2	13.3	13.4	13.5	14.2	14.9	15.6	16.3	17.0	17.8	18.5	19.2	19.9	20.6	
Option 3a		1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	
Option 4a		10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	12.2	12.8	13.5	14.1	14.8	15.4	16.0	16.7	17.3	18.0	
NPV (Benefits-Costs)																						
Option 2a	-206.4	-4.4	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	3.2	3.6	3.9	4.2	4.5	4.7	5.0	5.2	5.4	5.6	-140.0
Option 3a	-30.3	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	-17.7
Option 4a	-206.4	13.6	20.2	19.6	19.0	18.5	17.9	17.4	16.9	16.4	15.9	15.8	15.7	15.6	15.4	15.3	15.1	15.0	14.8	14.7	14.5	120.7

Table A4-16: Detailed NPV calculations for 'b' options, medium capital and operational costs, medium environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	206.4	4.8	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	
Option 3b	30.30	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Option 4b	206.4	4.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	
Benefits (£m)																						
Option 2b		12.1	12.2	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.8	14.5	15.3	16.0	16.7	17.4	18.1	18.8	19.5	20.2	
Option 3b		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	2.0	
Option 4b		10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	12.2	12.8	13.5	14.1	14.7	15.4	16.0	16.7	17.3	17.9	
NPV (Benefits-Costs)																						
Option 2b	-206.4	7.1	13.9	13.5	13.2	12.8	12.5	12.1	11.8	11.5	11.2	11.3	11.4	11.5	11.5	11.5	11.6	11.6	11.6	11.5	11.5	28.2
Option 3b	-30.3	1.2	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	-5.6
Option 4b	-206.4	14.4	21.0	20.4	19.8	19.2	18.6	18.1	17.5	17.0	16.5	16.4	16.3	16.1	16.0	15.8	15.6	15.5	15.3	15.1	14.9	133.1

Table A4-17: Detailed NPV calculations for ‘a’ options, medium capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2a	206.4	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	
Option 3a	30.30	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Option 4a	206.4	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9	
Benefits (£m)																						
Option 2a		22.2	22.4	22.6	22.7	22.9	23.1	23.2	23.4	23.6	23.7	24.8	25.9	26.9	28.0	29.1	30.1	31.2	32.3	33.3	34.4	
Option 3a		2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	
Option 4a	-	18.4	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.5	19.7	20.7	21.6	22.6	23.6	24.5	25.5	26.4	27.4	28.4	29.3	
NPV (Benefits-Costs)																						
Option 2a	-206.4	12.3	12.0	11.8	11.5	11.3	11.0	10.8	10.5	10.3	10.1	10.4	10.8	11.1	11.4	11.7	11.9	12.1	12.2	12.4	12.5	21.6
Option 3a	-30.3	1.6	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	-2.6
Option 4a	-206.4	28.2	27.4	26.6	25.9	25.1	24.4	23.7	23.0	22.3	21.7	21.6	21.5	21.4	21.3	21.1	21.0	20.8	20.6	20.4	20.2	251.6

Table A4-18: Detailed NPV calculations for 'b' options, medium capital and operational costs, high environmental values

	2021 (capital)	2021 (annual)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	NPV
Costs (£m)																						
Option 2b	206.4	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	
Option 3b	30.30	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	
Option 4b	206.4	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	
Benefits (£m)																						
Option 2b		21.4	21.6	21.8	21.9	22.1	22.3	22.4	22.6	22.7	22.9	24.0	25.0	26.1	27.2	28.2	29.3	30.4	31.4	32.5	33.6	
Option 3b		2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	
Option 4b		18.3	18.4	18.6	18.7	18.9	19.0	19.2	19.3	19.5	19.6	20.6	21.5	22.5	23.5	24.4	25.4	26.4	27.3	28.3	29.3	
NPV (Benefits-Costs)																						
Option 2b	-206.4	23.3	22.6	22.0	21.4	20.8	20.3	19.7	19.2	18.6	18.1	18.2	18.3	18.4	18.4	18.4	18.4	18.4	18.4	18.3	18.2	183.3
Option 3b	-30.3	2.3	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	8.8
Option 4b	-206.4	29.0	28.2	27.4	26.6	25.8	25.0	24.3	23.6	22.9	22.2	22.2	22.0	21.9	21.8	21.6	21.4	21.2	21.0	20.8	20.6	263.4

Summary

Options 1 and 3 are not considered viable options to tackle the issue of agricultural pollution affecting waterbodies across Wales. These options have no impact upon waterbodies failing to meet good status under the Water Framework Directive outside of designated or recommended NVZs. Due to the scale of NVZ areas, the majority of Welsh waterbodies not meeting good status are located outside of these areas. This presents an increased risk of infraction and fails to address Section 6 of the Environment Act (Wales) which places a duty on public authorities to 'seek to maintain and enhance biodiversity'. Options 1 and 3 are therefore incompatible with this duty.

An all Wales approach is considered proportionate and ensures a level playing field for all farms in Wales, while reducing levels of pollutants on all areas of the country.

Option 4 provides some flexibility in the measures which could be applied. Deselecting specific measures reduces the costs but also the associated benefits, while the risk of infraction and non-compliance and complexity is increased. Other than reduced costs and benefits, there is little benefit to this option compared to Option 2.

Although Option 2 does not present a positive NPV it is the preferred option. It is designed to reduce pollution from agriculture across the whole of Wales, addresses failure of water quality standards under the Nitrates Directive and Water Framework Directive, minimises the risk of infraction and provides a level playing field for farm businesses. This option is also compatible with domestic obligations in respect of biodiversity and contributes to tackling climate change compared to the alternative options.

APPENDIX 6: WELSH GOVERNMENT INTEGRATED IMPACT ASSESSMENT

WHAT ACTION IS THE WELSH GOVERNMENT CONSIDERING AND WHY?

Wales' natural resources are among our most valuable assets. They provide essential services including food, water and land. These are as fundamental to the long-term success of our economy as they are to the quality of our natural environment and the well-being of our communities.

Our resources are under pressure from challenges, including extreme weather, pollution and climate change. Over the past fifty years, more intensive farming methods have led to an increase in overall loadings of nutrients to land, and the loss of some of those nutrients into the environment which has detrimental consequences.

A significant proportion of Wales' nutrient input to the environment originates from diffuse pollution, individual small sources of pollution which collectively cause a significant impact. Agricultural activities are one of the main causes of water pollution and ammonia emissions which are detrimental to public health, the environment, biodiversity and the economy.

Acute point-source pollution incidents also effect water quality and can cause significant losses in biodiversity in large stretches of the aquatic ecosystem. It can take many years for full recovery to be achieved following large scale incidents, if at all. While many farms in Wales operate to high standards, comply with the regulatory baseline and follow good practice guidance, many do not. It is those businesses, which risk the reputation of responsible farmers and cause damage to our environment, the proposed measures are targeted at.

While the primary intention of the proposal is to reduce water pollution from agriculture the approach should not be detrimental to other policy aims, such as reduced atmospheric emissions. The Clean Air Plan for Wales, Healthy Air, Healthy Wales, was published earlier this year. The Plan highlights the importance of clean air for public health, which has been highlighted by the Covid-19 pandemic, due to the detrimental impact of air pollution on fatality rates and recovery. The proposed measures are designed to avoid pollution swapping, to prevent or minimise increased losses of nutrients to the environment, including greenhouse gases, phosphorus and ammonia as a result of measures primarily focussed on reducing losses of nitrogen.

The proposal also recognises a regulatory approach alone will not achieved the desired outcome. The provision of advice and guidance, financial support and voluntary measures will all play a role in minimising pollution from agriculture. A regulatory baseline which underpins these key factors is necessary to facilitate further improvement and protect the environment from detrimental activities.

The proposal moves to a preventative approach, as opposed to taking action once pollution has already occurred and the damage has been done. This approach will improve the enforcement capability of the regulator as a prohibited activity is more easily identifiable than determining the cause of pollution, particularly in respect of diffuse pollution. It will also prevent pollution occurring before action can be taken.

The Nitrates Directive (1991) (The Directive) aims to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices. The Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters against agricultural pressures.

More widely, the Water Framework Directive requires member states to take action to address agricultural pollution and expands the scope of water protection to all waters and requires good status to be achieved for all waterbodies.

More widely, the Water Framework Directive requires member states to take action to address agricultural pollution and expands the scope of water protection to all waters and requires good status to be achieved for all waterbodies.

The UK Committee on Climate Change issued its report on Land use: Policies for a Net Zero on 23 January 2020. The report highlights the UK's net-zero target will not be met without changes in how we use our land, which must be made now. The Committee's previous work has shown it is possible to reduce land-based emissions of greenhouse gases while contributing to other strategic priorities for land such as food production, climate change adaptation and biodiversity. This report focuses on the policies to drive that change. One of the key recommendations of the report is to extend coverage of NVZs to all of the UK.

The outcome of the referendum held on 23 June 2016 was that the UK should leave the European Union. Importantly before, and during the negotiations and the transitional period, the UK continues to participate in EU activities, the EU institutions, and abides by EU law. Welsh Ministers are obliged to continue to make legislation to transpose the requirements of the European Directives prior to the end of the Implementation Period and, beyond, retained EU law provides continuity in our obligations.

The issue of agricultural pollution will still need to be tackled whatever the outcome of the EU negotiations. Safeguarding drinking water, biodiversity and the rural economy from detrimental agricultural activities requires an approach which provides adequate protection from an industry adapting to market pressures and opportunities through changing practices.

The Welsh Government's aim is to provide a mechanism to protect the environment from losses of nutrients, in a climate of changing agricultural practices related to leaving the EU or otherwise. We want to take a proportionate, targeted approach

which facilitates entry into land management schemes and provides opportunities for payments for ecosystem services, for the benefit of agricultural businesses and the environment.

The Welsh Government recognises an approach which integrates good practice within the regulatory framework may represent significant change, particularly for those not already following good practice advice. The need to address pollution issues affecting the environment now, with protection in the long term, while providing sufficient time and support for such change to be adopted, will require a balanced approach.

Responses to consultations on the implementation of the Nitrates Directive, the regulations governing the storage of silage and slurry and the sustainable management of natural resources have all been considered in the development of the proposal. Stakeholder engagement has also informed the approach, including the work of the Wales Land Management Forum sub-group on agricultural pollution, which has also informed the development of this impact assessment. In addition, stakeholders have been afforded the opportunity to submit further evidence which they believe the Minister should consider when making a decision on the proposal.

The measures the Welsh Government proposes are designed to improve the baseline regulations to increase the capability of farms to manage nutrients more effectively. While it is not possible to establish the exact scale of the impact this will have due to limited data on land-spreading activities, the measures will provide the foundation upon which additional losses of nutrients can be prevented through further measures, including through payments for environmental outcomes. The potential of earned autonomy may also provide flexibility for farms to achieve the same outcomes in ways which are better suited to individual businesses.

Further work will be undertaken with stakeholders, including the Wales Land Management Forum sub-group on agricultural pollution on the delivery of the proposal. This will include building upon the work facilitated by Farming Connect, to ensure farm infrastructure improvements are approached in the most cost effective way, which has the potential to reduce the economic impact on farm businesses.

Funding for measures to aid compliance with the proposals has already been provided through the Rural Development Programme. Additional funding will be considered as part of the delivery of any resulting regulations.

The Covid-19 pandemic has been considered carefully as part of the proposal, to ensure the industry is able to implement the necessary changes with minimal disruption. As the risks associated with the impact of the pandemic can change at any time, transitional periods have been proposed to ensure the burden of implementation is spread over a number of years, providing a balance of providing positive environmental outcomes, whilst giving farmers time to understand and comply with the requirements.

The measures have been designed to contribute to the delivery of the Well-being of Future Generations Act and the principles embedded with Prosperity for All.

CONCLUSION

The development of the proposal has been informed by a number of consultations including on the storage of silage and slurry, the sustainable management of natural resources and on Nitrate Vulnerable Zones in Wales. Stakeholder engagement and the work of the Wales Land Management Forum sub-group on agricultural pollution has also been considered and taken into account. Welsh Government officials of relevant policy areas have been consulted during the development of the proposal to ensure co-ordinated approach with other policies, particularly in relation to water quality and the development of future land management schemes.

The proposal has the potential to impact upon the people, culture, Welsh language, economy and environment of Wales. The most significant impacts relate to the effect of the proposals on farm businesses and the environment. Agricultural businesses have identified concerns regarding the implementation of regulatory requirements. There are many agricultural businesses operating to very high, environmentally sustainable standards of production. The burden of paperwork and the economic impact were raised as significant challenges. The greatest economic issue raised relates to the investment in achieving compliance with the proposed slurry storage standards. These costs vary from minor clean and dirty separation actions to replacement stores requiring substantial investment. This is a commercial decision for the farmer but these types of capital investments can be financially supported through the Rural Development Programme. Where shortfalls in slurry storage exist, this investment is necessary to manage manures in a way which prevents pollution and replacement costs are inevitable when stores reach the end of their lifespan.

Where good practice guidance is already being followed and existing regulatory requirements are being met, the proposed measures will have minimal impact. A high level of non-compliance with regulatory standards relating to storage has been observed on farms producing slurry. Those businesses will face the greatest challenge as the most significant costs associated with the proposal relate to the additional storage needed by those not meeting existing requirements. Some tenant farmers may face particular challenges due to restrictive clauses in their tenancy agreements. The Welsh Government recognises this issue and is committed to modernise tenancy law to facilitate longer-term investments in sustainable land management practices and productivity improvements.

The other main cost attributed to the proposal is an annual reduction in yield due to the avoidance of spreading fertiliser at high risk times and in high risk areas. The economic impact will depend on the ability of farms to utilise nutrients more efficiently, to increase yields, such as through the use of precision spreading

technology. Agricultural contractor businesses may also face particular challenges, where measures restrict activities during the winter when nutrient losses are greater, due to the ability to retain staff during these periods.

The impact of non-conformity could have detrimental implications in respect of infraction costs and for future trade with European and worldwide markets, where the competitive advantage of a lower regulatory baseline may attract consequences which negate that cost benefit. There is uncertainty on these issues due to the negotiations on leaving the European Union but the associated risks for certain elements of the agriculture sector are considered to be high.

The economic impact on other sectors and individuals may also be significant. The viability of many rural businesses are dependent on water quality. Wales' fisheries provide jobs and incomes in commercial and recreational fishing, fisheries management and tourism. The economic benefits are particularly important in remote rural areas and areas with low income levels. The Water companies in Wales also benefit from improved water quality through reduced treatment costs, which can benefit household incomes through their water bills. The positive implications for rural populations supports the viability of Welsh culture and language. Whilst the Covid-19 pandemic continues the agricultural industry and related supply chains have responded positively and continue to perform comparatively well against 5 years averages. The inclusion of increased transitional periods will further minimise the initial impact of the regulations and mitigate against the potential impacts associated with exiting the EU and the pandemic.

Ministers are required to have due regard to the United Nations Convention on the Rights of the Child when exercising any of their functions. Infants are more susceptible to the effects of elevated levels of pollutants in drinking-water, especially bottle-fed infants. Each year in Wales, private water supplies fail to meet standards due to microbial and chemical parameters, which puts the health and development of children at risk. The proposal aims to enhance the environment, providing clean water for drinking and for play, improving opportunities for healthy activities in a safe environment.

The proposal is expected to have a positive impact on public health more generally. The reduction of nutrient and faecal pathogen losses to the environment provides improved access to safe outdoor recreational activities, improved mental well-being and improved access to clean drinking water. There may be some negative consequences for health due to the cost implications for farm businesses, which has the potential to contribute to the detrimental economic conditions affecting health of individuals. The potential negative impact of additional regulatory requirements on mental well-being, particularly where other economic or health challenges already exist, is also recognised.

The natural environment is a key element of Welsh culture and heritage. It also provides significant opportunities for outdoor recreation. The health of the environment at landscape scale, catchment scale or individual waterbodies is crucially important in supporting enjoyment of the countryside. Reduced nutrient losses from agriculture to the environment will be beneficial in helping to reverse the decline in biodiversity. An all-Wales approach will enhance ecological networks. Ecosystem improvements will support climate change mitigation and adaptation.

Sustainable farming is crucial for food production, access to the countryside, supporting a healthy population and for the provision of clean air and water. Financial support through the Rural Development Programme has already been provided and promoted through Farming Connect for measures which will be necessary to tackle agricultural pollution. The Welsh Government will continue to support the agricultural industry through advice, guidance and capital investment.

The programme of measures will be reviewed every 4 years to ensure they are effective and reflect the latest evidence available. This process will involve consultation with affected individuals and representative organisations.



Llywodraeth Cymru
Welsh Government

WRITTEN STATEMENT BY THE WELSH GOVERNMENT

TITLE **Control of Agricultural Pollution Regulations**

DATE **27 January 2021**

BY **Lesley Griffiths, Minister for Environment, Energy and Rural Affairs**

Today, I announce my decision to introduce regulations, which apply to the whole of Wales, to address the significant and ongoing effect of agricultural pollution on the health and quality of our rivers, lakes and streams.

Clean water is essential for life in Wales, for drinking, the health of our population, for food production and our natural environment. Too many rivers are currently polluted by agricultural activities from acute incidents of point source discharges to water and the cumulative effect of diffuse pollution. As a result, we fail to meet public expectation and our environmental standards. The number of agricultural pollution incidents remains far too high, averaging over 3 per week in the last 3 years demonstrating no long-term downward trend. We need to do better and raise the quality of our water courses across Wales by preventing incidents like these and managing wider diffuse pollution risks.

The Regulations I am introducing set a clear and consistent baseline, ensuring all farmers understand what actions they need to take to join those who are already protecting our rich environment and managing manures as a valuable source of nutrients rather than a waste product. The measures are proportionate to the risks of pollution from agricultural practices; some farmers will see a minimal impact whilst others will need time and support to improve.

The baseline standards established by these Regulations are not excessive. They establish standards of production in Wales comparable to those which apply in the rest of the UK and Europe. Formalising good practice standards in this way is not only important to protect our environment and well-being, it is critical to Welsh businesses maintaining European markets and accessing those further afield. These Regulations ensure our regulatory baseline is set at the appropriate level, in accordance with principles of the EU Trade and Cooperation agreement, to avoid future tariffs on exports to the EU, the equivalent of a no-deal scenario for Welsh agriculture.

Whilst these regulations have been developed primarily to prevent the unacceptable pollution of watercourses, other environmental considerations have been taken into

account. The implementation of the regulations will see nutrients used more efficiently on farms, resulting in lower losses of ammonia to the atmosphere. The regulations are a key part of reducing greenhouse gas emissions from agriculture to improve air quality and the whole Wales approach reflects the advice from the UK Climate Change Committee in their report “Land Use: Policies for a net zero UK”.

This decision has been taken following a lengthy period of consideration and engagement. I have given the industry every opportunity to demonstrate a change in behaviours through voluntary action. Some progress has been made over the last 4 years but not enough to demonstrate the scale, rate and commitment to change needed.

Before making a decision, I wanted to ensure the industry is in a position to be able to implement any new regulations. There remains uncertainty from the impacts of the Covid 19 pandemic on our agri food supply chain, but market price for agriculture produce remains buoyant and the introduction of the EU UK Trade and Cooperation Agreement removes the threat of export tariffs. I have included transitional periods within the regulations to reduce the immediate requirements on the industry. This will enable farmers to meet the initial good practice requirements which will be introduced from 1 April 2021 and provide sufficient time for planning and preparing for the additional requirements.

It will be necessary for some farms to invest in improvements in their infrastructure. Many farmers have already taken the opportunity to improve their nutrient management, to continue to maintain their high performance and market position, often with financial assistance from the Welsh Government. Up to September 2020 we provided £22m through the Sustainable Production Grant scheme to support infrastructure investments with over 500 applicants invited to submit full applications. For 2021, an additional £1.5 million has been made available to help farmers improve water quality and £11.5m of capital funding will be used to directly support farm businesses to improve on farm nutrient management infrastructure.

The introduction of the regulations will be supported by appropriate guidance and an effective knowledge transfer programme. Farming Connect have already held over 400 related events including soils and farm infrastructure clinics, priority catchment area meetings, Sustainable Farming and Farming for the Future events with close to 13,000 farmers in attendance.

This action on agricultural pollution is part of a suite of measures to improve water quality across Wales. I made £4.5m available in 2020/21 to tackle pollution from mine water sources, which is another major source of water pollution in Wales.

I recognise the farming industry has long advocated its own approach to nutrient management, including greater flexibility of farm practice in response to the environmental conditions. The regulation includes an opportunity for the industry to demonstrate how they might achieve this working within the framework of the regulations to deliver better outcomes in respect of water quality and atmospheric emissions. Any proposals considered by Welsh Ministers would need to meet the national minimum standard set out and maintained by this legislation.

Agricultural pollution has affected waterbodies across Wales for far too long and I am determined to act to protect the Welsh countryside for our future. This legislation, together with appropriate guidance, support and enforcement will make a step change in the quality of our Welsh environment and the sustainability of our agricultural industry.

Agenda Item 5.2

SL(5)741 – The M4 Motorway (Junction 28 (Tredegar Park) to Junction 24 (Coldra)) (50 mph Speed Limit) Regulations 2021

Background and Purpose

These Regulations impose a maximum speed limit of 50 miles per hour (in place of the national speed limit) on the lengths of the M4 motorway specified in the Schedule to these Regulations.

These Regulations also revoke the M4 Motorway (West of Junction 23A (Magor) to East of Junction 29 (Castleton)) (Variable Speed Limits) Regulations 2015.

Procedure

Negative

The Regulations were made by the Welsh Ministers before they were laid before the Senedd.

The Senedd can annul the Regulations within 40 days (excluding any days when the Senedd is: (i) dissolved, or (ii) in recess for more than four days) of the date they were laid before the Senedd.

Technical Scrutiny

No points are identified for reporting under Standing Order 21.2 in respect of this instrument.

Merits Scrutiny

The following point is identified for reporting under Standing Order 21.3 in respect of this instrument.

1. Standing Order 21.3(ii) – that it is of political or legal importance or gives rise to issues of public policy likely to be of interest to the Senedd

The Explanatory Memorandum and the Regulatory Impact Assessment have been laid in English only.

Standing Order 15.4 requires documents to be laid bilingually where reasonably practicable.

This point has been raised recently in relation to other statutory instruments. The Welsh Government responded by explaining that, whilst an increasing proportion of these documents are being laid bilingually, they are having to prioritise a limited translation resource very strictly at the moment. Covid and Brexit related legislation and guidance for the public are the top priority.



It was also explained that they have considered the relevant Welsh language standard and have considered guidance provided by the Welsh Language Commissioner's office.

Welsh Government response

A Welsh Government response is not required.

Legal Advisers

Legislation, Justice and Constitution Committee

10 February 2021



Senedd Cymru

Pwyllgor Deddfwriaeth, Cyfiawnder a'r Cyfansoddiad

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Welsh Parliament

Legislation, Justice and Constitution Committee

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W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 101 (W. 27)

ROAD TRAFFIC, WALES

**The M4 Motorway (Junction 28
(Tredegar Park) to Junction 24
(Coldra)) (50 mph Speed Limit)
Regulations 2021**

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations impose a maximum speed limit of 50 miles per hour (in place of the national speed limit) on the lengths of the M4 motorway specified in the Schedule to these Regulations.

These Regulations also revoke the M4 Motorway (West of Junction 23A (Magor) to East of Junction 29 (Castleton)) (Variable Speed Limits) Regulations 2015.

