Template for comments and secretariat observations

Date: 26/02/2021	Document: **PAS 115 – Draft for Public Consultation**	Project:

MB/ NC[1]	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment[2]	Comments	Proposed change	Observations of the secretariat
REA	Front page		Title	Tech	Please see comment we made on the scope's 2nd para, c) and e). Comments also made below on reconsidering and how to determine the hazardous versus non-hazardous status of geographically and temporally specific road sweepings and gully wastes.	Change first part of title to 'Manufactured soils and soil amendments…'. Review whether current inclusion of '(non-hazardous)' in the title needs to be changed, and change if necessary.	
REA	Front page		Footnote 1	Editorial	The 1 in front of the 20 03 03 waste code for street cleaning residue is an error.	Delete the 1.	
REA	Whole document overall			General	The DPC version of this PAS appears to be for the quality management and assurance of road sweepings and gulley pot wastes processed in basic ways that enable them to be used as growing media or soil amendments or as ingredients in such materials, the GM/SA material remaining subject to waste regulatory controls. PAS 115 GM/SA materials are not to be used where plants intended for animal or human consumption are grown or on agricultural land. As currently drafted, we have serious concerns this PAS does not effectively consider all the hazards and associated risks. We believe compliance with it would not be sufficient for an individual operator to succeed in obtaining an environment protection regulator's written opinion (through the regulator's Definition of Waste Service) that a PAS 115 SA or GM has ceased to be a waste. Gully wastes tend to be silty and silts are good absorbers of spillages and discharges from petrol and diesel engines, those substances including TPHs and PAHs. Their concentrations in silts from gullies can be very variable and sometimes reach concentrations that trigger classification of the waste as 'hazardous'. Very high localised concentrations of these chemical substances can occur at the nano-level. The associated risks are	Ask the regulators to make publicly available the evidence / basis on which Street Cleansing Residues (street sweepings and gulley wastes) are classified in WM3 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948735/Waste_classification_technical_guidance_WM3.pdf) as 'non-hazardous' wastes. If BSI's PAS 115 steering group has not seen the regulators' written justifications of the default, non-hazardous waste coding for these wastes, its steering group should already have considered whether PAS 115's requirements ensure that any batches of these wastes with hazardous concentrations of specified hazardous substances are excluded from PAS 115 ready-to-use materials. We have made proposals relevant to this issue in connection with clauses 4.5.2, 6.1.1 and 8. The content of this DPC version of this PAS needs improvement so we have made specific comments and proposed changes below. **Even after improvement of this draft PAS's text, we are concerned that Britain's environment protection regulators are not adequately resourced to check and enforce industry compliance with regulatory controls on the use of soils that remain wastes. Compliance with this PAS could give false confidence to end users who may not understand these materials remain wastes.** **We hear from industry that the EA is not adequately resourced to check the compliance of operators who use the EA's Regulatory Position Statement 190 (which covers**	

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					not yet well understood and risk assessment should include diesel and tyre particulates.	**manufactured topsoils made from specified low-risk wastes(s), non-waste(s) or a mixture of both).** **Publication of this PAS in its finalised, first edition will influence the positive perception and use of processed road sweepings and gulley pot wastes in soil amendments and growing media. If published as a finalised PAS, this should be timed at least AFTER the environment protection regulators become adequately resourced and only when an industry training programme is ready to begin, so that we avoid potential mistakes of PAS 115 ready-to-use materials automatically being traded as products rather than supplied for use under waste regulatory controls.**	
REA	P 6	Intro, 0.2	Para 4	Tech	The EA's Regulatory Position Statement 190 allows the use of up to 1,000 tonnes of manufactured topsoil to establish a vegetative layer ('an organic-rich soil layer suitable for growing plants') without obtaining permit for such use. Such a topsoil may be made from non-wastes, one or more out of a specified list of low risk waste types or a combination of one or more of those wastes with one or more non-wastes. With regard to aggregates hydrological risk assessments are required, see RPS https://www.gov.uk/government/publications/using-unbound-incinerator-bottom-ash-aggregate-ibaa-in-construction-activities-rps-247/using-unbound-incinerator-bottom-ash-aggregate-ibaa-in-construction-activities-rps-247	PAS 115's intro should at least flag RPS 190, state that this RPS is NOT a Quality Protocol and include RPS 190 reference to RPS 190 in the bibliography. Add text that alerts readers to requirement to carry out hydrological risk assessment with regard to use of aggregates and include reference to the relevant RPS.	
REA	P 6	Intro, 0.2	Para 5, note	Tech	Needs to be clearer and worded so it appropriately covers waste-derived composts and whether they have exited waste regulatory controls and non-waste derived composts.	Change note so it reads: 'Where waste-derived compost is blended with material that complies with PAS 115 the blend is a waste material, regardless of whether the compost is certified compliant with the Compost Quality Protocol or SEPA's Guidance on Regulation of Outputs from Composting Processes [plus numbered ref to SEPA's doc in the bibliography]. Similarly, where compost made from non-waste materials is blended with material that complies with PAS 115	

