



Engagement Journey Our Impact from 2021 – 2024

Foreword

From the beginning, WellHome has been rooted in the local community. Rather than hearing from just one person, we want to platform a diversity of voices from our network, including participants, researchers and Community Ambassadors, in this shared introduction.



"Partnering with the WellHome team to engage local communities has been an incredibly rewarding experience.

By collaborating with residents, community groups, and schools, the WellHome study has created more meaningful opportunities for collective action and change, raising awareness and addressing challenges like air pollution - one of many issues our communities face. This project not only highlights the importance of air quality in our homes but also inspires communities to advocate for healthier, thriving neighbourhoods".

Farial Missi

Senior Partnerships and Community Engagement Manager







"From day one, the project has been community-led...

and put its members at the heart of every decision, starting by the design of the study itself..."

Mounira WellHome Community Ambassador



"The experience and privilege of being allowed into people's homes has impressed upon me the need to co-design studies to understand how people interact with and accept scientific measurements."

Dr. David GreenWellHome Academic Lead



"I am now a person who constantly talks about air pollution. WellHome empowered me to be part of something that could shape our future. My biggest fear is climate change and leaving my children a broken world to live in."

Manon

WellHome Community Ambassador



"WellHome enabled me to do something for the next generation."

MutthuWellHome Community Ambassador

"It's a great research project and I feel lucky to be part of it.

This research has made me think of indoor air pollution more."

WellHome Participant

"Cleaner indoor air begins with awareness but thrives on community action."

Susu

WellHome Community Ambassador



"The WellHome study really highlighted to me how much more needs to be done."

Prof. Ben BarrattWellHome Academic Lead



"Particularly as we work, day in and day out, with the more vulnerable, marginalised groups in society who tend to be more affected,

The language of indoor air pollution has now become more part of our own dialogue.

From our children and young people's perspective we also feel they have been educated and hopefully more thoughtful regarding this subject, and will also become influencers and changemakers as they grow up. I feel WellHome were able to well embed themselves into the community by working with community members, and were also very sensitive to the needs of the groups they worked with."

Lydia Gandaa

Community Partner, Bubble & Squeak



"We were made to feel welcome and supported at every step of the way.

Staff were sensitive and welcoming to parents and carers - and went above and beyond, attending our community events and delivering children's activity sessions, to raise awareness of the issues surrounding air pollution in the home."

Mat Barnett
Community Partner, Nova









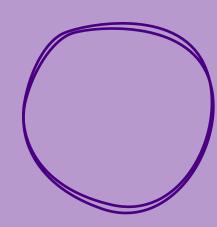
Scientists, students & Community

Ambassadors advocating at local events

Interactive activities in White City & Wormholt - W12 Festival, 2023







Clean Air Day, 2022





"A Day in the Life of a Scientist" visit with WellHome children

Face painting at WellHome Community Dinner - May 2023

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Broadening Awareness with Engaging, Accessible Communications

An Organic, Adaptable, and Responsive Engagement

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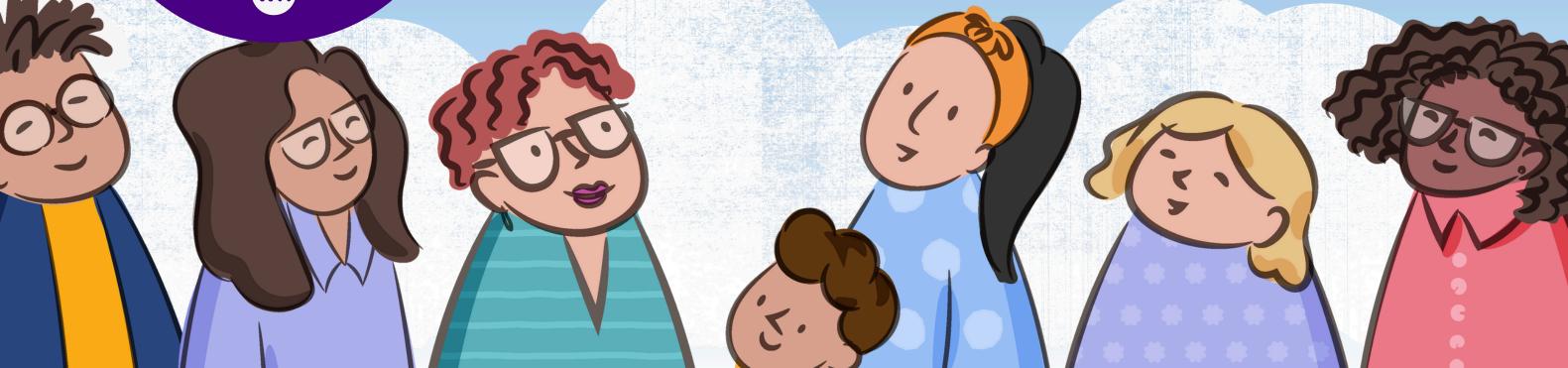
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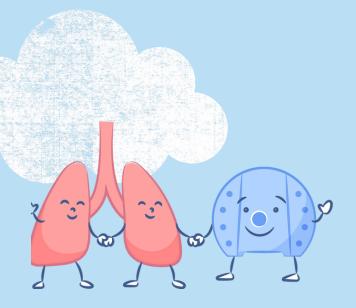




