The Quality Protocol for the production and use of quality compost from source-segregated biodegradable waste

Frequently Asked Questions

The Quality Protocol for the production and use of quality compost from source-segregated biodegradable waste (the Quality Protocol) will be published on 15 March 2007, and will be officially recognised by the Environment Agency from 7 May 2007. It is recognised that the Protocol will generate a lot of interest from different parties. To help answer some questions which may be raised as a result of the launch, we have produced a set of Frequently Asked Questions, categorised under the following headings:

1. The Quality Protocol for production and use of quality compost
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1. The Quality Protocol for production and use of quality compost

1.1 General

Q1. Why has a Quality Protocol for compost been developed?
A1. Compost was selected as the top priority for Quality Protocol development at a workshop held as part of a meeting of the Project Advisory Board. The Advisory Board includes a wide range of Trade Bodies and technical experts and is chaired by an independent Chairman. Selection was based upon:

- Tonnage
- Level of market place interest
- High Profile
- Potential for benefits

A Quality Protocol for compost aims to help reduce the regulatory burden for the production and use of quality compost. It also confirms that these materials will no longer be considered as waste as long as they are produced and used in accordance with the Quality Protocol.
The Quality Protocol will only apply in England and Wales.

In Northern Ireland, the Environment and Heritage Service plan to review their current position on the regulation of outputs from the composting of waste. This review will take the Quality Protocol into consideration.

Q2. How was the Quality Protocol for compost developed?
A2. A Technical Advisory Group (TAG) was set up and asked to consider the feasibility of producing a Quality Protocol which would enable the point of recovery of waste into compost to be moved closer to the point of production. The group was asked to consider the potential for using the British Standards Institute, Publicly Available Specification BSI PAS 100 for producing compost as part of the Quality Protocol (referred to as PAS100 within this document). The TAG:

- obtained and reviewed analytical data on the quality of compost produced to the PAS100 specification;
- identified the major markets for PAS100 compost;
- identified the current legislative framework for manufacture and use of PAS100 compost;
- identified and assessed the potential for any risk to the environment or human health from the use of PAS100 compost in each individual market; namely:
  - in domestic use and as a horticultural grade growing media
  - in landscape operations and on land restoration sites
  - in agriculture and soil-grown horticulture.
- assessed whether any other standards could also be incorporated in the protocol

Q3. What does the Quality Protocol cover?
A3. This Quality Protocol sets out criteria for the production of quality compost from source-segregated biodegradable waste (biowaste). Compliance with these criteria is considered sufficient to ensure that the product may be used without risk to human health or the environment and therefore without the need for waste regulatory control. The Protocol also indicates how compliance may be demonstrated and points to best practice for use of the product. Quality compost will normally be regarded as having ceased to be waste when it has been despatched to the customer.

Q4. What will be the effect of the Quality Protocol?
A4. Compost that meets all the requirements of the Quality Protocol will be a fully recovered material and its use will no longer be subject to the regulatory requirements that apply to the handling, transport and application of waste. This will lead to a reduction in the regulatory burden for the producers and users of quality compost from source-segregated biodegradable.
Q5. Do I have to comply with the Quality Protocol?
A5. Producers and users are not obliged to comply with the Quality Protocol. But if they do not, the compost will be considered to be a waste and waste regulatory controls will apply to its handling, transport and application. Further information on regulatory controls is contained in the Environment Agency's regulatory position statement http://www.environment-agency.gov.uk/commondata/acrobat/reg_1721807.pdf.

Q6. What will the impact on compost producers be?
A6. The launch of the Quality Protocol is likely to stimulate further growth in the production of compost from source segregated biodegradable waste and an increase in the use and purchase of quality compost. One of the findings of the cost/benefit assessment is that overall the Quality Protocol is likely to add value to the composting industry resulting in a benefit in excess of £23m (based on a net present value analysis (NPV), equivalent to £1.22 per tonne of compost (NPV).

Q7. Why does the Quality Protocol only focus on source-segregated biodegradable waste?
A7. The Quality Protocol is for the production and use of quality compost. It stipulates the use of specific types of source-segregated biodegradable waste to minimise the risk of contamination of the compost. This means that any potential risk to human health and/or the environment can be removed or reduced to acceptable levels where the compost producer complies with the Quality Protocol. This could not be achieved if the compost was manufactured from non-source segregated materials. The Quality Protocol documentation provides a list of acceptable waste types that can be used to manufacture quality compost.