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						the blend is a waste material. Reference to the SEPA guidance needs inclusion in the bibliography https://www.sepa.org.uk/media/219843/wst-g-050-regulation-of-outputs-from-composting-processes.pdf	
REA	P 7	Scope	1st para, second sentence	Tech	Compliance with this PAS will not automatically enable the ready-to-use materials (outputs) to be placed on the market as products, i.e. they will retain their controlled waste status unless the producer applies to the regulator's Definition of Waste Panel and obtains their opinion the material has ceased to be waste or until a Quality Protocol is developed and published for this material (if at all). Using the word product here and elsewhere in PAS 115 where its ready-to-use materials/outputs are being referred to risks reader misunderstanding that PAS 115 lifts these waste-derived materials/ouputs out of waste regulatory controls and into product regulations.	Replace 'product' at the end of the sentence with 'material' or 'waste'. Do the same wherever else in the document 'product' is used, except where the text is covering/explaining end of waste in legal and/or policy terms.	
REA	P 7	Scope	2nd para, c) and e)	Tech	The scope is too wide given that processed street sweepings and gulley wastes can be present in PAS 115 material and the tests and limits this PAS specifies (in Table 1 and by reference to [limits in] BS 8601). Seems unnecessary to include 'growing media' as one of the terms for PAS 115 ready-to-use materials given that in this PAS 'growing medium' is used within the definition of 'structural soil'. If growing media continues to be used as one of the terms for PAS 115 ready-to-use materials there is risk they will be used in growing media applications beyond this PAS's scope.	Restrict use of PAS 115 materials to a) manufactured topsoil, b) manufactured subsoil, c) manufactured structural soil and d) manufactured tree soil which is used only where the land use is urban, non-domestic and the soil is not used, currently or in rotation, for growing plants intended for human or animal consumption. Also restrict use of PAS 115 materials to e) amendments to soils in situ, where those soils are in urban, non-domestic locations and are not used, currently or in rotation, for growing plants intended for human or animal consumption. In all relevant places in the document, delete use of 'growing medium' as a term for a PAS 115 ready-to-use material, state somewhere appropriate that PAS ready-to-use materials are manufactured topsoils, manufactured subsoils, manufactured structural soils, manufactured tree soils and amendments to soils in situ (the last of these abbreviated as 'soil amendments').	