Introducing WellHome: Air Quality Research for Healthier Communities

The West London Healthy Home and Environment study (WellHome) is a pioneering community-based initiative, exploring air quality both inside and outside homes.

This ambitious project integrates cutting-edge scientific research with a unique approach to community engagement. WellHome has collaborated with over 100 families to investigate air pollution and its impact on asthma in children, focusing on families from vulnerable and diverse urban communities.



WellHome is based in Imperial College London's **Environmental Research Group (ERG)**, a world-leading centre for the study of air pollution, within the School of Public Health.

Methodology

The aim of this exploratory study is to discover what air pollution exists in our homes, where it comes from, and how it affects our health. We are particularly interested in identifying exposures along the 'indoor-outdoor air pollution continuum'.

Our findings will shape effective recommendations for residents, authorities, and policymakers.

Between 2022-2024, air pollution sensors were placed in over 100 homes to measure particles, gases, temperature and humidity. Passive samplers (small trays that collect pollutants form the environment) were used to capture chemical, biological and microplastic contaminants present within the home. Families completed questionnaires and activity diaries so that we could understand their behaviours and perceptions of air pollution.



Air pollution is a global problem...

8.1m

Number of global deaths due to air pollution in 2021



In the UK, it is considered the largest environmental health risk.



Air pollution damages our bodies systematically – harming every cell,

organ, our mental health, and across all life stages.



The burden of air pollution falls unevenly on:

- Poorer families
- Communities of colour
- People with pre existing health conditions
- Children
- Elderly



Climate change and air pollution are interlinked.

Improving air quality will also help reduce greenhouse gas emissions.





Our Approach to Community Engagement

For too long, communities have been passive recipients of research, rather than active participants - despite being the true experts of their own lived experiences. This dynamic fails to provide the equitable, long-term outcomes that these communities deserve. To actively challenge this, we adopted an Engagement, Involvement and Participation approach, incorporating overlapping yet mutually reinforcing activities.

Our approach was fluid and organic, involving a diverse range of methods, from participatory arts projects to co-production. This enabled the creation of relationships and trust within the community necessary for the research. To embed ourselves into the community, we integrated the three strands, allowing local residents to interact meaningfully with WellHome in ways that suited their needs.



Our community

Co-designing with the community a feasible, acceptable and scientifically robust study.

Instead of strictly defining 'participatory research', WellHome has integrated participatory research principles throughout. Given the size and complexity of WellHome, the study has incorporated participatory elements at relevant stages. We have consistently engaged and involved local residents at key decision-making points. Our organic approach has enabled researchers to remain attuned to the needs and concerns of the local community, thereby removing barriers to inclusion.

The following pages give you a glimpse into the various stages of our journey, and the incredible people and groups who made WellHome possible.

Quremos air puro

We want clean air



Waxaan rabnaa hawada nadiifka ah de l'air pur

Nous voulons

Chcemy czystego powietrza





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أنا أريد هواءً نقياً





'Air Quality Investigation Lab'

Engagement

Where information and knowledge about our research is provided and disseminated. Examples of our engagement activities are:

- Participation in local **festivals and community events**
- Educational sessions with local community partners
- Distribution of science activity packs

These activities were designed to ensure that the entire community has opportunities to learn about the causes and effects of air pollution, as well as strategies for reducing their exposure to harmful pollutants.

We aim to ensure that our air quality research is conducted collaboratively with and by the community, rather than being done to, about, or for them!



