Permitting decisions

Bespoke permit

We have decided to grant the permit for Higher Exe Farm operated by Mr Adrian Shute, Mr William Shute, Mr Jeremy Shute, Mrs Maureen Shute and Mr Matthew Shute.

The permit number is EPR/YP3734CK.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

This decision document provides a record of the decision making process. It:

- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- shows how we have considered the consultation responses.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

Key issues of the decision

New Intensive Rearing of Poultry or Pigs BAT Conclusions document

The new Best Available Techniques (BAT) Reference Document (BREF) for the Intensive Rearing of poultry or pigs (IRPP) was published on the 21st February 2017. There is now a separate BAT Conclusions document which will set out the standards that permitted farms will have to meet.

The BAT Conclusions document is as per the following link

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D0302&from=EN

Now the BAT Conclusions are published all new installation farming permits issued after the 21st February 2017 must be compliant in full from the first day of operation.

There are some new requirements for permit holders. The conclusions include BAT Associated Emission Levels for ammonia emissions which will apply to the majority of permits, as well as BAT associated levels for nitrogen and phosphorus excretion.

For some types of rearing practices stricter standards will apply to farms and housing permitted after the new BAT Conclusions are published.

New BAT conclusions review

There are 34 BAT conclusion measures in total within the BAT conclusion document dated 21st February 2017.

We have sent out a not duly made request requiring the Applicant to confirm that the new installation complies in full with all the BAT conclusion measures.

The Applicant has confirmed their compliance with all BAT conditions for the new installations in their emails dated 30/10/18

The following is a more specific review of the measures the Applicant has applied to ensure compliance with the above key BAT measures

BAT measure	**Applicant compliance measure**
BAT 3 - Nutritional management Nitrogen excretion	The Applicant has confirmed it will demonstrate it achieves levels of Nitrogen excretion below the required BAT-AEL for the following pig types : 4 kg N/animal place/year for Weaners (pigs up to 30kg) 13 kg N/animal place/year for Fattening Pigs(pigs over 30kg) by using a mass balance of nitrogen based on the feed intake, dietary contact of crude protein and animal performance. This confirmation was in response to the Not Duly Made Request received 20/05/18, which has been referenced in Table S1.2 Operating Techniques of the Permit. Table S3.4 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions. The Applicant intends to use a model developed by AHDB/AIC, or similar to determine the N & P excretion annually once the permit has been granted
BAT 4 Nutritional management Phosphorous excretion	The Applicant has confirmed it will demonstrate it achieves levels of Phosphorus excretion below the required BAT-AEL for the following pig types 2.2 kg P_2O_5 animal place/year for Weaners (pigs up to 30 kg)

BAT measure	Applicant compliance measure
	5.4 kg P_2O_5 animal place/year for Fattening Pigs (pigs over 30 kg) by an estimation using manure analysis for total Phosphorous content. This confirmation was in response to the Not Duly Made Request received 20/05/18, which has been referenced in Table S1.2 Operating Techniques of the Permit. Table S3.4 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 24 Monitoring of emissions and process parameters - Total nitrogen and phosphorous excretion	Table S3.4 Process monitoring requires the operator to undertake relevant monitoring that complies with these BAT conclusions
BAT 25 Monitoring of emissions and process parameters - Ammonia emissions	Table S3.4 of the Permit concerning process monitoring requires the Operator to undertake relevant monitoring that complies with these BAT Conclusions.
BAT 26 Monitoring of emissions and process parameters - Odour emissions	The approved OMP includes the following details for on Farm Monitoring and Continual Improvement: • The staff will perform a daily boundary walk to check the surrounding area for high levels of odour, as well as this checks will be performed on the surrounding area by persons who do not regularly work on the farm. • Visual (and nasal) inspections of potentially odorous activities will be carried out.
BAT 27 Monitoring of emissions and process parameters -Dust emissions	Table S3.4 Process monitoring requires the operator to undertake relevant monitoring that complies with these BAT conclusions. The Applicant has confirmed they will report the dust emissions to the Environment Agency annually by calculating the emission factor with the dust concentration and ventilation rate. This confirmation was in response to the Not Duly Made Request for Further Information received 20/05/18, which has been referenced in Table S1.2 Operating techniques of the Permit.
BAT 30 Ammonia emissions from pig houses	The Applicant has confirmed it will demonstrate it achieves levels of ammonia below the required BAT-AEL for the following pig types: Pigs 7 – 30kg: 0.53 kg NH3/animal place/year. Pigs > 30kg: 2.6 kg NH3/animal place/year. The standard emission factors does not comply with the BAT AEL for some categories of pigs, however additional measures detailed below have been incorporated to ensure compliance.