The Welsh Ministers' Code of Practice on the carrying out of Regulatory Impact Assessments was considered in relation to these Regulations. As a result, a regulatory impact assessment has been prepared as to the likely costs and benefits of complying with these Regulations. A copy can be obtained from: Orders Branch, Transport, Welsh Government, Cathays Park, Cardiff, CF10 3NQ or TransportOrdersBranch@gov.wales.

W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 101 (W. 27)

ROAD TRAFFIC, WALES

**The M4 Motorway (Junction 28
(Tredegar Park) to Junction 24
(Coldra)) (50 mph Speed Limit)
Regulations 2021**

Made 29 January 2021

Laid before Senedd Cymru 2 February 2021

Coming into force 28 February 2021

The Welsh Ministers, in exercise of the powers conferred on them by section 17(2), (3) and (3ZAA) of the Road Traffic Regulation Act 1984⁽¹⁾, and after consultation with such representative organisations as were thought fit in accordance with section 134(10) of that Act, make the following Regulations.

Title, commencement and interpretation

1.—(1) The title of these Regulations is the M4 Motorway (Junction 28 (Tredegar Park) to Junction 24 (Coldra)) (50 mph Speed Limit) Regulations 2021, and they come into force on 28 February 2021.

(2) In these Regulations, “the M4 motorway” means the M4 London to South Wales motorway.

Imposition of speed limit

2. No person may drive a motor vehicle at a speed exceeding 50 miles per hour on the lengths of the M4 motorway specified in the Schedule.

(1) 1984 c. 27. Section 17(2) was amended by the New Roads and Street Works Act 1991 (c. 22), Schedule 8, paragraph 28(3) and the Road Traffic Act 1991 (c. 40), Schedule 4, paragraph 25 and Schedule 8. Section 17(3ZAA) was inserted by the Wales Act 2017 (c. 4), section 26(2).

Revocation

3. The M4 Motorway (West of Junction 23A (Magor) to East of Junction 29 (Castleton)) (Variable Speed Limits) Regulations 2015⁽¹⁾ are hereby revoked.

Ken Skates

Minister for Economy, Transport and North Wales,
one of the Welsh Ministers
29 January 2021

⁽¹⁾ S.I. 2015/1018 (W. 72).

SCHEDULE Regulation 2
**THE SPECIFIED LENGTHS OF THE
M4 MOTORWAY**

The specified lengths of the M4 motorway are—

- a) The length of the westbound carriageway from a point 675 metres west of the centre line of the Bishton to Llanmartin overbridge to a point 80 metres west of the centre point of Forge Road underbridge.
- b) The length of the eastbound carriageway from a point 64 metres east of its junction with the junction 28 (Tredegar Park) eastbound exit slip road to a point 229 metres east of its junction with the junction 24 (Coldra) eastbound entry slip road.
- c) The length of the eastbound off slip road at junction 24 (Coldra) from its junction with the main eastbound carriageway to a point 123 metres west of its junction with the circulatory carriageway of the A48/A449 Coldra Interchange.
- d) The length of the westbound off slip road at junction 24 (Coldra) from its junction with the main westbound carriageway to a point 114 metres east of its junction with the circulatory carriageway of the A48/A449 Coldra Interchange.
- e) The length of the westbound on slip road at junction 24 (Coldra) from a point 6 metres west of its junction with the circulatory carriageway of the Coldra Interchange to its junction with the main westbound carriageway.
- f) The length of the westbound off slip road at junction 25 (Caerleon) from its junction with the main westbound carriageway to its junction with the B4596 Caerleon roundabout circulatory carriageway.
- g) The length of the eastbound on slip road at junction 25 (Caerleon) from its junction with the B4596 Caerleon roundabout circulatory carriageway to its junction with the main eastbound carriageway.
- h) The length of the westbound off link road at junction 25A (Grove Park) from its junction with the main westbound carriageway to its junction with the A4042.
- i) The length of the eastbound on link road at junction 25A (Grove Park) from its junction

- with the A4042 to its junction with the main eastbound carriageway.
- j) The length of the eastbound off slip road, including the left turn lane, at junction 26 (Malpas) from its junction with the main eastbound carriageway to its junction with the A4051 Malpas roundabout circulatory carriageway.
 - k) The length of the westbound off slip road at junction 26 (Malpas) from its junction with the main westbound carriageway to its junction with the A4051 Malpas roundabout circulatory carriageway.
 - l) The length of the eastbound on slip road at junction 26 (Malpas) from its junction with the A4051 Malpas roundabout circulatory carriageway to its junction with the main eastbound carriageway.
 - m) The length of the westbound on slip road at junction 26 (Malpas) from its junction with the A4051 Malpas roundabout circulatory carriageway to its junction with the main westbound carriageway.
 - n) The length of the eastbound off slip road at junction 27 (High Cross) from its junction with the main eastbound carriageway to its junction with the B4591 High Cross roundabout circulatory carriageway.
 - o) The length of the westbound off slip road at junction 27 (High Cross) from its junction with the main westbound carriageway to its junction with the B4591 High Cross roundabout circulatory carriageway.
 - p) The length of the eastbound on slip road at junction 27 (High Cross) from its junction with the B4591 High Cross roundabout circulatory carriageway to its junction with the main eastbound carriageway.
 - q) The length of the westbound on slip road at junction 27 (High Cross) from its junction with the B4591 High Cross roundabout circulatory carriageway to its junction with the main westbound carriageway.
 - r) The length of the westbound off slip road at junction 28 (Tredegar Park) from its junction with the main westbound carriageway to a point 270 metres north of its junction with the main circulatory carriageway of Tredegar Park Interchange.
 - s) The length of the eastbound on slip road at junction 28 (Tredegar Park) from a point 45 metres north of its junction with the A48/A467 roundabout circulatory

carriageway to its junction with the main eastbound carriageway.

Explanatory Memorandum to the M4 Motorway (Junction 28 (Tredegar Park) to Junction 24 (Coldra)) (50mph Speed Limit) Regulations 2021

This Explanatory Memorandum has been prepared by the Department for Economic Infrastructure and is laid before Senedd Cymru in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1.

Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of the M4 Motorway (Junction 28 (Tredegar Park) to Junction 24 (Coldra)) (50mph Speed Limit) Regulations 2021. I am satisfied that the benefits outweigh any costs.

Ken Skates MS

Minister for Economy, Transport and North Wales

02 February 2021

PART 1 – EXPLANATORY MEMORANDUM

1. Description

These regulations (the Regulations) revoke the M4 Motorway (West of Junction 23A (Magor) to East of Junction 29 (Castleton)) (Variable Speed Limits) Regulations 2015 and impose a maximum speed limit of 50 mph on the lengths of the M4 Motorway between Junction 28 (Tredegar Park) and Junction 24 (Coldra) specified in the Schedule to the Regulations.

2. Matters of special interest to the Legislation, Justice and Constitution Committee

None.

3. Legislative Background

The powers enabling this instrument to be made are under sections 17(2), (3) and (3ZAA) of the Road Traffic Regulation Act 1984 (RTRA). These give the Welsh Ministers the power to make provision by regulations with respect to a particular special road (such as a motorway) in Wales and for regulating the speed of vehicles on such roads in Wales.

This instrument is to be made following the negative procedure.

4. Purpose and intended effect of the legislation

The Regulations allow for the operation and enforcement of a 50 mph mandatory speed limit in relation to the lengths of the M4 specified in the schedule to the Regulations.

The imposition of the mandatory 50 mph speed limit will help to maintain the safe passage of vehicles and is expected to reduce carbon dioxide emissions and improve air quality.

5. Implementation

If this legislation were to be annulled, road safety would be compromised and nitrogen dioxide levels at this location would remain above the acceptable levels. This Instrument has a coming into force date of 28 February 2021.

6. Consultation

In accordance with section 134(10) of the RTRA, the views of representative organisations were sought between 19 November 2020 and 10 December 2020. No representations were made to the Welsh Government within the consultation period

The list of consultees and summary of any responses is attached in the Annex to this Explanatory Memorandum.

7. Regulatory Impact Assessment

The Welsh Ministers' Code of Practice on the carrying out of Regulatory Impact Assessments was considered in relation to these Regulations and a Regulatory Impact Assessment has been conducted and is set out in Part 2 of this document.

PART 2 – REGULATORY IMPACT ASSESSMENT

1. Options

Option 1: Do Nothing

If the legislation were not made, the existing regulations that set a Variable Speed Limit (VSL) would remain. The VSL was introduced in 2011 as a method to reduce congestion. Its underlying principle is to keep traffic moving by adjusting the speed limit, helping to make journeys safer and more reliable. Variable message signs installed on posts and overhead gantries were installed to display reduced speed limit information. Fixed cameras were also installed to monitor traffic flows.

In 2016, the fixed cameras were used to enforce the VSL to further improve traffic flow and reduce the number of collisions. Speed enforcement through the use of roadside cameras is managed and coordinated by GoSafe, a multi-agency partnership comprising all highway authorities within Wales and the four Welsh police forces. Within that partnership structure the Welsh Government owns and installs the cameras located on the M4 Motorway and the police, as the enforcement authority, are responsible for operating them and carrying out enforcement on a day-to-day basis.

Option 2: Revocation of the existing regulations to allow a 50mph mandatory Speed Limit to be in operation

Making the legislation on this section of the M4 Motorway around Newport would be consistent with the recommendations published by Lord Burns' South East Wales Traffic Commission (SEWTC). The SEWTC put forward three short-term solutions to help ease congestion on the M4 around Newport, the first being the removal of the VSL, the second was to provide additional lane guidance on the westbound approach to the Brynglas tunnels and the third measure was to enhance Welsh Government Traffic Officer support by formalising response time targets and extending the range of patrolling.

A permanent 50mph is anticipated to improve traffic flow during the peak times by achieving a smoother traffic flow, minimising the effects from vehicles speeding up and slowing down which cause a ripple effect in congestion.

2. Costs and benefits

a) Costs

Option 1: Do Nothing

There are no additional costs associated with retention of the existing VSL 50mph on the M4 Motorway between J24 and J28.

Option 2: Revocation of the existing regulations to allow a permanent 50mph mandatory speed limit to be in operation

The costs of the removing the VSL and replacing it with the proposed speed limit are approximately £2.3m and include the new camera infrastructure required and removal of the current VSL signage.

b) Benefits

We have identified the benefits for both options as follows:

Option 1: Do Nothing

The benefits of retaining the existing VSL allow the speed limit to be varied according to traffic conditions. During periods of no congestion on an incident-free carriageway, no variable speed limit signs or signals would be set allowing the national speed limit to be applied. However at busy times or in the event of an incident, sensors detect congestion and the current system calculates the optimum speed limit for the current amount of traffic.

Option 2: Revocation of the existing regulations to allow a 50mph mandatory speed limit to be in operation

The SEWTC found that the current VSL was a contributing factor to the breakdown of flow on the M4 around Newport, especially on the approaches to the Brynglas tunnels. It was found that the VSL had limited impacts on improving traffic flow during peak times. Therefore the proposed speed limit is expected to have better journey time reliability in the peak flows due to smoother traffic flow.

Making the legislation would also remove intermittent differential speed limits (for example, 3 variable message signs displaying 50mph, followed by 40mph, followed by 50mph) which can result in driver dissatisfaction.

It is also expected to improve road safety by reducing the risk of collisions, reduce carbon dioxide emissions and improve air quality.

3. Competition Assessment

It is considered that this proposed legislation will not have any detrimental effect on competition as it is solely intended to ensure the safe and free passage of vehicles by removing a variable speed limit that is no longer required following a review of its suitability during peak hour flow.

4. Post implementation review

All changes to the trunk road and motorway network that may impact on road user behaviour or result in a change to the outcome of a collision are subject to independent Road Safety Audit (RSA).

A Stage 1/2 RSA was undertaken following completion of detailed design of the works to install a mandatory 50 mph speed limit and further RSAs will be carried out all works have been completed (Stage 3) and 12-months and 36-months following completion of the works (Stages 4 and 4a).

Officials are required to consider the problems identified at each stage of the RSA process and take appropriate action in mitigation.

ANNEX

CONSULTEES FOR DRAFT REGULATIONS November – December 2020

Organisation	Response
Newport City Council	No comment
Gwent Police	No comment
South Wales Fire & Rescue Service HQ	No comment
Welsh Ambulance Services NHS Trust	No comment
Road Haulage Association Ltd.	No comment
Freight Transport Association	No comment
NAVTEQ	No comment
Trafficmaster Travel	No comment
South Wales Trunk Road Agent Manager	No comment
'Go Safe'	No comment
Ministry of Justice	No comment
HERE	No comment

Agenda Item 5.3

SL(5)743 – The Non-Domestic Rating (Unoccupied Property) (Wales) (Amendment) Regulations 2021

Background and Purpose

The Regulations amend Regulation 5 of the Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008 such that the temporary period of occupancy required before receiving a subsequent period of Empty Property Rates Relief is extended. The period is extended from six weeks to 26 weeks.

The policy intent is to reduce a widely known method of abuse of the six-week period by disingenuous persons in order to claim repeated cycles of rates relief, which is against the policy intention of the relief scheme.

The aim of the six-week period was to ensure there is no disadvantage for owners who regularly let to genuine short-term occupants. However, there is extensive evidence that the six-week period is being exploited to claim continuous cycles of Empty Property Rates Relief. The temporary period of occupancy is often artificial and contrived, with examples of cardboard boxes, pallets, posters or a Bluetooth transmitter being stored in an otherwise empty property. The Welsh Government and local authorities believe that by requiring a 26-week period of occupancy, where full rates are paid, these artificial arrangements would be discouraged.

Procedure

Negative

Technical Scrutiny

No points are identified for reporting under Standing Order 21.2 in respect of this instrument.

Merits Scrutiny

The following point is identified for reporting under Standing Order 21.3 in respect of this instrument.

1. Standing Order 21.3(ii) – that it is of political or legal importance or gives rise to issues of public policy likely to be of interest to the Senedd

These Regulations, although being laid now, do not come into force until April next year. The Explanatory Memorandum states that:

“The Regulations have a commencement date of 1 April 2022 to allow time for ratepayers, local authorities and other stakeholders to prepare for changes.”



Welsh Government response

A Welsh Government response is not required.

Legal Advisers

Legislation, Justice and Constitution Committee

15 February 2021



Senedd Cymru

Pwyllgor Deddfwriaeth, Cyfiawnder a'r Cyfansoddiad

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Welsh Parliament

Legislation, Justice and Constitution Committee

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W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 118 (W. 31)

**RATING AND VALUATION,
WALES**

**The Non-Domestic Rating
(Unoccupied Property) (Wales)
(Amendment) Regulations 2021**

EXPLANATORY NOTE

(This note is not part of the Regulations)

Regulation 4(a) and (b) of the Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008 (“the 2008 Regulations”) excludes from liability for non-domestic rates under section 45 of the Local Government Finance Act 1988 any hereditaments which have been continuously unoccupied for three months or less, or in the case of a qualifying industrial hereditament, six months or less.

Both classes of hereditaments are subject to regulation 5 of the 2008 Regulations which provides that an unoccupied hereditament which becomes occupied on any day is to be treated as being continuously unoccupied for the purposes of regulation 4(a) and (b) if it becomes unoccupied again on the expiration of a period of less than six weeks beginning with that day.

Regulation 2 of these Regulations amends regulation 5 of the 2008 Regulations so that an unoccupied hereditament which becomes occupied for a period of 26 weeks or less before becoming unoccupied again is to be treated as being continuously unoccupied for the purposes of regulation 4(a) and (b) of the 2008 Regulations.

The Welsh Ministers’ Code of Practice on the carrying out of Regulatory Impact Assessments was considered in relation to these Regulations. As a result, a regulatory impact assessment has been prepared as to the likely costs and benefits of complying with these Regulations. A copy can be obtained at the Local Government Strategic Finance Division, Welsh Government, Cathays Park, Cardiff, CF10 3NQ.

W E L S H S T A T U T O R Y
I N S T R U M E N T S

2021 No. 118 (W. 31)

**RATING AND VALUATION,
WALES**

**The Non-Domestic Rating
(Unoccupied Property) (Wales)
(Amendment) Regulations 2021**

Made 3 February 2021

Laid before Senedd Cymru 4 February 2021

Coming into force 1 April 2022

The Welsh Ministers make the following Regulations in exercise of the powers conferred on the Secretary of State by section 45(1)(d), (9) and (10) of the Local Government Finance Act 1988⁽¹⁾ and now vested in them⁽²⁾.

Title and commencement

1. The title of these Regulations is the Non-Domestic Rating (Unoccupied Property) (Wales) (Amendment) Regulations 2021 and they come into force on 1 April 2022.

**Amendment to the Non-Domestic Rating
(Unoccupied Property) (Wales) Regulations 2008**

2. In regulation 5 of the Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008⁽³⁾, for “six weeks” substitute “26 weeks”.

-
- (1) 1988 c. 41. Section 45(1)(d) was amended, and subsections (9) and (10) were inserted, by the Local Government and Housing Act 1989 (c. 42), Schedule 5. See section 146(6) for the definition of “prescribed”.
- (2) The functions of the Secretary of State contained in the Local Government Finance Act 1988 were transferred, so far as exercisable in relation to Wales, to the National Assembly for Wales by virtue of the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672, article 2, Schedule 1). By virtue of section 162 of, and paragraph 30 of Schedule 11 to, the Government of Wales Act 2006 (c. 32) those functions are now vested in the Welsh Ministers.
- (3) S.I. 2008/2499 (W. 217).

Rebecca Evans

Minister for Finance and Trefnydd, one of the Welsh
Ministers

3 February 2021

Explanatory Memorandum to the Non-Domestic Rating (Unoccupied Property) (Wales) (Amendment) Regulations 2021

This Explanatory Memorandum has been prepared by the Local Government Strategic Finance Division of the Welsh Government and is laid before Senedd Cymru in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1.

Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of the Non-Domestic Rating (Unoccupied Property) (Wales) (Amendment) Regulations 2021. I am satisfied that the benefits justify the likely costs.

Rebecca Evans MS
Minister for Finance and Trefnydd
4 February 2021

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PART 1: EXPLANATORY MEMORANDUM

1. Description

The Regulations, from 1 April 2022, extend the period of occupancy required between claiming periods of Empty Property Rates Relief from six weeks to 26 weeks. A suite of policy measures intended at addressing the known methods of fraud and avoidance within the non-domestic rates system was announced on 16 October 2018. These Regulations enact one such measure and the intent to introduce this Statutory Instrument was announced on 14 January 2021.

The Statutory Instrument amends the Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008. Regulation 5 is amended to state:

*“A hereditament which has been unoccupied and becomes occupied on any day is to be treated as having been continuously unoccupied for the purposes of regulation 4(a) and (b) if it becomes unoccupied again on the expiration of a period of less than **26 weeks** beginning with that day.”*

Regulation 5 previously stated:

*“A hereditament which has been unoccupied and becomes occupied on any day is to be treated as having been continuously unoccupied for the purposes of regulation 4(a) and (b) if it becomes unoccupied again on the expiration of a period of less than **six weeks** beginning with that day.”*

These Regulations will have the effect of increasing the period of occupation required between periods of Empty Property Rates Relief from six weeks to 26 weeks.

2. Matters of Special Interest to the Legislation, Justice and Constitution Committee

The Regulations have a commencement date of 1 April 2022 to allow time for ratepayers, local authorities and other stakeholders to prepare for changes.

3. Legislative background

Section 45 of the Local Government Finance Act 1988 provides that owners of unoccupied non-domestic hereditaments are liable to pay non-domestic rates (up to 100% of the normal charge for occupied hereditaments) if certain conditions apply. One condition is that the hereditament falls into a class prescribed by the Welsh Ministers (section 45(1)(d)).

The Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008 Regulations set out when a ratepayer is liable to pay non-domestic rates in accordance with section 45.

Regulation 4 provides a list of hereditaments that do not fall within the scope of section 45(1)(d) and as such would not pay non-domestic rates in respect of those hereditaments. The list includes (but is not limited to):

- hereditaments which, subject to Regulation 5, have been empty for up to three months (Regulation 4(a)); and
- “qualifying industrial hereditaments” which, subject to Regulation 5, have been empty for up to six months (Regulation 4(b)).

A ‘qualifying industrial hereditament’ is defined in Regulation 2 as a hereditament, other than a retail hereditament, where all the buildings which comprise the hereditament are:

- constructed or adapted for use in the course of a trade or business; and
- constructed or adapted for use for one or more of the following purposes, or one or more such purposes and one or more purposes ancillary thereto:
 - the manufacture, repair or adaptation of goods or materials, or the subjection of goods or materials to any process;
 - storage (including the storage or handling of goods in the course of their distribution); the working or processing of minerals;
 - and the generation of electricity.

Regulation 5 currently provides that if at any time a hereditament which is caught by Regulation 4(a) or (b) is subsequently occupied for a temporary period of at least six weeks where full rates are paid by the occupier, the relief period is reset and the owner is then eligible for another cycle of three or six months relief. These Regulations amend Regulation 5 such that the temporary occupation period is now a longer period of 26 weeks.

4. Purpose and Intended Effect of the Legislation

The Regulations amend Regulation 5 of the Non-Domestic Rating (Unoccupied Property) (Wales) Regulations 2008 such that the temporary period of occupancy required before receiving a subsequent period of Empty Property Rates Relief is extended. The period is extended from six weeks to 26 weeks.

The policy intent is to reduce a widely known method of abuse of the six-week period by disingenuous persons in order to claim repeated cycles of rates relief, which is against the policy intention of the relief scheme.

The aim of the six-week period was to ensure there is no disadvantage for owners who regularly let to genuine short-term occupants. However, there is extensive evidence that the six-week period is being exploited to claim continuous cycles of Empty Property Rates Relief. The temporary period of occupancy is often artificial and contrived, with examples of cardboard boxes, pallets, posters or a Bluetooth transmitter being stored in an otherwise empty property. The Welsh Government and local authorities believe that by requiring a 26-week period of occupancy, where full rates are paid, these artificial arrangements would be discouraged.

The Regulations will have the effect of increasing the temporary period of occupancy, ensuring ratepayers are required to occupy a premises for a substantial period of time before receiving subsequent relief.

5. Consultation

A 12-week consultation took place in the summer of 2018 on the policy behind the Regulations, alongside other non-domestic rates fraud and avoidance proposals, with policy intentions announced in October 2018. A subsequent six-week technical consultation took place between 1 October 2020 and 12 November 2020 on draft regulations for this specific policy change.

The consultation on the suite of policy measures can be found at:

<https://gov.wales/tackling-avoidance-non-domestic-rates-wales>

The technical consultation on draft regulations for this specific measure can be found at: <https://gov.wales/empty-property-rates-relief>

PART 2: REGULATORY IMPACT ASSESSMENT

Options

Option 1 – Do Nothing

This option would result in no legislation being brought forward and no changes to Empty Property Rates Relief. Instances of a widely known method of rates avoidance would not be reduced.

Option 2 – Increase the six-week period to 26 weeks from 1 April 2022

This option would increase the temporary occupancy period from six weeks to 26 weeks and would take effect from 1 April 2022.

Costs and benefits

Option 1 – Do Nothing

The identified method of avoidance would continue to be prevalent in Wales, representing a loss in non-domestic rates revenue which is a vital source of funding for local government services. It is not possible to quantify accurately the extent of this financial loss from this method alone. Data extraction from local authority systems in 2017 estimated the total loss of rates from a number of different methods was up to £20 million a year. However, based on practitioner expertise, this method of avoidance is estimated to account for the largest portion of the total loss to the non-domestic rates pool.

Option 2 – Increase the six-week period to 26 weeks from 1 April 2022

This option would result in the implementation of planned changes being implemented from 1 April 2022. This option would be expected to result in an increase in local government funding. Implementation in 2022 serves to factor in economic impacts of coronavirus and enable those impacted by changes time to prepare prior to commencement.