INVOLVEMENT

Co-design focus groups

Involvement

Where members of the community have engaged in our research study through the following activities:

Participation

- Gathering their own indoor air pollution data
- Completing surveys and participating in interviews

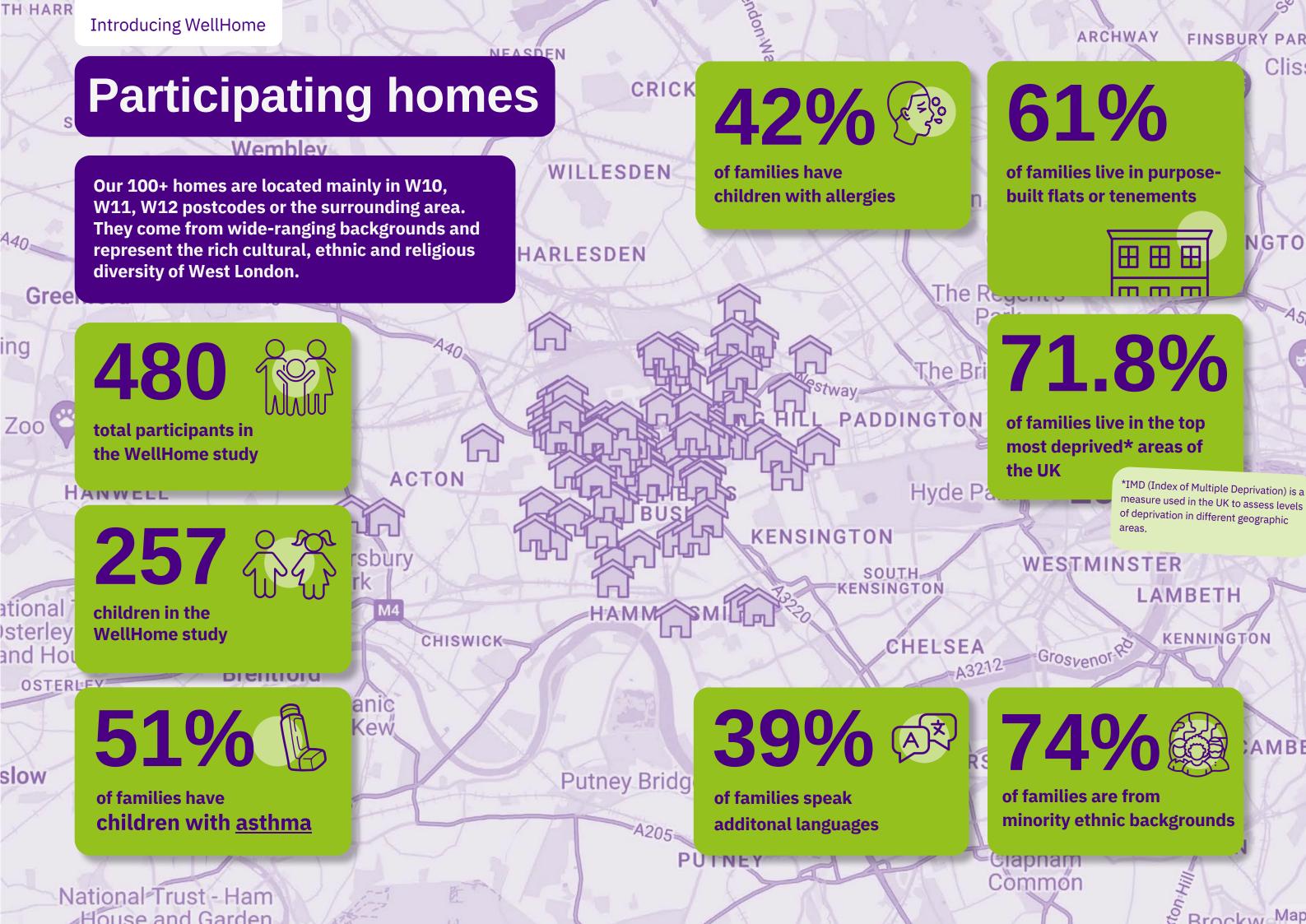
Moving forward, we aim to continue collaborating with WellHome families to establish a community air quality research hub. This hub will integrate a network for monitoring residential indoor and outdoor air quality, facilitate information exchange, and offer educational programs.

Where members of the public are actively involved in our research through various avenues, for example:

- Focus Groups: Contributing to the development of our engagement strategy and methodological approach and co-designing the findings reports.
- Steering Group Membership: Participating as members of our steering group to guide research direction.
- WellHome Community Ambassadors Model: Serving as key bridges between the research and the community, facilitating communication and understanding.



