Department for Education

Consultation Response Form

Consultation closing date: 16 May 2014
Your comments must reach us by that date

Acoustic design of schools: performance standards 2014

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Please tick if you want us to keep your response confidential.	
Reason for confidentiality:	

Name: Anne Budd	
Please tick if you are responding on behalf of your organisation.	√
Name of Organisation (if applicable): Institute of Acoustics	
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If your enquiry is related to the DfE e-consultation website or the consultation process in general, you can contact the Ministerial and Public Communications Division by e-mail: consultation.unit@education.gsi.gov.uk or by telephone: 0370 000 2288 or via the Department's 'Contact Us' page.

Please mark the box that best describes you as a respondent.

☐ School	☐ College	☐ HT/teacher
☐ Trade Union	☐ Other Government Department	☐ LA/Council
☐ Building Control Body	☐ University	☑ Other

Please Specify:
The Institute of Acoustics (IoA) is the UK's professional body for those working in acoustics, noise and vibration. It was formed in 1974 and is a nominated body of the Engineering Council, offering registration at Chartered and Incorporated Engineer levels. The Institute has 3000 members from a rich diversity of backgrounds, including engineers, scientists, educators, lawyers, occupational hygienists, architects and environmental health officers.

The following consultation questions relate to the proposed changes.

1. Introduction of standards for refurbishment including where there is a change of use of premises

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
1	Standard for refurbishment	There is quite widespread failure to comply with the Equality Act, the School Premises Regulations and the Independent School Standards during refurbishment work because the current BB93	The new standards we propose for existing buildings will clarify what the minimum standards are for refurbishment or changes of use covered by the	We are consulting on the minimum refurbishment standards which we think are necessary to comply with the Equality Act, the School Premises

		only provides standards for new build work and in many cases these are not achievable in refurbishment projects. At the moment designers must infer the minimum standards for refurbishment to comply with the Equality Act and the School Premises Regulations from good practice and experience.	Building Regulations, eg conversion of a building from an office into a school. The setting of a lower baseline for refurbishment and conversion projects will make compliance much more straight forward.	Regulations and the Independent School Standards. This is a low cost change.

1 Do you agree that the new standards adequately cover the requirements for refurbishment and change of use? **(If not please suggest changes/amendments with reasons.)**

√	Yes		No		Not Sure

Comments:

We welcome the introduction of minimum performance standards for use in refurbishment and change of use as shown in Table 1.

However, we are concerned that the exception for natural or mixed mode/hybrid systems set out in Section 2.1.4. is overriding the "minimum" standards set out in Table 1 as the +5dB natural ventilation exception can be applied to all IANL in Table 1 other than in *"classrooms specifically for use by students with who have special hearing and communication needs"*.

The application of the +5dB exception to refurbishments/change of use will increase the upper limit IANL in naturally ventilated classrooms from 40 to 45dB $L_{Aeq,30mins}$ and for other room types often used for "chalk and talk" teaching e.g. science laboratories, design & technology (including art, food, textiles etc) from 45 to 50dB $L_{Aeq,30mins}$.

The actual "minimum" standard being proposed is therefore unclear.

Section 1.5 on Alternative Performance Standards states that, *"An APS should not be of a lower standard than those shown for refurbishment in the tables given in Section 2* ***or*** *those described in the exceptions in Section 2"* which implies that the exceptions override the Tables. A definitive statement setting out the position on "normal[1]" application of the Section 2.1.4. +5dB exception is therefore required and we would suggest that as 45dB $L_{Aeq,30mins}$ was permitted under BB93/BB101for the 8 l/s/person

condition for teaching spaces this should remain the "normal[1]" minimum standard for naturally ventilated teaching spaces (including Sports Halls, Dance Studio, Gymnasium etc) in all schools including refurbishment/change of use.

In addition we would suggest that consideration be given in Section 2.1.4 / Table 1 to providing a performance criterion of IANL 40dB at the proposed minimum ventilation rate (mid-season) in all teaching rooms, as research evidence[2] shows noise levels above 40dBA are detrimental to speech communication for children aged 11-12 years (the research shows younger children require a lower background noise level to achieve the same level of performance; 35dBA for children aged 5-6 years and 38dBA for children aged 8-9 years.)