Option selection

The Welsh Government has committed to tackling non-domestic rates fraud and avoidance and has a long-term programme in place, comprising a range of policy and legislative changes. Abuse of Empty Property Rates Relief through artificial arrangements is a widely known method, often applied through commission-based rates mitigation schemes. There have been a number of challenges against these arrangements in the courts but it is the legal view that the artificial arrangements constitute occupation of an otherwise empty property.

Governments of other nations of the UK have considered how to reduce rates avoidance for a number of years. It is considered that by requiring a longer than six-week period of temporary occupation for future relief cycles, the financial

incentives to avoid rates are altered enough to ensure avoidance is no longer financially viable.

Option 2 is the Welsh Government's preferred option.

Analysis of other effects and impacts

Promoting Economic Opportunity for All (Tackling Poverty)

Increasing the temporary occupancy period discourages disingenuous behaviour and aims to ensure vital funding for local government services is protected. The long lead time before commencement enables ratepayers, local authorities and other stakeholders with more than twelve months in which to plan for the changes ahead, due to the difficult circumstances experienced by many as a result of the coronavirus pandemic.

UNCRC

No particular impact on the rights of children has been identified.

Welsh language

No effect on the opportunities to use the Welsh language or the equal treatment of the language has been identified.

Equalities

No specific impacts, positive or negative, on persons who share a protected characteristic (as determined by the Equality Act 2010) have been identified.

Well-being of Future Generations (Wales) Act 2015

Increasing the temporary occupancy period is intended to result in a reduction in the amount of local government funding lost to non-domestic rates avoidance. Protecting local government funding enables local authorities to better provide local services to their communities.

Impact on the voluntary sector

There are marginal risks that short-term lets in the charity sector may be negatively impacted by these Regulations, though the number of lets for a genuine charitable purpose for only a six-week period is few. These impacts will be monitored.

Competition assessment

A competition filter test has been applied to the Regulations. Ratepayers in Wales may be negatively impacted in comparison to those in England as a result of the change. A similar policy is already in effect in Scotland.

Post implementation review

The Welsh Government will monitor the impact of the change on the non-domestic rates pool as well as specific impacts on ratepayers, sectors, local authorities and other stakeholders. The Welsh Government will carry out this work through its regular representative fora and working groups.

Agenda Item 5.4

SL(5)736 – The Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021

Background and Purpose

These Regulations provide for the licensing of persons involved in Wales in selling animals as pets and make it an offence for commercial third parties to sell puppies and kittens under 6 months.

These Regulations specify activities for the purposes of section 13(1) of the Animal Welfare Act 2006 (“the 2006 Act”) and provides for local authorities to be the licensing authorities. As such, subject to qualifying criteria, any person wishing to carry on any of these activities in Wales must obtain a licence from the local authority under these Regulations. These requirements replace the requirements, in Wales, to obtain a licence under the Pet Animals Act 1951.

A person who carries on any of these activities in Wales without a licence will commit an offence under section 13(6) of the 2006 Act and is liable to imprisonment for a term of up to six months, a fine or both. Under section 30 of the 2006 Act, local authorities may prosecute for any offence under the Act.

The Regulations set out how a person may apply to the local authority for a licence and sets out matters in respect of which a local authority must be satisfied when considering the grant or renewal of a licence. The Regulations provide for a local authority to charge fees to cover the costs it incurs in performing this function, considering a licence holder’s compliance with the Regulations, enforcement and administration. The Regulations specify that a local authority must attach certain licence conditions to each licence granted or renewed. Further, a local authority must appoint an inspector when it considers it appropriate, for the purpose of ensuring that the licence conditions are being complied with. The Regulations require a local authority to have regard to guidance issued by the Welsh Ministers in carrying out their functions, and provides powers for inspectors to take samples from animals.

Procedure

Draft Affirmative.

Technical Scrutiny

The following points are identified for reporting under Standing Order 21.2 in respect of this instrument.



1. Standing Order 21.2 (vi) – that its drafting appears to be defective or it fails to fulfil statutory requirements

It appears that the reference in Schedule 1, paragraph 3(b), may be incorrect. Paragraph 3 provides for certain exemptions to paragraph 2 of Schedule 1, which concerns selling animals as pets. Paragraph 3(a) provides an exemption for certain aquaculture production businesses. Paragraph 3(b) exempts “the activity described in paragraph 8 of Schedule 2”. However, Schedule 2 provides for “general conditions” that apply to all licensable activities. Paragraph 8 provides as follows:

“Animal handling and interactions

8—(1) All people responsible for the care of the animals must be competent in the appropriate handling of each animal to protect it from pain, suffering, injury or disease.

(2) The animals must be kept separately or in suitable compatible social groups appropriate to the species and individual animals and no animals from a social species may be isolated or separated from others of their species for any longer than is necessary.

(3) The animals must have at least daily opportunities to interact with people where such interaction benefits their welfare.”

Merits Scrutiny

The following points are identified for reporting under Standing Order 21.3 in respect of this instrument.

2. Standing Order 21.3(i) – that it imposes a charge on the Welsh Consolidated Fund or contains provisions requiring payments to be made to that Fund or any part of the government or to any local or public authority in consideration of any licence or consent or of any services to be rendered, or prescribes the amount of any such charge or payment.

Regulation 12 of these Regulations allows local authorities to charge fees to cover the costs incurred in performing their licensing functions.

3. Standing Order 21.3(ii) - that it is of political or legal importance or gives rise to issues of public policy likely to be of interest to the Senedd

Full consideration of the regulations has not been undertaken as on 3 February 2021, the Welsh Government announced that a new version of the Regulations would be laid. The Welsh Government’s statement explained the circumstances as follows:

“In order to address a small, but important, error in the original version laid on 27 January, with regret, I have to advise I will shortly be laying a new version of the draft Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021.

The overall intention of the policy behind these Regulations, which will replace section 1(1) of the Pet Animals Act 1951, is to reflect best practice in the sale of puppies and kittens. Allowing commercial third parties to sell puppies and kittens means, in most



cases, purchasers will not see the puppy or kitten interacting with the bitch/ queen or the siblings.

Officials are working at pace to resolve the matter and a new debate date has been set for 23 March 2021. This delay is not anticipated to affect the coming into force date of these regulations which is the 10th September 2021."

Welsh Government response

A Welsh Government response is required to reporting point 1, above.

Legal Advisers

Legislation, Justice and Constitution Committee

12 February 2021



Draft Regulations laid before Senedd Cymru in accordance with section 61(2) of the Animal Welfare Act 2006, for approval by resolution of Senedd Cymru.

DRAFT WELSH STATUTORY
INSTRUMENTS

2021 No. (W.)

ANIMALS, WALES

**The Animal Welfare (Licensing of
Activities Involving Animals)
(Wales) Regulations 2021**

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations provide for the licensing of persons involved in Wales in selling animals as pets.

Regulation 3 specifies these activities for the purposes of section 13(1) of the Animal Welfare Act 2006 (“the 2006 Act”) and provides for local authorities to be the licensing authorities. The consequence of this specification is that, subject to qualifying criteria, any person wishing to carry on any of these activities in Wales must obtain a licence from the local authority under these Regulations. These requirements replace the requirements, in Wales, to obtain a licence under the Pet Animals Act 1951.

A person who carries on any of these activities in Wales without a licence under these Regulations commits an offence under section 13(6) of the 2006 Act and is liable to imprisonment for a term of up to 6 months, a fine or both. Under section 30 of the 2006 Act, local authorities may prosecute for any offence under that Act.

Part 2 of the Regulations sets out how a person may apply to the local authority for a licence and sets out matters in respect of which a local authority must be satisfied when considering the grant or renewal of a licence. It provides for a local authority to charge fees to cover the costs it incurs in performing this function, considering a licence holder’s compliance with these Regulations, enforcement and administration. It specifies that a local authority must attach certain licence conditions to each licence granted or renewed. It provides that a local authority must appoint an

inspector when it considers it appropriate, for the purpose of ensuring that the licence conditions are being complied with. It requires a local authority to have regard to guidance issued by the Welsh Ministers in carrying out their functions under these Regulations. It provides powers for inspectors to take samples from animals.

Part 3 sets out the circumstances and procedures under which a licence may be suspended, varied or revoked. It also provides that the breach of a condition of a licence or the obstruction of any inspector appointed for the purposes of enforcement of these Regulations is an offence and applies relevant post-conviction powers contained in the 2006 Act.

Part 4 provides for appeals against licensing decisions by local authorities.

Part 5 makes repeals, consequential amendments and saving provision.

Part 6 sets out that local authorities must provide certain information to the Welsh Ministers.

Schedule 1 describes each type of licensable activity.

Schedule 2 sets out the general conditions that apply to all licensable activities.

Schedule 3 sets out the specific conditions that apply to each licensable activity.

Schedule 4 lists persons who may not apply for a licence.

Schedule 5 provides for repeals and consequential amendments.

The Welsh Ministers' Code of Practice on the carrying out of Regulatory Impact Assessments was considered in relation to these Regulations. As a result, a regulatory impact assessment has been prepared as to the likely costs and benefits of complying with these Regulations in Wales. A copy can be obtained from the Office of the Chief Veterinary Officer, Welsh Government, Cathays Park, Cardiff CF10 3NQ or by emailing a request to: CompanionAnimalWelfare@gov.wales.

Draft Regulations laid before Senedd Cymru in accordance with section 61(2) of the Animal Welfare Act 2006, for approval by resolution of Senedd Cymru.

DRAFT WELSH STATUTORY
INSTRUMENTS

2021 No. (W.)

ANIMALS, WALES

**The Animal Welfare (Licensing of
Activities Involving Animals)
(Wales) Regulations 2021**

Made

Coming into force

10 September 2021

The Welsh Ministers, as the appropriate national authority in relation to Wales⁽¹⁾, make the following Regulations in exercise of the powers conferred by section 13(2), (7), (8) and (10) of, and Parts 1 and 3 of Schedule 1 to, the Animal Welfare Act 2006⁽²⁾.

In accordance with section 13(9) of that Act, the Welsh Ministers have consulted those persons appearing to them to represent interests with which these Regulations are concerned as they considered appropriate.

In accordance with section 61(2) of that Act⁽³⁾, a draft of this instrument has been laid before, and approved by resolution of, Senedd Cymru.

(1) The “appropriate national authority” is defined in section 62(1) of the Animal Welfare Act 2006 (c. 45). Functions conferred on the National Assembly for Wales are now vested in the Welsh Ministers by virtue of section 162 of, and paragraphs 30 and 32 of Schedule 11 to, the Government of Wales Act 2006 (c. 32).

(2) 2006 c. 45.

(3) By virtue of section 162 of, and paragraph 34 of Schedule 11 to, the Government of Wales Act 2006, the reference in section 61(2) to “House of Parliament” includes Senedd Cymru.

PART 1

Introduction

Title, commencement and application

1.—(1) The title of these Regulations is the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021.

(2) These Regulations come into force on 10 September 2021.

(3) These Regulations apply to Wales except paragraph 2 of Schedule 5 which applies to both England and Wales.

Interpretation

2. In these Regulations—

“the Act” (“*y Ddeddf*”) means the Animal Welfare Act 2006;

“general condition” (“*amod cyffredinol*”) means the conditions set out in Schedule 2;

“kitten” (“*cath fach*”) means a cat aged less than 6 months;

“licence” (“*trwydded*”), except as the context otherwise requires in regulation 10(1)(b) or where more specifically provided, means a licence to carry on a licensable activity granted or renewed under these Regulations and cognate expressions are to be construed accordingly;

“licence conditions” (“*amodau trwydded*”) means—

(a) the general conditions, and

(b) the relevant specific conditions;

“licensable activity” (“*gweithgaredd trwyddedadwy*”) means an activity described in paragraph 2 of Schedule 1;

“local authority” (“*awdurdod lleol*”) means the council for a county or county borough in Wales;

“operator” (“*gweithredwr*”) means an individual who—

(a) carries on, attempts to carry on or knowingly allows to be carried on a licensable activity, or

(b) where a licence has been granted or renewed, is the licence holder;

“pet” (“*anifail anwes*”) means an animal mainly or permanently, or intended to be mainly or permanently, kept by a person for—

(a) personal interest,

(b) companionship,

(c) ornamental purposes, or

(d) any combination of paragraphs (a) to (c);
“puppy” (“*ci bach*”) means a dog aged less than 6 months;

“relevant specific conditions” (“*amodau penodol perthnasol*”) means, in relation to the activity of selling animals as pets (or with a view to their being later resold as pets) as described in paragraph 2 of Schedule 1, the conditions set out in Schedule 3;

“veterinary surgeon” (“*milfeddyg*”) means a person registered in the register of veterinary surgeons, or the supplementary veterinary register, kept under the Veterinary Surgeons Act 1996⁽¹⁾.

Licensing of operators

3.—(1) Each licensable activity is a specified activity for the purposes of section 13(1) of the Act.

(2) A local authority is the licensing authority for any licensable activity carried on in premises in its area.

PART 2

Grant, renewal and variation with consent of a licence and inspection of premises

Conditions of grant or renewal of a licence

4.—(1) This regulation applies where—

- (a) a local authority has received from an operator an application in writing for the grant or renewal of a licence to carry on a licensable activity on premises in the local authority’s area, and
- (b) the application gives such information as the local authority has required.

(2) The local authority must—

- (a) appoint one or more suitably qualified inspectors to inspect any premises on which the licensable activity or any part of it is being or is to be carried on, and
- (b) following that inspection, grant a licence to the operator, or renew the operator’s licence, in accordance with the application if it is satisfied that—
 - (i) the licence conditions will be met,
 - (ii) any appropriate fee has been paid in accordance with regulation 12, and

⁽¹⁾ 1971 c. 80.

(iii) the grant or renewal is appropriate having taken into account the report submitted to it in accordance with regulation 9.

(3) A local authority must attach to each licence granted or renewed—

- (a) the general conditions, and
- (b) the relevant specific conditions.

(4) In considering whether the licence conditions will be met, a local authority must take account of the applicant's conduct as the operator of the licensable activity to which the application for the grant or renewal relates, whether the applicant is a fit and proper person to be the operator of that activity and any other relevant circumstances.

(5) A local authority must not grant a licence to an operator, or renew an operator's licence, in any circumstances other than those described in these Regulations.

(6) All licences granted or renewed in relation to any of these licensable activities are subject to the licence conditions.

Period of licence

5. A local authority may grant or renew a licence for any period up to 1 year.

Power to take samples from animals

6. An inspector may, for the purposes of ensuring the licence conditions are being complied with, take samples for laboratory testing from any animals on premises occupied by an operator.

Duty to assist in the taking of samples from animals

7. An operator must comply with any reasonable request of an inspector to facilitate the identification and examination of an animal and the taking of samples in accordance with regulation 6 and, in particular, must arrange the suitable restraint of an animal if so requested by an inspector.

Variation or revocation of a licence on the application, or with the consent, of a licence holder

8. A local authority may at any time vary or revoke a licence—

- (a) on the application in writing of the licence holder, or
- (b) on its own initiative, with the consent in writing of the licence holder.

Inspector's report

9.—(1) Where a local authority arranges an inspection pursuant to regulation 4(2)(a), it must arrange for the submission to it of a report by the inspector.

(2) The inspector's report must—

- (a) contain information about the operator, any relevant premises, any relevant records, the condition of any animals and any relevant matter, and
- (b) state whether or not the inspector considers that the licence conditions will be met.

Persons who may not apply for a licence

10.—(1) The following persons may not apply for a licence in respect of any licensable activity—

- (a) a person listed as a disqualified person in paragraphs 2 to 8 of Schedule 4 where the time limit for any appeal against that disqualification has expired or where, if an appeal was made, that appeal was refused;
- (b) a person listed in paragraph 1 of Schedule 4 as having held a licence which was revoked where the time limit for any appeal against that revocation has expired or where, if an appeal was made, that appeal was refused.

(2) Any licence granted or renewed, or held by, a person mentioned in paragraph (1)(a) or (b) is automatically revoked.

Death of a licence holder

11.—(1) In the event of the death of a licence holder, the licence is deemed to have been granted to, or renewed in respect of, the personal representatives of that former licence holder.

(2) In the circumstances described in paragraph (1), the licence is to remain in force for 3 months beginning with the date of the death of the former licence holder or for as long as it was due to remain in force but for the death (whichever period is shorter) but remain subject to the provisions in Part 2.

(3) The personal representatives must notify in writing the local authority which granted or renewed the licence that they are now the licence holders within 28 days beginning with the date of the death of the former licence holder.

(4) If the personal representatives fail so to notify the local authority within the period specified in paragraph (3), the licence ceases to have effect on the expiry of that period.

(5) The local authority which granted or renewed the licence may, on the application of the personal representatives, extend the period specified in paragraph (2) for up to 3 months if it satisfied that the extension is necessary for the purpose of winding up the estate of the former licence holder and is appropriate in all the circumstances.

Fees

12.—(1) A local authority may charge such fees as it considers necessary for—

- (a) the consideration of an application for the grant, renewal or variation of a licence including any inspection relating to that consideration, and for the grant, renewal or variation,
- (b) the reasonable anticipated costs of consideration of a licence holder's compliance with these Regulations and the licence conditions to which the licence holder is subject in circumstances other than those described in sub-paragraph (a) including any inspection relating to that consideration,
- (c) the reasonable anticipated costs of enforcement in relation to any licensable activity of an unlicensed operator, and
- (d) the reasonable anticipated costs of compliance with regulation 26.

(2) The fee charged for the consideration of an application for the grant, renewal or variation of a licence and for any inspection relating to that consideration must not exceed the reasonable costs of that consideration and related inspection.

Guidance

13. A local authority must have regard in the carrying out of its functions under these Regulations to such guidance as may be issued by the Welsh Ministers.

PART 3

Enforcement and notices

Grounds for suspension, variation without consent or revocation of a licence

14. A local authority may, without any requirement for the licence holder's consent, decide to suspend, vary or revoke a licence at any time on being satisfied that—

- (a) the licence conditions are not being complied with,
- (b) there has been a breach of these Regulations,
- (c) information supplied by the licence holder is false or misleading,
- (d) it is necessary to protect the welfare of an animal, or
- (e) the licence holder would not be able to apply for a new licence in accordance with regulation 10.

Procedure for suspension or variation without consent

15.—(1) Except as otherwise provided in this regulation, the suspension or variation of a licence following a decision under regulation 14 has effect at the end of a period of 7 working days beginning with the date on which notice of the decision is issued to the licence holder or, if that date is not a working day, the next working day.

(2) If it is necessary to protect the welfare of an animal, the local authority may specify in the notice of its decision that the suspension or variation has immediate effect.

(3) A decision to suspend or vary a licence must—

- (a) be notified to the licence holder in writing,
- (b) state the local authority's grounds for suspension or variation,
- (c) state when it comes into effect,
- (d) specify measures that the local authority considers are necessary in order to remedy the grounds, and
- (e) explain the right of the licence holder to make written representations in accordance with paragraph (4) and give details of the person to whom such representations may be made and the date by the end of which they must be received.

(4) The licence holder may make written representations which must be received by the local authority within 7 working days beginning with the date of issue of notice of the decision under regulation 14 to suspend or vary the licence or, if that date is not a working day, the next working day.

(5) Except in relation to notices under paragraph (2), where a licence holder makes written representations which are received by the local authority within the period specified in paragraph (4), the suspension or variation is not to have effect unless the local authority, after considering the representations, suspends or varies the licence in accordance with paragraph (6)(a).

(6) Within 7 working days beginning with the date of receipt of any representations made in accordance with paragraph (5), the local authority must, after considering the representations—

- (a) suspend or vary the licence,
- (b) cancel its decision under regulation 14 to suspend or vary the licence,
- (c) confirm the suspension or variation of the licence under paragraph (2), or
- (d) reinstate the licence if it has been suspended, or cancel its variation if it has been varied, under paragraph (2).

(7) The local authority must issue to the licence holder written notice of its decision under paragraph (6) and the reasons for it within 7 working days beginning with the date of receipt of any representations made in accordance with paragraph (4) or, if that date is not a working day, beginning with the next working day.

(8) The local authority's decision under paragraph (6) is to have effect on service of its notice under paragraph (7).

(9) Paragraph (10) applies if the local authority fails to comply with paragraph (6) or (7).

(10) Where this paragraph applies, after 7 working days beginning with the date of receipt of any representations made in accordance with paragraph (4) or, if that date is not a working day, beginning with the next working day—

- (a) a licence suspended under paragraph (2) is to be deemed to be reinstated;
- (b) a licence varied under paragraph (2) is to be deemed to have effect as if it had not been so varied;
- (c) a licence suspended under paragraph (6)(a) is to be deemed to be reinstated;
- (d) a licence varied under paragraph (6)(a) is to be deemed to have effect as if it had not been so varied;
- (e) any licence held by the licence holder other than a licence suspended or varied under paragraph (2) or (6)(a) which the local authority decided to suspend or vary under regulation 14 is to be deemed to remain in force and not to be so varied.

(11) Once a licence has been suspended for 28 days, the local authority must on the next working day—

- (a) reinstate it without varying it,
- (b) vary and reinstate it as varied, or
- (c) revoke it.

(12) If the local authority fails to comply with paragraph (11), the licence is to be deemed to have been reinstated without variation with immediate effect.

Reinstatement of a suspended licence by a local authority

16.—(1) A local authority must reinstate a suspended licence by way of written notice once it is satisfied that the grounds specified in the notice of suspension have been or will be remedied.

(2) Where a local authority reinstates a licence under paragraph (1), it may reduce the period for which it is reinstated.

Notice of revocation

17.—(1) A revocation decision must—

- (a) be notified in writing to the licence holder,
- (b) state the local authority's grounds for revocation, and
- (c) give notice of the licence holder's rights of appeal to a magistrates' court and the period under regulation 23 within which such an appeal may be brought.

(2) The decision has effect on service of the notice.

Obstruction of inspectors

18. A person must not intentionally obstruct an inspector appointed for the purposes of the enforcement of these Regulations in the exercise of any powers conferred by or under the Act.

Offences

19.—(1) It is an offence for a person, without lawful authority or excuse—

- (a) to breach a licence condition;
- (b) to fail to comply with regulation 7 or 18.

(2) A person who commits an offence under paragraph (1) is liable on summary conviction to a fine.

Powers of entry

20. Breach of a licence condition must be treated as a relevant offence for the purposes of section 23 of the Act (entry and search under warrant in connection with offences).

Post-conviction powers

21. The relevant post-conviction powers contained in sections 34 and 42 of the Act apply in relation to a conviction for an offence under regulation 19.

Notices

22.—(1) Any notice issued by a local authority under these Regulations may be amended, suspended or revoked by the local authority in writing at any time.

(2) A notice may be served on a person by—

- (a) personal delivery,
- (b) leaving it or sending it by post to the person's current or last known postal address, or
- (c) emailing it to the person's current or last known email address.

PART 4

Appeals

Appeals

23.—(1) Any operator who is aggrieved by a decision by a local authority to refuse to grant or renew, or the decision to revoke, a licence may appeal to a magistrates' court.

(2) The procedure on an appeal to a magistrates' court under paragraph (1) is by way of complaint, and the Magistrates' Courts Act 1980(1) applies to the proceedings.

(3) The period within which an appeal may be brought is 28 days beginning with the day following the date on which the decision is notified.

PART 5

Repeals, consequential amendments and saving provision

Repeals and consequential amendments

24. Schedule 5 (repeals and consequential amendments) is to have effect.

(1) 1980 c. 43.