Measuring air quality indoors





WellHome Community Network

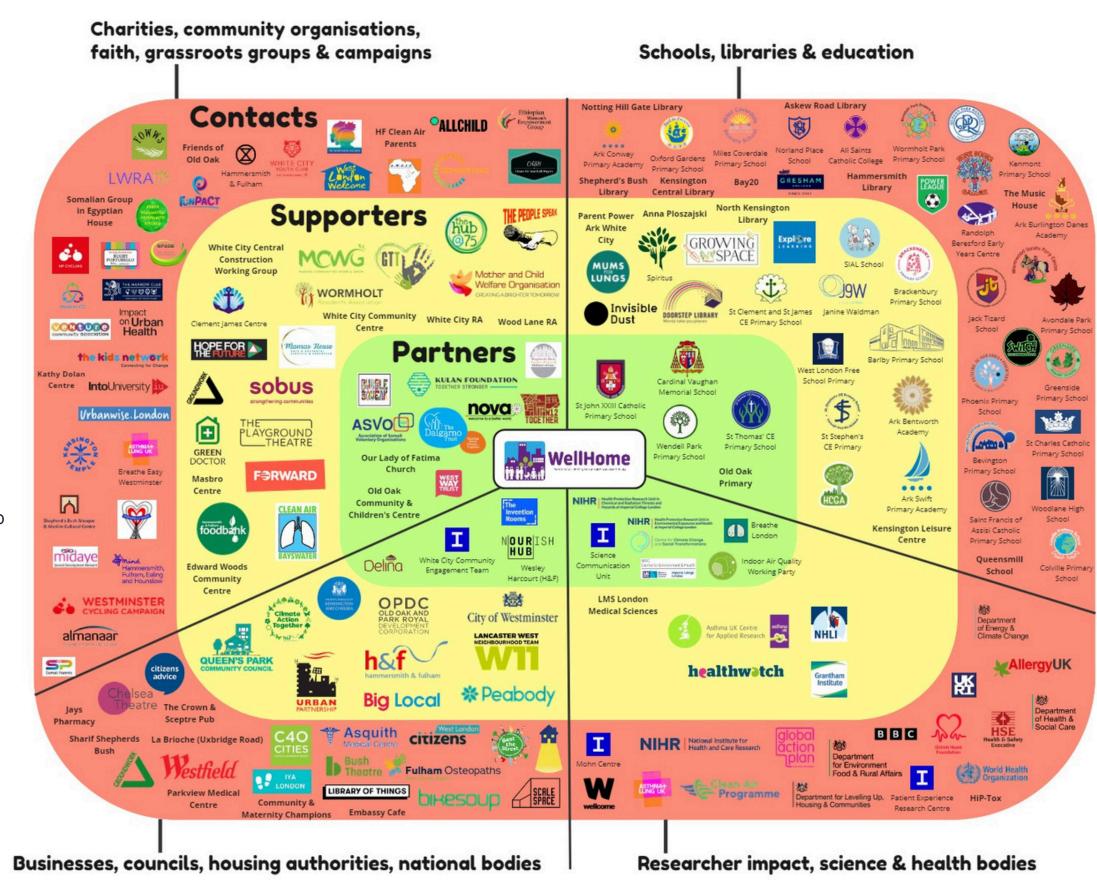
From 2021-2024, we engaged over 165 external groups from a range of areas. The depth of relationship can be classified as:

- Partners: Championing and collaborating, for e.g. co-developing engagement activities
- Supporters:
 Joint events and activities,
 two-way consulting
- Contacts:

 Informing connecting & providing key information

There are also many exceptional individuals who have played their part, that may not be part of a group or body represented here. We are very grateful to you all - you know who you are!

165+
external groups
engaged





01. Listening, Learning and Understanding.

Spring 2020 Summer 2021

Rooted in the community from the beginning.

In 2020, we collaborated with the local community near Imperial College London's White City Campus to co-design a participatory indoor air quality research. Funded by a UKRI Citizen Science grant, our pilot study, 'My house, my rules: Co-designing residential air pollution research,' provided valuable insights that informed the WellHome study. Key findings highlighted the importance of active local involvement, particularly from marginalised communities and families with your children.

WellHome is funded!

Awarded grant funding for WellHome from <u>UKRI SPF Clean Air Programme</u>, in collaboration with project community partners:





Residents expressed curiosity about whether they should 'let the pollution in, or out'?