NOTES:

[1]please see comments on question 7 regarding "normal" standard for APS

[2] Bradley J.S., "A new look at acoustical criteria for classrooms", Inter-Noise 2009, Ottawa, Ontario, August 24-26, 2009, pp. 1-9

2. Indoor ambient noise levels

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
2.1	Indoor ambient noise levels		Room types revised and amalgamated in places, eg ICT rooms and Art included with Electronics/control, textiles, food, graphics, design/resource areas.	This is a no cost change.
2.2	Unit of measurement of airborne sound insulation	A complex unit $D_{nT(Tmf,max),w}$ was used for the specification of unit of measurement of airborne sound insulation.	The unit of measurement has been replaced by $D_{nT,w}$ with a reference RT of 0.5s.	This is a no cost change which will make the design standards easier to comprehend and to apply as the units to be chosen are familiar to acousticians.
2.3	Sound Insulation of the Building Envelope	Criteria for sound insulation of the building envelope based on ventilation	Revised criteria for sound insulation of the building envelope based on ventilation openings at mid-season weather	This change will mean that fewer schools will require sound attenuation of the building envelope as the window openings

		openings required for peak summertime weather condition.	condition means that more schemes will be able to use opening windows rather than purpose designed acoustically attenuated ventilators or mechanical ventilation and comfort cooling. As the ventilation openings are now sized at the mid-season condition rather than on the hottest day the openings will be smaller and fewer schools will now require sound attenuated ventilation openings.	will be smaller for the same ventilation rate and smaller openings let in less sound and therefore will require less sound attenuation. A study was carried out by BRE Acoustics in 2004 on the proportion of schools in areas with different noise levels. This showed that a large proportion of schools were in areas with high noise levels that required sound attenuated ventilation with the BB93 2003 criteria for summertime ventilation and indoor ambient noise levels. This change will reduce the cost of sound attenuation in new and refurbished buildings.
2.4	Maximum indoor levels	Guidance was given that noise from aircraft and trains should not exceed 55 dB L_{A1} in teaching classrooms.	This was a duplicate requirement as the 35 dBA requirement ensures this, so the requirement has been dropped.	The criterion has been dropped but this will have no impact on cost or acoustic performance. The requirement was not needed.
2.5	Rain Noise	A design target for rain noise of 20 dB $L_{Aeq,30\ mins}$ above the appropriate indoor ambient noise level given in Table 1 was included.	We have reduced this requirement to 25dB above the IANL for new roofs and for refurbishments where the roof or roof glazing is replaced.	Deemed to satisfy constructions will make design easier in the case of heavyweight roofs often used for thermal comfort. (For example they are used in the Department's Baseline Designs being produced by the Education Funding Agency for the Priority Schools Building

				Programme.) There will be a cost saving for new roofs and refurbishments.

Do you think these changes relating to indoor ambient noise levels are reasonable? If not please suggest changes/amendments with reasons.)

2 a) Changes to indoor ambient noise level room types (2.1)

√	Yes		No		Not Sure

2 b) Change of unit of measurement of airborne sound insulation between spaces (2.2)

√	Yes		No		Not Sure

2 c) Change of design conditions for calculation of sound insulation of building envelope (2.3)

	Yes	√	No		Not Sure

2 d) Dropping of 55 dB L_{A1} (2.4)

	Yes		No	√	Not Sure

2 e) Change in standard for rain noise (2.5)

√	Yes		No		Not Sure

Comments:

2 a)
No additional comments on change of room types in Table 1.

With regard to sound insulation changes relating to the new categorisation of rooms in Table 1 we note that the change from “very low tolerance” to “low tolerance” for rooms specifically design for children with special hearing of communication needs results in a decrease in sound insulation performance if the room was adjacent to music accommodation from 55dB to 50dB. We suggest a note is added that this adjacency should not occur.

2 b)
We agree with the move away from the parameter $D_{nT(Tmf,max),w}$ as the design parameter for sound insulation between rooms and with the proposed parameter $D_{nT,w}$ being used in Table 2.

However, we wish to see guidance on Commissioning in the Design Guide document which states that where testing on site occurs, both $D_{nT,w}$ and D_w should be measured and reported, with compliance being achieved where either $D_{nT,w}$ and D_w achieve the target level set out in Table 2.

