

Supported by:



Essex County Council

*FPS*



# Making Sweyne Park School sound good

A summary by the National Deaf Children's Society (NDCS) of a study into acoustics



NDCS is the national charity dedicated to creating a world without barriers for deaf children and young people.

## Introduction

NDCS is the national charity dedicated to creating a world without barriers for deaf children and young people. We represent the interests and campaign for the rights of all deaf children and young people from birth until they reach independence. There are over 45,000 deaf children in the UK.

Government figures suggest that deaf children are 42% less likely than their hearing peers to achieve five GCSEs, including English and Maths at grades A\* to C.<sup>1</sup> Deafness is not a learning disability and this gap is unacceptable. NDCS is campaigning to close the gap<sup>2</sup> and we believe that poor quality acoustics is one of a range of barriers that contribute to it. Earlier this year, NDCS, the Federation of Property Services, and Essex County Council jointly funded the analysis of data which tested the effects of different acoustic standards in classrooms. This note summarises the interim findings of this research.

*“You feel really left out and you feel like you’re sitting in a corner in a lonely classroom so it hurts your feelings quite a bit”*

A deaf pupil from Sweyne Park comments on noisy classrooms before changes to the acoustics

<sup>1</sup> [www.ndcs.org.uk/data](http://www.ndcs.org.uk/data)

<sup>2</sup> [www.ndcs.org.uk/mustdobetter](http://www.ndcs.org.uk/mustdobetter)

## Background and methodology

Essex has three mainstream secondary schools with resource bases for students with a hearing impairment. In recent years, some parents requested ‘out of authority’ schools for their deaf children. Poor classroom acoustics was one of the issues raised, so the Council allocated £150,000 for classroom refurbishment and to test the effect of applying different acoustic standards to the problem classrooms. Sweyne Park School, a secondary school with a large resource base for deaf students, was selected to test the impact of applying the different standards.

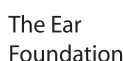
As there are different standards for acoustics it was felt that it was necessary to research the impact of three published standards on teaching and learning and get best value:

- Type 1: Standard – *Building Bulletin 93 (BB93)*<sup>3</sup> compliant secondary school classroom
- Type 2: Enhanced – BB93 compliant classroom specifically for use by deaf pupils
- Type 3: Enhanced to a higher standard recommended by the British Association of Teachers of the Deaf (BATOD)

<sup>3</sup> Government guidance on the acoustic standards for all new school buildings is set out in *Building Bulletin 93*. The guidance is mandatory for all new school buildings and major refurbishments but NDCS evidence shows compliance is not taking place.

### The following organisations endorsed NDCS’s *Sounds good?* campaign:

Special Educational Consortium, NASUWT, Communication Trust, RNID, Essex County Council, NCB, Skill, Sense, National Autistic Society, Ear Foundation, Voice Concern, British Society of Audiology, the British Association of Education Audiologists, the British Council of School Environments, Treehouse and the British Association of Teachers of the Deaf.



Three classrooms were refurbished applying a different standard in each. A fourth untreated room was used as a control. Data was then collected which included acoustic performance, teacher and pupil questionnaires/interviews and pupil assessments. Data from both deaf and hearing pupils was collected. All data was collected without staff or pupil knowledge of the acoustic standard of each classroom.

### The Sweyne Park story so far...

Considerable effort was made to obtain objective data. More than 120 hours of lessons were recorded in addition to 78 hours of detailed acoustic data. More than 400 children and 13 teachers were involved directly in the study. The data is currently being analysed and will be published in full later. However, the interim report has established that acoustic conditions can be created which enhance inclusion and support the teaching and learning process in extremely positive ways. The following trends have been identified:

#### 1. Good acoustics can level the playing field between deaf and hearing children

As part of the research, hearing-impaired and hearing children were asked to repeat what their teacher was saying in the various classroom settings. The gap between how much deaf and hearing children can hear narrowed considerably when the acoustics improved and in some cases, deaf and hearing children performed equally. Better acoustics can effectively level the playing field. Observations from teachers also support this and a communication support worker described Type 3 classrooms as 'being more equal and a fairer environment for hearing-impaired children'.

*"If everyone was being noisy I couldn't concentrate. In this new classroom I find it a lot better, a lot less noisy and it gives me a lot of confidence to work as a group"*

deaf pupil

#### 2. Teachers found the acoustically treated classrooms better and less stressful teaching environments

Thirteen class teachers and communication support workers were involved in the study. Even though staff didn't know which classrooms were acoustically treated, many of them made positive comments about the Type 2 and 3 rooms. They described them as better for talking and listening, more pleasant and less strenuous. The less experienced staff reported the biggest reduction in stress levels.

*"I am able to do group work now, whereas before I would not take that risk"*

teacher

*"The real difference is I can teach, previously I could not teach, I had to structure the lesson such that I got them in, shouted above the noise to try to get them quiet. Now they come in, they are calmer and I can actually teach a formal lesson with the whole class"*

teacher

*"Before Easter I would have walked out stressed, high blood pressure, feeling blinkered, hearing not right with a changed altitude as if in an aeroplane. After Easter I walk out of there refreshed"*

teacher

#### 3. Teachers found that pupil behaviour improved in the acoustically treated classrooms

Teachers did not know which classrooms had been refurbished to the high acoustic standards. However, they reported:

- Improved behaviour in the Type 2 and Type 3 rooms particularly when working with students known to present more challenging behaviour.
- Improved behaviour of students who were not normally taught in the treated room. One teacher stated that they “became positively angelic.”

*“Before Easter it was the lesson I hated most of all. I had to give loads of detentions in order to get any sense of discipline at all... but since Easter I have had no discipline problems whatsoever and yet these rather structured straight jacketed rows of desks are exactly the same.”*

teacher

*“When its echoey, sometimes I feel I like to mess about! When the class is quiet, then I start to be good.”*

Deaf pupil

#### 4. Type 2 classrooms are only marginally more expensive than Type 1 classrooms

As a result of the interim findings, all new primary and secondary schools commissioned by Essex County Council will be built to the Type 2 standard as a minimum, with care taken to deal with low frequency reverberation. The Type 3 standard will be specified for classrooms used by deaf children. The additional cost to treat a typical classroom of 50m<sup>2</sup> to a higher specification from the minimum standard is just £375.

#### 5. Increased sound treatment reduced working noise levels to a far greater extent than would be predicted by calculations alone.

## Recommendations

The majority of deaf children are now taught in mainstream schools and any classroom could be one in which a deaf child is taught. It is therefore vital that acoustics are of the highest possible quality to ensure that deaf children are able to listen and learn effectively. **This research supports the case for high-quality acoustics in schools.** Not only does it benefit deaf children but all students and the staff involved in their education. Yet, despite the opportunity presented by the Government’s school rebuilding programmes, there is evidence that government standards are being ignored. NDCS is calling on the Government to take urgent action to ensure that schools do not just look good, but sound good too. Essex County Council has given its full support to the NDCS campaign. The billions of pounds being spent on school rebuilding must not be wasted.

### **NDCS is calling for the introduction of a mandatory requirement for acoustic testing of all new school buildings before they open.**

To find out more about this research or the NDCS Sounds good? campaign, visit [www.ndcs.org.uk/soundsgood](http://www.ndcs.org.uk/soundsgood) or contact Jo Campion on **020 7014 1182** or email: [campaigns@ndcs.org.uk](mailto:campaigns@ndcs.org.uk)

Children’s quotes included by kind permission of BBC/See Hear.

Thank you to David Canning and Hear2Learn for conducting the research.