Winter 2021

Steered by community voice and lived experiences.

We conducted online workshops with local residents to explore effective and acceptable strategies for engagement. Participants highlighted the importance of maintaining a consistent visible presence, emphasising the benefits of the WellHome study, and utilising a variety of methods.

We also draw insights from Imperial's White City Community Engagement Team, who have extensive experience working with the local community over many years, and from the London Borough of Hammersmith and Fulham's collaborative efforts with communities.



Old Oak Queen's Jubilee events, 2022



Early 2022

Spring 2022

Summer 2022

Growing awareness and understanding

Valuable conversations with key gatekeepers and organisations reveal that respiratory conditions, allergies and housing problems are rife in the local community.

Community Ambassadors joined WellHome!

Since joining our team, the Community Ambassadors have been our main advisory group, acting as key bridges between local families and our research. Their knowledge and experience have greatly contributed to informing our methodological approach and enhanced our outreach to diverse community networks.

Shaped by local needs and concerns

We engage in two-way dialogue with local groups and stakeholders, in a variety of community settings. They recommend emphasising the **health impacts** and importance of the study, who to engage, how and where. Their insights shape our approaches and protocols.



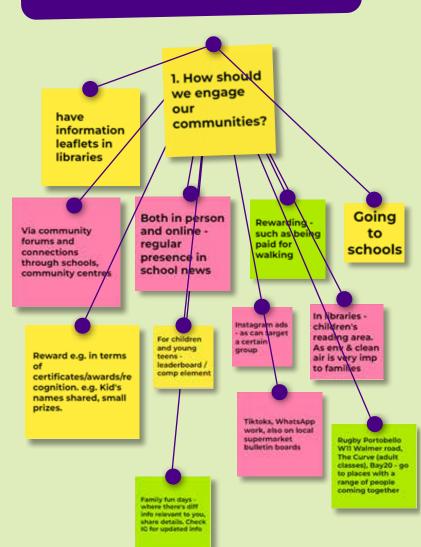






Family fun days and community festivals

Brainstorming Engagement Approaches







02. Relationship Building and Connecting the

Dots

Spring 2022

Summer 2022

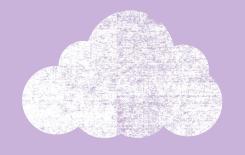
WellHome First Big Engagement Event in the Community

'Discovery Day' was a science-packed festival where participants learned about WellHome via engaging science activities, including arts & crafts, talks and experiments. Click to watch the highlights video!



Engaging with Local Families and **Groups**

Local post-pandemic events, such as the Queen's Jubilee Street Parties in Old Oak and White City, enabled us to connect with key audiences such as families with children with asthma, Resident Associations, health & environmental groups, and local charities. These opportunities allowed us to establish relationships in the community to further listen, share and learn. To celebrate Clean Air Day 2022 and strengthen our connections with the local community, we hosted a panel discussion titled "Our Neighbourhood, Our Air" at Edward Wood's Estate, in West London.











03. Making Science Accessible



A Day in the Life of a Scientist for Clean Air Day

For the very first time, the Environmental Research Group opened their laboratories and offices to the public. The event was a resounding success, with all participants expressing a newfound desire to learn more about how air pollution impacts our health.

Large-scale summer events & festivals allowed us to connect widely, identifying local families with children who have asthma or allergies.

We also created a video for our families, featuring our experts and revealing the science of WellHome. In the video, we aimed to offer an insider's view of our work and the scientific processes involved.

sr Michael Ures Hisb

300+

We delivered over 300 engagement activities

144

professionals involved in WellHome Engagement.
Including 79 researchers,
35 professional staff, and
30+ external collaborators