2 c)
Although the principal of changing from ventilation provision being calculated as a “summer time peak” to “mid-season” condition is acceptable, the transfer of this into the acoustic attenuation provided from both conditions through a natural ventilation system is unclear.

We therefore do not wish to see a change from the current design conditions for calculation of sound insulation of the building envelope to the proposed method referring only to ppm carbon dioxide concentration in Section 2.1.4. unless an alternative scheme is proposed.

For example, an alternative “deemed to satisfy” solution which provides an external noise level for which a natural ventilation solution (based on openable windows) would be deemed to achieve the new build IANL as set out in Table 1 +5dB would be a useful addition. This could be based on a fixed opening width of for example, 100mm and mid-season conditions, although clarification is required on what can be achieved through this opening in terms of both ventilation and noise attenuation, stating if this is assumed to be minimum or maximum ventilation rate for the assumed conditions. Refurbishment/change of use would not receive an additional +5dB exception applied to this deemed to satisfy external noise level.

For higher external noise levels design calculations would need to be provided based on maximum and minimum ventilation rates at mid-season conditions, showing that the IANL in Table 1 +5dB exception is achieved. Refurbishment/change of use would not

receive an additional +5dB exception. To aid this process additional information on typical attenuation for fixed window opening widths would be useful in the Design Guide document.

2 d)
Although we accept that at 35dB $L_{Aeq,30mins}$ the 55dB L_{A1} criteria is always achieved, we are concerned about the removal of an L_{A1} criteria entirely from the standard as something is required to address sites with high intermittent noise sources. We suggest consideration be given to including a limit of 60 dB L_{A1} level which would be automatically achieved rooms with IANL criteria of 40dB, but would need additional assessment for rooms with higher IANL.

2 e)
We agree that the inclusion of a rain noise criterion in the standard is a good thing but would like to see the inclusion of the calculation method and performance of typical materials included in the accompanying Design Guide document.

3. Sound Insulation between rooms

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
3.1	Sound insulation between rooms	D_w requirements were previously given in terms of a 4x4 matrix as a function of noise tolerance and activity noise levels.	$D_{nT,w}$ requirements now given in a 4x3 table using three bands of noise tolerance High, Medium and Low instead of 4. Very Low noise tolerance has been dropped.	This is a simplification and improvement to the standards making them easier to apply and has a minor impact on costs.
3.2	Sound insulation between rooms	No values were included for refurbishment. BB93 standards were intended for new build only.	Refurbishment values are now 5 to 10dB less than new build requirements. This is more realistic for change of use and refurbishment.	This will have a minor cost impact for refurbishment projects.
3.3	Impact sound insulation	A complex unusual unit used for the specification of Impact Noise, $L'_{nT(Tmf,max),w}$	The unit of measurement has been replaced by $L'_{nT,w}$ for reasons given for $D_{nT,w}$ above.	There will be no cost impact from this change.

Do you think these changes relating to sound insulation between rooms are reasonable? (If not please suggest changes/amendments with reasons.)

3 a) Changes to Table 2 of airborne sound insulation values (3.1)

√	Yes		No		Not Sure

3 b) Adoption of lower standard for refurbishment for sound insulation between rooms (3.2)

√	Yes		No		Not Sure

3 c) Change of unit of measurement of impact sound insulation between spaces (3.3)

√	Yes		No		Not Sure

Comments:

3 a)
We agree in principal with the proposed changes to airborne sound insulation criteria values in Table 2 however, the removal of the highest 60dB criteria is of some concern (given that many users have not happy with this level of insulation in the past) and it is imperative that the fact that these standards are minimum performance criteria to achieve building regulations only and that simply applying them will not result in rooms which are fit for purpose for all uses must be made abundantly clear in the document. There is a note with Table 1 stating this which should be moved or repeated alongside Table 2.

Guidance on this matter providing suitable sound insulation targets and referring to specialist percussion suites etc should be provided in the accompanying Design Guide document.

Comments on the four permitted exceptions to Table 2 are written as part of Question 7 response.

3 b)
No additional comments on the proposed lower standard of sound insulation for refurbishment.