More detailed assessment of specific BAT measures

Ammonia emission controls

A BAT Associated Emission Level (AEL) provides us with a performance benchmark to determine whether an activity is BAT.

Ammonia emission controls – BAT conclusion 30

The new BAT conclusions include a set of BAT-AEL's for ammonia emissions to air from animal housing for pigs.

'New plant' is defined as plant first permitted at the site of the farm following the publication of the BAT conclusions.

All new bespoke applications issued after the 21st February, including those where there is a mixture of old and new housing, will now need to meet the BAT-AEL.

More detailed assessment of AEL's

Pig housing

The operator has confirmed that the housing systems are fully slatted flooring (FSF) with frequent slurry removal systems which meet the following criteria:

- All slurry pits will be operated with a maximum slurry liquor depth of 800 mm as defined in section 4.7.1.2 of the latest Intensive Farming BREF http://eippcb.jrc.ec.europa.eu/reference/BREF/IRPP/JRC107189_IRPP_Bref_2017_published.pdf, and
- Slurry removal frequency of a maximum of 12 weeks.

In addition, where necessary, the operator has included additional information to show that the ammonia BAT AELs can be achieved. A full description is given below:

Pigs 7 - 30kg: BAT AEL = 0.53 kg NH3/animal place/year

Actual emission factors used for ammonia assessments are for the weight ranges 7 – 15kg and 15 – 30kg, therefore an average calculation has been used to calculate an emission factor which can be achieved with the measures proposed by the applicant as follows:

Actual emission factor for 7 – 15 kg pigs on FSF with frequent slurry removal = 0.22

Applying a reduction for 90 % occupancy rate and 2% crude protein reduction (giving 20% reduction in emissions = 0.22 x 0.90 x 0.8 = 0.158 kg NH3/animal place/year

Actual emission factor for 15 – 30kg pigs on FSF with frequent slurry removal = 1.19 kg NH3/animal place/year

Applying a reduction for 90% occupancy rate and 2% crude protein reduction (giving 20% reduction in emissions = 1.19 x 0.90 x 0.8 = 0.856 kg NH3/animal place/year

The application is for 3,500 pigs 7 – 15kg and 3,500 pigs 15 – 30kg

Calculating an average emission factor = 0.158 + 0.856/2 = 0.51 kg NH3/animal place/year therefore below the BAT AEL of 0.53 kg NH3/animal place/year.

Pigs > 30kg: BAT AEL = 2.6 kg NH3/animal place/year

Actual emission factor for FSF with frequent slurry removal = 3.11 kg NH3/animal place/year

We have agreed an emission factor of 2 for FSF with frequent slurry removal at most every 12 weeks with slurry depth <800mm. This is therefore below the BAT AEL of 2.6 kg NH3/animal place/year.

Industrial Emissions Directive (IED)

The Environmental Permitting (England and Wales) (Amendment) Regulations 2013 were made on the 20 February and came into force on 27 February 2013. These Regulations transpose the requirements of the IED.

This permit implements the requirements of the European Union Directive on Industrial Emissions.

Groundwater and soil monitoring

As a result of the requirements of the Industrial Emissions Directive, all permits are now required to contain a condition relating to protection of soil, groundwater and groundwater monitoring. However, the Environment Agency's H5 Guidance states **that it is only necessary for the operator to take samples** of soil or groundwater and measure levels of contamination where there is evidence that there is, or could be existing contamination and:

- The environmental risk assessment has identified that the same contaminants are a particular hazard; or
- The environmental risk assessment has identified that the same contaminants are a hazard and the risk assessment has identified a possible pathway to land or groundwater.