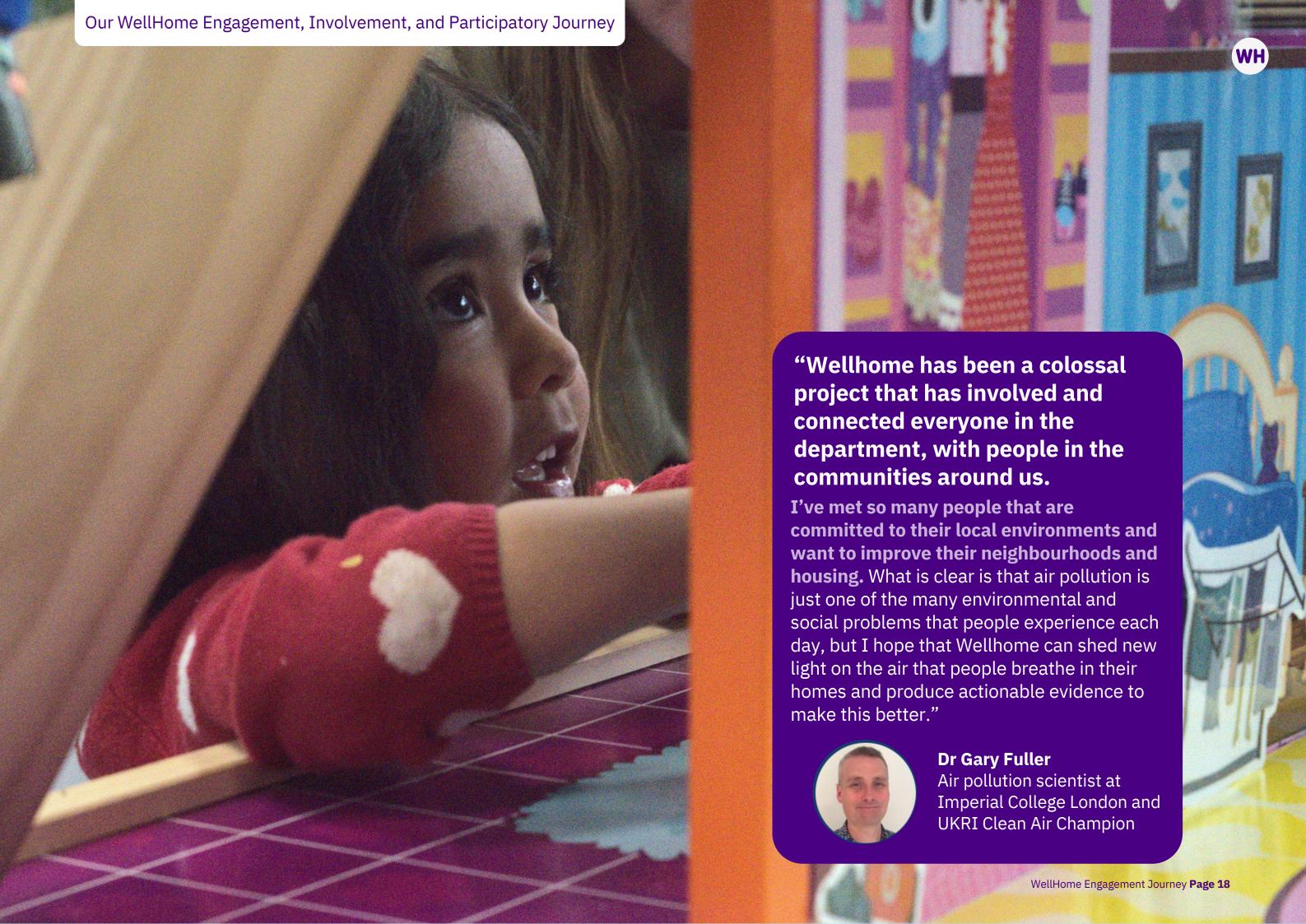
"We most enjoyed seeing a **real lab!**"

ChildParticipating family



"The (day in the life of a scientist) was absolutely beneficial for the parents and the children - this will make the children interested in becoming scientists. Because of today I know what to expect of the WellHome study and will be more familiar with the equipment in our home. This will help me to be more involved in what's happening in the home - so I can understand the importance of pollution and how it affects our home."

Mustaphe O MuseFather in a participating family



04. Broadening Awareness with Engaging, Accessible Communications

Face to face meetings proved highly effective for recruitment. We primary recruited from community events (28%), which facilitated trust and relationship-building. Our recruitment strategy also involved our 10 Community Ambassadors and their own local networks (22%), and a mass leaflet and postering campaign (6%), leveraging community partners' networks and local schools.

We translated our leaflets into Somali, Amharic and Arabic.

We featured in local newspapers and bulletins, including White City's The Local, East Acton Times and Queen's Park Council's.





118+

Venues sharing promotional materials



10k

Leaflets distributed



250

Recycled WellHome tote bags given



452

Expressions of Interest to participate in the study



213

Sign ups to the general WellHome mailing list











Our recruitment video

ሰላም

Përshëndetje

Soo Dhawoow

درود

السّلامُ عليكم

Available in 4 languages, we worked with Community Ambassador Tomassina Hessel on our animated WellHome explainer.