3 c)
In Section 2.4.1. the text states that, “it does not therefore address significant impacts… such as dancing (where specialist advice will be required from the acoustician and structural engineer)”, whereas Table 5 shows the minimum performance criteria values for all room types. Although we accept that the design implications for achieving the criteria will differ from normal footfall to dance, it is not clear why the performance criteria shown in Table 5 would not apply. This sentence may need to be revised.

Other comments on change from $L'_{nT(Tmf,max),w}$ to $L'_{nT,w}$ are as per 2 b) response.

4. Sound insulation between teaching rooms and corridors

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
4.1	Sound insulation between rooms and corridors	Existing Table 1.3 specifies the performance of individual elements of the separating wall.	A new table has been added providing composite R_w sound insulation values for the glazing, door and partition wall. This allows for trade-off between elements. Lower values have been added for refurbishment and conversion works.	The changes have a significant effect on the performance of the glazing and the ventilators in walls between teaching spaces and corridors. This means that lower performance glazing and ventilators can now be used and there will be a substantial cost saving on new buildings. In addition refurbishments will not cost any more than at present. The EFA baseline designs for the Priority School Building Programme have on average about $3.6m^2$ of internal glazing to the corridor walls of north facing classrooms for daylighting purposes and $2m^2$ of ventilators. Previously the glazing would need to have been double glazed with two sheets of 6mm glass separated by 90mm or a single sheet of 17mm laminated glass. This can now be reduced in specification to one pane of 6mm glass. This change allows much

				improved design solutions for daylighting.
4.2	Sound insulation between rooms and corridors		The performance standards for ventilation ducts between classrooms and corridors have been reduced as previous values were unrealistically high. The performance standard for ventilators has been reduced from 45 to 37 $D_{n,e,w}$ -10LogN dB for music rooms, drama rooms, multi-purpose halls and teaching spaces specifically designed for use by students with special hearing or communication needs. The performance standard for ventilators has been reduced from 39 to 32 dBA for all other rooms used for teaching or learning.	To meet the previous BB93 performance standards the ventilation ducts would have needed to incorporate a change of direction. Ventilators of very low pressure drop can now be used meaning that night cooling and summertime ventilation can be provided by natural stack ventilation on nearly all schools. These changes make natural and hybrid ventilation systems much more feasible in schools.

Do you think these changes relating to sound insultation between rooms and corridors are reasonable? (If not please suggest changes/amendments with reasons.)

4 a) Changes to composite R_w values instead of specification of individual elements of wall (4.1)

√	Yes		No		Not Sure

4 b) Reduction of standard for ventilation ducts between classrooms and corridors (4.2)

√ Yes	No	Not Sure

Comments:

4 a)
No comment on proposal to change to composite R_w

4 b)
We accept the proposal for a reduction in the $D_{n,e,w}$ for ventilators in corridor walls but would like to see more evidence that 32dB is an acceptable level to use between classrooms and corridors, as this is significantly lower than the previous 45dB used in BB93.

5. Reverberation times of teaching spaces designed for students with special hearing or communication needs

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
5	Reverberation times of teaching spaces designed for students with special hearing or communication needs	BB93 required ≤0.4 seconds average across 125 Hz to 4kHz octave band centre frequencies	≤0.4 seconds average (and less than 0.6 seconds in all 125 Hz to 4kHz octave band centre frequencies). High values at low frequencies significantly affect these pupils hence the need for a low RT across the frequency range.	This will have a cost impact for spaces specifically designed for SEN students. However they are benefited by the improved signal to noise ratios that will result in improvements in educational attainment for SEN pupils. In addition, better facilities in Local Authorities for HI and other SEN students will mean that fewer pupils will need to be sent out of authority for their education. In the case of Essex County Council this has resulted in the Council no longer sending any HI pupils out of the LA due to the introduction of improved acoustic standards to cater for SEN pupils. The Consortium for

				Research into Deaf Education (CRIDE) survey shows that large numbers of pupils are currently educated out of Authority presumably due to there being no suitable education in the Authority. Many of these pupils will be in special schools. Although acoustics is only one of the criteria for appropriate educational provision for HI and SEN pupils it is a key part of it with 90% of SEN pupils benefitting from acoustic conditions above those specified for mainstream pupils.