Q8. Why has PAS100 been selected as the chosen standard?
A8. PAS100 has been prioritised as the first “standard” to be considered, as it meets the criteria laid down in Appendix D of the quality protocol. It is also the most widely used standard within the composting industry. Other standards that meet the criteria in Appendix D may be considered providing that they can provide sufficient protection to human health and the environment as required by the Environment Agency.

Q9. When will the Quality Protocol be launched?
A9. The Quality Protocol will be published on 15 March 2007. This will give producers and users time to consider the implications for their business and start to put in place any additional measures necessary to meet the requirements of the protocol before it comes into force during Compost Awareness Week (6 – 12 May 2007).
1.2 Waste Types

Q10. How were the waste types chosen?
A10. We have aimed to produce an inclusive list of waste types that can be composted in an operational-scale composting facility. The list has been compiled from consultation responses together with significant input from experts from the composting industry, regulators and government.

Q11. What is sewage sludge and why has it been excluded?
A11. Sewage sludge means residual sludge from sewage plants treating domestic or urban waste waters and from other sewage plants treating waste waters of a composition similar to domestic and urban waste water. Sewage sludge, in any form, will not be allowed. The use of sewage sludge is controlled by separate EU legislation (the Sludge Directive) and it is not possible for the Quality Protocol to effectively release sewage sludge from regulatory control. If an operator wishes to compost sewage sludge and use the composted material in any of the markets defined in the Quality Protocol, then they must comply with the relevant legislative framework.

Q12. Why have oxodegradable plastics been excluded?
A12. Compostable packaging and plastics will be allowed if they meet the EN 13432 standard, or its accepted equivalents in Germany (DIN V 54900) or the USA (ASTM D6400). Compostable plastics will be allowed if they meet the EN 14995, the equivalent of EN 13432 for materials not classified as ‘packaging’. Packaging and plastics that can not meet one of these standards will be excluded, unless they comprise solely natural fibres and cannot comply with the standards referred to above due to their thickness. Examples are paper, cardboard or wood packaging. We are not aware of any oxodegradable plastics are known to have complied with any of the standards referred to above.

1.3 Compost Producers

Q13. How much will it cost me to comply with the Protocol?
A13. The cost of independent assessment of compliance with the Quality Protocol will be included in your PAS100 annual certification fee. The composting processes and resulting compost grades being assessed for initial certification and those certified will be listed on the Composting Association’s website. Laboratory fees for testing compost and soil samples are payable directly to the Approved Laboratory that you chose to use. Information about assessment and laboratory fees can be obtained from the Composting Association.

1 Definition taken from the Sludge (Use in Agriculture) Agriculture Regulations 1989.
Q14. If I meet the PAS100 standard but I am not meeting the requirements of the Quality Protocol, can I still sell my product as a quality compost?
A14. Yes for a short while, if the product is certified as being PAS 100 compliant. At the end of Compost Awareness Week in May 2007 you will be expected to keep the records required by the Quality Protocol. This will be checked when your certification is renewed.

Q15. How can I learn more about how to comply with the Quality Protocol?
A15. WRAP (Waste & Resources Action Programme) and the Composting Association will run training in the Spring and Summer of 2007. This will be open to all interested stakeholders.

Q16. Where do I find guidance?

Q17. I’m already producing certified PAS100 compost. What extra work will I need to do to comply with the Protocol?
A17. You will need to check and ensure that you are only composting waste input types included in the Protocol's allowable inputs list (see appendix B). For each compost consignment dispatched from the site, you will have to send the customer a ‘Contract of Supply’ and ensure that the customer completes it and returns a copy to you. Customers who use the compost in agriculture or soil-grown horticulture must keep records about when, where and how much compost was applied to the soil and ensure that soil Potentially Toxic Elements (PTE) limits do not exceed those allowed in the Sludge Use in Agriculture Regulations. These records must be supplied for auditing within 12 months of receipt of the compost.

Q18. What happens if I choose to produce compost outside PAS100 and the Quality Protocol?
A18. The compost that meets the Quality Protocol can be shipped off the site of production without waste regulatory controls. Other compost must be transported in accordance with duty of care regulations, and used in accordance with waste management licence regulations. Further information on regulatory controls is contained in the Environment Agency’s regulatory position statement http://www.environment-agency.gov.uk/commondata/acrobat/req_1721807.pdf.

Q19. What is the compost certification number that is mentioned in the Quality Protocol and is there a special form I need to use to declare compliance with it?
A19. The compost certification number is a unique certification number awarded to the producer annually by the certification body and will be included in the certificate. Declaration of compliance with the Quality Protocol is included in the ‘Contract of Supply’ template available from the Composting Association. The certification body is currently the Composting Association, which is in the process of selecting other suitable organisations to provide certification services on its behalf.