Saving provision

25. Any unexpired licence granted in accordance with the provisions of the Pet Animal Act 1951⁽¹⁾ continues in force for the remainder of its term subject to the provisions of that Act as it had effect on the relevant date.

PART 6

Provision of information to the Welsh Ministers

Provision of information to the Welsh Ministers

26.—(1) Each local authority must provide the following information to the Welsh Ministers in writing—

- (a) the number of licences in force in its area on each reference date, and
- (b) the average level of fees it has charged for licences it has granted or renewed in each reference period.

(2) Each local authority must provide the information to the Welsh Ministers—

- (a) in electronic form, or secure that it is accessible to the Welsh Ministers in electronic form, and
- (b) no later than the next 31 May following the relevant reference date.

(3) In this regulation—

“reference date” (“*dyddiad cyfeirio*”) means 31 March;

“reference period” (“*cyfnod cyfeirio*”) means the period beginning with 10 September 2021 and ending with 31 March 2022 and each subsequent period of 12 months beginning with the 1 April.

Name

Minister for Environment, Energy and Rural Affairs,
one of the Welsh Ministers

Date

(1) 1951 c. 35 (14 & 15 Geo 6).

SCHEDULE 1

Licensable activities

PART 1 Business test

1. The circumstances which a local authority must take into account in determining whether an activity is being carried on in the course of a business for the purposes of this Schedule include, for example, whether the operator—

- (a) makes any sale by, or otherwise carries on, the activity with a view to making a profit, or
- (b) earns any commission or fee from the activity.

PART 2 Selling animals as pets

2. Selling animals as pets (or with a view to their being later resold as pets) in the course of a business including keeping animals in the course of a business with a view to their being sold or resold.

3. The activity described in paragraph 2 does not include—

- (a) selling animals in the course of an aquaculture production business authorised under regulation 5(1) of the Aquatic Animal Health (England and Wales) Regulations 2009⁽¹⁾, or
- (b) the activity described in paragraph 8 of Schedule 2.

⁽¹⁾ S.I. 2009/463.

SCHEDULE 2

General conditions

Licence display

1.—(1) A copy of the licence must be clearly and prominently displayed on any premises on which the licensable activity is carried on.

(2) The name of the licence holder followed by the number of the licence holder's licence must be clearly and prominently displayed on any website used in respect of the licensable activity.

Records

2.—(1) The licence holder must ensure that at any time all the records that the licence holder is required to keep as a condition of the licence are available for inspection by an inspector in a visible and legible form or, where any such records are stored in electronic form, in a form from which they can readily be produced in a visible and legible form.

(2) The licence holder must keep all such records for at least 3 years beginning with the date on which the record was created.

Use, number and type of animal

3.—(1) No animals or types of animal other than those animals and types of animal specified in the licence may be used in relation to the relevant licensable activity.

(2) The number of animals kept for the licensable activity at any time must not exceed the maximum that is reasonable taking into account the facilities and staffing on any premises on which the licensable activity is carried on.

Staffing

4.—(1) Sufficient numbers of people who are competent for the purpose must be available to provide a level of care that ensures that the welfare needs of all the animals are met.

(2) The licence holder or a designated manager and any staff employed to care for the animals must have competence to identify the normal behaviour of the species for which they are caring and to recognise signs of, and take appropriate measures to mitigate or prevent, pain, suffering, injury, disease or abnormal behaviour.

(3) The licence holder must provide and ensure the implementation of a written training policy, which complies with the requirements of paragraph 9, for all staff.

Suitable environment

5.—(1) All areas, equipment and appliances to which the animals have access must present minimal risks of injury, illness and escape and must be constructed in materials that are robust, safe and durable, in a good state of repair and well maintained.

(2) Animals must be kept at all times in an environment suitable to their species and condition (including health status and age) with respect to—

- (a) their behavioural needs;
- (b) its situation, space, air quality, cleanliness and temperature;
- (c) the water quality (where relevant);
- (d) noise levels;
- (e) light levels;
- (f) ventilation.

(3) Staff must ensure that the animals are kept clean and comfortable.

(4) Where appropriate for the species, a toileting area and opportunities for toileting must be provided.

(5) Procedures must be in place to ensure accommodation and any equipment within it is cleaned as often as necessary and good hygiene standards are maintained and the accommodation must be capable of being thoroughly cleaned and disinfected.

(6) The animals must be transported and handled in a manner (including for example in relation to housing, temperature, ventilation and frequency) that protects them from pain, suffering, injury and disease.

(7) All the animals must be easily accessible to staff and for inspection and there must be sufficient light for the staff to work effectively and observe the animals.

(8) All resources must be provided in a way (for example as regards, frequency, location and access points) that minimises competitive behaviour or the dominance of individual animals.

(9) The animals must not be left unattended in any situation or for any period likely to cause them distress.

Suitable diet

6.—(1) The animals must be provided with a suitable diet in terms of quality, quantity and frequency and any new feeds must be introduced gradually to allow the animals to adjust to them.

(2) Feed and (where appropriate) water intake must be monitored, and any problems recorded and addressed.

(3) Feed and drinking water provided to the animals must be unspoilt and free from contamination.

(4) Feed and drinking receptacles must be capable of being cleaned and disinfected, or disposable.

(5) Constant access to fresh, clean drinking water must be provided in a suitable receptacle for the species that requires it.

(6) Where feed is prepared on the premises on which the licensable activity is carried on, there must be hygienic facilities for its preparation, including a working surface, hot and cold running water and storage.

Monitoring of behaviour and training of animals

7.—(1) Active and effective environmental enrichment must be provided to the animals in inside and any outside environments.

(2) For species whose welfare depends partly on exercise, opportunities to exercise which benefit the animals' physical and mental health must be provided, unless advice from a veterinary surgeon suggests otherwise.

(3) The animals' behaviour and any changes of behaviour must be monitored and advice must be sought, as appropriate and without delay, from a veterinary surgeon or, in the case of fish, any person competent to give such advice if adverse or abnormal behaviour is detected.

(4) Where used, training methods or equipment must not cause pain, suffering or injury.

(5) All immature animals must be given suitable and adequate opportunities to—

- (a) learn how to interact with people, their own species and other animals where such interaction benefits their welfare, and
- (b) become habituated to noises, objects and activities in their environment.

Animal handling and interactions

8.—(1) All people responsible for the care of the animals must be competent in the appropriate handling of each animal to protect it from pain, suffering, injury or disease.

(2) The animals must be kept separately or in suitable compatible social groups appropriate to the species and individual animals and no animals from a social species may be isolated or separated from others of their species for any longer than is necessary.

(3) The animals must have at least daily opportunities to interact with people where such interaction benefits their welfare.

Protection from pain, suffering, injury and disease

9.—(1) Written procedures must—

- (a) be in place and implemented covering—
 - (i) feeding regimes;
 - (ii) cleaning regimes;
 - (iii) transportation;
 - (iv) the prevention of, and control of the spread of, disease;
 - (v) monitoring and ensuring the health and welfare of all the animals;
 - (vi) the death or escape of an animal (including the storage of carcasses);
- (b) be in place covering the care of the animals following the suspension or revocation of the licence or during and following an emergency.

(2) All people responsible for the care of the animals must be made fully aware of these procedures.

(3) Appropriate isolation, in separate self-contained facilities, must be available for the care of sick, injured or potentially infectious animals.

(4) All reasonable precautions must be taken to prevent and control the spread among the animals and people of infectious diseases, pathogens and parasites.

(5) All excreta and soiled bedding for disposal must be stored and disposed of in a hygienic manner and in accordance with any relevant legislation.

(6) Sick or injured animals must receive prompt attention from a veterinary surgeon or, in the case of fish, an appropriately competent person and the advice of that veterinary surgeon or, in the case of fish, that competent person must be followed.

(7) Where necessary, animals must receive preventative treatment by an appropriately competent person.

(8) The licence holder must register with a veterinary surgeon with an appropriate level of experience in the health and welfare requirements of any animals specified in the licence and the contact details of that veterinary surgeon must be readily available to all staff on the premises on which the licensable activity is carried on.

(9) Prescribed medicines must be stored safely and securely to safeguard against unauthorised access, at the correct temperature, and used in accordance with the instructions of the veterinary surgeon.

(10) Medicines other than prescribed medicines must be stored, used and disposed of in accordance with the instructions of the manufacturer or veterinary surgeon.

(11) Cleaning products must be suitable, safe and effective against pathogens that pose a risk to the animals and must be used, stored and disposed of in accordance with the manufacturer's instructions and used in a way which prevents distress or suffering of the animals.

(12) No person may euthanize an animal except a veterinary surgeon or a person who has been authorised by a veterinary surgeon as competent for such purpose or in the case of fish, a person who is competent for such purpose.

(13) All animals must be checked at least once daily and more regularly as necessary to check for any signs of pain, suffering, injury, disease or abnormal behaviour and vulnerable animals must be checked more frequently.

(14) Any signs of pain, suffering, injury, disease or abnormal behaviour must be recorded and the advice and further advice (if necessary) of a veterinary surgeon (or in the case of fish, of an appropriately competent person) must be sought and followed.

Emergencies

10.—(1) A written emergency plan, acceptable to the local authority, must be in place, known and available to all the staff on the premises on which the licensable activity is carried on, and followed where necessary to ensure appropriate steps are taken to protect all the people and animals on the premises in case of fire or in case of breakdown of essential heating, ventilation and aeration or filtration systems or other emergencies.

(2) The plan must include details of the emergency measures to be taken for the extrication of the animals should the premises become uninhabitable and an emergency telephone list that includes the fire service and police.

(3) External doors and gates must be lockable.

(4) A designated key holder with access to all animal areas must at all times be within reasonable travel distance of the premises and available to attend in an emergency.

SCHEDULE 3

Specific conditions: selling animals as pets

Interpretation

1. In this Schedule—

“prospective owner” (“*darpar berchennog*”) means a person purchasing an animal to keep or to be kept as a pet;

“premises” (“*mangre*”) means the premises on which the licensable activity of selling animals as pets (or with a view to their being later resold as pets) is carried on;

“purchaser” (“*prynwr*”) means a person purchasing an animal to keep as a pet or with a view to it later being resold as a pet.

Records and advertisements

2.—(1) A register must be maintained for all the animals or, in the case of fish, all the groups of fish, on the premises which must include—

- (a) the full name of the supplier of the animal,
- (b) the animal’s sex (where known),
- (c) (except in the case of fish) the animal’s age (where known),
- (d) details of any veterinary treatment (where known),
- (e) the date of birth of the animal or, if the animal was acquired by the licence holder, the date of its acquisition,
- (f) the date of the sale of the animal by the licence holder, and
- (g) the date of the animal’s death (if applicable).

(2) Where an animal is undergoing any medical treatment—

- (a) this fact must be clearly indicated—
 - (i) in writing next to it, or
 - (ii) (where appropriate) by labelling it accordingly, and
- (b) it must not be sold.

(3) Any advertisement for the sale of an animal must—

- (a) include the number of the licence holder’s licence,
- (b) specify the local authority that issued the licence,

- (c) include a recognisable photograph of the animal being advertised,
- (d) (except in the case of fish) display the age of the animal being advertised,
- (e) state the country of residence of the animal from which it is being sold, and
- (f) state the country of origin of the animal.

Prospective sales: pet care and advice

3.—(1) The licence holder and all staff must ensure that any equipment and accessories being sold with an animal are suitable for the animal.

(2) The licence holder and all staff must ensure that the prospective owner is provided with information on the appropriate care of the animal including in relation to—

- (a) feeding,
- (b) housing,
- (c) handling,
- (d) husbandry,
- (e) the life expectancy of its species,
- (f) the provision of suitable accessories, and
- (g) veterinary care.

(3) Appropriate reference materials on the care of all animals for sale must be on display and provided to the prospective owner.

(4) The licence holder and all staff must have been suitably trained to advise prospective owners about the animals being sold.

(5) The licence holder and all staff must ensure that the purchaser is informed of the country of origin of the animal and the species, and where known, the age, sex and veterinary record of the animal being sold.

Suitable accommodation

4.—(1) Animals must be kept in housing which minimises stress including from other animals and the public.

(2) Where members of the public can view or come into contact with the animals, signage must be in place to deter disturbance of the animals.

(3) Dangerous wild animals (if any) must be kept in cages that are secure and lockable and appropriate for the species.

(4) For the purposes of sub-paragraph (3), “dangerous wild animal” means an animal of a kind

specified in the first column of the Schedule to the Dangerous Wild Animals Act 1976⁽¹⁾.

Sale of animals

5.—(1) No animal of any of the following descriptions may be sold as a pet, or sold with a view to being resold as a pet, by or on behalf of the licence holder—

- (a) unweaned mammals;
- (b) mammals weaned at an age at which they should not have been weaned;
- (c) non-mammals that are incapable of feeding themselves;
- (d) puppies, kittens, ferrets or rabbits, aged under 8 weeks;
- (e) puppies or kittens which were not bred by the licence holder.

(2) The sale of a dog must be completed in the presence of the purchaser on the premises.

Protection from pain, suffering, injury and disease

6.—(1) All animals for sale must be in good health.

(2) Any animal with a condition which is likely to affect the quality of life must not be moved, transferred or offered for sale but may be moved to an isolation facility or veterinary care facility if required until the animal has recovered.

(3) When arranging for the receipt of animals, the licence holder must make reasonable efforts to ensure that they will be transported in a suitable manner.

(4) Animals must be transported or handed to purchasers in suitable containers for the species and expected duration of the journey.

(1) 1976 c. 38. The Schedule was substituted in relation to England and Wales by article 2 of S.I. 2007/2465.

SCHEDULE 4

Persons who may not apply for a licence

- 1.** A person who has at any time held a licence which was revoked under regulation 14 of these Regulations.
- 2.** A person who is disqualified under section 33 of the Welfare of Animals Act (Northern Ireland) 2011**(1)**.
- 3.** A person who is disqualified under section 34 of the Act.
- 4.** A person who is disqualified under section 40(1) and (2) of the Animal Health and Welfare (Scotland) Act 2006**(2)**.
- 5.** A person who is disqualified under section 6(2) of the Dangerous Wild Animals 1976**(3)** from keeping a dangerous wild animal.
- 6.** A person who is disqualified under section 5(3) of the Pet Animals Act 1951**(4)** from keeping a pet shop.
- 7.** A person who is disqualified under section 1(1) of the Protection of Animals (Amendment) Act 1954**(5)** from having custody of an animal.
- 8.** A person who is disqualified under section 3 of the Protection of Animals Act 1911**(6)** from the ownership of an animal.

(1) 2011 c. 16.
(2) 2006 asp 11.
(3) 1976 c. 38; section 6(2) has been amended but the amendments are not relevant.
(4) Section 5(3) was amended by paragraph 3(2) of Schedule 3 to the Animal Welfare Act 2006.
(5) 1954 c. 40 (2 & 3 Eliz 2); section 1 was repealed by Schedule 4 to the Animal Welfare Act 2006.
(6) 1911 c. 27 (1 & 2 Geo 5); section 3 was repealed by Schedule 4 to the Animal Welfare Act 2006.

SCHEDULE 5

Repeals and consequential amendments

Pet Animals Act 1951

1. The Pet Animals Act 1951, section 1(1) (restriction on keeping a pet shop) ceases to have effect in relation to Wales.

Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations 2018

2. In Schedule 6(1)(c)(ii) to the Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations 2018, for “the Pet Animals Act 1951 to keep the shop” substitute “regulations 2 and 4 of the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021”.

Explanatory Memorandum to the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021

This Explanatory Memorandum has been prepared by the department for Economy, Skills and Natural Resources of the Welsh Government and is laid before the Senedd Cymru in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1.

Minister/Deputy Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of The Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021. I am satisfied that the benefits justify the likely costs.

Lesley Griffiths AM

Minister for Environment, Energy and Rural Affairs

27 January 2021

Introduction

This document covers both the Explanatory Memorandum (EM) (Part 1) and the Resource Impact Assessment (RIA) (Part 2).

PART 1 – EXPLANATORY MEMORANDUM

1. Description

- 1.1 These Regulations provide for the licensing of persons involved in Wales in selling animals as pets and make it an offence for commercial third parties to sell puppies and kittens under 6 months.
- 1.2 These Regulations will specify activities for the purposes of section 13(1) of the Animal Welfare Act 2006¹ (“the 2006 Act”) and provides for local authorities to be the licensing authorities. The consequence of this specification is that, subject to qualifying criteria, any person wishing to carry on any of these activities in Wales must obtain a licence from the local authority under these Regulations. These requirements replace the requirements, in Wales, to obtain a licence under the Pet Animals Act 1951².
- 1.3 A person who carries on any of these activities in Wales without a licence under these Regulations commits an offence under section 13(6) of the 2006 Act and is liable to imprisonment for a term of up to six months, a fine or both. Under section 30 of the 2006 Act, local authorities may prosecute for any offence under the Act.
- 1.4 The Regulations set out how a person may apply to the local authority for a licence and sets out matters in respect of which a local authority must be satisfied when considering the grant or renewal of a licence. It provides for a local authority to charge fees to cover the costs it incurs in performing this function, considering a licence holder’s compliance with these Regulations, enforcement and administration. It specifies that a local authority must attach certain licence conditions to each licence granted or renewed. It provides that a local authority must appoint an inspector when it considers it appropriate, for the purpose of ensuring that the licence conditions are being complied with. It requires a local authority to have regard to guidance issued by the Welsh Ministers in carrying out their functions under these Regulations. It provides powers for inspectors to take samples from animals.

¹ <https://www.legislation.gov.uk/ukpga/2006/45/contents>

² <https://www.legislation.gov.uk/ukpga/Geo6/14-15/35>

2. Matters of special interest to the Legislation, Justice and Constitution Committee

None.

3. Legislative background

- 3.1 Currently commercial third party sellers of pets in Wales are licensed under section 1(1) of the Pet Animals Act 1951. Section 13 of the AWA enables the repeal of the Pet Animals Act 1951 and provides the power to make regulations for the licensing or registration or activities involving animals.
- 3.2 Schedule 1, Part 1, para 11 (Fees) allow for regulations to include provision for fees or other charges in relation to the carrying out of functions of the licensing authority.
- 3.3 The Welsh Ministers, are the appropriate national authority in relation to Wales³, The Regulations are made in exercise of the powers conferred by sections 13(2), (7), (8) and (10) of, and Parts 1 and 3 of Schedule 1 to, the Animal Welfare Act 2006⁴.
- 3.4 In accordance with section 13(9) of that Act, the Welsh Ministers have consulted those persons appearing to them to represent interests with which these Regulations are concerned as they considered appropriate.
- 3.5 These Regulations follow the Senedd's draft affirmative procedure.
- 3.6 The Regulations will be similar in nature to The Animal Welfare (Licensing of Activities Involving Animals) (England) (Amendment) Regulations 2019⁵ which came into force on 6 April 2020 banning the third party sale of puppies and kittens.

4. Purpose and intended effect of the legislation

- 4.1 The Minister for Energy, Environment and Rural Affairs is proposing the introduction of legislation to ban commercial third party sales of puppies and kittens.
- 4.2 The proposals will change the licensing arrangements for the sale of animals as pets which includes a ban on the commercial third party sale of puppies and kittens. Optimising welfare standards across Wales is a priority and a consequence of the new Regulations is to promote

(3) The “appropriate national authority” is defined in section 62(1) of the Animal Welfare Act 2006 (c. 45). Functions conferred on the National Assembly for Wales are now vested in the Welsh Ministers by virtue of section 162 of, and paragraphs 30 and 32 of Schedule 11 to, the Government of Wales Act 2006 (c. 32)

(4) 2006 c. 45.

⁵ Animal Welfare (Licensing of Activities Involving Animals) (England) (Amendment) Regulations 2019

responsible breeding and ensure puppies and kittens are bred in suitable conditions. A ban on its own cannot tackle all the problems associated with puppy trading. The proposed ban will be one part of the work associated with improvements in welfare standards at dog breeding establishments which include tackling barriers to enforcement.

- 4.3 Legitimate commercial third party sales of puppies and kittens are undertaken by those who are licenced pet sellers: this could be a traditional pet shop type setting, a domestic dwelling, dealers acting as brokers between breeders or breeders who sell puppies from litters they have not bred themselves. Currently in Wales, they are required to hold a licence under the Pet Animals Act 1951.
- 4.4 This new legislation will revoke the relevant section of the Pet Animals Act 1951 and replace it with a new animals activities regulations in Wales titled The Animal Welfare (Licencing of Activities Involving Animals) (Wales) Regulations 2021 will provide for the licensing of persons involved in Wales in selling animals as pets and make it an offence for commercial third parties to sell puppies and kittens under 6 months.
- 4.5 There are concerns commercial third party sales of puppies and kittens may be associated with poorer welfare conditions for the animals compared with direct purchase from the breeder. The introduction to several new and unfamiliar environments, and the increased likelihood of multiple journeys the puppies or kittens have to undertake have the potential to contribute to an increased risk of disease and lack of socialisation and habituation for the puppies and kittens.
- 4.6 The Regulations are being drafted as a first step towards ensuring the welfare of puppies and kittens in Wales, who are currently being bred and sold onto third parties, is improved significantly by being sold only by breeders directly to the new owner. Legislation which relates to the selling of pets should reflect best practice. Allowing commercial third parties to sell puppies and kittens means, in most cases, purchasers will not see the puppy or kitten interacting with the bitch/queen or the siblings or the conditions they have been bred in.

The new Regulations will also:

- Align the licensing process with other Administrations. This is to ensure there are no inconsistencies between the Administrations where some breeders may cross the border to avoid being caught up in the legislation which applies to that region.
- Provide a future opportunity to include other licensed animal welfare establishments including, but not exclusively, horse stables and riding schools.

- Provide a legislative mechanism for future changes to the Animal Welfare (Breeding of Dogs) (Wales) Regulations 2014⁶.
- 4.7 The Regulations will be similar in nature to The Animal Welfare (Licensing of Activities Involving Animals) (England) (Amendment) Regulations 2019⁷ which prohibits the sale of puppies and kittens by third parties and came into force in England on 6 April 2020. The England Regulations do not restrict breeders in England selling puppies and kittens to third party sellers in Wales. The introduction of this new legislation will prevent existing third party sellers in Wales selling puppies and kittens, it will also prevent future third party sellers of puppies and kittens and will provide an opportunity to stop breeders and brokers in England continuing to sell in Wales. Scotland are also bringing forward legislation on this issue.
- 4.8 The 2016 EFRA report ‘Animal Welfare in England: Domestic Pets’⁸ states:
- “Responsible breeders would never sell through a pet shop licence holder. The process of selling through a third party seller has an unavoidable negative impact upon the welfare of puppies. It also distances the purchaser from the environment in which their puppy was bred. Banning third party sales so that the public bought directly from breeders would bring public scrutiny to bear on breeders, thereby improving the welfare conditions of puppies. It would also bring a positive financial impact to breeders, allowing them to retain money that is currently lost in the supply chain. We acknowledge that difficulties of public access, due to a rural location, security issues and diseases, may be challenging for some breeders. On balance, however, we consider it is more important that animal welfare standards are ensured across all breeders. (Paragraph 90)
- “We recommend that the Government ban third party sales of dogs. Dogs should only be available from licensed, regulated breeders or approved rehoming.” organisations.” (Paragraph 91)*
- 4.9 In England, a petition associated with the Lucy’s Law campaign gained over 100,000 signatures and was debated in Parliament on 21 May 2018. The Lucy’s Law campaign called for an immediate ban on the sale of puppies by pet shops and other third-party commercial dealers. The campaigners claimed regulating commercial third party sales is ineffective to prevent harm and a ban is therefore necessary.
- 4.10 Local Authorities across the UK were asked to sign up to the principles of Lucy’s Law. Local Authorities across the UK were asked to sign up to the principles of Lucy’s Law and there was widespread support from Local Authorities in Wales.