5 Do you think the change to the reverberation time in teaching spaces designed for students with special hearing or communication needs is reasonable? **(If not please suggest changes/amendments with reasons.)**

√	Yes		No		Not Sure

Comments:

We approve of the change in the definition of students with special hearing or communication needs as described in Section 1.4.

Please make clear in Table 6 if ≤0.4 seconds criterion in Refurbishment column of is T_{mf} or T_{30} averaged from 125Hz-4kHz.

Also, do the standards as set out for students with special hearing or communication needs apply to vocational areas within the school? It should be stated if this is the case or if in this instance an APS can be applied.

6. Reverberation time (RT) of indoor sports halls

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
6.1	Reverberation time (RT) of indoor sports halls	RT≤1.5 seconds	The new standard is RT ≤2 seconds.	There is a considerable cost saving on the acoustic wall panels that are generally used as the means of reducing the reverberation time in sports halls.
6.2		Testing of sports halls was recommended in BB93.	Testing is no longer recommended and a deemed to satisfy acoustic design method will be included in guidance to be published by the Association of Noise Consultants and the Institute of Acoustics in 2014. The deemed to satisfy method will be easier to achieve and more realistic than using the previous Sabine formula.	Testing often resulted in remedial work that was not really necessary. The change to a longer reverberation time and dropping the recommendation to carry out testing will eliminate the problem and save on costs of testing and remedial works.

Do you think these changes relating to reverberation time in sports halls are reasonable? (If not please suggest changes/amendments with reasons.)

6 a) Increase in Reverberation Time for Sports Halls from 1.5 to 2 seconds (6.1)

☐	Yes	√	No	☐	Not Sure

6 b) Testing not recommended for sports halls with deemed to satisfy constructions (6.2)

√	Yes		No		Not Sure

Comments:

6 a) We do not agree with the proposed change from 1.5 seconds to 2 seconds T_{mf} in Sports Halls. With the method of compliance changing from test to calculation/modelling evidence we do not feel this change is necessary.

6 b) We support the proposed change from recommended testing to proving compliance by calculation, although we wish to see testing remain as an alternative method of demonstrating compliance. However, we are not able to fully review the "deemed to satisfy" calculation method as this is to be published in the accompanying Design Guide document.

From what we understand of the deemed to satisfy method, evidence must be provided by calculation along certain specific attributes which must be adhered to for compliance to be achieved such as statements on the minimum height of wall absorption and the soffit being entirely absorbing. However, the Performance Standards draft for consultation states that, *"evidence for compliance can be provided by submission of the acoustic model or design calculations together with acoustic laboratory test data*" we would agree with this method and ask that both 3D computer modelling and calculation be deemed acceptable methods of proving compliance in the Design Guide as well as in the Performance Standard Section 2.6.4. If additional limitations on modelling such as limits for scattering coefficients to be used are required these can be listed in the Design Guide.

There is a typo in Section 2.6.3. paragraph 3, "roof surfaces" should read, "room surfaces".

7. Alternative Performance Standards

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
7.1	Alternative Performance Standards	BB93 had no lower limit to performance for Alternative Performance Standards that could be justified on grounds of	In future no relaxation of minimum recommended performance standards will be allowed that is any more significant than	There will be an improvement in standards overall by setting the minimum APS at the refurbishment standard. Less technical advice will be needed to apply APS. This will make it easier for

		particular educational, environmental or health and safety reasons. This led to very poor acoustics standards being adopted in some cases.	the reduced criteria given for refurbishments and conversion work.	designers to make the case for Alternative Performance Standards and for Building Control Bodies to assess the compliance of APS as they simply need to be at least the same standard as is specified for refurbishment and conversion work in existing buildings. This will result in some minor cost savings in Building Control Applications.
7.2	Alternative Performance Standards		The commonly applied APSs that have been found to be useful since BB93 was introduced in 2003 have been included as specific allowable exceptions that no longer require an APS in the new standards.	Use of these commonly applied APS will make design easier as no calculations will be needed to apply these APS. This will result in some minor cost savings in Building Control Applications.