Q20. Who is responsible for the use of compost once it has been delivered to a customer?
A20. The customer is. However, the producer is responsible for telling the customer what he is receiving and how he should treat it.

Q21. What will the contract of supply have to look like? Is there a template I can download to use?
A21. The Composting Association will provide template ‘Contracts of Supply’ for use by compost producers participating in the certification scheme. It should be noted that the term contract is not used in a legally binding sense, but as a standard term for this type of paperwork.

Q22. Who are the certification bodies and how and when will they get in touch with me?
A22. Contact the Composting Association for information about certification bodies. The Association is in the process of selecting up to 3 organisations to provide certification assessment on its behalf and is updating its certification scheme so that it covers the Quality Protocol’s requirements as well as those of PAS100.

Q23. If I operate a site under a Para 12 A exemption and produce quality compost (PAS 100 and Quality Protocol certified), can I sell it off the site at which it is produced?

Q24. If I achieve or have already achieved the PAS100 certification, do I automatically qualify to gain the Quality Protocol?
A24. No. You must fill in the Composting Association’s PAS100 and Quality Protocol application form and pay a ‘top up’ fee. Please continue to follow your existing renewal phase schedule unless advised otherwise by the Composting Association. You will have to supply all requested document evidence to the certification body, undergo composting site inspection and be assessed as having met all requirements before PAS100 & Quality Protocol certification will be awarded.

Q25. Can I sell compost from my composting site if I do not comply with the Quality Protocol requirements?
A25. Yes, but it must be transported and used in accordance with waste regulatory controls. See the Environment Agency’s regulatory position statement http://www.environment-agency.gov.uk/commondata/acrobat/reg_1721807.pdf for more details.

Q26. How often will I be audited to check my site is still compliant with the Quality Protocol?
A26. Every year.

Q27. If I’m selling my compost to a farmer how can I demonstrate to the certification body that no environmental harm was caused when the compost was applied? What information does the land manager need to provide me with and within what timescales?
A27. You will demonstrate no environmental harm by providing records of where and how much compost was applied. To help you to do this, an online system is being developed which will enable land managers (such as farmers or their representative) to submit this information direct to the certification body. Records of all compost applications should be submitted to the certification body within 12 months of receipt of compost. Full details can be obtained from the Composting Association.

Q28. I produce and sell compost on a small scale locally - will this need to be PAS100-certified?
A28. Yes, this material will need to be both PAS100 and Quality Protocol compliant for it to be sold in the three designated market sectors. However, the decision to seek PAS100 certification and to comply with the requirements of the Quality Protocol is voluntary and at the discretion of the compost producer. Where community composting operations are running within the definition of a composting club, where the finished compost is going back for use on the gardens of the members of the club, it would not normally be in the public interest for us to prosecute for failure to obtain a waste management licence. The same applies where a National Trust property or an Royal Horticultural Society garden type activity is composting its own waste on its own grounds for use on its own gardens. The Environment Agency takes a risk-based approach to regulation. Where the use of a material is likely to cause harm to human health or pollution of the environment however, the appropriate enforcement action will be taken. In any other circumstances, only Quality Protocol compliant materials will be able to be sold as products.
1.4 End Users

Q29. How will I know whether the compost I'm offered is Quality Protocol compliant, or that the producer's claim of compliance is genuine?
A29. A list of composting processes/sites and resulting compost grade(s) certified compliant with PAS100 and the Quality Protocol will be available at www.compost.org.uk. The compost should also be supplied with a certification number for PAS100 and the Quality Protocol.

Q30. I buy my compost from a local wholesaler/national distributor. What information should I be asking for?
A30. You should ask your supplier for a copy of the contract of supply for his material. This will explain what you are receiving and how to use it. An example of the contract of supply can be found on the Composting Association web site.

Q31. Do I have to use PAS100 compost?
A31. No. If you use another waste-derived compost however, you must ensure you fulfil your legal obligations with regard to obtaining a waste management licence or exemption from waste management licensing from the Environment Agency.

Q32. What benefits will the Quality Protocol have for the landscaping sector?
A32. Compliance with the Quality Protocol will allow compost to be used as a soil conditioner, mulch or component of root zones, turf dressings and/or manufactured topsoil without the need to comply with waste management regulations. The Quality Protocol covers both direct use of compost in landscaping projects and also use of compost to manufacture blended products for supply into the landscaping sector.