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						State that collectively in PAS 115 they are also referred to as PAS 115 manufactured soils and soil amendments [or something briefer but still soil focussed].	
REA	P 10	3.1.13 Ecotoxicity	Definition	Tech	EA Technical Guidance WM3's Appendix C quotes the European Waste Directive's definition of ecotoxicity which is: 'waste which presents or may present immediate or delayed risks for one or more sectors of the environment'. This annex goes on to state conditions that, when any of them are fulfilled by a waste, it has ecotoxic properties and is therefore hazardous.	Use definition in WM3. Perhaps existing wording in 3.1.13 could become a note (no source is quoted).	
REA	P10	3.1.18 Gully	Definition	Tech	Needs more words in definition which are relevant to the PAS 115 context; which specifically include roads / streets.	Technical author / SG to improve definition.	
REA	P10	3.1.20 Gully waste	Definition	Tech	Needs comprehensive description by including accumulated waste solids such as tyre and fuel particulates, road salt, gravel and smaller particles from natural aggregates and plant debris plus water/moisture from precipitation and, depending on vehicle type used for road sweeping, may include liquids used by the vehicle. Check EA document LIT8942, published 2013, wrt type of vehicle and material collected.	Technical author / SG to improve definition so it becomes comprehensive.	
REA	P12	3.1.40 Sharps	Definition	Tech	In PAS 115 context this definition also needs to include 'waste-derived soils'. We have said in our comments on the Scope's 2nd para c) and e) subparts that we are not convinced PAS 115 ready-to-use materials should include the term growing media. Accidental use of 'proactive' instead of 'protective'.	Add 'waste-derived soils' and delete growing media. Change proactive to protective.	
REA	P16 - 18	4, QMS	Whole clause	General	Lacks requirement that the person(s) responsible for operating the permitted sites which will produce fit for purpose PAS 115 are technically competent in the management of wastes and have sufficient knowledge of soil science and soil hydrology (particle size ranges and its other properties that will affect drainage of precipitation at sites where the PAS 115 ready-to-use	Define the qualification(s) / competence necessary for ensuring that all materials at the processing site are managed in accordance with its permit and PAS 115 requirements and that ready-to-use material complies with PAS 115 (which includes taking into account where and how it will be used and any site-specific requirements and conditions in the authorization [deployment] that will have to be obtained for using the PAS 115 ready-to-use material). Require that the person(s) responsible	

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					materials are used).	for operating the permitted site and producing PAS 115 ready-to-use materials receives on-going training that maintains his/her qualification(s) / competence.	
REA	P16 - 18	4, QMS	Whole clause	General	Lacks other QMS requirements such as instruction the whole QMS is documented, regularly reviewed, senior management is responsible for the QMS and ensuring it is adequately resourced, min frequencies for audit of the QMS's efficacy by someone internal in the producer organisation (who is not the person responsible for the QMS) and its audit by an external, independent person/organisation, and procedures for continuous improvement of the QMS.	Check relevant QMS standards, e.g. ISO 9001, and add any parts of it/them that are missing from PAS 115 yet relevant given its scope.	
REA	P16 & 17	4.4.1, Validation	Paragraph	Tech	More detail is necessary for validation, e.g. what is the minimum number of batches that must be sampled, tested and evaluated before the efficacy of the QMS, HACCP and SOPs can be soundly evaluated? We suggest a minimum should be specified given that some of these wastes may contain hazardous and/or variable (between batches) concentrations of pollutants, physical contaminants and sharps. PAS 100's clause 4.7.3 includes useful text that could be adapted to the PAS 115 context.	Specify minimum number of consecutively sampled batches whose samples' test results must show compliance with PAS 115's minimum quality criteria, including any additional minimum quality criteria the producer has committed to meeting in his/her quality policy for the corresponding ready-to-use material. Require that the test results validation evidence contributed by a batch shall be those for one representative sample taken from the batch when it as completed all production steps. If PAS 115 does not already contain this kind of provision please add it: 'Batch resampling after batch quality failure and corrective action, testing of the resample and assessment of its results shall be acceptable for determining - after validation of the QMS, HACCP and SOPs - whether the batch now conforms to PAS 115's requirements or continues to be non-conforming.'	
REA	P17	4.5, Safety and Quality System	Note	Tech	'..so cultivated..' is not appropriate given that PAS 115 ready-to-use materials will not be allowed to be used where plants grow which are intended for human or animal consumption and inclusion of 'primarily' earlier in the sentence is, in effect, a grey loophole (as it exists in note text here).	Change remainder of sentence after semicolon so it reads: while the intended use of the ready-to-use materials covered by this PAS is only to support the growth of trees and shrubs within a built-up environment and within that, where those plants are not intended for human or animal consumption, it is possible that, for example, the fruit of trees and shrubs growing where such material has been used may be consumed by humans or	