Do you think the changes relating to Alternative Performance Standards (APS) are reasonable? **(If not please suggest changes/amendments with reasons.)**

7 a) Lower limit for APS set at refurbishment standard (7.1)

√	Yes		No		Not Sure

7 b) Commonly applied APS that have proved successful included as permitted exceptions (7.2)

√	Yes		No		Not Sure

Comments:

7 a) We agree that APS should have a minimum standard and that it is sensible to make this the same as the refurbishment standard. However, we think that this needs to be set in context as being the “normal” minimum standard rather than the “absolute” minimum standard as there will always be exceptions and alternative designs which contravene the rule but which can be fully justified in terms of educational based evidence. We suggest the caveat, *“should not normally be allowed….”* be added.

We also feel that it must be stated that refurbishments do not “normally” get a further 5dB reduction in standards beyond that shown in the tables when an APS or the permitted exceptions are invoked, however, there are circumstances for instance when double doors are required to connect two teaching spaces, that the deemed to satisfy exception requiring a door rating of R_w 35dB may not be compatible with the client requirement for doors with no rebates etc. that an APS may be required which reduces the standard set in the exceptions.

We also suggest that refurbishment/change of use be treated as a form of permitted APS and a clause be added requiring that where new build standards will not be achieved in a refurbishment/change of use a detailed full and proper case must be made and documented.

7 b) We welcome the inclusion of permitted exceptions which do not require a full APS. However, as stated in response to question 2 c) there needs to be clear guidance on when they can be applied. In particular can the exception in 2.1.4. be applied to refurbishment/change of use?

The exception in Section 2.2.3. on vision panels needs re-wording so that it is clear that it applies between a multi-purpose hall and a control room OR between a music room and a control room. At the moment it could be read as applying between a multi-purpose hall and a music room. We request that a note on limitations of performance must also be included in the Design Guide.

It must also be made clear that the permitted exceptions do not have a 5dB relaxation when an APS is applied e.g. if there were a pass door in an operable wall.

8. Design of open plan areas

		BB93 2003 Acoustic Standards	Proposed changes in revised 2012 acoustic standards	Impact
8.1	Design of open plan areas	Designers were required to submit STI calculations for all open plan areas to Building Control Bodies (BCBs) for approval. In many cases Alternative Performance Standards were used as a means of derogation and sub-standard open plan learning spaces resulted. BCBs were in a difficult position as designers sometimes claimed the derogations on educational grounds even when the reason was to achieve cost savings.	Speech Transmission Index, the index of speech intelligibility, is to be removed from the Building Regulations requirements as it is too difficult in practice for Building Control Bodies to judge whether the Speech Intelligibility in open plan spaces is suitable for their intended use. School Client Bodies will be responsible under the School Premises Regulations for ensuring that Speech Intelligibility in open plan teaching areas is suitable for the planned educational use of the spaces.	A very similar standard is included as guidance in support of the School Premises Regulations and the Independent School Standards to that previously required as part of Building Regulation submissions. Removal of STI calculations from Building Control Submissions will make it easier for Building Control Bodies to assess school designs and make it simpler for contractors to make Building Control Submissions. BCBs will no longer need to try to understand pedagogy and different educational approaches. There will be no cost savings to design teams but making the schools responsible for speech intelligibility will put the onus of responsibility for introducing open plan teaching on the educators which is where it belongs.
8.2	Design of open plan areas	Speech Transmission Index (STI) in open-plan teaching and study spaces of > 0.60 in Table 6 in of BB93	Figures for Speech Transmission Index (STI) are given in Table 7: For instruction or critical listening activity – within group ≥ 0.6 and STI between groups	Although difficult to quantify this additional guidance should lead to less expensive remedial work to ill-considered open plan teaching spaces. For example a secondary school built in 2002 required £600k of

			(during critical listening activities) ≤ 0.3 New guidance is being included in *Acoustics of Schools – A Design Guide* to be published by the IoA and ANC to supplement the standards on Speech Intelligibility for open plan spaces. This will help educators to understand the requirements of open plan and semi open plan teaching spaces which will result in the creation of more effective teaching environments.	acoustic remedial work only 4 years after construction due to the adoption of semi open plan teaching environments that prevented effective listening and communication.