⁶ <https://www.legislation.gov.uk/wsi/2014/3266/contents/made>

⁷ <https://www.legislation.gov.uk/ukdsi/2019/9780111186954>

⁸ <https://publications.parliament.uk/pa/cm201617/cmselect/cmenvfru/117/117.pdf>

- 4.11 In February 2018 Defra launched a Call for Evidence for banning third party sales of puppies and kittens in England. They received just over 300 responses and around 70% supported a ban.
- 4.12 The Defra consultation exercise on banning commercial third party sales of puppies and kittens received 6,854 responses in the 4 weeks it ran (22 August – 19 September 2018). The overwhelming majority supported a ban.
- 4.13 Almost from the time Defra announced they intended to ban the third party sales of puppies and kittens Welsh Government has been lobbied, petitioned and repeatedly asked by Assembly Members/Members of the Senedd when Wales would be introducing a ban. Between May 2018 and December 2019 the MEERA received 74 pieces of correspondence and 63 in 2020. The Climate Change, Environment and Rural Affairs committee has also expressed complete support in the bringing forward the legislative changes required.
- 4.14 The Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations 2018 were amended (The Animal Welfare (Licensing of Activities Involving Animals) (England) (Amendment) Regulations 2019) to include a ban on commercial third party sales of puppies and kittens. The ban came into force on 6th April 2020.
- 4.15 In her Oral Statement of 19th June 2018 the Minister for Environment, Energy and Rural Affairs, Lesley Griffiths committed to an investigation of third party sales in Wales. A consultation on the impact of a ban on third party sales of puppies and kittens was launched in early 2019 with a final consultation taking place in 2020.
- 4.16 Both DEFRA and Welsh Government consultations have shown widespread support for banning third party sales of puppies and kittens. However, in Wales, a ban is seen as only one of the steps necessary to improve the welfare of dogs and cats at breeding premises. The combination of new regulations on pet sales and a three year, Welsh Government funded, project tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities for improvements to the enforcement and delivery of the existing The Animal Welfare (Breeding of Dogs) (Wales) Regulations 2014⁹ will result in lasting improvements to the welfare standards of puppies bred in Wales.
- 4.17 This new legislation will revoke the relevant section of the Pet Animals Act 1951 and replace it with a new animals activities regulations in Wales. These Regulations will provide for the licensing of persons involved in Wales in selling animals as pets and make it an offence for commercial third parties to sell puppies and kittens under 6 months.

⁹ <https://www.legislation.gov.uk/wsi/2014/3266/contents/made>

- 4.18 New licensing under the Regulations would improve the welfare of puppies and kittens and dogs and cats used for breeding, aligning the licensing process with other Administrations. This is to ensure there are minimal inconsistencies between the Administrations where some breeders may cross the border to avoid being caught up in the legislation which applies in each country.
- 4.19 This new legislation will also provide a mechanism for future changes to the Animal Welfare (Breeding of Dogs) (Wales) Regulations 2014 and an opportunity to include other licensed animal welfare establishments including, but not exclusively, Horse Stables, Riding Schools, in the future.

5. Consultation

Details of the Welsh Government's consultation activities are available in Part 2 of this document under the RIA considerations.

PART 2 – REGULATORY IMPACT ASSESSMENT

Rationale for intervention and intended effects

- 5.1 In 2019, a public consultation took place which looked at the evidence on what stage the government should intervene in breeding premises to address the concerns about animal welfare. The consultation responses showed widespread support for banning third party sales of puppies and kittens.
- 5.2 A ban is seen as only the first necessary step to improve the welfare of dogs and cats and their offspring. The combination of new Regulations on pet sales and a three year, Welsh Government funded, project tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities for improvements to the enforcement and delivery of the existing Breeding Regulations will result in lasting improvements to the welfare standards of puppies bred in Wales.
- 5.3 Under current rules, it is possible for someone to sell puppies and/or kittens in Wales, in the course of business, without having bred them themselves. Such sales, known as commercial third party sales. The 2016 EFRA Report on Animal Welfare in England: Domestic pets highlights the issues associated with selling through a third party seller commenting on the unavoidable negative impact on the welfare of puppies and the distance of the purchaser from the environment in which the puppy was bred. Also stating banning third party sales so that the public bought directly from the breeder would bring scrutiny to bear on breeders thereby improving welfare conditions of puppies. There is a justification for Welsh Government to intervene to drive up welfare standards.
- 5.4 There are no specific provisions in the subordinate legislation which charge expenditure on the Welsh Consolidated Fund.

6. Options

Options

Policy options considered, including alternatives to regulation

The options considered were:

1. Do nothing (baseline) - Keep the status quo i.e. business as usual.
2. Introduce a licensing or registration scheme which would allow commercial third party sellers to continue to sell puppies and kittens, subject to certain conditions.

3. Introduce a ban on commercial third party sales of puppies and kittens in Wales.

7. Costs and benefits

Option 1: Business as usual – allow commercial third party sellers to continue to sell puppies and kittens

- 7.1 This is the baseline option and as such there are no additional costs or benefits associated with this option.
- 7.2 Business as usual would not meet the Welsh Government commitment to ensuring a high standard of welfare for all animals kept in Wales is maintained at all stages of their life.
- 7.3 Whilst the ‘do nothing’ approach would be cost-neutral for commercial third party sellers and effect no change on Local Authorities, it is clear that the status quo is an insufficient approach to improving and enforcing welfare standards of puppies and kittens being sold in Wales. It would also mean that Wales would most likely see an increase in the numbers of puppies and kittens sold via third party sellers in Wales and/or new pet shops established as the ban on commercial third party sales of puppies and kittens which came into force in England on 6 April 2020 specifies puppies and kittens can be sold to third party sellers in Wales.
- 7.4 Scotland are also planning to introduce legislation to ban third party sales of puppies and kittens which could leave Wales in a vulnerable position.
- 7.5 The existing licensing regime will continue. Licences are issued/renewed on an annual basis following inspection.
- 7.6 For Local Authorities, Regulation 12 of the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021 allows them to charge such fees as considered necessary for the consideration of an application for the grant of a licence, or its renewal or variation, including any inspection relating to that consideration, and for the actual grant, renewal or variation of a licence. Fees can also be charged for the reasonable anticipated costs of consideration of a licence holder’s compliance with the Regulations and the licence conditions to which the licence holder is subject in circumstances other than those described in the Regulations, including any inspection relating to that consideration; the reasonable anticipated costs of providing information to the Welsh Ministers in line with regulation 30; and the reasonable anticipated costs of enforcement in relation to the licensable activity of an unlicensed pet shop owner. Whilst the fees charged must not

exceed the reasonable costs of the consideration of the points outlined in this paragraph, the Regulations should allow for any enforcement action to be cost-neutral.

Option 2: *Introduce a licensing or registration scheme which would allow commercial third party sellers to continue to sell puppies and kittens, subject to certain conditions.*

- 7.7 This option would have the same impact as Option 1 'Do nothing'. It would be cost neutral as existing legislation permits local authorities to add conditions to license holders. This option does not meet the commitment to ensuring a high standard of welfare for all animals kept in Wales is maintained at all stages of their life.
- 7.8 Campaigners for Lucy's Law believed regulating commercial third party sales is ineffective to prevent harm and a ban is therefore necessary.
- 7.9 This option is not being considered further.

Option 3: *Ban the commercial third party sale of puppies and kittens*

- 7.10 This option does meet the Welsh Government commitment to ensuring a high standard of welfare for all animals kept in Wales is maintained at all stages of their life.
- 7.11 There are 115 licensed pet shops in Wales, of which 10 currently hold licenses permitting them to sell puppies and kittens. There are many issues associated with commercial third party sales, including the poor welfare conditions, trauma of transportation, premature separation from the mother, lack of socialisation, poor health and hygiene standards and lack of medical screening for breeding bitches and stud dogs. All these result in puppies potentially having debilitating inherited diseases and conditions, vulnerability to life threatening diseases, behavioural problems and lack of socialisation. The responses to the consultation for the ban of commercial third part sale of puppies and kittens suggest overwhelming support for a ban.
- 7.12 A ban is seen as only the first step necessary to improve the welfare of dogs and cats and their offspring. The combination of new Regulations on pet sales and a three year, Welsh Government funded, project tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities for improvements to the enforcement and delivery of the existing Breeding Regulations will result in lasting improvements to the welfare standards of puppies bred in Wales.
- 7.13 The new Regulations would repeal and replace the Pet Shop Act 1951 would continue to allow local authorities to charge such fees as

considered necessary for the consideration of an application for the grant of a licence, or its renewal or variation of licences permitting the sale of animals as pets. Fees can also be charged for the reasonable anticipated costs of consideration of a licence holder's compliance with the Regulations and the licence conditions.

Assessment of impact on business

7.14 The puppy market is in many respects, complicated and poorly understood. There is a high demand for puppies - in the region of 750,000 puppies per annum across the UK and around 55,000 in Wales each year. From the information available sales from licensed third party sellers accounts for a small proportion of the overall puppy sales. With a very significant, if not a majority, of these puppies being bred by low volume breeders who operate totally independently of each other and who sell from domestic premises.

7.15 It is estimated a ban would generate a direct cost of between £2.0m and £3.6m per year to commercial third party sellers in Wales, as they would lose the future profits they would have continued to make from third party sales in the absence of a ban. It is likely the ban would also have an impact on breeders who currently sell via third party sellers.

7.16 We have assumed that a proportion of these breeders would no longer be able to operate as a result of a ban on third party sales; if so they could incur an annual direct cost of between £75,000 and £130,000 per annum from the loss of future profits. Breeders that stay in the market would have to sell directly to consumers rather than selling via third party sellers. We anticipate that they would see an increase in profits as they would be able to sell their puppies and kittens for the market rate rather than a discounted rate. We estimate an annual direct benefit to breeders of between £1.4m and £2.6m.

7.17 In addition the market share of breeders who drop out of the market might be picked up by other domestic breeders, and domestic breeders might also pick up the market share previously associated with imported puppies and kittens which were sold by third party sellers. These impacts have been classed as indirect benefits and have not been monetised at this stage.

Expected level of business impact

7.18 The table below shows the expected impacts to businesses associated with option 3, relative to the baseline (option 1 – do nothing).

Expected impacts of Options 3 relative to baseline (Option 1 - Do Nothing)		
Cost to third party sellers	They would no longer be able to sell puppies and kittens without breeding them and so would lose the profits they currently get from third party sales	Annual cost of between £2.0m and £3.6m per annum. (direct impact)
Cost to breeders	Some breeders may leave the market if they can no longer sell via a third party.	Annual cost of between £75,000 and £130,000. (direct impact)
Benefit to breeders	By selling the animals directly to consumers, breeders are expected to get a higher revenue from doing so (as they will no longer split the profits with third parties).	Annual benefit of between £1.4m and £2.6m million (direct impact)
Benefit to breeders	Some breeders may pick up the market share of other breeders who leave the market, and may pick up the market share previously held by imported animals which were sold by third party sellers.	Annual unquantified benefit (indirect impact)

7.19 There is significant uncertainty around the size of these impacts. The data available on third party sales of puppies and kittens is limited. In order to quantify these impacts, we have used evidence from a number of sources including evidence collected by DEFRA through a Call For Evidence (CFE) - to try and assess the scale of the existing trade, the size of the impacts and the number of businesses affected but there are lots of evidence gaps, particularly for kittens.

7.20 Information provided by the RSPCA in response to Defra's Call for Evidence estimated there were between 40,000 and 80,000 puppies sold via a third party seller in Great Britain each year (prior to the ban in England).

7.21 To apportion these figures WG have used the latest regional data published by the UK Pet Food Manufacturers Association (UK PFMA)¹⁰ which shows approximately 7.4% of the GB dog population lives in Wales. On this basis, we estimate between 3,000 and 6,000 puppies are sold via a third party seller in Wales each year. The estimate of the number of puppies sold via a third party seller in Wales each year has a significant bearing on the scale of the impact of the Regulations on sellers and breeders. Given the uncertainty around the number of third party sales, we have undertaken sensitivity analysis looking at the impact of changing this variable. The sensitivity analysis is on page 17.

7.22 Data from the UK PFMA¹¹ shows there were approximately 596,000 cats living in Wales in 2018. Taking the average life of a cat to be

¹⁰ <https://www.pfma.org.uk/dog-population-2018>

¹¹ <https://www.pfma.org.uk/cat-population-2018>

approximately 14 years and assuming that the cat population remains broadly stable, this suggests there will be 42,500 kittens sold in Wales each year. The proportion of kittens sold via a third party seller is believed to be lower than that for puppies. In the absence of firm evidence, we have assumed 3% of kittens are sold via a third party seller or approximately 1,300 kitten each year.

7.23 The following sections set out how the cost estimates have been calculated.

Cost to third party sellers in Wales (see also Sensitivity Analysis 7.40)

7.24 There will be a cost to third party sellers as the ban means they will lose the profit on the sale of any puppies and kittens which they have not bred.

7.25 The value of a puppy has increased significantly during 2020 as the lockdowns introduced across the UK to help combat coronavirus have generated a surge in demand. Data from the Pets4homes website suggests the average price of a puppy in 2020 was £1,875, this is more than double the price recorded in the corresponding period in 2019 (£810).

7.26 Whether the higher prices will be sustained is unclear. Covid-19 vaccinations are now being rolled out and it is hoped the type of national lockdown experienced in 2020 and the start of this year will not be required going forward. As a result, Welsh Government anticipate that the demand for puppies and the price of puppies will return to pre-lockdown levels (this is considered further in the sensitivity analysis). The following calculations are therefore based on the average cost of a puppy in 2019, which was £810. Applying this average value to the estimated number of puppies sold via a third party seller in Wales each year gives a range for the annual revenue of between £2.4m and £4.8m.

7.27 As above, we estimate around 1,300 kittens are sold via third party in Wales each year. Based on the Pets4homes website, we have assumed that the average price for a kitten is £480. The revenue generated from the third party sale of kittens in Wales each year is therefore estimated to be £0.6m.

7.28 Overall, the annual revenue generated from the third party sale of puppies and kittens in Wales is estimated to range between £3.0m and £5.4m.

7.29 To estimate the cost of the ban to third party sellers, we need to understand how the revenue from third party sales is split between the sellers and the breeders and also the costs which third party sellers incur prior to the sale. Evidence on the split of revenue between sellers and breeders is limited.

730 The Canine Action 2016 report¹² states that Welsh breeders responding to the 2011 Welsh licensing Consultation indicated that around 60% of the sales value goes to third party sellers. A 2017 Scottish Government report¹³ included a case study which showed UK third party sellers of puppies imported from Ireland were getting around 86% of the sales revenue. Taking an average of these two reports gives a central estimate of the third party seller's share of the revenue of 73%. In the absence of any alternative evidence, the same revenue split is assumed for the third party sale of kittens.

7.31 Based on this, the seller's share of the revenue from the third party sale of puppies and kittens is estimated to be between £2.2m and £4.0m per annum.

7.32 Third party sellers would be expected to incur some costs in the period between receiving puppies and kittens from their breeder and the point of sale (for example, for food and accommodation). These costs are estimated to be £50 per puppy and £35 per kitten. Taking these costs into account gives an estimate of the profit third party sellers will lose as a result of a ban of between £2.0m and £3.6m per annum.

Cost to breeders

7.33 Breeders who currently sell via a third party will not necessarily be forced out of business by a ban on third party sales. A large proportion of these breeders are expected to choose to continue breeding and to sell the puppies and/or kittens to consumers directly. However, for a variety of reasons (such as location or security issues), this will not be an option for all breeders. The Canine Action 2016 report considered whether rural location in Wales would act as a hindrance to direct selling and found 89% of breeders that sold puppies to third parties are based in postal areas where direct sale should be feasible. This figure is based on breeders in one rural area in Wales and does not consider factors other than location (e.g. security). For the purposes of this RIA, we have assumed that 20% of breeders who currently sell via a third party will have to drop out of the market if a ban is introduced. This assumption is considered further in the sensitivity analysis.

7.34 We estimated above that 73% of the revenue from the third party sale of puppies and kittens goes to the seller and this leaves 27% of the revenue for the breeders. However, not all of the puppies and kittens sold in Wales via a third party seller will have been bred in Wales or even the UK. The impact of a ban on overseas breeders is outside of the scope of this RIA and so the revenue figures need to be adjusted

¹² <https://cariadcampaign.files.wordpress.com/2016/05/licensed-third-party-puppy-vending-in-gb-20164.pdf>

¹³ <http://www.gov.scot/Publications/2017/11/1736/347297>

to reflect this. Canine Action's 2016 report¹⁴, found around 12% of pet shops were importing puppies from outside the UK. There have been reports during the 2020 lockdowns of an increase in the number of puppies imported into the UK but in the absence of firm evidence of this, the 12% figure has been used. The number of kittens imported into the UK for sale is believed to be significantly lower and so a figure of 2% has been used. The revenue to UK breeders from the third party sale of puppies and kitten is therefore estimated to be between £0.7m and £1.3m.

7.35 Assuming that 20% of UK breeders will drop out of the market and experience a loss of revenue as a result of the ban, we estimate a loss in sales revenue to UK breeders of between £145,000 and £260,000 per year. To calculate the loss of profit, we need to take account of the costs the breeders incur. In the absence of alternative evidence, it is assumed that breeder's profits are 50% of the revenue they receive from third party sales. On this basis the cost (lost profit) to UK breeders from a ban on third party sales is estimated to be between £75,000 and £130,000. Given that a large number of UK puppy breeders are based in Wales, much of this cost will fall to businesses in Wales.

7.36 It is difficult to make assumptions on the likelihood of breeders in Wales reducing the volume of their breeding stock or ceasing trading altogether as a result of the ban on third party sales. There are no current figures on how many puppies are sold via a third party from breeders in Wales. The third party sale ban in England may have provided some information on the impact on breeders in Wales had it not been for the timing of the Covid-19 pandemic and subsequent lockdowns. During this time it was permitted for breeders to deliver puppies to purchasers and therefore eliminating the possibility of following the recommended advice of viewing the puppy with its mother. Due to the significant increase in demand for puppies during this time, and the inflated prices people were prepared to pay for them it would be unlikely that large scale breeders would opt out of the market due to the closure of their previous route to market.

Benefit to breeders

7.37 Although the evidence on why breeders choose to sell via third party sellers is limited, we expect the majority of breeders will to continue to operate and to sell their puppies and kittens directly to consumers and potentially for a higher price than if they had sold them to a third party seller. While the breeder would be expected to incur some additional costs by selling directly to consumers (when compared to selling to a third party) such as advertising the animals for sale and additional feed costs, the higher selling price would be expected to cover those costs. There would therefore be a potential benefit to breeders.

¹⁴ <https://cariadcampaign.files.wordpress.com/2016/05/licensed-third-party-puppy-vending-in-gb-20164.pdf>

7.38 It is anticipated that the profits which currently go to third party sellers could instead be captured by breeders, should they choose to remain in the market. The annual profits currently made by third party sellers in Wales was estimated to be between £2.0m and £3.6m. Adjusting this to reflect that some puppies and kittens are currently imported and the assumption that 20% of breeders would drop out of the market suggests a potential benefit for the remaining UK breeders of between £1.4m and £2.6m. Again, much of this benefit is expected to accrue in Wales.

Indirect benefit to breeders

7.39 Some breeders may pick up the market share of other breeders who leave the market and may pick up the market share previously held by imported animals which were sold by third party sellers. These benefits are classed as indirect and have not been monetised.

Sensitivity analysis undertaken by Welsh Government Economist

7.40 There are a number of areas of uncertainty in the above analysis which have required us to make quite broad assumptions in order to estimate the impact of a ban on the third party sale of puppies and kittens on sellers and breeders. The following sensitivity analysis looks at the impact of changing some of the key assumptions on the headline results in the analysis. In each case, only one assumption is changed at a time. The sensitivity analysis focuses on the assumptions around the third party sale of puppies since these have a greater impact on the results than the assumptions around kitten sales.

Number of puppies sold via a third party in Wales

7.41 The calculations in the RIA are based on a report from the RSPCA which suggests between 40,000 and 80,000 puppies were sold via a third party seller in Great Britain each year before the ban on third party sales was introduced in England. The number of third party sales in Wales is estimated by apportioning this GB figure according to Wales' share of the dog population as given by data from the UK Pet Food Manufacturers Association (7.4%).

7.42 Commercial third party sellers are those who are licensed pet sellers. However, there are relatively few pet shops in Wales which are licensed to sell puppies and kittens and unlike in England (prior to the ban on the third party sales of puppies and kittens) there are no pet 'supermarkets' selling puppies and kittens in Wales. As such, it has been suggested that apportioning the estimated number of GB third

party sales according to the size of dog population may over-estimate the number of third party sales in Wales.

7.43 If we were to assume that between 2% and 5% of the estimated annual GB third party puppy sales take place in Wales then this would equate to between 800 and 4,000 puppies being sold via this route in Wales each year. Including these figures in the analysis would reduce the estimated loss of profit experienced by third party sellers following a ban to between £0.8m and £2.6million per annum. Similarly, the reduction in annual profit experienced by those breeders who opt to leave the market is estimated to fall to between £30,000 and £95,000 and the potential increase in annual profit for those breeders who remain and who sell direct to customers (rather than use a third party seller) is estimated to fall to between £0.6m and £1.8m.

Response of breeders following a ban on third party sales on a UK basis

7.44 Another area of uncertainty in the analysis is around how domestic breeders will respond to the ban on third party sales. It has been assumed in the analysis that (for reasons of location and security etc.) 20% of breeders will opt to give up breeding puppies and kittens rather than sell directly to customers. However, it has been suggested this is an over-estimate of the likely impact and there is emerging evidence which suggests no breeders in Wales have ceased operating following the ban on third party sales in England (although as noted above, markets may currently be distorted by the pandemic and lockdowns).

7.45 Given it is over a year since the English Regulations were brought forward, if the percentage of breeders who are assumed to exit the market was reduced to 10% then the estimate for the reduction in annual profit for those breeders who leave the market falls to between £35,000 and £65,000. Similarly, the potential increase in annual profit for UK breeders (if the remaining breeders are able to capture the profits previously made by third party sellers) increases to between £1.6m and £2.9m.

7.46 If no breeders were to leave the market then the potential increase in estimated annual profit for UK breeders rises to between £1.8m and £3.2m. It follows that since no breeders leave the market, the reduction in breeders profit in this scenario is zero.

Average price of a puppy

7.47 As noted above, the analysis is based on the average price for a puppy in 2019 (£810) rather than the 2020 average (£1,875). This is because the pandemic and lockdowns resulted in a significant increase in the demand for and price of puppies in 2020 and we do not believe the average price in 2020 is representative of the likely average going forward.

7.48 However, if we were to assume the current high prices were actually sustained and included an average price for a puppy of £1,875 in the calculations, then the estimated loss of profit experienced by third party sellers following a ban would be between £4.3m and £8.2m per annum. The loss of profit for those UK breeders who were to leave the market (assuming 20% leave) would be between £145,000 and £280,000 per annum. The increase in annual profits for those UK breeders who remain in the market is estimated to be between £3.1m and £5.8m.