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						other animals, which is undesirable but not preventable.'	
REA	P17 & P 20-21	4.5.2's systematic assessment of hazards & also relevant to clause 8 (on 'separated mineral fractions') and any other clause relevant to identification and rejection of hazardous materials.	4.5.2's paragraph and whole of clause 8	Tech	Although not automatically coded as hazardous wastes, some road sweeping and gully wastes from urban sources are at risk of containing considerable concentrations of Total Petroleum Hydrocarbons (TPHs) and Polyaromatic Hydrocarbons (PAHs). (https://www.gov.uk/dispose-hazardous-waste 'Waste is generally considered hazardous if it (or the material or substances it contains) are harmful to humans or the environment. Examples of hazardous waste include: chemicals, such as brake fluid or print toner.[or] oils (except edible ones), such as car oil...') This PAS does not cover hydrocarbons at the level of detail appropriate for control of risks arising from hydrocarbons' presence in road sweeping and gully wastes. For example, Suitable for Use Levels specified in rules for management of contaminated land should be considered, taking account of exposure pathways relevant to users of PAS 115 ready-to-use materials, including how they will be allowed to be used in the environment. If data has not been provided, assessed by the regulators and they have not agreed that that all road sweeping and gully wastes from any British source are non-hazardous, this PAS either wouldn't have a value (including for wastes that remain subject to waste regulatory controls) or it would need clauses that ensure adequate control of risks to humans and the environments in which PAS 115 compliant materials will be used. It seems very unlikely that the test results for all	Check with the environment protection regulators (for all countries relevant to this prospective PAS) whether all and road sweeping and gully wastes from any British source are non-hazardous. If some of them may have characteristics that mean they are hazardous, either do not publish this PAS or add clauses that ensure adequate control risks to humans and the environments in which PAS 115 compliant materials will be used, i.e. require that hazardous wastes or any batch of waste whose test results show it is hazardous is not allowed to be present in PAS 115 compliant material.	

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					road sweeping and gully wastes from any British source would prove always non-hazardous; those from densely populated and commercial and industrial parts of urban environments are likely to contain high concentrations of TPHs, PAHs and BAP (last of which is a marker for hydrocarbon oils used as lubricants). The EA's position which prevents inclusion of leaves from road sweepings into composting processes (Report EA LIT8942, 2013) should provide useful info for risk assessment of road sweepings, even though in PAS 115 the processing and output types will be different.		
REA	P17	4.5.3, assigning CCPs	Clause sentence	Tech	Not adequately worded because the text does not explicitly require the producer to operate a CCP for each hazard identified in the hazard analysis where the associated risk may be unacceptably high and therefore a CCP must be applied. PAS 115 should include reference to HACCP guidance (e.g. FAO's and WHO's' Codex Alimentarious, Food Hygiene Basic Texts) so readers can read more about HACCP and its application, e.g. use of Control Points where necessary, as well as CCPs. The CCP is the last step in the process which is necessary for reducing the risk associated with a specific hazard to an acceptably low level.	Require the producer to operate a CCP for each hazard identified in the hazard analysis (for handling and use of PAS 115 ready-to-use material) where the risk level associated with that hazard would be unacceptably high if the production of that material does not have a CCP. Require the producer also use of one or more Control Points before the CCP if any control(s) in the preceding materials sourcing and/or production steps is/are necessary for the CCP to operate within its CLs and be effective. Include at least one reference to HACCP guidance in PAS 115's bibliography.	
REA	P18	Collection of waste materials, 5.1	Clause sentence, first para	Tech	See our comment on 6.1.2 and its relevance to 5.1	See our proposed change relevant to 6.1.2 which also potentially affects wording of 5.1.	
REA	P19	Input materials and checks,	Clause sentence	Tech	How is the designated processing facility operator to know, before accepting gully waste for treatment and segregation, whether it contains any concentration of a substance that means it is hazardous waste? Same question applies to	Identify how this is possible to achieve or change this PAS's content so that deliveries of these waste batches' hazardous or non-hazardous statuses are determined while they are in an on-site, separate holding area and add requirement that any batches of waste determined hazardous shall not enter or	

