



# The Scaffell Project - Screen Children At-risk For Elevated Lead Levels

By Tim Pye, 25<sup>th</sup> September 2020

This article introduces “The Scaffell Project”.

## Mission

The mission of the Scaffell Project is to convince the UK National Screening Committee (NSC) that screening children at-risk for elevated lead levels is:

- Necessary
- Achievable
- Effective

The next NSC review is scheduled for 2021/22. Keep up to date with progress on [these web pages](#).

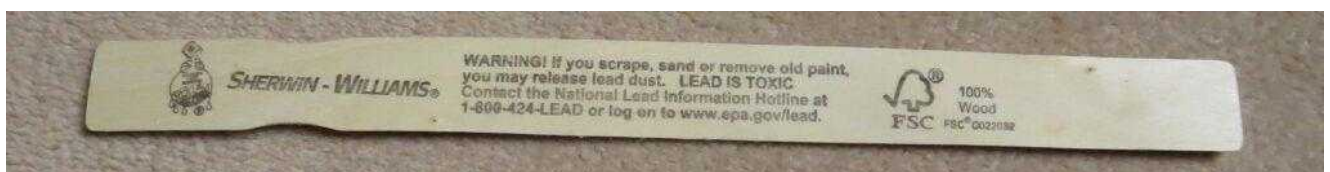


## Introduction

### Logic

A lead poisoning prevention (LPP) stakeholder observed that screening children for lead would be pivotal in the UK. If even limited screening can be introduced, parents would become aware of lead toxicity. They will then start asking questions about the source of the lead exposure which, hopefully, would lead to more action and information from relevant government agencies, trade organisations and businesses.

There may be concerns about a panic response. To prepare for this we should encourage the introduction of a web site and help line, as is provided in the USA, and repeat the message that lead poisoning is entirely preventable.





## Timing

There may be additional difficulties in progressing this project during the COVID-19 pandemic. Public Health England (PHE) staff have been reallocated from lead related initiatives to work on COVID-19 and the PHE is to be re-organised into a new agency called National Institute for Health Protection (NIHP). This could perhaps result in the next review by the NSC being pushed back, but there is no news about this yet.

## Scope

Health Services in the UK are devolved to the individual countries. This scope of this project will be England, initially.

The initial age group focus would be from 1-4 years, inclusive, because this is where most elevated BLCs were reported by the passive Lead Exposure in Children Surveillance System (LEICSS).

## Project Naming

Scafell Pike is the highest mountain in England. There is a mountain to climb to achieve the project mission, but Scafell Pike is not inaccessible.

The name “Scafell Project” has been used previously for an initiative regarding prolific and priority offenders. This is nothing to do with screening, except that there is evidence that lead exposure can lead to crime (Boutwell et al, 2017, Dietrich et al, 2001, Taylor et al, 2016).

## Background

In 2018 the NSC recommended against screening for lead poisoning. The reasons given were:

- the number of children affected in the UK is currently not known
- the test was not reliable enough
- treatments in children with mild symptoms have not been proven and may also be harmful

The three parts of the mission of the Scafell Project address each of these reasons.

A detailed submission was presented to the NSC in 2018 by associates of Lead Safe World dealing with these questions in some detail. However, this was not effective in persuading the NSC to change their recommendation. The evidence presented at that time can be found on the NSC web site.

The NSC had also commissioned an external review from Bazian Limited. Unless there are personnel changes, it would be likely that Bazian would not want to change their recommendation, so we should ask the NSC to use another organisation to perform the next review. The Scafell Project could look for alternatives, perhaps from the USA, where there is more experience.

The Parliamentary Under Secretary of State for Prevention, Public Health and Primary Care, Jo Churchill MP, has stated that “prevalence is likely to be a higher concern in at-risk populations, in whom lead exposure may be a public health concern”. This statement could be used to support the project’s submission to the NSC.



## Objectives

The objectives required to meet the project mission are as follows:

### Necessary

The Scaffell Project aims to acquire up-to-date data on the prevalence of elevated BLC in the child population as a whole, but focus this in areas where lead exposure may be more frequent. This probably means former industrial areas which are now deprived and include older housing. If these data show that lead exposure is still a problem in England then they should be presented to the NSC to show that testing for elevated BLCs is necessary.