Q33. As a landscaper I’ve been using compost in my projects for the last few years. What difference will the Quality Protocol make?
A33. The Quality Protocol will bring certainty and confidence to the market. It clarifies how and when compost should be used by the landscape sector in a clear and visible way. If you buy and use a Quality Protocol compliant compost, then you will be in a position to work with your clients on the basis of using a product rather than a waste. If you are not using a Quality Protocol compliant material, you should be complying with the relevant waste management regulations.

Q34. What benefits will the Quality Protocol have for the horticulture sector?
A34. Compliance with the Quality Protocol will allow compost to be used as a component of growing media or as a soil conditioner in its own right without the need to comply with waste management regulations. The Quality Protocol covers the use of compost for these two uses in both amateur and professional horticulture.
Q35. I’m a farmer/land manager. What records am I responsible for keeping and why?

A35. Customers who use the compost in agriculture or soil-grown horticulture must keep records about when, where and how much compost was applied to the soil and ensure that soil concentrations of potentially toxic elements (PTEs) do not exceed the limits allowed in the Sludge Use in Agriculture Regulations. These records must be supplied to the certification body within 12 months of receipt of the compost.

Q36. What system is going to be used for keeping records?

A36. An online system is being developed which will enable land managers (such as farmers or their representative) to submit this information direct to the certification body. Records of all compost applications should be submitted to the certification body within 12 months of receipt of the compost.

Q37. Why do I have to provide data on soil metal concentrations?

A37. Composts are derived from waste materials and as such almost inevitably contain unavoidable levels of potentially toxic elements (PTEs). When present in excess these are known to have the potential to cause harm to the soil environment, to crops or to livestock, and if allowed to accumulate beyond a certain point, can damage soil function. You must provide data on soil metals so that you can demonstrate that you are protecting the soil and limiting the accumulation of PTEs. This is in line with recommended good farming practice.

1.5 Agriculture - Soil and compost sampling and testing requirements

Q38. What is the soil sampling area?

A38. Soil samples should be representative of the soil over the whole application area of compost, to a maximum of 50 hectares. These hectares do not have to adjoin each other, but should be similar in terms of soil type, previous crops and application of manures, fertilisers and other wastes.

Q39. What if there is a significant variation in the soil type?

A39. If there is a significant variation in the soil type, management history or applications, then soil testing for each different area will be necessary in order to accurately match compost application rate to each soil area in terms of nutrient content and Potentially Toxic Elements (PTEs). It is recognised that soil sampling for PTEs may be over a wider area than routine nutrient sampling that would normally be carried out field by field, but in some instances they may be combined.

Soil samples should be representative of the ‘uniform’ area (maximum of 50 hectares) and their collection should follow RB209 guidance\(^2\). This means as a minimum, 25

\(^2\) RB209 - Fertiliser Recommendations for Agricultural and Horticultural Crops
individual sub-samples (cores) for a ‘uniform’ area, thoroughly mixed before taking and sending one final sample for analysis by a suitable laboratory.

Sampling, taking account of the factors listed above, must be representative of the whole ‘uniform’ area intended to receive compost.

Q40. When should soil samples be taken?
A40. The protocol requires soil PTE analysis to be carried out BEFORE the first compost application. The sampling analysis must be recent and representative of the area of application of compost. Soil analysis within the last five years can be used provided that no significant quantities of sludge, compost, manure or other PTE-containing materials have been added since the last soil sampling and analysis.

The soil should then be tested again when any predicted soil PTE level reaches the 75% trigger level for any one or more of the seven PTEs listed in the Code of Practice for the Agricultural Use of Sewage Sludge.

Once the soil has been re-tested, the 75% trigger level may not in practice have been reached, but caution should still be exercised when adding further compost. More frequent soil sampling and analysis should be carried out to ensure that the limits in the Code of Practice for Agricultural Use of Sewage Sludge are not exceeded for any of the PTEs listed.

Q41. How many tests must be carried out per soil sample?
A41. Soil sample tests must cover the following parameters:

- PTEs (lead, chromium, cadmium, mercury, copper, zinc, nickel)
- pH, and
- Nutrients (Olsen’s P, available K and Mg)\(^3\).

Nitrogen should be sampled where RB209 suggests, but otherwise should be calculated using Soil Nitrogen Supply (SNS). Soil available nitrogen should be tested using KCl extractant.