Wider impacts

Impact on Welsh Government

7.49 Sections of the Welsh public and a number of third sector organisations have been lobbying for this practice to be banned and the Welsh Government has, for a number of years, received regular correspondence to that effect. Welsh Government officials have so far this year responded to 63 letters and provided a number of briefings for AQ and WQs. Lesley Griffiths AM, then Cabinet Secretary for Energy, Planning and Rural Affairs, consulted on a ban of commercial third party sales of puppies and kittens and announced her intention to explore opportunities to bring forward legislation to ban the third party sale of puppies and kittens in Wales in June 2018, going on to consult on the The Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021 later that year.

7.50 Responding to correspondence can be time consuming with each response, on average, taking half a day of an Executive Officer (EO) or Higher Executive Officer's (HEO) time, at a daily rate of £135 or £175 respectively. Assuming a 50/50 split between EO and HEO, responding to correspondence on this subject has cost the Welsh Government ranging between £9,200 and £12,000 for the last three years. Correspondence on this subject is expected to reduce significantly if the third party sale of puppies and kittens is banned. An increase in correspondence from those opposing a ban, or from those calling for a ban to be extended to other species, cannot be ruled out, however this is unlikely to be anywhere near the same scale. The costs associated with this are therefore unknown.

7.51 There will be a small implementation cost to the Welsh Government in developing guidance on the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021. The development of guidance, based on an estimate of 5,000 words, including engaging stakeholders to ensure it is fit for purpose, is anticipated to take approximately four weeks over a period of three months of a Higher Executive Officer's time, equating to £3,500. The guidance will be available in English and Welsh. Translation and design would take up to two weeks to complete. Translation would take approximately a week

of a Higher Executive Officer's time, equating to £900. Design would require approximately a week of an Executive Officer's time, which would equate to £700. Guidance would be published on the Welsh Government website and shared electronically with Local Authorities. There would be no printing and distribution costs. All costs associated with producing guidance would be incurred in 2020-21. The total cost for preparing guidance would be approximately £5,100.

- 7.52 Costs to communicate a ban on commercial third party sales of puppies and kittens will also fall to Welsh Government. This will include publicising the change to the businesses affected, issuing Press Notices and the use of Welsh Government social media accounts. This is expected to take, at the most, the equivalent of a week of a Higher Executive Officer's time, equating to £900.

Impact on Justice System

- 7.53 The Animal Welfare (Licensing of Activities Involving Animals) (England) (Amendment) Regulations 2019 established the selling of puppies and kittens as an offence.
- 7.54 The Regulations introduce a new licensing scheme, and consequently provide a new means by which people will be held to account when selling animals as pets in Wales.
- 7.55 The Regulations do not provide for a change in the Court or Tribunals process, however there could be a minor increase in applications to the Court, should there be persons against whom action needs to be taken. As this is a new licensing scheme, it is not possible to determine the precise impact on the justice system although we anticipate this to be reasonably low as there are currently only 10 licensed third party sellers in Wales who are permitted to sell puppies or kittens.

Impact on Local Authorities

- 7.56 Local Authorities will be responsible for enforcement of the Regulations as they are for the Pet Animals Act 1951. Under section 30 of the 2006 Act, local authorities may prosecute for any offence under the Act.
- 7.57 Commercial third party sellers already need to apply for a licence and are subject to ongoing inspections. Therefore, it is anticipated there will be no additional costs. However, LAs will have the opportunity to allow for anticipated costs of registration, inspection and enforcement by charging a fee for the issue of a licence (regulation 14).
- 7.58 The fee charged for the consideration of an application for the grant, renewal or variation of a licence and for any inspection relating to that

consideration must not exceed the reasonable costs of that consideration and related inspection.

7.59 Licence fees across the 22 Local Authorities in Wales vary significantly due to the individual circumstances of each authority. If the 10 existing third party sellers were to stop trading the loss of income from license fees will be negligible.

Benefits

7.60 Existing legitimate commercial third party sales of puppies and kittens are presently undertaken by those who are licenced pet sellers: this could be a traditional pet shop type setting, dealers acting as middle men between breeders or breeders who sell puppies from litters they have not bred themselves. Currently in Wales, they are required to hold a licence under the Pet Animals Act 1951.

7.61 There are concerns commercial third party sales of puppies and kittens may be associated with poorer welfare conditions for the animals compared with direct purchase from the breeder. For example, the introduction to several new and unfamiliar environments, and the increased likelihood of multiple journeys the puppies or kittens have to undertake have the potential to contribute to an increased risk of disease and lack of socialisation and habituation for the puppies and kittens.

7.62 The Regulations are a first step towards ensuring the welfare of puppies and kittens in Wales, who are currently being bred and sold on to third parties, is improved significantly by being sold only by breeders directly to the new owner. Legislation which relates to the selling of pets should reflect best practice. Allowing commercial third parties to sell puppies and kittens means, in most cases, purchasers will not see the puppy or kitten interacting with the bitch/queen or the siblings. The ban would:

- Assist purchasers in making responsible buying decisions based on seeing a puppy or kitten with its dam/bitch and the conditions in which it has been bred.
- Improve the welfare of puppies and kittens and dogs and cats used for breeding and reducing the sale of puppies which have not been bred to the recognised standards of welfare in Wales.
- Incentivise welfare improvements in licenced dog breeding establishments by ensuring transparency, accountability and appropriate remuneration for breeders.
- Align the licensing process with other Administrations. This is to ensure there are no inconsistencies between the Administrations where some breeders may cross the border to avoid being caught up in the legislation which applies to that region.
- Provide a legislative mechanism for future changes to the Animal Welfare (Breeding of Dogs) (Wales) Regulations 2014 that will

align the licensing process more closely with the other Administrations.

- Provide a future opportunity to include other licensed animal welfare establishments including, but not exclusively, Horse Stables, Riding Schools and

7.63 The proposal on a ban on commercial third party sales of puppies and kittens, generally, has been well received and supported by the public, animal health and welfare organisations.

7.64 Lucy's Law campaign in England called for an immediate ban on the sale of puppies by pet shops and other commercial third party dealers. Lucy was a King Charles spaniel who was an ex-breeding bitch in very poor condition. Lucy was rescued and adopted in 2013 and became the mascot of anti-puppy farm campaign. She died in December 2016 and Lucy's Law was named in her honour.

7.65 The petition associated with the campaign gained over 100,000 signatures and was debated in Parliament on 21 May 2018. It called for an immediate ban on the sale of puppies by pet shops and other third party commercial sellers. The ban came into force on 6 April 2020.

7.66 Local Authorities across the UK were asked to sign up to the principles of Lucy's Law and there was widespread support from Local Authorities in Wales.

7.67 Both Welsh Government's consultations in 2019 and 2020 have shown widespread support for the ban. However this is seen as only the first necessary step to improve the welfare of dogs & puppies and cats & kittens. The combination of new regulations on pet sales and a three year, Welsh Government funded, project tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities for improvements to the enforcement and delivery of the existing Breeding Regulations will result in lasting improvements to the welfare standards of puppies bred in Wales.

7.68 Pet shops will continue to be welcome in Wales, provided they do not sell puppies and kittens through a third party. Following a period of transition, the 10 pet shops affected by the ban should be able to successfully continue to trade. The small and declining number of pet shops who hold licences to permit them to sell puppies and kittens suggests their presence is not a major factor in determining the popularity for the demand of puppies and kittens amongst breeders.

7.69 Clearly a ban on commercial third party sales of puppies and kittens will have an effect on breeders operating model, though this is would be a desirable disruption. For larger, more commercial establishments it might impact on the speed in which they can sell their puppies. Whereas a third party seller may collect whole litters of puppies for onward re-sale, the overwhelming majority of the wider puppy buying

public will only buy one puppy at a time. This is likely to result in the licence holder (staff) having to spend more time conducting puppy sales, which may reduce the available time to look after the other puppies and dogs at the establishment. Should a ban come into place, a transition period will be provided for licence holders to make adjustments to their operating procedures to address this, in conjunction with their licensing authority.

- 7.70 The way we treat animals is an important reflection of the values of our society. It is increasingly difficult to justify breeding puppies and kittens, removing them from their mother at such a young age and kept in poor conditions. Responses to the consultation on the ban of commercial third party sales suggest there is overwhelming support for a ban. A ban will contribute to encouraging respectful and responsible attitudes, particularly the developing attitudes of children and young people, towards all species. It will also contribute to an improved perception of pet shops and how puppies and kittens are bred.
- 7.71 Breeders who currently sell puppies via third parties may need to improve their 'shop floor', as third party sellers will have less concerns regarding the upkeep and standards of the breeder's establishment, than someone looking for their next pet.
- 7.72 However, given the question is limited to licensed breeders, we must assume that these breeders should have nothing to fear from the public buying their puppies direct from their establishments. We know that the puppy buying public will travel significant distances to buy puppies, so a breeder who gains a good reputation will have no problem selling their puppies direct from their breeding establishment. The reduction in volumes of puppies being sold will be offset by the increased sales prices, as the third party seller will be a sizable cut of the eventual puppy sales price to cover their costs and generate their own revenue.
- 7.73 A puppy who is properly reared in their early weeks will be far more likely to grow up confident, calm, more open to learning new things, less likely to respond to new experiences fearfully or aggressively – in short, more likely to become a good family dog.
- 7.74 The critical puppy socialization period up to 12 weeks of age is a time of rapid learning. A puppy not exposed to sufficient experiences, people, other animals and noises during this time is unfortunately destined for a lifetime of fear and sometimes aggression problems.
- 7.75 Social exposure for a kitten should begin at 3-4 weeks of age. Kittens do best when worked with by 9 weeks of age, but earlier is better. Non-threatening, ideally positive, experiences with multiple animals of the same and other species, people, stimuli and common life experiences for pet animals such as handling and transportation. Social interactions should continue to be reinforced throughout the animal's life as

necessary to support good temperament and promote the wellbeing of the animal.

7.76 Puppies sold via commercial third party sellers are exposed to a number of inherently stressful, challenging events which fall within key periods of development and hence are likely to detrimentally impact on behaviour, health and welfare. These events include:

- Potential for abrupt/early separation of puppies from their mothers and littermates before 7-8 weeks of age which interrupts the natural process of weaning and may inflict acute and/or chronic stress.
- Likelihood of multiple journeys especially for those puppies who are imported from Ireland and the Continent e.g. from breeder to place of sale to buyer or breeder to broker to place of sale to buyer. Studies which have measured the impact of transportation on dog welfare have shown that transportation is stressful and multiple factors are likely to contribute to this stress including handling, containment, ventilation, and temperature, driving style, access to food and water and opportunities for exercise.
- Introduction to new and unfamiliar people as well as environments including vehicles, in some cases broker accommodation, place of sale and the subsequent buyer's residence which will likely result in behaviours associated with fear.
- Introduction and mixing of young and unfamiliar animals which may pose a disease risk especially within the premises of those sellers who also breed their own dogs. As puppies may be separated from their mother and littermates before 7-8 weeks and are typically vaccinated at eight and ten weeks, puppies are highly likely to be unprotected against diseases including canine parvovirus and distemper virus.

7.77 There is plenty of evidence to suggest that pets make great companions for children of all ages, particularly helping in reducing mental health problems and anxiety. For example, Bishop of Llandaff High School¹⁵, Cardiff brought a black Labrador puppy permanently into the school setting in 2019. The 'wellbeing dog' reduces the pupils' anxiety and helps 'children with their mental health'. There is evidence to suggest that children with disabilities, including autistic children, find even more joy in petting animals. Pets can offer formal therapy, but also everyday assistance.

7.78 The main conclusions of the research conducted by National Autism Team¹⁶ suggests the whole family, not just the autistic child, benefits from introducing a dog into the family home. It can often reduce stress, encourage socialising and bring about healthy routines, such as going out for a walk twice a day. However, it is clear that this is an area lacking

15 <https://www.itv.com/news/wales/2019-07-15/meet-georgie-the-therapy-dog-whos-delighting-pupils-at-a-welsh-high-school>

16 <https://www.autism.org.uk/advice-and-guidance/topics/strategies-and-interventions/strategies-and-interventions>

in scientific research and many of the findings are based on anecdotal evidence.

7.79 In 2010, Dogs for the Disabled 'received a research grant from the Big Lottery Fund to investigate exactly how pet dogs can benefit and improve the wellbeing and development' of autistic children and their families.

The study found that pet dogs can:

- have a profound impact on the wellbeing on the entire family,
- improve parent-child relationships,
- reduce parental stress levels,
- improve child behaviour,
- enable the child to stick to routines independently,
- Provide the child with a greater sense of responsibility.

7.80 In their research paper 'What Factors Are Associated with Positive Effects of Dog Ownership in Families with Children with ASD?' (2016)¹⁷, Sophie Susannah Hall, Hannah F Wright, and Daniel Simon Mills look at the benefits of introducing autistic children to an environment where there is a dog present.

7.81 It is therefore essential for any puppy who is purchased for any of these reasons is socialised in the right environment. A puppy who is properly reared in their early weeks will be far more likely to grow up confident, calm, more open to learning new things, less likely to respond to new experiences fearfully or aggressively – in short, more likely to become a good family dog.

7.82 Responsible ownership of a dog includes making sure your dog is walked daily. However there are many benefits to owner such as improved cardiovascular fitness, lower blood pressure, stronger muscles and bones (built up by walking regularly), and decreased stress. Therefore it is essential that the puppy is properly socialised at a young. Socialising teaches your dog how to react to the world around it in a healthy way, without unnecessary fear or aggression.

7.83 On 30th September 2019 BBC Wales broadcast a programme called BBC Investigates: Inside the UK's Puppy Farm Capital. The BBC programme primarily looked at the conduct of licenced dog breeders under the Animal Welfare (Breeding of Dogs (Wales) Regulations 2014. The BBC had five examples of licenced breeders keeping dogs in conditions which expert independent vets have told them are completely unacceptable.

7.84 A ban on commercial third party sales of puppies and kittens will also go some way to rebuilding Wales's damaged reputation in regard to

¹⁷ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0149736>

dog breeding. A view which is echoed in responses received through the consultation.

- 7.85 A ban on commercial third party sales of puppies and kittens may have an impact on rehoming shelters. With fewer animals available from others sources this could encourage people to purchase from an animal shelter instead. Rehoming shelters should also see a reduction in the number of animals who are abandoned due to health problems or an impulse buy. Unwanted puppies regularly take space in shelters across the UK. This peaks after Christmas and dogs/cats bred specifically for this purpose find themselves in shelters. The over production of puppies and kittens in the UK is constant throughout the year.

8. Consultation

- 8.1 The first public consultation on the Banning of Third Party Sales of Puppies and Kittens ran for twelve weeks 19 February 2019 -17 May 2019. The consultation was published on the Welsh Government website and publicised in newsletters and via various social media platforms. This consultation looked at evidence on what stage the government should intervene in large scale breeding premises and address concerns about animal welfare. There were 458 responses to the consultation.
- 8.2 Officials also attended the RSPCA Cymru's Big Walkies event on 18th May 2019 and the Royal Welsh Horticultural Show in July 2019 to engage with children and young people on the issue of responsible ownership and buying pets. These events provided officials the opportunity to conduct a data capture exercise with children and young persons through a questionnaire. The questions were not specific in regards to an opinion on the ban but the information gathered identified a gap in education concerning the conditions and welfare of the animals sold by commercial third party sellers.
- 8.3 A final eight week public consultation on the draft banning of commercial third party sales of puppies and kittens was published on 22 June 2020. Respondents were asked nine questions relating to the general policy, economic impacts, the provisions of the Regulations and impacts on the Welsh language. There were 226 responses to the consultation. Responses were received from the general public, third sector organisations, and the British Veterinary Association and enforcement bodies.
- 8.4 Alongside the full public consultation, Welsh Government worked with Children in Wales through its Young Wales initiative, to conduct a children and young person's consultation asking them to give their views on banning third parties sales of puppies and kittens.
- 8.5 There was a focus on four key questions with an aim to hear children and young people's voices and recommendations to further inform and

support the development of the new legislation; which is part of our children and young people's participation agenda.

- 8.6 During July and August Young Wales conducted an online consultation to seek the views of children and young people in relation to banning third party sales of puppies and kittens. Young Wales received 59 responses from children and young people across Wales with ages ranging from under 10 to 21 years old. 96% of respondents agreed with a ban, 2% disagreed and 2% were unsure.
- 8.7 All responses were analysed and a summary of the responses was published 5 October 2020 <https://gov.wales/ban-commercial-third-party-sales-puppies-and-kittens-young-peoples-consultation>
- 8.8 Following the responses to the consultation being fully reviewed and analysed, Welsh Government took into account all the evidence received from the public, animal welfare organisations and our stakeholders and could confirm a ban on commercial third party sales of puppies and kittens would be brought forward before the end of the Senedd.
- 8.9 Both Welsh Government's consultations responses (2019 and 2020) have shown widespread support for the ban. A small number of negative comments were recorded from our final consultation this year mainly from members of the public. They felt the existing Pet Animal Act 1951 is comprehensive enough for pet shop owners to keep animals in appropriate conditions. However it is worth highlighting the proposal to ban third party sales is considered to be only one of the steps necessary to improve the welfare of dogs and cats at breeding premises in Wales. Welsh Government are working closely with Local Authorities, with work underway in relation to tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities as part of a three year Welsh Government funded project.

9. Competition Assessment

- 9.1 A Competition Assessment has been undertaken to assess the potential impact of banning the commercial third party sales of puppies and kittens in Wales. This policy is not expected to have a significant detrimental effect on competition within the breeding industry. The policy does not discriminate between breeders, applying equally to all. The results of a filter test (consisting of nine yes/no questions) which support this conclusion are below, followed by evidence to support the answers.

9.2 Table: Filter test for banning the commercial third party sales of puppies and kittens in Wales.

The competition filter test	
Question	Answer yes or no
Q1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?	NO
Q2: In the market(s) affected by the new regulation, does any firm have more than 20% market share?	NO
Q3: In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?	NO
Q4: Would the costs of the regulation affect some firms substantially more than others?	NO
Q5: Is the regulation likely to affect the market structure, changing the number or size of firms?	NO
Q6: Would the regulation lead to higher set-up costs for new or potential suppliers that existing suppliers do not have to meet?	NO
Q7: Would the regulation lead to higher ongoing costs for new or potential suppliers that existing suppliers do not have to meet?	NO
Q8: Is the sector characterised by rapid technological change?	NO
Q9: Would the regulation restrict the ability of suppliers to choose the price, quality, range or location of their products?	NO

9.3 There would be a transition period to allow pet shop owners to consider a different operating model to mitigate any potential impact. Whilst the proposed legislation does not allow third parties to sell puppies and kittens under 6 months of age this will not be the case if you have bred the animal. Pet shops will also be permitted to sell dogs and cats over the age of 6 months.

9.4 The costs of adhering to the ban will affect the 10 licenced commercial third party sellers which currently sell puppies and kittens, but not those which do not, or new entrants. There may be an increase in costs to pet shops who choose to adapt their business model to breed puppies and kittens, in the short term at least, but the degree to which they will be affected will depend on a number of factors and there may be cost savings from not purchasing via a third party seller.

9.5 The incentives of complying with the ban will outweigh the incentives for non-compliance. An offence would be committed by the person who commercially sells puppies or kittens if they are not the owner of the mother/dam. A person guilty of such an offence is liable on summary conviction to a fine.

- 9.6 The Blue Cross started their research in February 2016 and produced the report: [Unpicking the Knots](#). It says buying a pet in the UK is a postcode lottery and the welfare of thousands of pets being bred and sold is at risk. They mention that under resourced local authorities are struggling to cope with enforcing welfare standards for pet shops and dog breeders and an ever growing unlicensed online pet trade means that animals are slipping under the radar entirely, with breeders making thousands of pounds while putting pets at risk.
- 9.7 A ban on commercial third party sales of puppies and kittens may have an impact on rehoming shelters. With fewer animals available from others sources this could encourage people to purchase from an animal shelter instead. Rehoming shelters should also see a reduction in the number of animals who are abandoned due to health problems or an impulse buy. Unwanted puppies regularly take space in shelters across the UK. This peaks after Christmas and dogs/cats bred specifically for this purpose find themselves in shelters. The over production of puppies and kittens in the UK is constant throughout the year.
- 9.8 Justification for the ban to meet the policy objective was evident from overwhelming support from respondents to the consultation. Consumers would, with confidence, be able to source a puppy and kitten safe in the knowledge they have been properly reared in their early weeks and will be far more likely to grow up confident, calm, more open to learning new things, less likely to respond to new experiences fearfully or aggressively – in short, more likely to become a good family dog.

10. Post implementation review

- 10.1 It is important to note the proposal to ban third party sales is considered to be only one of the steps necessary to improve the welfare of puppies and kittens at breeding premises in Wales. Welsh Government are working closely with Local Authorities, with work underway in relation to tackling barriers to enforcement; enhanced training; better guidance; and improved use of resources within local authorities as part of a three year Welsh Government funded project.
- 10.2 It would be appropriate to consider reviewing the legislation following completion of the Local Authority Enforcement Project on dog breeding. At that time, it may be appropriate to consider incorporating other licensable activities involving animals in to these Regulations. This would give an opportunity to:
- Align the licensing process with other Administrations. This is to ensure there are no inconsistencies between the Administrations where some breeders may cross the border to avoid being caught up in the legislation which applies to that region.

- Provide a future opportunity to include other licensed animal welfare establishments including, but not exclusively, horse stables and riding schools.
- Provide a legislative mechanism for future changes to the Animal Welfare (Breeding of Dogs)(Wales) Regulations 2014



Llywodraeth Cymru
Welsh Government

WRITTEN STATEMENT BY THE WELSH GOVERNMENT

TITLE **The Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021**

DATE **27 January 2021**

BY **Lesley Griffiths MS, Minister for Environment, Energy and Rural Affairs**

I am pleased to announce I have today laid the Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021 alongside the accompanying Explanatory Memorandum and a Plenary debate on them will be held on 2 March 2021.

As I advised in my Written Statement of 5 October 2020 my commitment is to introduce a ban on the commercial third party sales of puppies and kittens in Wales before the end of this Senedd.

These Regulations will change the licensing arrangements for the sale of animals as pets in Wales, which includes a ban on the commercial third party sale of puppies and kittens. Optimising welfare standards across Wales is a priority and the intention of the new Regulations is to promote responsible breeding and ensure puppies and kittens are bred in suitable conditions.

I have always maintained a ban on its own cannot tackle all the problems associated with puppy trading. The proposed ban is *one part* of the work associated with improvements in welfare standards at dog breeding establishments which include tackling barriers to enforcement.

I am also pleased to advise, working closely with Local Authorities, work is also underway in relation to tackling barriers to enforcement of the Animal Welfare (Breeding of Dogs) (Wales) Regulations 2014. A three year Welsh Government funded project, which includes enhancement of training and better guidance for inspectors and improved use of resources within Local Authorities and across Wales, has been established and is being led by Local Authorities in Wales.

We will continue to work with key stakeholders, including Local Authorities and the other Administrations to ensure we introduce changes which will have a lasting impact on the welfare standards of dogs and cats bred in Wales.



Llywodraeth Cymru
Welsh Government

**WRITTEN STATEMENT
BY
THE WELSH GOVERNMENT**

TITLE Re-laying of draft Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021

DATE 03 February 2021

BY Lesley Griffiths MS, Minister for Environment, Energy and Rural Affairs

In order to address a small, but important, error in the original version laid on 27 January, with regret, I have to advise I will shortly be laying a new version of the draft Animal Welfare (Licensing of Activities Involving Animals) (Wales) Regulations 2021.

The overall intention of the policy behind these Regulations, which will replace section 1(1) of the Pet Animals Act 1951, is to reflect best practice in the sale of puppies and kittens. Allowing commercial third parties to sell puppies and kittens means, in most cases, purchasers will not see the puppy or kitten interacting with the bitch/ queen or the siblings.