1133+

Amount of times that the video has been viewed.

English, Somali,
Arabic, and Amharic
videos were shared
and amplified via
Whatsapp messages
throughout local
groups and
forums!



Animation & design by Elfy Chiang



Thousands of people engaged

Thousands engaged via social media & press

Well-timed to align with relevant events and campaigns, we effectively engaged with residents through LinkTree, X and Instagram, targeting key audiences.

This allowed us to amplify community content and highlight relevant air pollution campaigns, such as <u>Clean Air Day</u> and <u>#AskAboutAsthma month.</u>

420 X followers, with an average of 2981 impressions per month.







8800

Average number of views on X per month during our final recruitment drive in late summer 2023.

WellHome was featured in national news!

The London Evening
Standard published
a news report about
the WellHome study in
August 2023.



05. An Organic, Adaptable, and Responsive Engagement

Responding to the needs of our community partners Bubble & Squeak and NOVA, we ran air quality activities during holiday clubs and after-school sessions, strengthening our relationships with local families.



Community Centre

Making science fun!

Summer

2022

Imperial's Sustainability Working Group run pollution scavenger hunts for kids in Wormwood Scrubs!

In response to community feedback, we also organise asthma workshops at The Dalgarno Trust, and environmental community film screenings for all ages.

Working with local organisations

Reflecting on what works, we took a more adaptable approach to events, avoiding duplication of effort and resources. We provided high-quality activities to strengthen local causes and campaigns, coming together with local organisations as a joint effort. One example is connecting the Cost of Living Crisis with Air Quality.

Sep

2022

Involving Somali women was a vital aspect for WellHome, as they serve as influential linchpins within their families and play a key role in fostering healthy homes across the community.

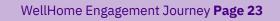
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Dr Will Hicks at an Air Quality action event in North Kensington, with the charity *Hope for the Future*



More in-depth projects
and a consistent
presence allowed us
to develop greater
acceptance, trust and
understanding in
the local community.

Community Ambassadors running
WellHome stalls at Cathnor Park





WH

06. Connecting Art, Air Pollution, and the Community

Creativity is key for exploring the unknown. Over a series of hands-on workshops, artist Mo Langmuir, originally from West London, and community champion Janis Walton worked with families from the Girls Create a Vibe (White City) and Old Oak kids clubs to explore views of local air pollution. This resulted in not your typical map! The artwork reveals Nitrogen Dioxide levels in W10, W11 and W12 postcodes, combined with feelings and movements of participants over a 24 hour day, through prints, drawing and stitchings.



The collaboration resulted in a transportable, educational resource used at over 25 engagement events to encourage dialogue about local air quality and environmental research, with people from all ages and backgrounds.







Our WellHome Engagement, Involvement, and Participatory Journey



Inspiration: Civil Rights activist quilts made by generations of Gee's Bend women, Alabama

A background guide to the participatory map

THE

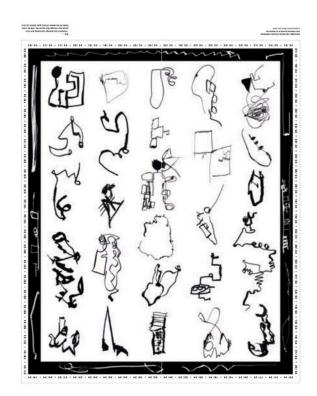
INDOOR

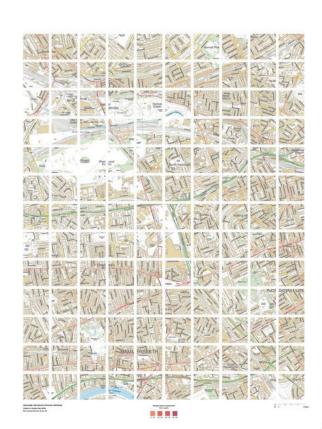
This map has been co-created through a series of 5 workshops with different community groups based around Imperial College's White City campus. The map is a physical interpretation and expression of WellHome, the biggest study Imperial College has ever done in partnership with the local community. Working with those most affected by air pollution health impacts, 5-12 year olds with asthma from diverse ethnic backgrounds, WellHome will specifically look to fill gaps in the research on indoor air quality and the indoor outdoor continuum.