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		6.1.1			street sweepings.	cross-contaminate the site area for production and storage of PAS 115 ready-to-use materials. If the latter is done, this PAS should include a note that waste regulatory controls will require the processing facility operator to have a permit which allows the management of Street Cleansing Residue wastes which have been determined hazardous.	
REA	P19	Input materials and checks, 6.1.3	Note	Editorial	This note is relevant to wastes described in 6.1.1, not 6.1.3.	Move this note so it appears immediately after 6.1.1.	
REA	P19	Input materials and checks, 6.1.2	Clause sentence	Tech	Looks like a copy and paste from PAS 100 with sentence ending modified to the PAS 115 context. Most street/road sweepings and gully wastes will include pollutants from petrol / diesel vehicles' exhausts and some will include hypodermic needles, broken glass and littered wastes. Street sweeping machines will continue to be used and gulley pot emptying vehicles may not be feasible to change such that pollutants are no longer collected with the 'desirable' parts of street/road sweepings and gully wastes. Consider position of clause within document; includes similar content to 5.1 and even ends with 'at the point of collection stage', collection being covered under clause 5. Perhaps 6.1.2's text should instruct rejection of any load which is contaminated by any hypodermic needle(s), and/or more than a negligible concentration of glass or any other sharps.	Consider again whether this clause should be part of 5.1 and regardless of final position re-word so it becomes realistic. Perhaps something, for 5.1, like: 'Street sweepings and gulley wastes may be co-collected but no other waste type shall be co-collected with one or more of these waste types. Any load of street sweepings and/or gully waste known to include ANY hypodermic needle(s) or glass and/or other sharp waste (see 3.1.40) above a specified threshold - for negligible glass and sharps other than hypodermic needles - shall not be delivered to a processing facility that receives materials for treating to produce PAS 115 compliant ready-to-use materials.'. Suggestion to add something, for 5.1, like: 'Note: It is recommended that street cleansing procedures deploy different vehicles to separately collect street sweepings and gully wastes from sources where pollutants or non-sharp physical contaminants are known to be higher than is typical and ensure those worse quality wastes are not delivered to a processing facility that receives materials for treating to produce PAS 115 compliant ready-to-use materials.'. Consider replacing 6.1.2's existing text with minimum requirements for rejection of any delivered load that is found, during inspection of tipped waste, to contain any hypodermic needle(s) or found to contain glass or/or any other sharps whose concentration is above a specified threshold for negligible content of this kind.	

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REA	P19	Processing, 7.3	Clause sentence	Editorial	The text aims to exclude particles larger than 4 cm from being used for production of PAS 115 ready-to-use materials, however it leaves a loophole in that they could be used if they weren't further treated.	Reword so that particles larger than 4 cm are clearly removed from this and any other subsequent steps for producing PAS 115 ready-to-use materials.	
REA	P19	Processing, 7.4	Clause sentence and its notes	Tech	It's unclear whether particles in the 4 to 2 cm range (the maximum particle size for coarse gravel is 2 cm) and particles smaller than 0.063 mm (the minimum of the particle size range for fine sand) are allowed to be directly or further processed for use in PAS 115 ready-to-use materials. It seems likely there will be organic particles in the 2 to 4 cm range as well as inorganic (mineral) ones and does their presence in representative samples sent for testing and evaluation of compliance with clause 8.2 not matter?	Consider the issues and clarify the requirements.	
REA	P19	Processing, 7.5	Note	Tech	Coagulants and flocculants used during the decantation step(s) must be considered when HACCP planning and when deciding what characteristics are acceptable in fit-for-purpose PAS 115 ready-to-use materials. Coagulants and flocculants may also be used for processing the wet sludge referred to in note 2 to 7.4	Include instruction to risk assess any coagulants or flocculants used, plan how associated risks will be managed and whether any tests and limits applicable to these substances need to be included in the quality policy for PAS 115 ready-to-use materials.	
REA	P20 & 21	Material verification / Monitoring, 8	Whole clause	Tech	Lacks minimum microbiological quality and plant response requirements, e.g. upper limits for pathogen indicator species and minimum germination and growth of a suitable plant species and lack of visually identifiable abnormalities in those plants. Plant response testing is an established method in the toolset for assessing whether a material is phytotoxic (rootzone material specified in the test methodology should correspond with the material under assessment). Such plant response testing would also provide data relevant for assessing whether the sampled material will support plant germination and development at commercially	Consider the context and potential addition of these extra minimum quality requirements. Leaving it all to producer judgement of what's fit for purpose seems risky to the reputation of this PAS.	