Officials are working at pace to resolve the matter and a new debate date has been set for 23 March 2021. This delay is not anticipated to affect the coming into force date of these regulations which is the 10th September 2021.

SL(5)695 – The Official Feed and Food Controls (Miscellaneous Amendments) (Wales) Regulations 2020

Background and Purpose

The Official Feed and Food Controls (Miscellaneous Amendments) (Wales) Regulations 2020 (“the Regulations”) amend:

- the Food Hygiene (Wales) Regulations 2006,
- the Official Feed and Food Controls (Wales) Regulations 2009, and
- the Animal Feed (Hygiene, Sampling etc. and Enforcement) (Wales) Regulations 2016.

The Regulations are made by the Welsh Ministers in exercise of the powers conferred by section 2(2) of, and paragraph 1A of Schedule 2 to, the European Communities Act 1972 (“the ECA 1972”). The Welsh Ministers are designated in relation to:

- measures relating to feed produced for or fed to food-producing animals (see European Communities (Designation) (No. 2) Order 2005/1971).
- measures in the veterinary and phytosanitary fields for the protection of public health (see European Communities (Designation) (No. 2) Order 2008/1792); and
- measures in relation to the common agricultural policy of the European Union (see the European Communities (Designation) (No. 5) Order 2010/2690).

The Regulations allow for the further implementation and enforcement of EU Implementing and Delegated Regulations (“EU tertiary legislation”) that are made under Regulation (EU) 2017/625 on official controls and other official activities performed to ensure the application of food and feed law (“the OCR”).

Implementation and enforcement of the OCR and such EU tertiary legislation as had been published in the Official Journal of the European Union by November 2019 was enabled by way of the Official Feed and Food Controls (Wales) (Miscellaneous Amendments) Regulations 2019 (“The 2019 Regulations”). The amendments made by the 2019 Regulations also covered a package of EU tertiary legislation (Implementing and Delegated Regulations), made under the OCR. It was noted at the time that additional EU tertiary legislation was being prepared by the EU would not be published in time for provisions giving effect to that legislation to be included in the 2019 Regulations if those Regulations were to come into force by the 14 December 2019 deadline - the date the OCR took effect.

The Regulations captures that additional EU tertiary legislation within the lists of legislation set out in the Food Hygiene (Wales) Regulations 2006 and the Official Feed and Food Controls (Wales) Regulations 2009, and make limited consequential changes. This tertiary legislation sets out the detailed rules for applying the OCR in specific areas, such as the



frequency and methods of applying physical checks to consignments of food or feed at ports and some of the rules for further action required on completion of these checks.

In addition to the tertiary legislation, some limited errors/omissions have been identified in the amendments made by the 2019 Regulations that require correction. These required corrections are necessary to ensure that the OCR is properly implemented in relation to Wales and the Regulations will amend the necessary instruments to provide for enforcement of the tertiary legislation and fix these errors and omissions in the 2019 Regulations.

Procedure

Negative.

The Regulations were made by the Welsh Ministers before they were laid before the Senedd.

The Senedd can annul the Regulations within 40 days (excluding any days when the Senedd is: (i) dissolved, or (ii) in recess for more than four days) of the date they were laid before the Senedd.

Technical Scrutiny

The following two points are identified for reporting under Standing Order 21.2 in respect of this instrument.

1. Standing Order 21.2(vii) - that there appear to be inconsistencies between the meaning of its English and Welsh texts

References to specific regulations in this point are to the Welsh text of the regulations.

The reference in regulation 2(2)(a)(ii) to text that is to be omitted from regulation 2 of the Food Hygiene (Wales) Regulations 2006 ("the 2006 Regulations") does not seem to be correct. We cannot see a definition that begins "*ystyr "Cyfarwyddeb 2004/41"*" in regulation 2 of the 2006 Regulations. We believe regulation 2(2)(a)(ii) should refer to the definition that begins "*mae i "Cyfarwyddeb 2004/41"*" (emphasis added).

Similarly, the reference in regulation 3(2)(a)(i) does not seem to be correct. We cannot see a definition that begins "*ystyr "Penderfyniad 2007/275"*" in regulation 2 of the Official Feed and Food Controls (Wales) Regulations 2009. We believe regulation 3(2)(a)(i) should refer to the definition that begins "*mae i "Cyfarwyddeb 2004/41"*" (emphasis added).

2. Standing Order 21.2(vii) - that there appear to be inconsistencies between the meaning of its English and Welsh texts

In the English text of the Regulations, in the table inserted by Schedule 5 (replacing Schedule 6 to the Official Feed and Food Controls (Wales) Regulations 2009), the paragraph in the subject matter column for "Article 6(4) of Regulation 2019/2123" does not specify that the operator is the operator "responsible for the consignments", as is the case in the Welsh text and in other entries in the table.



Merits Scrutiny

No points are identified for reporting under Standing Order 21.3 in respect of this instrument.

Welsh Government response

A Welsh Government response is required.

Committee Consideration

The Committee considered the instrument at its meeting on 18 January 2021 and reports to the Senedd in line with the reporting points above.



Government Response: *The Official Feed and Food Controls (Miscellaneous Amendments) (Wales) Regulations 2020*

Technical Scrutiny point 1: Response

The Welsh Government agrees with the point raised:-

- The Welsh language text of regulation 2(2)(a)(ii) of the 2020 regulations should read “*hepgorer y diffiniad sy’n dechrau ag “**mae i “Cyfarwyddeb 2004/41”**”*” (bold emphasis added). The English language text is correct.
- The Welsh language text of regulation 3(2)(a)(i) should read “*hepgorer y diffiniad sy’n dechrau ag “**mae i “Cyfarwyddeb 2004/41”**”*” (bold emphasis added). The English language text is correct.

The Welsh Government considers that the errors identified have limited legal implications, and that, notwithstanding the errors, the legislative intention of the provisions is clear. However, for clarity, the Welsh Government has arranged for the errors to be corrected by way of a correction slip.

Technical Scrutiny point 2: Response

The Welsh Government agrees that there is a disparity between the Welsh and the English language texts concerning column 2 of the entry for Article 6(4) of Regulation 2019/2123 in the table in the new Schedule 6 to the Official Feed and Food Controls (Wales) Regulations 2009 as inserted by Schedule 5 of the 2020 Regulations.

In the new Schedule 6 of the 2009 Regulations (as inserted by the 2020 Regulations), column 1 of the table contains a list of provisions of the now retained EU law provisions that are “specified import provisions” for the purposes of the 2009 Regulations. Column 2 of that table contains descriptions of the provisions listed in column 1 – those descriptions are taken from the text of the relevant retained EU provisions. In the new Schedule 6 of the 2009 Regulations, the English language text of column 2 of the entry in the table for Article 6(4) of retained Regulation 2019/2123 correctly refers to “the operator”, as that is the text of Article 6(4) itself. The Welsh Government considers that, in this instance, a reference to the “operator” has the same meaning as the “operator responsible for the consignments”, as there is no other operator to which the provision could apply. The Welsh Government considers that the disparity between the Welsh and the English language texts as identified in the point raised does not lead to a lack of legal equivalence between the two texts.

For accuracy, the Welsh Government will seek to address the disparity in the Welsh and English language texts if/when another appropriate legislative vehicle is taken forward.

SL(5)727 – The Candidate Election Expenses (Senedd Elections) Code of Practice 2021

Background and Purpose

This Code has been prepared by the Electoral Commission to give guidance as to what does or does not fall within Part 1 or Part 2 of Schedule 7 of the National Assembly for Wales (Representation of the People) Order 2007 ('the 2007 Order').

Those Parts are relevant to the definition of 'election expenses' and therefore, in particular, to what expenses a candidate is required to report. Part 1 of Schedule 7 lists the matters in respect of which any expenses for the purposes of the candidate's election count as 'election expenses'. Part 2 lists the exclusions.

The Code also gives guidance as to the cases or circumstances in which expenses are, or are not, to be regarded as incurred 'for the purposes of a candidate's election' as referred to in Article 63 of the 2007 Order.

Procedure

Draft negative. Unless the Senedd resolves not to approve the draft within 40 days (excluding any days when the Senedd is: (i) dissolved, or (ii) in recess for more than four days) of its being laid, the Code of Practice will be brought into force by an appointed day order made by the Welsh Ministers, and published by the Electoral Commission.

Scrutiny under Standing Order 21.7

Two points are identified for reporting under Standing Order 21.7 in respect of this code.

1. Paragraphs 1.18 to 1.20 of the Code sets out how notional spending is calculated for the purpose of election expenses. Paragraph 1.20 concludes by stating that "The rules on donations also apply to the associated gift". No reference is made as to what the rules on donations are or where they can be found. The Committee notes that rules on donations fall outside the scope of the Code but in order to assist those using the Code to comply with all of their obligations, reference should be made to where the rules on donations can be found.
2. The Code sets out the requirements relating to declaring expenses. Paragraph 1.23 states that, under Article 54(3) of the 2007 Order, a candidate on a regional list would be guilty of a corrupt practice if they knowingly make a false declaration. However, the Code makes no reference to Article 53(5) of the 2007 Order which similarly provides that a constituency candidate or their agent would be guilty of a corrupt practice if they knowingly make a false declaration. The Committee notes that consistency of approach and the provision of full information is crucial in the context



of Codes with statutory force such as this Code and would therefore welcome an explanation from the Welsh Government as to why no reference is made to Article 53(5).

Government response

A Welsh Government response is required.

Committee Consideration

The Committee considered the Code of Practice at its meeting on 1 February 2021 and reports to the Senedd in line with the reporting points above.



Government Response: The Candidate Election Expenses (Senedd Elections) Code of Practice 2021.

Scrutiny under Standing Orders 21.7

A Government response has been invited in respect of the two points raised in the report. The responses are noted below.

1. The rules on donations falls outside the scope of the Code and so as not to suggest to the reader that such donations did fall within scope, it was felt prudent not to provide detail of the rules on donations in the Code. It was felt that the reference to the rules on donations at paragraph 1.20 was sufficient to advise the reader that such donations are a consideration also but to provide further detail would infer that it was within the scope of the Code. There is no proposal to amend the Code.

We have raised your comment with the Electoral Commission who drafted the Code and have been advised that there is guidance on rules on donations available on the Electoral Commission website and when the Code of Practice is published, there will be a marker for the guidance on donations.

2. We have liaised with the Electoral Commission in respect of the fact that the Code does not make reference to the offence of corrupt practice relating to a constituency candidate or their agent under article 53(5) of the 2007 Order. The Code does make reference to the offence of corrupt practice relating to candidates on a regional list under article 54(3). It is accepted that reference to both articles could have been made in the Code but the absence of the offence under article 53(5) does not undermine the Code and reference to an offence of corrupt practice is made in the Code.

The absence to the reference in the Code does not diminish the fact that the offence is in the legislation, and it is referenced in the Commission's Guidance. The Code itself is intended to be read alongside the wider Guidance published by the Commission. The legislative reference to the offence will be made when the Code is next updated but at this time it will be referenced elsewhere on the Electoral Commission's website.



Llywodraeth Cymru
Welsh Government

Mick Antoniw MS
Chair
Legislation, Justice and Constitution Committee

5 February 2021

Dear Mick,

The Organics (Amendment) Regulations 2021

The above titled SI is required to continue easements in relation to organic Control Bodies' on-site inspections of low-risk organics operators, which were introduced in 2020 by the European Commission, in response to the Covid-19 crisis.

The easements will allow for such on-site inspections to be replaced by documentary checks in order to reduce the risk to inspectors and operators of transmitting Covid-19.

The SI will be subject to the made affirmative procedure and it is proposed by the Department for Environment, Food and Rural Affairs that it is laid before Parliament on 28 January.

I am writing to let you know that as these amendments are temporary emergency easements, I give my consent, pursuant to Article 38a(3) of the retained Regulation (EU) 834/2007, to the Secretary of State to make this statutory instrument in relation to Wales.

I am copying this letter to the Counsel General and Minister for European Transition and Minister Finance and Trefnydd.

Regards,

Lesley Griffiths AS/MS

Gweinidog yr Amgylchedd, Ynni a Materion Gwledig
Minister for Environment, Energy and Rural Affairs

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0300 0604400

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Correspondence.Lesley.Griffiths@gov.wales

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Elin Jones MS
Llywydd and Chair of Business Committee
Senedd Cymru
llywydd@senedd.wales

09 February 2021

Dear Elin,

I am writing to provide further information about how the Welsh Government envisages that Senedd business should proceed during the pre-election period and that the exercise of the powers under sections 5 and 6 of the Welsh Elections (Coronavirus) Bill would work in practice.

Senedd business during the pre-election period

Business Committee has agreed that during the pre-dissolution period, the Senedd should only be recalled for business relating to:

- urgent and significant Coronavirus related decisions; or
- postponement of the Senedd election.

It would be helpful for Business Committee to discuss the treatment of other urgent and significant developments of the type which saw a recall of the Senedd during the pre-election period ahead of the 2016 election.

In asking for a recall we would be mindful of balancing the need for the Welsh Government to be held to account for decisions by the Senedd with the platform that scrutiny would provide for Members which would not be available to other candidates.

We would welcome Business Committee's views on the treatment of regulations. During the pre-election period there will be no formal requirement for scrutiny by the Legislation, Justice and Constitution Committee (as during the Recess the timescales for reporting are paused) or for Senedd agreement during that period to regulations made under the made affirmative procedure. The arrangements for approval of such Regulations before they automatically fall would otherwise be a matter for the next Senedd and Government to consider immediately after the election, however, the balance between scrutiny and election fairness is also relevant here. Consideration of regulations during the pre-election period might require flexible arrangements including potentially the suspension of Standing Orders to allow debate of a motion without due notice.

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

We will publish our pre election guidance for Welsh Government civil servants as soon as possible, but I would like to reassure you that the fundamental principles will remain the same as for previous elections. Changes will recognise and reflect the specific circumstances of the pandemic. It is unlikely that the details of the guidance will significantly influence considerations by the Business Committee and the Senedd Commission beyond the details we have already confirmed around treatment of correspondence.

It is important that Members and candidates are treated on as equal a basis as possible during the pre-election period. To that end, we are of the view that Written Questions should not be tabled during that period.

Section 5 power – postponement of Senedd election for up to six months

Under section 5 of the Bill, the First Minister may propose that the Senedd election be postponed. Except in the most extreme circumstances, I anticipate that the First Minister and our officials will be in continuous dialogue with you and your officials on a confidential basis, to supplement the regular updates I have agreed to provide to the Senedd, so that the exercise of this power does not come as a surprise.

The First Minister intends to continue to offer regular briefings to the leaders of the main opposition parties in the Senedd, throughout the pre election period, and will invite you to join these. This would give you and the First Minister a clear view of the likely reaction of other parties to a proposal to defer the election (and hence the likelihood of it achieving the super-majority) before you put forward any proposal to fix a new date.

As I have indicated to the Senedd already, we would like to be able to make a decision in a timely fashion and we would hope that any recommendation from the First Minister to postpone the election would be made in advance of the Easter recess. Our three-weekly review process for Coronavirus regulations includes consideration of the public health context for the election, and we will also align decision-making to the extent possible with key election timetable decision points including the notice of election, as well as to decision-making elsewhere in the UK. But, of course, we must also prepare for a decision to be made closer to polling day if that is necessary.

If the First Minister decides to exercise the power, his intention is that he would write to you, providing details about the considerations he has made of the public health situation, the challenges associated with the administration of the election, and the effect on voters, enclosing separate advice from the Welsh Government's Chief Medical Officer, and indicating the preferred window for holding the postponed poll. The First Minister would simultaneously lay a Written Statement enclosing the same information.

It would then be for you to decide whether or not to recall the Senedd and put a motion to Members asking for agreement to your fixing a new date for the poll. If supermajority agreement was obtained, you would be under a duty to lay a statement. If not, you could decide to put a new motion to the Senedd; this would not require fresh intervention by the First Minister although we would of course be happy to assist in any way with your consideration of this option.

It is important that Business Committee discusses contingency planning for a situation where more sitting weeks may be available for the Fifth Senedd, and to reach agreement on the types of business which could be taken forward during that period. I would be grateful if our officials could work together to prepare further advice for Members on this.

Section 6 power – further variation of Senedd election date

Under section 6 of the Bill, you may propose a new date for the election which is one month earlier or later than a date you have fixed under section 5. If you propose this, the Welsh Government will liaise with Buckingham Palace regarding the proclamation to be made by Her Majesty dissolving the Senedd and requiring the election to be held on the new date. The wording of the proclamation will be based on that to be set out in the forthcoming Senedd Cymru (Letters Patent and Proclamations) Order 2021.

The Welsh Government will arrange for the proclamation agreed by Her Majesty to be passed under the Welsh Seal as soon as possible, and published in the Gazettes; we will of course need to coordinate the arrangements for wider communication to Members, those involved in the election and the people of Wales.

We are in discussion with Buckingham Palace about the practicalities and I will provide further information about any other issues which arise from those discussions as appropriate.

I welcome the ongoing work between our officials on these matters and I would also be happy to discuss them further with you directly.

I am copying this letter to the First Minister, to the Minister for Finance and Trefnydd, and to the Legislation, Justice and Constitution Committee. I will also lay a copy in the Senedd.

Yours sincerely,



Julie James AS/MS

Y Gweinidog Tai a Llywodraeth Leol
Minister for Housing and Local Government



Llywodraeth Cymru
Welsh Government

David Rees MS
Chair of External Affairs and Additional Legislation Committee

Mick Antoniw MS
Chair of the Legislation, Justice and Constitution Committee

Senedd Cymru
Cardiff Bay
CF99 1SN

10 February 2021

Dear David and Mick,

I am writing to inform you that the House of Commons moved a UK Government amendment to the Trade Bill on 9 February which makes provision with regard to devolved matters. The amendment will be considered by the House of Lords in due course.

The Statutory Protections Amendment

The amendment, which has been proposed in lieu of Lords amendment 6B, places restrictions on how the new concurrent powers conferred on a Minister of the Crown and the devolved authorities under clause 2 of the Bill can be exercised to implement certain provisions of FTAs concluded between the UK and other countries in circumstances where there was an existing agreement between that partner country and the EU as of 31 January 2020 (often referred to as 'continuity trade agreements').

It is important to note that clause 2 of the Bill does not confer a general power to implement new FTAs and so this amendment will not place any restrictions on the UK Government's or the Devolved Governments' powers to implement provisions within new FTAs where there was no agreement with the partner country and the EU as of 31 January 2020.

The amendment will mean that any regulations made under clause 2 will need to be consistent with maintaining UK levels of statutory protections in a number of specified areas including animal welfare and environmental protection. The definition of "UK levels of statutory protection" includes legislation made by the Welsh Ministers or passed by the Senedd in the specified areas. The amendment also specifies that provisions on healthcare services must be consistent with maintaining UK publicly-funded clinical healthcare services provided in the UK, or in the part of the UK in which the regulations have effect.

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We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

The amendment is considered to meet the threshold for laying a Legislative Consent Memorandum (LCM) for the following reasons:

- The amendment makes provision with regard to devolved matters because it alters the executive competence of the Welsh Ministers. It limits the scope of the Welsh Ministers' regulation making powers by setting out conditions which need to be complied with in order to make any regulations under clause 2(1).
- Clause 2 fell within scope of the original LCM that was laid on 2 April 2020 on the basis that it was making provision that was within the Senedd's legislative competence for the purposes of the test in SO 29.1(i). This was because the provisions that could be implemented by regulations encompassed a wide range of policy areas falling within the Senedd's competence, to include such matters as agriculture and fisheries. As the amendment alters the scope of the regulation making powers, those arguments are also considered to be of relevance to the amendment. The standards that Welsh Ministers would need to take into account before exercising that power also relates to a number of matters that are within the Senedd's legislative competence, such as agriculture, the environment and health and animal health.

This amendment would ordinarily have required an LCM but due to the very late stage at which it has been tabled during the rapidly-moving Consideration of Amendments stage, there is insufficient time to lay a supplementary memorandum and to schedule a debate in the Senedd in a way which can be taken into account in the Parliamentary process. It is frustrating that last minute changes of this nature mean that the consent process cannot be adhered to in the way we would wish. However, I consider that in this instance, the amendment is an improvement to the Bill on the basis that it sets out safeguards that apply to the scope of the regulation making power in clause 2, by ensuring that it cannot be exercised in a way that would be inconsistent with the existing standards that apply in such areas as human, animal or plant health and environmental protection.

I will continue to keep you informed of any amendments made during the final stages of the Bill in Parliament which I consider engage devolved competence.

I am copying this letter to all Members of the Senedd for information.

Yours sincerely,



Jeremy Miles AS/MS

Cwnsler Cyffredinol a'r Gweinidog Pontio Ewropeaidd
Counsel General and Minister for European Transition



Report on the implementation of Law Commission proposals

February 2021

Presented to Senedd Cymru pursuant to Section 3C
of the Law Commissions Act 1965 as inserted by
Section 25 of the Wales Act 2014

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Introduction

I am pleased to present this report on the Welsh Ministers' implementation of Law Commission proposals. This is the sixth annual report to be presented following the passing of the Wales Act 2014. It covers the period from 15 February 2020 to 14 February 2021.

The Law Commissions Act 1965, as amended by the Wales Act 2014, places the Welsh Ministers under a duty to report to Senedd Cymru each year on the extent to which they have implemented Law Commission proposals relating to Welsh devolved matters.

This report provides updates on the progress made over the last twelve months on a range of issues that have been the subject of Law Commission recommendations. We issued our detailed final response to the Law Commission's "Planning Law in Wales – Final Report". This followed and supplemented our interim response, by setting out our position on each of the 192 recommendations made by the Law Commission to simplify and consolidate the legislation on all aspects of the planning system. We have made good progress in taking forward Law Commission proposals in relation to electoral reform, mental capacity and deprivation of liberty, taxi and private hire services, and wildlife law.

This report also provides information about how we are engaging with the Law Commission on its current and future projects. This includes important work relating to coal tip safety legislation, devolved Welsh tribunals and automated vehicles.

This update and the progress noted demonstrates the importance the Welsh Government places on Law Commission proposals.

Mark Drakeford AM
First Minister of Wales

15 February 2021

Scope of the report

1. Section 3C of the Law Commissions Act 1965, as inserted by Section 25 of the Wales Act 2014, places a duty on the Welsh Ministers to report annually to Senedd Cymru on the extent to which Law Commission proposals have been implemented that year.
2. This is the sixth annual report to be published by the Welsh Ministers under the Act. The report covers the period from 15 February 2020 to 14 February 2021.
3. As stipulated by the Act, the report covers Law Commission proposals relating to Welsh devolved matters that have been implemented during the year, and proposals relating to Welsh devolved matters that have not been implemented, including plans for implementation and decisions taken not to implement proposals.
4. The report covers the reports of the Law Commission of England and Wales as far as they relate to Welsh devolved matters.

Proposals that have been implemented

5. The Welsh Government has not completed the implementation of any Law Commission proposals during this reporting period.

Proposals that have not yet been implemented

Planning Law in Wales

6. In November 2020 the Welsh Government issued its detailed final response to the Law Commission's "Planning Law in Wales – Final Report". It follows and supplements the Government's interim response published in May 2019, by setting out the Welsh Government's position on each of the 192 recommendations made by the Law Commission to simplify and consolidate the legislation on all aspects of the planning system. The majority of the recommendations have been accepted by the Welsh Government.
7. As stated in both responses, the Welsh Government acknowledges the importance of, and is committed to, bringing forward a Planning Consolidation Bill to achieve the consolidation and simplification of this significant area of law. Such a Bill is anticipated to be the main delivery mechanism for the majority of the recommendations that have been accepted.
8. Given the significant benefits it will bring to all stakeholders and the urgent need for consolidation demonstrated by the Report, work will now focus and continue on the production of the Bill, with the Law Commission continuing to work with the Welsh Government. It will also enable the Bill to form an important part of the formal programme to improve the accessibility of Welsh law required by the Legislation (Wales) Act 2019, which will be a matter for the Government in the next Senedd term.