H5 Guidance further states that it is **not essential for the Operator** to take samples of soil or groundwater and measure levels of contamination where:

- The environmental risk assessment identifies no hazards to land or groundwater; or
- Where the environmental risk assessment identifies only limited hazards to land and groundwater and there is no reason to believe that there could be historic contamination by those substances that present the hazard; or
- Where the environmental risk assessment identifies hazards to land and groundwater but there is evidence that there is no historic contamination by those substances that pose the hazard.

The site condition report (SCR) for Higher Exe (received with the application on 10/06/18) demonstrates that there are no hazards or likely pathway to land or groundwater and no historic contamination on site that may present a hazard from the same contaminants. **Therefore, on the basis of the risk assessment presented in the SCR, we accept that they have not provided base line reference data for the soil and groundwater at the site at this stage and although condition 3.1.3 is included in the permit no groundwater monitoring will be required.**

Odour

Intensive farming is by its nature a potentially odorous activity. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance (http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297084/geho0110brsb-e-e.pdf).

Condition 3.3 of the environmental permit reads as follows:

"Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour."

Under section 3.3 of the guidance an Odour Management Plan (OMP) is required to be approved as part of the permitting process, if as is the case here, sensitive receptors (sensitive receptors in this instance excludes properties associated with the farm) are within 400m of the Installation boundary. There are two residential receptors within 400 metres of the installation boundary they are located approximately 372m and 374 m to the west of the installation. It is appropriate to require an OMP when such sensitive receptors have been identified within 400m of the installation to prevent, or where that is not practicable, to minimise the risk of pollution from odour emissions.

The risk assessment for the Installation provided with the Application lists key potential risks of odour pollution beyond the Installation boundary. These activities are as follows:

- Feed storage
- Storage, moving and application of manure or slurry
- Carcass disposal
- Housing

Odour Management Plan Review

We have assessed the OMP and the H1 risk assessment for odour and are satisfied that all sources and receptors have been identified, and that the proposed mitigation measures will minimise the risk of odour pollution / nuisance.

Noise

Intensive farming by its nature involves activities that have the potential to cause noise pollution. This is recognised in our 'How to Comply with your Environmental Permit for Intensive Farming' EPR 6.09 guidance. Under section 3.4 of this guidance a Noise Management Plan (NMP) must be approved as part of the permitting determination, if there are sensitive receptors within 400m of the Installation boundary.

Condition 3.4 of the Permit reads as follows:

Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan, to prevent or where that is not practicable to minimise the noise and vibration.

There are sensitive receptors within 400 metres of the Installation boundary as stated in section 4.4.2 above. There are two residential receptors within 400 metres of the installation boundary they are located approximately 372m and 374 m to the west of the installation. The Operator has provided a noise management plan (NMP) as part of the Application supporting documentation, and further details are provided in section 4.5.2 below.

The risk assessment for the Installation provided with the Application lists key potential risks of noise pollution beyond the Installation boundary. These activities are as follows:

- Traffic/machinery
- Extraction fans
- Alarm System
- Pigs
- Personnel/Workers
- Repair work

Noise Management Plan Review

We have assessed the NMP and the H1 risk assessment for noise and conclude that the Applicant has followed the guidance set out in EPR 6.09 Appendix 5 'Noise management at intensive livestock installations'. We are satisfied that all sources and receptors have been identified, and that the proposed mitigation measures will minimise the risk of noise pollution / nuisance.

Dust and Bio aerosols

The use of Best Available Techniques and good practice will ensure minimisation of emissions. There are measures included within the Permit (the 'Fugitive Emissions' conditions) to provide a level of protection. Condition 3.2.1 'Emissions of substances not controlled by an emission limit' is included in the Permit. This is used in conjunction with condition 3.2.2 which states that in the event of fugitive emissions causing pollution following commissioning of the Installation, the Operator is required to undertake a review of site activities, provide an emissions management plan and to undertake any mitigation recommended as part of that report, once agreed in writing with the Environment Agency.