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					necessary rates, e.g. must vegetation become established and remain healthy looking within a specified period after the material has been used in a soft landscape planting scheme for ornamental plants?		
REA	P20	Material verification / Monitoring , 8.1	Part of clause sentence preceding bullet points	Tech	'Separated mineral fractions' are not defined.	Define this term in clause 3 or replace it with something else appropriate and defined.	
REA	P 20 & 21	Material verification / Monitoring , 8	Whole clause	Tech	Not all of the quality parameters listed under 8.1 are included in Table 1 and have corresponding minimum concentrations or acceptable ranges specified. Clause 8.2 is trying to require the sampled and tested material to not exceed whichever is the lowest when comparing upper limits in Table 1 with upper limits specified in BS 8601, but it is unclear as currently drafted. The lack of a clearly set out list of minimum quality criteria means there is more risk that users of this PAS will make mistakes when evaluating sample test results. In addition, if a manufactured topsoil is being made, are all appropriate minimum quality criteria which are applicable to the 'separated mineral fraction' specified in Table 1 and BS 8601? Same question in the case of structural and tree soils. We are concerned this PAS is too flexible in terms of minimum quality requirements for the 'separated mineral fractions' and the ready-to-use materials (outputs ready for use in relevant markets under waste regulatory controls). One operator in the topsoils and growing media market has said the following to us about the draft PAS:	We cannot recommend how to address these issues without sight of BS 8601, BS 3882 and involvement in Steering Group discussions, which should also take account of relevant published criteria for speciated TPHs and PAHs, criteria for classification of wastes as hazardous and PAS 115's QMS approach (which includes requirement the ready-to-use material is fit for purpose).	

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					'Apart from a list of selected heavy metals and upper limits being set in Table 1 the other [parameters] listed on page 20, they have no upper limits and it references BS 8601 (2013) for subsoil. The BS only covers physical properties and organic matter with a select number of heavy metals – it does not cover the full list presented – this would fall under CLEA - Contaminated land exposure assessment.' 'Both BS['s] criteria cover mainly horticultural properties and their ability as ' fit for purpose' i.e. will they grow a plant/shrub/tree in the capacity they were specified and the BS is normally used as means of controlling and policing the soils on the project. If the soils do not adhere with the specifications then unfortunately this could lead to the soils being removed from site. If they have already been placed and planted up – then the costs associated in the removal – replace - replant will be significant and the contractor would expect those costs to be met by the supplier – potentially putting them out of business.' 'Topsoil and subsoil also have to meet with an extensive range of contaminates to include – heavy metals, hydrocarbons and asbestos. Site specific guideline values are set for each project and must be adhered to or as above the soil will be removed from site and there are no arguments/defence.' 'The key to the supply of products into the soils and growing media markets is to provide material which is fit for purpose, free of contamination and…produced in very large volumes – CONSISTENTLY.'		