Q42. Where can the tests be carried out?
A42. Soil sample PTE tests must be carried out by laboratories using appropriate methods that are accredited by UKAS to ISO/IEC17025 for the Environment Agency’s ‘MCerts performance standard for the chemical testing of soil’. Nutrient and pH tests should also be carried out in laboratories using methods for these parameters that are accredited to the MCerts performance standard. Although few laboratories have yet achieved the accreditation for soil nutrient and pH testing, it is recommended that these laboratories are chosen.

\(^3\) Although referred to in Appendix H of the protocol, it is not obligatory to test the soil sample’s total sulphur content because crop leaf testing should be a more reliable guide if soil sulphur deficiency is suspected.
For a list of MCerts accredited laboratories:

- visit www.ukas.com
- click on the ‘Accredited Bodies’ section
- click on ‘Testing and Calibration Laboratories’
- click on ‘Testing’
- type ‘MCerts’ into the search box and click ‘search’, then
- ensure there is a green dot in the circle for ‘Environmental samples – soils and sediments’ and click ‘search’

Q43. **What parameters must the tests cover?**

A43. In order to match compost applications with crop nutrient requirements and other aspects of good agricultural practice, without any soil PTE concentration exceeding the limits set in the Code of Practice for the Agricultural Use of Sewage Sludge, compost sample tests must cover the following parameters:

- PTEs (lead, chromium, cadmium, mercury, copper, zinc, nickel)
- pH
- total N, P and K
- moisture content
- water soluble nitrogen (nitrate and ammonium)
- organic matter content, and
- organic carbon content.

According to the planned crop type(s) and soil characteristics, the FACTS advisor may want to know compost sample test results on the following parameters:

- electrical conductivity
- total Mg, Ca, and S
- water soluble P, K, Mg, Ca and S, and
- neutralising (liming) value (calcium oxide equivalent).

Compost producers are not required to sample and test every compost batch supplied for use in agriculture and soil-grown horticulture. Typical results can be supplied, based on the test results history for the compost grade. They should ensure that compost batch sampling and testing covers the approved standard’s minimum requirements and the compost characteristics information wanted by customers.
Q44. How can I find an approved compost testing laboratory?
A44. Compost sample tests must be carried out according to the methods of test specified in the approved standard (e.g. PAS 100:2005). There is not an MCerts performance standard for the testing of composts, but the Composting Association provides a list of laboratories it has approved as suitable.

Q45. How much do these tests cost?
A45. Laboratory test prices vary, so ask the laboratory to quote for the range of soil or compost parameter tests appropriate for the application. Quotes may be lower per sample if the laboratory is given an estimate of the number of samples anticipated over a stated timeframe.

2. **Regulatory Position of the Environment Agency**


Q46. Does the Quality Protocol affect the way in which the Environment Agency will regulate the production of compost?
A46. No. There will be no change to the licensing of compost sites or registration of exempt composting facilities. All sites that produce compost from waste materials have to comply with the legislative requirements that apply to waste.

Q47. What approach should the Environment Agency take with different compost producers during the pre-launch period i.e. between 15 March 2007 and 7 May 2007?

A47a. Spreading PAS100 compost to land
During the interim period between protocol publication and the protocol going live (15 March and 7 May 2007), those producers who wish to spread PAS100 quality compost on agricultural land should continue to register the activity under paragraph 7A of Schedule 3 of the Waste Management Licensing Regulations.

A47b. Using quality compost to produce topsoil at sites other than those where the quality compost is produced.
Currently we require these sites to be licensed. We would not expect a producer to apply for a licence during the pre-launch period. If at any stage the operation causes pollution or harm The Environment Agency will consider prosecuting in accordance with their enforcement and prosecution policy ([http://www.environment-agency.gov.uk/business/444217/444661/112913/?version=1&lang=_e](http://www.environment-agency.gov.uk/business/444217/444661/112913/?version=1&lang=_e)).

A47c. Using quality compost in landscape operations or land restoration activities.
These activities are currently subject to regulatory requirements. During the pre-launch period, those producers who wish to undertake these types of activities should continue to register as exempt.

**A47d. Using quality compost in domestic horticulture.**
We do not apply regulatory controls to compost used in this way and will not do so during the pre-launch period.

**Q48. Will the Environment Agency still regulate my site once I have obtained the Quality Protocol?**
**A48. Yes.** You will still need a waste management licence or an exemption to operate a site to produce compost from waste materials.

**Q49. How will the Environment Agency regulate the non-compliant sites?**
**A49.** We will regulate all sites according to our enforcement and prosecution policy irrespective of whether they produce compost that is still a waste or compost that complies with the quality protocol. We will not however monitor compliance with the quality protocol – see above.