Whilst there are no sensitive receptors within 100 metres of the boundary of the installation the applicant has provided a dust and bio aerosol management plan.

Ammonia

The applicant has demonstrated that the housing will meet the relevant NH3 BAT-AEL.

There are no European sites within 5 km of the installation boundary.

There are 2 Sites of Special Scientific Interest (SSSI) located within 5 km of the installation. There are also 2 Local Wildlife Sites (LWS) within 2 km of the installation.

Ammonia assessment – SSSI

The following trigger thresholds have been applied for assessment of SSSIs:

- If the process contribution (PC) is below 20% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.
- Where this threshold is exceeded an assessment alone and in combination is required. An in combination assessment will be completed to establish the combined PC for all existing farms identified within 5 km of the SSSI.

Screening using the ammonia screening tool version 4.5 has determined that the PCs of ammonia emissions from the application site are over the 20% threshold, and therefore may cause damage to features of the SSSI. An in combination assessment has therefore been carried out.

There are no other farms acting in combination with this application. The PC is predicted to be less than 50% of the critical level significance threshold. Under Environment Agency guidelines it is therefore possible to conclude no likely damage to the site from the installation, no further assessment is required.

Table 2 – Ammonia emissions

Site	Critical level ammonia µg/m^3	Predicted process contribution µg/m^3	% of critical level
Brendonmoor SSSI	1*	0.214	21**

*APIS indicated the presence of Bryophytes therefore a CLe of 1 applied (August 2018)
** detailed modelling [A Report on the Modelling of the Dispersion and Deposition of Ammonia from the existing piggeries and proposed expanded piggeries at Higher Ex, Week St. Mary, Holsworthy in Devon dated 27 March 2018 submitted with this application] has indicated that the PC for Brendonmoor SSSI is predicted to between 9 - 13% this was based on a worst case scenario, in reality the ammonia emissions are likely to be less than this and therefore insignificant.

No further assessment is required.

Screening using detailed modelling [A Report on the Modelling of the Dispersion and Deposition of Ammonia from the existing piggeries and proposed expanded piggeries at Higher Ex, Week St. Mary, Holsworthy in Devon dated 27 March 2018 submitted with this application] has indicated that the PC for Greenamore SSSI is predicted to be between 16.4 – 25.3 % of the CLe for ammonia emissions. However the applicant's modelling used emission factors for two scenarios which did not fully reflect the emission factors we agreed during the determination (see section ' more detailed assessment of AELs 'within this decision document). We asked our technical experts to review the modelling report and carry out some sensitivity analysis, using the emission factors we agreed during the determination. They confirmed using the revised emission factors the PC is predicted to be less the 20% of the critical level significance threshold. Under Environment Agency guidelines it is therefore possible to conclude no likely damage to the site from the installation, no further assessment is required.

The results of the ammonia modelling are given in the tables below.

Table 3– Ammonia emissions

Site	Ammonia Cle (µg/m^3)	PC (µg/m^3)	PC % critical level
Greenamore SSSI	1 *	0.164 - 0.253 **	16.4 - 25.3 ***

*APIS indicated the presence of Bryophytes therefore a CLe of 1 applied (August 2018)

** PC range based on unrealistic worst case and unproven mitigation scenarios

*** reviewed using emission factors provided in this document in section ' more detailed assessment of AELs '. We concluded the PC is predicted to be less than 20% of the critical level .

Ammonia assessment - LWS

The following trigger thresholds have been applied for the assessment of these sites:

- If the process contribution (PC) is below 100% of the relevant critical level (CLe) or critical load (CLo) then the farm can be permitted with no further assessment.

Initial screening using ammonia screening tool version 4.5 has indicated that emissions from Higher Exe Farm will only have a potential impact on the LWS sites with a precautionary critical level of 1µg/m^3 if they are within 1531 metres of the emission source.

Beyond 1531 m the PC is less than 1µg/m^3 and therefore beyond this distance the PC is insignificant. In this case the LWS is beyond this distance (see table below) and therefore screen out of any further assessment.