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REA	p 22	Product preparation and storage, 9.1	Clause sentence	Tech	First comment on 9.1: How can 'selected recombination' of 'separated solid fractions' that comply with their minimum conformity requirements (8.2) occur given that clause 8 doesn't specify minimum sampling procedures and frequencies for 'separated mineral fractions' and neither does clause 10?	Specify minimum sampling procedures and frequencies for 'separated mineral fractions' (clause 8 seems to be the right place) and require in clause 9 that if any separated solid fractions are blended together this achieves a consistent quality, fit-for-purpose, ready to use material that complies with the producer's quality policy. Add note that 4.2.1's 3rd bullet point requires the ready to use material to be fit for purpose.	
REA	p 22	Product preparation and storage, 9.1	Clause sentence	Tech	Second comment: Is there deliberate terminology difference between the 'separated mineral fractions' which clause 8 covers and the 'separated solid fractions' (of clay, silt, sand and gravel) in 9.1? They are not defined in clause 3.	If the terminology difference is deliberate, these different terms in clauses 8 and 9.1 need to be visually emphasised so the differences stand out and these terms need to be defined in clause 3.	
REA	P22 & 23 (for sampling)	Sampling (clause 10) and quality control (all other clauses relevant to quality control)	Whole clauses	Tech	Each delivery of road sweepings / gully waste is likely to be small, e.g. between 5 and 10 tonnes. Are they allowed to be combined during treatment steps before sampling for testing and evaluating batch compliance with clause 8's requirements for 'separated mineral fractions', provided traceability is upheld? If yes, any batch sampled at this stage and whose test results show it is hazardous waste will have to be sent for other recovery or disposal. Alternatively, if its test results show it is not hazardous but does not comply with any of PAS 115's specified minimum quality criteria does the entire batch have to be rejected from the production process or can the producer choose whether to apply corrective action and resample and retest the batch (after validation)? The regulators are likely to have views on any corrective action that may be perceived as 'dilution of pollution'.	Check PAS 115's clauses are appropriate for management of separated mineral fraction batches, according to whether their test results show they are hazardous or non-hazardous. Require that all batches of separated mineral fraction types are assessed for whether they are non-hazardous and of adequate quality to continue be used in the process. Any batch whose test results show it is hazardous and/or is inadequate quality shall be rejected. Add a note that characteristics of each batch of separated mineral fraction that passes minimum quality requirements will need to be known so that producers achieve consistent blending of those materials.	
REA	P22	Sampling, 10.1	Clause sentence	Editorial	Why does the clause begin with 'Any or every…'?	If the requirement is to sample every batch, reduce potential for confusion by deleting 'Any or'.	
REA	P22	Sampling,	Note	Tech	Current wording could be misunderstood to mean	Revise the wording so that the automatic WASTE status of PAS	

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MB/ NC[1]	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment[2]	Comments	Proposed change	Observations of the secretariat
		10.1			that PAS 115 ready-to-use material has product status (has exited waste regulatory controls) unless it is blended with a controlled waste. There is not a QP or Scottish end of waste rule set that enables PAS 115 ready-to-use materials to automatically exit waste regulatory controls. The only short to medium term exit route is gaining the relevant regulator's opinion that a producer's specific, fully processed output material has ceased to be waste through their Definition of Waste Panel Service.	115 ready-to-use materials is clear and acknowledge the EA's Definition of Waste Panel Service and any equivalent services provided by the NIEA, NRW and SEPA.	
REA	P 22	Sampling, 10.2	Note	Tech	Clause 10.2's note provides guidance on the number of subsamples to take from a batch according to its volume. This guidance does not suggest a maximum batch size and the '3,600 m3 or more' mentioned is a large quantity. Lack of specified minimum batch sizes mean that competition between businesses to minimise costs and maximise profits is likely to drive batch sizes up very large and for test results which show quality failures to be 'lost', as there is no requirement for all test results to be supplied to the relevant regulator or for independent audit of the separated mineral fraction's and ready-to-use material's compliance with this PAS. There may be 'customer supply requirements' that are the same across multiple customers, so this is not a factor which can be guaranteed to sufficiently limit sampled and tested batch size. Thirty sub-samples may be inadequate for obtaining a representative sample if the sampled batch size is significantly larger than 3600 m3. An operator in the manufactured soils industry informs us that in the contexts of BS 3882 and BS 8601 'the frequency of testing each batch can vary from 1 x 50m3 up to 1 x 500m3 and this is dependent on the type of soils selected'.	PAS 115 must specify a maximum allowable batch size from which a) 'separated mineral fraction' [or the new term for this fraction] is sampled and b) a ready-to-use material (output) is sampled. PAS 115's text could include a note to the effect that, if the producer wants to take a representative sample from a batch that is smaller than the corresponding specified maximum, this is allowed and he/she can choose how much smaller the sampled batch is.	