There has been no study of the prevalence of elevated lead levels in the UK since the middle of the 1990s. At that time it was found that, of those sampled, 14.5% of pregnant women ([Taylor et al, 2013](#)) and 27% of toddlers ([Chandramouli et al, 2008](#)) had blood lead concentrations (BLC) above 5 µg Pb/dL. This is the action level currently recommended by the [Lead Exposure in Children Surveillance System](#).

To show that screening is necessary, more up-to-date data on the prevalence of elevated BLCs is needed. One way to achieve this could be to exploit existing stocks of blood samples. [UK Biobank](#) have been contacted about this and information about costs is awaited.

Another approach could be to collect new samples for analysis. This could be done using a finger prick method analysed by a device such as [LeadCare II](#). A current study on COVID-19 antigens uses participant [self-administered sample collection](#) showing that a trained nurse may not be needed. The ethical constraints around this would have to be examined and a cohort of volunteers would be needed – perhaps from the children of the [ALSPAC 'Children of the Nineties'](#) cohort.

### Achievable

The NSC asserted that existing tests are not reliable enough. However, according to the [Centre for Disease Control \(CDC\)](#), in the USA in 2017, 2,014,208 tests were performed on children younger than 72 months. This represents 18.7% of this age group. Of these, 3% were found to have BLCs  $\geq 5$  µg/dL. It should be noted that these data may not include all tests performed where these do not meet the CDC standardisation criteria. The CDC also warn that these data do not represent population-based estimates. In UK terms, the same percentages would result in around 540,000 children being tested and 115,000 children being found to have elevated blood lead levels.

What this shows is that screening children for elevated blood lead levels is clearly achievable in the USA so this should also apply in England. Blood lead concentrations are already measured in England for children with recognised lead toxicity and in workers handling lead. Does the NSC believe these existing tests are not accurate?

The Scaffell project should collate this, and other, information, seek endorsement from UK professionals and present this to the NSC showing that testing for elevated lead levels can be simple, cheap and effective.

### Effective

The NSC state that treatments are not proven and possibly harmful. They seem to limit their definition of treatment to clinical or medical interventions. In the USA the Environmental Protection Agency (EPA) provide [considerable information](#) about how to reduce the lead loading in homes and other locations frequented by children. The Scaffell Project will use this, and other collated evidence, to



create a compelling case to explain how lead exposure can be reduced.

### **Stakeholders**

The stakeholders, from whom endorsement of the project will be sought, may include:

- Academics
- Clinicians
- Service providers
- Activists
- Parents

### **Approach**

#### **Branding**

The project is hosted under the Lead Safe World project created by The LEAD Group in Australia. This includes using the Lead Safe World branding, web site and emails.

#### **Costs and Funding**

The main, and perhaps only, cost involved with the project could be acquisition of BLC data. Further work would be needed to establish the options, feasibility and costs. Following this, and depending on how much it would be, funding could be sought. Perhaps from the [National Institute for Health Research](#).

#### **Steps**

At this time, the steps envisioned to progress the Scaffell Project include:

- Seek endorsements.
- Seek people to help progress the project.
- Seek assurances that the replacement of Public Health England will not mean that the Lead Exposure in Children Surveillance System ([LEICSS](#)) is abandoned and that the new National Institute for Health Protection will include protecting children from lead in its remit.
- Inform the NSC about the mission of the Scaffell Project and ask them
  - to seek an alternative organisation to provide the next external review.
  - To indicate what evidence of the prevalence of elevated blood lead levels they would accept
- Investigate ways to find out the prevalence of elevated blood lead levels in England.
- Collect information on the accuracy of BLC screening.
- Collect information on the efficacy of interventions in children's environments.
- Prepare a submission to the NSC.

#### **Personal Note to Lead-Using Businesses**

My name is Tim Pye and I am the instigator of this project. If you represent a lead-using business and feel threatened by it, there is no need to take legal, or illegal, action against me. Just let me know and we'll talk.

I do not believe it would be helpful to seek to blame, or hold responsible, any individual or organisation for lead exposure. Everyone has benefited from the use of lead, so there should be collective responsibility for resolving the consequential health issues. This is best addressed through



government agencies.

I have no wish to be a martyr for this cause, but feel I am well placed to help in a small way to improve the health and wealth of the country through this campaign. Your help would be welcomed. I can be contacted at [uk1@leadsafeworld.com](mailto:uk1@leadsafeworld.com).

***“Let us not seek to fix the blame for the past. Let us accept our own responsibility for the future” John F Kennedy***

---