Table 3 – LWS Assessment

Name of LWS	Distance from site (m)
Week St Mary Woods LWS	1619

Screening using the ammonia screening tool version 4.5 has determined that the PC on the LWS for ammonia emissions/nitrogen deposition/acid deposition from the application site are under the 100% significance threshold and can be screened out as having no likely significant effect. See results below.

Table 4 - Ammonia emissions

Site	Critical level ammonia µg/m^3	Predicted PC µg/m^3	PC % of critical level
Witheven Farm LWS	3*	1.835	61.2

* CLe 3 applied as no protected lichen or bryophytes species were found when checking Easimap layer

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Table 5 – Nitrogen deposition

Site	Critical load kg N/ha/yr. [1]	Predicted PC kg N/ha/yr.	PC % of critical load
Witheven Farm LWS	10	9.533	95.3

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – August 18

Table 6 – Acid deposition

Site	Critical load keq/ha/yr. [1]	Predicted PC keq/ha/yr.	PC % of critical load
Witheven Farm LWS	3.606	0.681	18.9

Note [1] Critical load values taken from APIS website (www.apis.ac.uk) – August 18

No further assessment is required.

Decision checklist

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Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on confidentiality.
Consultation	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement. The application was publicised on the GOV.UK website. We consulted the following organisations: Local Authority Environmental Health Health and Safety Executive No responses were received from consultees or following the publication on the GOV.UK website.
Operator	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
The facility	
The regulated facility	We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits. The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.
The site	
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports.
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in

Aspect considered	Decision
	the nature conservation screening report as part of the permitting process. We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified. We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.
Environmental risk assessment	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.
Operating techniques	
General operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility. The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit The operating techniques are as follows:- - The pig houses (except one and four) are ventilated by roof fans with emission points higher than 5.5 metres above ground level and an efflux speed of 10 metres per second. Pig houses one and four are ventilated by roof fans but at an efflux speed of 10 metres per second and the emissions points are 4.8 metres above ground level. - Slurry is kept to a depth of less than 800 mm and frequently removed every 12 weeks and spread on the operators and other land owned by a third party - Dirty wash water is channelled to the underground slurry tanks - Roof water and clean yard water is directed to a retention pond before being discharged to soakaway - Carcasses are stored in a lockable container and disposed of via a licensed contactor - Phosphorus and protein levels are reduced over the production and growing cycle by providing different feeds The proposed techniques for priorities for control are in line with the benchmark levels contained in the Sector Guidance Note EPR6.09 and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs.
Odour management	We have reviewed the odour management plan in accordance with our guidance on odour management. We consider that the odour management plan is satisfactory.
Noise management	We have reviewed the noise management plan in accordance with our guidance on noise assessment and control. We consider that the noise management plan is satisfactory.

Aspect considered	Decision
Permit conditions	
Pre-operational conditions	Based on the information in the application, we consider that we need to impose pre-operational conditions The Operator is currently assessing the slurry lagoons D1 and D4 and manure storage area D3 and then proposing to carry out the necessary work to ensure that they are fully compliant with The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) (Regulations 2010) (SSAFO) and the relevant Best Available Techniques for Intensive Rearing of Poultry or Pigs outlined in BAT conclusion BAT 15 and BAT 18. In addition a further lagoon D5 is proposed, there is a pre-operational condition requirement for the Operator to submit a report to demonstrate compliance with SSAFO and BAT 18. Both report must be submitted 28 days before use of the lagoons and stores for the Environment Agency to approve in writing.
Emission limits	We have decided that emission limits are required in the permit. BAT AELs have been added in line with the Intensive Farming sector BAT conclusions document dated 21/02/17. These limits are included in permit table S3.3.
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. We made these decisions in accordance with Intensive Farming BAT conclusion document dated 21/02/17.
Reporting	We have specified reporting in the permit. We made these decisions in accordance with Intensive Farming BAT conclusions document dated 21/02/17
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Relevant convictions	Relevant convictions were declared in the application. We considered relevant convictions as part of the determination process.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to vary this permit.

Aspect considered	Decision
	Paragraph 1.3 of the guidance says: “The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.” We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections. We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.