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REA	P 22 & 23	Sampling, 10.4		Tech	Omits requirement to record batch volume, number of sub-samples taken from the batch, and description of locations of those subsamples (e.g. systematic and within basal, core and surface zones of the batch).	Require also recording of sampled batch volume, number of sub-samples taken from the batch, and description of locations of those subsamples.	
REA	p 23	Sampling, 10.5	Clause sentences	Tech	Requirement to send each sample to a UKAS laboratory within 1 working day after being taken should be split from this clause's requirements about assessing the sample's compliance with minimum quality and fitness for purpose requirements in this PAS. Is it necessary for the sample to be sent to the lab within 1 working day regardless of which tests are performed, and is it intended they are dispatched to the lab within 1 working day or reach the lab within 1 working day of having been sampled from the batch? There are different duration sample transport services, which vary in price. Labs that comply with UKAS requirements would be described as UKAS accredited. Do they have such accreditation for all the obligatory tests specified in this PAS and any other tests that may be necessary for assessing whether the ready to use material is fit for purpose?	This clause should read 'Each sample assessed for compliance with this PAS shall be tested at a [BSI to insert whatever the requirement is for lab competence] laboratory, dispatched to the lab within [BSI to insert number] working days and received at the laboratory within [BSI to insert number] working days after dispatch by the producer.' Write a separate clause about using the lab test results to assess the sample's compliance with minimum quality and/or fitness for purpose requirements in this PAS, depending on what batch type was sampled ('separated mineral fraction' or ready-to-use material). Add a note that sample compliance should be interpreted as compliance of the sampled batch - because 10.2 requires each sample to be representative of the batch from which it is obtained - unless it is subsequently found that the sample was not representative of the sampled batch.	
REA	P23	Sampling, 10.5	Clause's second sentence	Tech	Only refers to where the growing medium claims compliance with the topsoil or subsoil standard. Doesn't take account of any extra quality requirements the producer may have included in his/her quality policy.	Include reference to the manufactured topsoils, manufactured subsoils, manufactured tree soils and manufactured structural soils this PAS covers. In comments above we have suggested no longer using growing medium as a term for a PAS 115 ready-to-use material, so also suggesting deleting it hers. Also adjust wording so there is an appropriate requirement in the case of soil amendments. Revised wording needs to take into account any extra quality requirements the producer may have committed to meeting in his/her quality policy, for the relevant ready-to-use material.	

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Template for comments and secretariat observations

Date: 26/02/2021	Document: **PAS 115 – Draft for Public Consultation**	Project:

MB/ NC[1]	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment[2]	Comments	Proposed change	Observations of the secretariat
REA	P 23	Sampling, 10.6	Note 2	Tech	Not acceptable just to recommend the lab is independent from the producer, even in this context of use of PAS 115 ready-to-use materials under waste regulatory controls.	Change note to clause text which requires the laboratory is independent from the producer.	
REA	P 23	Traceability, 12.1	Clause sentence	Editorial	The clause doesn't but should also mention storage of materials on site.	Change to read '…shall carry out storage and operations…'	
REA	P 24	Annex A, Soil amendments	1st para, 2nd sentence.	Tech	Although manures and biosolids are organic materials that can be applied to soils, it doesn't seem appropriate to include them in this informative annex given this PAS does not require biological processing requirements, set upper limits for pathogenic microbial indicator species and that biosolids are subject to waste regulatory controls which also restrict applications and markets in which they are allowed to be used. Grass clippings are not ready-to-use amendments to manufactured soils and addition of sawdust and/or straw could result in short term restriction of plant-available nutrients.	Consider carefully which organic amendments are appropriate to name here; we particularly suggest deletion of manure and biosolids.	

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