8 a) Do you agree that STI calculations of the Speech Intelligibility in open plan spaces should be excluded from Building Regulations requirements but standards should be included in"Acoustic Design of Schools" in support of the School Premises Regulations and the Independent School Standards? **(If not please suggest changes/amendments with reasons.)**

√	Yes		No		Not Sure

Comments:

Although we accept the removal of the STI calculations from the Building Regulations, we express concern that the onus will fall on the “school” / “school client body” to ensure that Speech Intelligibility in open plan teaching areas is suitable for the planned use for the educational space. We are concerned about the definition of the school / school client body and if they will be equipped with the knowledge, skills or time to understand the complexities of the open plan acoustic design and ensure compliance. If this is to be a successful transition then more training and profile raising needs to be offered to allow those tasked with checking compliance of the design to fulfil their role and understand their responsibilities. This is something that could be included in the Design Guide or in an additional separate document.

There should be a definition of “school / school client body” to be included in Section 1 of the Performance Standard so we can be sure who is responsible for the design and ensuring compliance.

8 b) Do you agree with the inclusion of a second criterion in Table 7 relating to the STI between groups of pupils? **(If not please suggest changes/amendments with reasons.)**

√	Yes		No		Not Sure

Comments:

We agree with the additional criterion set out in Table 7 relating to STI but think that the higher criterion mentioned in the note below Table 7 (which we believe are included in the Design Guide) should also be included in the Performance Standard in Section 2.8.2.

We are concerned that the proposed method of calculation relies on a voice weighting which is not included BS60268-16 and suggest that the methodology needs rewording to explain where and why the proposed method is not in accordance BS60268-16.

There is no mention of “future proofing” in Section 2.8. We suggest that the sentence, “Future proofing should be considered” should be added to the text, although we accept that a fully co-ordinated multidisciplinary alternative “closed plan” design scheme would not always be viable.

Section 2.8 paragraph one should read, “in order to comply with the School Premises Regulations, the Independent School Standards and the Equality Act”.

9 Have you have any comments on the proposed revision of the performance standards for schools?

Comments:

The Performance Standards document requires a short acronym so it is memorable to clients and other bodies.

Please add an explanation in Section 1 of who has responsibility for checking compliance of the design when not covered by Building Regulations.

Noise from operational activities is not mentioned in the Performance Standard so will need to be covered in the Design Guide document.

There should be something in the Design Guide regarding noise from playing fields.

The Design Guide should note that door closers in SEN accommodation must be quiet.

10 Is the guidance as short and concise as possible whilst being fit for purpose?

	Yes		No	√	Not Sure

Comments: Not possible to say yet as it depends on the balance with the Design Guide document. No case studies included yet.

Thank you for taking the time to let us have your views. We do not intend to acknowledge individual responses unless you place an 'X' in the box below.

Please acknowledge this reply.	√
E-mail address for acknowledgement: anne@newacoustics.co.uk	

Here at the Department for Education we carry out our research on many different topics and consultations. As your views are valuable to us, please confirm below if you would be willing to be contacted again from time to time either for research or to send through consultation documents?

√	Yes		No

All DfE public consultations are required to meet the Cabinet Office Principles on Consultation

The key Consultation Principles are:

- departments will follow a range of timescales rather than defaulting to a 12-week period, particularly where extensive engagement has occurred before
- departments will need to give more thought to how they engage with and use real discussion with affected parties and experts as well as the expertise of civil service learning to make well informed decisions
- departments should explain what responses they have received and how these have been used in formulating policy
- consultation should be 'digital by default', but other forms should be used where these are needed to reach the groups affected by a policy
- the principles of the Compact between government and the voluntary and community sector will continue to be respected.

However, if you have any comments on how DfE consultations are conducted, please contact Aileen Shaw, DfE Consultation Coordinator, tel: 0370 000 2288 / email: aileen.shaw@education.gsi.gov.uk

Thank you for taking time to respond to this consultation.

Completed responses should be sent to the address shown below by 16 May 2014

Send by post to:
Richard Daniels
Education Funding Agency
33 Greycoat Street
London
SW1P 2QF

Send by e-mail to: AcousticStandards.CONSULTATION@education.gsi.gov.uk