Electoral Law

9. As part of its 11th Programme of Law Reform, the Law Commission set out to streamline the legislative framework governing all elections and referendums, and to simplify and modernise the law governing the conduct of elections and referendums. The Law Commission of England and Wales, along with the Scottish Law Commission published their final report in March 2020.
10. The Welsh Government has continued with work to implement the changes brought about by the Senedd and Elections (Wales) Act 2020 and the 2021 Senedd election will be the first to be held with the extended franchise.
11. The Law Commission's recommendation around the consolidation of electoral law has continued to be considered as part of the Welsh Government's electoral reform agenda and to inform future work programmes in this area.
12. One of the pieces of enabling legislation for Senedd elections, the National Assembly for Wales (Representation of the People) Order 2007, has been amended a number of times. The Welsh Government is committed to

making the law in Wales accessible and easy to navigate and therefore work is in hand to consider reviewing the Order with a view to replacing it with a new consolidated Order.

13. The Local Government and Elections (Wales) Bill was agreed by the Senedd in November 2020 and received Royal Assent in January 2021. This legislation makes changes to local government electoral arrangements and has consolidated some disqualification provisions as they relate to Wales in the Local Government Act 1972. The local government elections are due to take place in Wales in May 2022. Given the extensive changes presented by this legislation it has been agreed that the rules governing both principal council and town and community council elections in Wales will be re-made in their entirety. This will consolidate existing law, incorporate recent changes and will produce two single pieces of legislation governing local elections in Wales.

Mental Capacity and Deprivation of Liberty

14. In January, 2021 the UK Government published a White Paper setting out proposals for reform of the Mental Health Act 1983. Given that the Act has application in both England and Wales, the findings of the proposals set out in this White Paper also need to be carefully considered in the context of how the Act currently operates alongside specific legislation, mental health services and systems in Wales. To do this, we will be working with the UK Government to ensure that this consultation will also help inform policy decisions in Wales.
15. Whilst consultation responses to the White Paper will be received directly by the UK Government, responses will also be shared with the Welsh Government. On reserved matters, all responses from England and Wales will be fully considered by the UK Government. On devolved matters, both Governments will consider all responses, however, feedback from Wales will not be counted or addressed separately as part of the UK Government's consultation response.
16. The Welsh Government will continue to engage with the UK Government on the proposals set out in the White Paper as it considers appropriate next steps for Wales and develops its own response to the Review. We will do this in close co-operation with our mental health third sector partners and statutory partners in the field.
17. In March 2017, the Law Commission published a report and draft Bill recommending that the Deprivation of Liberty Safeguards (DoLS) be replaced with a replacement scheme. The UK Government introduced a Bill to amend the Mental Capacity Act in the summer of 2018, which received Royal Assent on 16 May 2019. Whilst not named on the face of the Act, the new procedural arrangements for authorising care and treatment that amount to a deprivation of a person's liberty are referred to as the Liberty Protection Safeguards (LPS).

18. The Welsh Government continues to work closely with UK Government departments on this reserved subject matter to ensure that the secondary legislation and the Code of Practice for the operation of the LPS accurately reflects the legislative landscape and health and social care sector in Wales.
19. In July 2020, the UK Government confirmed that it is planning to implement the new Liberty Protection Safeguards in April 2022 and plans to consult on draft regulations for England and the draft LPS code of practice for England and Wales in spring 2021. To support the implementation of the safeguards in Wales and to align with the planned implementation date of April 2022, the Welsh Government will consult on draft regulations for Wales in spring 2021. These draft regulations will focus on monitoring and reporting on the safeguards; who can undertake assessments and determinations; Independent Mental Capacity Advocates (IMCAs); and the role and appointment of Approved Mental Capacity Advocates (AMCPs). We are also planning to consult on a draft Workforce and Training Strategy for LPS for Wales. Ahead of formal consultation, officials have established cross-sector stakeholder groups to inform and co-produce the draft regulations and codes of practice.

Taxi and Private Hire Services

20. The Welsh Government's annual report on the implementation of Law Commission proposals 2019-20 referred to the consultation on Taxis and Private Hire Vehicle (PHV) legislation. The report makes reference to the consultation undertaken by the Welsh Government in 2017. Subsequently, the Welsh Government published the 'Improving Public Transport' White Paper in 2018. The consultation focused on four proposals:
1. The creation of National Standards to address the variation in taxi and PHV standards across Wales' twenty two local authorities;
 2. The extension of enforcement powers to allow local authority officers to take effective enforcement against any taxi/PHV operating in their area;
 3. The establishment of effective information sharing protocols for the purposes of safeguarding; and
 4. The possible redirection of taxi and PHV licensing functions away from local authorities and towards a Joint Transport Authority (JTA).
21. The responses to the consultation in Spring 2019 highlighted the wide range of stakeholder views about how the legislation underpinning the operation of the taxi and PHV industry should be improved and the views expressed were not consistent across the industry. It was clear that there is a considerable amount of work still required to bring forward legislation that addresses the improvements needed. The First Minister therefore announced that provisions relating to Taxis would not be included in the

proposed public transport Bill¹ this Senedd term, in order to work with the Taxi and PHV industry to develop legislative proposals to bring Taxi and Private Hire Vehicle regulation into the 21st century.

22. The Welsh Government has undertaken work with the Welsh Local Government Association and local authorities to develop a number of non-legislative solutions to be considered ahead of legislative change in order to address some of the problems associated with the current licensing regime. A 'Guide to Harmonization of Taxi/PHV Licensing' will be published shortly and contains a number of recommendations to local authorities that can be adopted on a voluntary basis to provide a more consistent approach to licensing across Wales.
23. Decisions on the development and introduction of a White Paper and Bill in the next Senedd term will be a matter for the next Government.

Leasehold and Commonhold Reform

24. The Welsh Government welcomed the publication of the Law Commission's final reports in July 2020 on Enfranchisement, the Right to Manage and Commonhold as a significant step towards much needed reform. Once the Minister for Housing and Local Government has had the benefit of considering shortly forthcoming research into the scale and scope of leasehold issues experienced in Wales, the Minister will set out how the Welsh Government intends to address those issues identified in the Welsh Government response to the Law Commission's recommendations.

Termination of Tenancies for Tenant Default and Making Land Work: Easements, Covenants and Profits à Prendre

25. The first of these Law Commission projects examined the means whereby a landlord can terminate a tenancy because the tenant has not complied with his or her obligations. The other project examined the general law governing Easements, Covenants and Profits à Prendre. The Law Commission report recommended reforms to modernise and simplify the law underpinning these rights, making it fit for the 21st century and introducing a modern registration system. The UK Government announced in the Housing White Paper published on 7 February 2017 that: "The Government also intends to simplify the current restrictive covenant regime by implementing the Law Commission's recommendations for reform and will publish a draft Bill for consultation as announced in the Queen's Speech". The Welsh Government will be giving careful consideration to the Law Commission's updated reports and to the revised UK Government Bill on the law of property and this will help inform the Welsh Government's course of action in respect of legislative options.

¹ The Bus Services (Wales) Bill was subsequently withdrawn from the Senedd in 2020 in light of the need to reprioritise resources in response to the Covid-19 pandemic.

Wildlife Law

26. As part of its 11th Programme of Law Reform, the Law Commission set out to consider the law relating to the conservation, control, protection and exploitation of wildlife in England and Wales. The Law Commission published its first report, *Wildlife Law: Control of Invasive Non-native Species* in 2014 recommending the introduction of control agreements and orders to compel landowners or occupiers to carry out control or eradication operations. Some of these recommendations were given effect in the Infrastructure Act 2015.
27. The Law Commission published their final Wildlife Law report in 2015 proposing a single statute bringing together most of the law relating to wildlife as well as making specific proposals on the most appropriate way of transposing EU directives and enforcement of wildlife legislation, including both criminal offences and civil sanctions, and appeals.
28. The Welsh Government considered the Law Commission's proposals in the context of both the passage of the Environment (Wales) Act 2016 and the outcome of the EU referendum in June 2016. In light of both, the Welsh Government decided not to implement the Law Commission's recommendations at that time, instead indicating both the report and draft Bill would be used as part of the underpinning evidence to inform future legislative opportunities to protect wildlife in Wales.
29. Over the last two years, the Welsh Government has taken steps to convert the majority of EU law into domestic law and preserve and correct domestic law that implements EU obligations. This will provide a firm foundation as we consider the way forward on new legislative opportunities to protect wildlife in Wales.
30. During this period, the Welsh Government has also taken steps that implement some of the Law Commission's specific proposals relating to Invasive Non-native Species. The Invasive Alien Species (Enforcement and Permitting) Order 2019, made by the Parliamentary Under Secretary of State for Defra and Minister for Environment, Energy and Rural Affairs came in to force in December 2019. This puts in place enforcement, licensing and permitting regimes for those species listed as Invasive Alien Species of Union concern under EU Regulation 1143/2014. Similar to the Law Commission's cross-cutting proposals the Order provides for both criminal and civil sanctions, sets penalties consistent with similar penalties contained in existing wildlife legislation, contains provisions relating to offences by companies and partnerships, introduces standard licensing requirements and make changes where some existing provisions overlap with the controls set out in the Order.
31. In the 2015 Report, the Law Commission took the view that, in the future, the operation and inspection of snares may benefit from additional regulations prescribing how relevant snares should be operated and

inspected. The Welsh Government White Paper published in December 2020 includes proposals to include order making powers related to the sale and use of snares through the introduction of an Agriculture (Wales) Bill during the sixth Senedd term.

Current and Future Law Commission Projects

Devolved Welsh Tribunals

32. As part of the Law Commission's 13th Programme of Law Reform, the Commission and the Welsh Government agreed to embark on a Wales-only project on the law relating to devolved Welsh tribunals. The Law Commission's Wales-only project has commenced and is progressing well. Several meetings with stakeholders have been undertaken and the project is now in its consultation stage. The final report of the Law Commission is due in Autumn 2021.

Automated Vehicles

33. In March 2018, the UK Government's Centre for Connected and Autonomous Vehicles (CCAV) asked the Law Commission to undertake a far-reaching review of the UK's regulatory framework for road-based automated vehicles. The Law Commission aims to produce its final report including recommendations for legislative change by the end of 2021.

34. The Welsh Government welcomes the Law Commission's work on this critical area for the future of passenger transport. The Welsh Government's consultation on the Wales Transport Strategy sets out a vision to improve the operation and maintenance of the road network, including through new technology. Innovations in passenger transport will play an enormous role in managing increasing demand and continuing to improve road safety whilst reducing Wales' carbon footprint and making more efficient use of our infrastructure. To do this safely, it is vital to have a legal framework which recognises the changing role technology will play in driving and supports people to have confidence in its use.

Coal Tip Safety

35. Following a landslide from a disused coal tip in Tylorstown in February 2020, the Welsh Government began an assessment of the legislation underpinning coal tip safety. It found the current legislation is neither sufficiently robust nor fit for purpose to provide the necessary levels of management and oversight required to ensure public safety.

36. In October 2020, the Minister for Environment, Energy and Rural Affairs invited the Law Commission to undertake a review of coal tip safety legislation using powers under the Law Commissions Act 1965 (as amended by the Wales Act 2014). The Law Commission agreed this was an important piece of work and commenced its review of coal tip safety legislation on 2 November 2020. The review is expected to run for a period of 13-15 months.

37. The review will evaluate current legislation relating to coal tip safety with a view to identifying gaps, inconsistencies and approaches which are

unhelpful or have become outdated. The Commission has been asked to identify options for alternative regulatory models appropriate for adoption in Wales, and consider the features needed to ensure that any proposed system is effective and to propose recommendations to ensure a robust, integrated and future-proofed regulatory system which adopts a uniform approach to inspection, maintenance and record-keeping.

38. The Law Commission is expected to consult with stakeholders in spring 2021 and subsequently publish its report early in 2022.

Decisions taken not to implement

39. The Welsh Government has taken no decisions not to implement a Law Commission report during this reporting period.



Llywodraeth Cymru
Welsh Government

WRITTEN STATEMENT BY THE WELSH GOVERNMENT

TITLE Report on the implementation of Law Commission proposals
DATE 15 February 2021
BY Mark Drakeford MS, First Minister of Wales

I am pleased to lay before the Senedd today, the sixth annual [report on the Welsh Government's implementation of Law Commission proposals](#).

Under Section 3C of the Law Commissions Act 1965, as inserted by Section 25 of the Wales Act 2014, the Welsh Ministers are required to report annually on the extent to which Law Commission proposals relating to Welsh devolved matters have been implemented.

This report covers the period from 15 February 2020 to 14 February 2021, and provides Members with an update about a number of areas that relate to Law Commission proposals as well as information on current and future Law Commission projects.

Progress has been made over the last twelve months on a range of issues that have been the subject of Law Commission recommendations. We issued our detailed final response to the Law Commission's "Planning Law in Wales – Final Report". This followed and supplemented our interim response, by setting out our position on each of the 192 recommendations made by the Law Commission to simplify and consolidate the legislation on all aspects of the planning system. We have made good progress in taking forward Law Commission proposals in relation to electoral reform, mental capacity and deprivation of liberty, taxi and private hire services, and wildlife law.

This report also provides information about how we are engaging with the Law Commission on its current and future projects. This includes important work relating to coal tip safety legislation, devolved Welsh tribunals and automated vehicles.

This update and the progress noted demonstrates the importance the Welsh Government places on Law Commission proposals.

Agenda Item 8.5



Rt Hon Simon Hart MP
Secretary of State for Wales
Ysgrifennydd Gwladol Cymru

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Mick Antoniw MS

Chair of the Legislation, Justice and Constitution Committee
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16 February 2021

Dear Mick,

The Sewel Convention

Thank you for your letter of 21 January regarding the application of the Sewel Convention to the United Kingdom Internal Market Bill (the Bill).

As set out in the Minister of State for Small Business, Consumers and Labour Markets' written statement of 17 December 2020, it was the UK Government's intention from the very outset of the process to legislate for the Bill with the consent of all devolved legislatures. As with every UK Government Bill that engages the legislative consent process, we followed the associated practices and procedures for seeking consent from the devolved administrations. We therefore wrote to all three devolved administrations in advance of introduction of the Bill seeking consent.

In this respect I disagree with your assertion that the 'not normal' circumstances of the Bill meant that the Sewel Convention did not apply. The convention applies in all circumstances where Parliament seeks to legislate on devolved matters and the UK government seeks consent on this basis. The convention recognises however that there are circumstances in which it may be necessary for Parliament to legislate irrespective of whether or not consent is obtained. The inclusion of the words 'not normal' within the convention acknowledges that Parliament is sovereign and therefore it is ultimately for Parliament whether to use its power to legislate in any such circumstances.

Our work with the Welsh Government alongside the Bill's parliamentary passage sought to clarify the concerns that they had raised with us with the hope of reaching a point at which the Welsh Government could recommend that the Senedd granted consent to the Bill. I was pleased that as a result of this engagement we were able to bring forward amendments to the Bill to directly address a number of issues.

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This included providing a mechanism that would enable divergence under Common Frameworks to be excluded from the Market Access Principles where there is agreement between all four parts of the UK, as well as ensuring that the Secretary of State is obliged to seek the consent of the devolved administrations when panel appointments are made to the Office of the Internal Market. The UK Government deeply regrets that, despite efforts to find common ground, both the Senedd and the Scottish Parliament refused consent for the Bill. However, we sought consent in good faith and are confident that the legislation is more robust and more attuned to Welsh Government concerns in particular as a result.

The Bill, now Act, is vital in ensuring that businesses in Wales and across the UK can continue to trade freely within our internal market now that the Transition Period has ended. Our consultation highlighted the real concerns that businesses, including those in Wales, had about the potential for regulatory divergence between parts of the UK to create new internal barriers to trade. It is the Government's view that legislation of this kind must be in place across the whole UK in order to provide businesses and consumers from all parts of our country with the same legal protections and advantages. Taking all of this into account, we made the difficult decision at the end of the process that it was necessary to proceed with the Bill without consent and to bring key parts of the Act into force before the end of the Transition Period on 31 December 2020. This is not a decision that was taken lightly, however as I have made clear, it was in line with the convention.

The Government remains firmly committed to the Sewel Convention and its associated practices. The convention continues to work well and it remains the case that the vast majority of UK Parliamentary Bills that intersect with devolved competence are passed with the consent of the devolved legislatures. This has enabled provisions to be made in parliamentary primary legislation which are of great benefit to Wales and ensured that the Senedd has the necessary time and capacity to deliver its distinct programme of legislation. The information provided in explanatory notes which accompany UK primary legislation provide transparency on the provisions for which consent is being sought.

It is a matter for Parliament to consider the role that it should play in respect of the Sewel Convention. I am sure that your Committee will be aware of the implementation of a new procedure in the House of Lords, proposed by the Procedure and Privileges Committee and which the UK Government adopted for the first time in the course of the UKIM Bill's passage. Under this procedure the UK Government is expected to provide peers with a statement to the House outlining the reasons why legislative consent has been refused or not yet granted by the relevant devolved legislatures prior to the commencement of Third Reading.

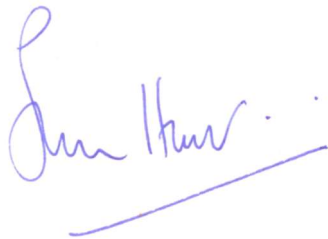
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Letters from the Clerks of each of the relevant devolved legislatures detailing the outcome of LCMs are also made available on the Parliament website. The UK Government will engage constructively with Parliament and its committees on any ongoing improvements to the legislative consent process.

I am copying this letter to the Secretary of State for Business, Energy and Industrial Strategy, the Minister for Small Business, Consumers and Labour Markets, the Minister of State for the Constitution and Devolution, the Chairs of the External Affairs and Additional Legislation Committee, Finance and Constitution Committee, Committee for the Executive Office, the Welsh Affairs Committee, the Public Administration and Constitutional Affairs Committee, and the Lords Constitution Committee.

Yours sincerely,



Rt Hon Simon Hart MP
Secretary of State for Wales
Ysgrifennydd Gwladol Cymru

The Rt Hon Simon Hart MP
Secretary of State for Wales

21 January 2021

Dear Simon

The Sewel Convention

As you will be aware, we are undertaking an inquiry on Wales' Changing Constitution. As we conclude our inquiry, we would like to consider the application of the Sewel Convention to the United Kingdom Internal Market Bill ("the Bill").

We wrote to you on **18 September 2020** asking whether the UK Government would seek to pass the Bill without the consent of the Senedd. You will be aware that this question was asked within the context of the evidence you provided to the Committee on **9 March 2020** in relation to the European Union (Withdrawal Agreement) Bill, during which you said "in this particular instance, 'not normal' emerged as the theme as it became more obvious that the LCM wouldn't get through this place [the Senedd]".

You responded on **3 October 2020** and stated that the UK Government remains "fully committed to the convention on legislative consent". You also said that "...the Bill's explanatory notes state clearly that we are seeking consent in relation to all parts of the Bill [and] the UK government ministers responsible for the Bill wrote... ahead of the Bill's introduction to set this position out in detail".

Prior to the Bill becoming an Act, the Minister for London and Parliamentary Under Secretary of State, Paul Scully MP made a **statement** on 17 December 2020. He stated that:

The Sewel Convention envisages situations where the UK Parliament may need to legislate for the whole country [...] The exceptional circumstances of our departure from the EU, and the need to provide a UK-wide legal underpinning for the internal market, is clearly one such situation.



We share the view of the Senedd's External Affairs and Additional Legislation Committee, expressed in its report **UK Internal Market Bill Legislative Consent**, that the circumstances relating to the UK internal market are fundamentally different from the circumstances of our departure from the European Union.



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The Bill should not, in our view, have been captured by the “not normal” aspect of the Sewel Convention and the Senedd’s refusal of consent should have been respected by the UK Government. Our position that the UK-wide Bill as drafted was a preferred course of action by the UK Government, not a required one, is supported by the UK Government’s own acknowledgement in the [JMC communique of October 2017](#) that a UK internal market could be delivered through legislative and non-legislative common frameworks. This is something that we highlighted in our report on [The Welsh Government’s Legislative Consent Memorandum on the United Kingdom Internal Market Bill](#).

Our report also highlighted that, at the same time as all four governments of the UK were collaborating on common frameworks, the Welsh Government (along with other devolved governments) was being excluded from involvement in the Bill’s development prior to its introduction to the UK Parliament. We were therefore surprised to see the UK Government say in the statement, “At every stage, we have followed the spirit and letter of the devolution settlement and worked hard to secure legislative consent.” We consider that collaboration and engagement with the Welsh Government prior to the introduction of a constitutional Bill that impacts on the Senedd’s legislative competence is an essential part of the legislative consent process. Such an approach would be in line with the UK Government’s own guidance contained in [Devolution Guidance Note: Parliamentary and Assembly Primary Legislation Affecting Wales](#).

In light of our observations, we would be grateful for your responses to the following questions:

1. Why did the UK Government not involve the Welsh Government in the preparation of the Bill prior to its introduction?
2. Your response of 3 October 2020 references the Explanatory Notes to the Bill (as introduced to the House of Commons), which state:

87 There is a convention that the UK Government will not normally legislate with regard to matters that affect or are within the legislative competence of the Scottish Parliament, the National Assembly for Wales or the Northern Ireland Assembly without the consent of the legislature concerned.

88 The Government has therefore sought legislative consent for the clauses contained in this Bill.

If the circumstances of the Bill were “not normal”, meaning the Sewel Convention did not apply, why did the UK Government seek consent in the first instance?

3. When did the UK Government decide that the circumstances of the Bill were “not normal” for the purposes of the Sewel Convention?
4. Did the UK Government make its final decision after consent was refused by the Senedd?
5. What, if anything, did you do differently when seeking consent for the Bill when compared to the process you followed for the EU (Withdrawal Agreement) Bill, consent for which was also refused by the Senedd?
6. What role does the UK Government consider the UK Parliament should play in the Sewel Convention in respect of each UK Bill for which consent is sought from the Senedd?



7. How could the processes surrounding the Sewel Convention be improved so that it operates clearly and more effectively?

I look forward to hearing from you by 17 February 2021.

Yours sincerely,



Mick Antoniw MS

Chair of the Legislation, Justice and Constitution Committee

Croesewir gohebiaeth yn Gymraeg neu Saesneg.
We welcome correspondence in Welsh or English.

cc.

The Rt Hon Kwasi Kwarteng MP, Secretary of State for Business, Energy and Industrial Strategy

Paul Scully MP, Minister for London and Parliamentary Under Secretary of State (Minister for Small Business, Consumers and Labour Markets)

David Rees MS, External Affairs and Additional Legislation Committee, Senedd Cymru

Bruce Crawford MSP, Finance and Constitution Committee, Scottish Parliament

Colin McGrath MLA, Committee for the Executive Office, Northern Ireland Assembly

Rt Hon Stephen Crabb MP, Welsh Affairs Committee, House of Commons

William Wragg MP, Public Administration and Constitutional Affairs Committee, House of Commons

Rt Hon the Baroness Taylor of Bolton, Constitution Committee, House of Lords



Agenda Item 11

By virtue of paragraph(s) vi of Standing Order 17.42

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Agenda Item 12

By virtue of paragraph(s) vi of Standing Order 17.42

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