The map features the three boroughs of the WellHome study; W10, W11 and W12 printed on organic unbleached cotton twill. The front map side represents outdoor air pollution (the NO2 pollution in West London). Stitches running through the map represent the relationship between indoor and outdoor air.



Each young person has mapped where they live, where they go to school, and where they go after school. They connected these dots and to create their own symbol and used potato printing with air pollution inks to print their symbols onto the map in the locations where they spend their time. These symbols, alongside first names, forms the key to the map.







Fabric sqaures dyed with activated charcoal, an absorbant of indoor air pollutants [Bhave and Yeleswarapu, 2020, 'Removal of Indoor Air Pollutants Using Activated Carbon - A review'] The embroidered messsages are words which came out of workshopping with local young people and have been sewn by a local Afghan women's group, learning english whilst learning about air pollution and sharing their sewing skills handed down from mothers and grandmothers.



Continuous line drawings of how local people move around on a typical day, alongside a code for the hours out of 24 that they spend indoors e.g. 21/24. People have a perception that they spend a lot more time outside than they actually do. Most adults in the UK spend >90% of their time inside.

OUTDOOR



The fabric tiles which are stitched over the top are made from upcycled bedsheets which have been naturally dyed with Madder root and Quebracho bark, according to Cindy Brewer's research into colours for readability of data maps, used famously in Ed Hawkins 'Warming Stripes'. The reddish colours were chosen for the colour of Nitrogen Oxide smog. All of the thread has also been naturally-dyed, without the use of polluting chemicals.

CONTINUUM



07. Opportunities for Honest and Meaningful Dialogue

Local residents also emphasised the importance of conversation and discussions with experts, encouraging more diverse ways to listen, learn and express, connecting the community's concerns with scientific research. With LBHF Council (LiveWell Festivals), we hosted free and open discussions in public parks to widen the conversation around air pollution, our lived environments and health.

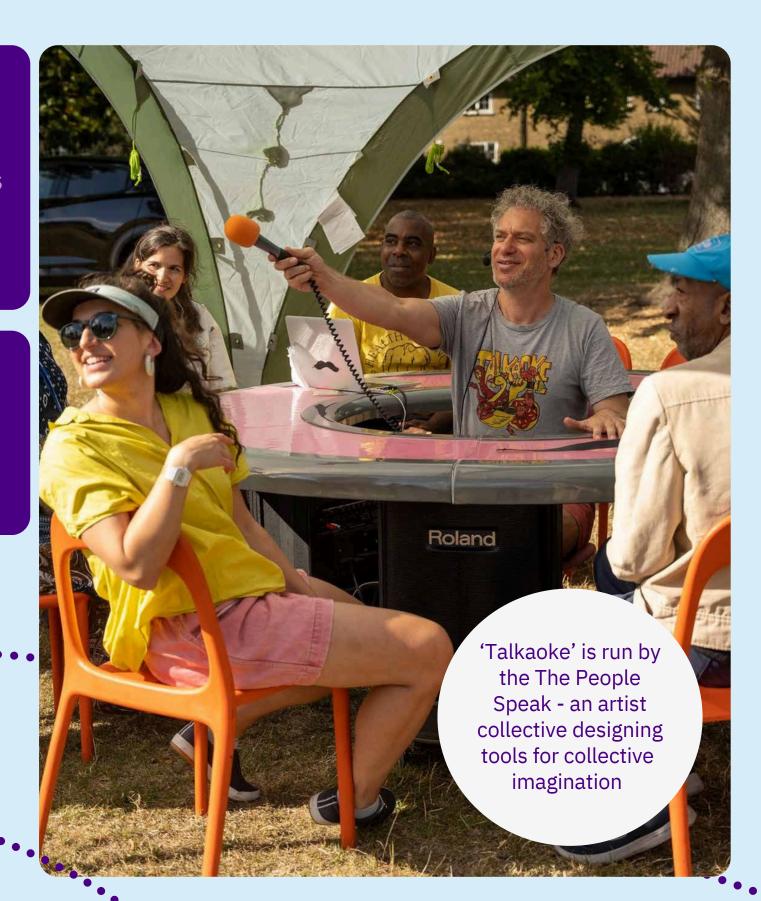
Talkaoke sessions broke down barriers between researchers and local residents, bringing a human face to science diverse opinions and tensions, such as mistrust of universities and research agendas, were able to surface and be exchanged air pollution issues and debates were broadened and deepened.

"Why are you talking about air pollution? I want to know why everyone around me is dying from stroke."

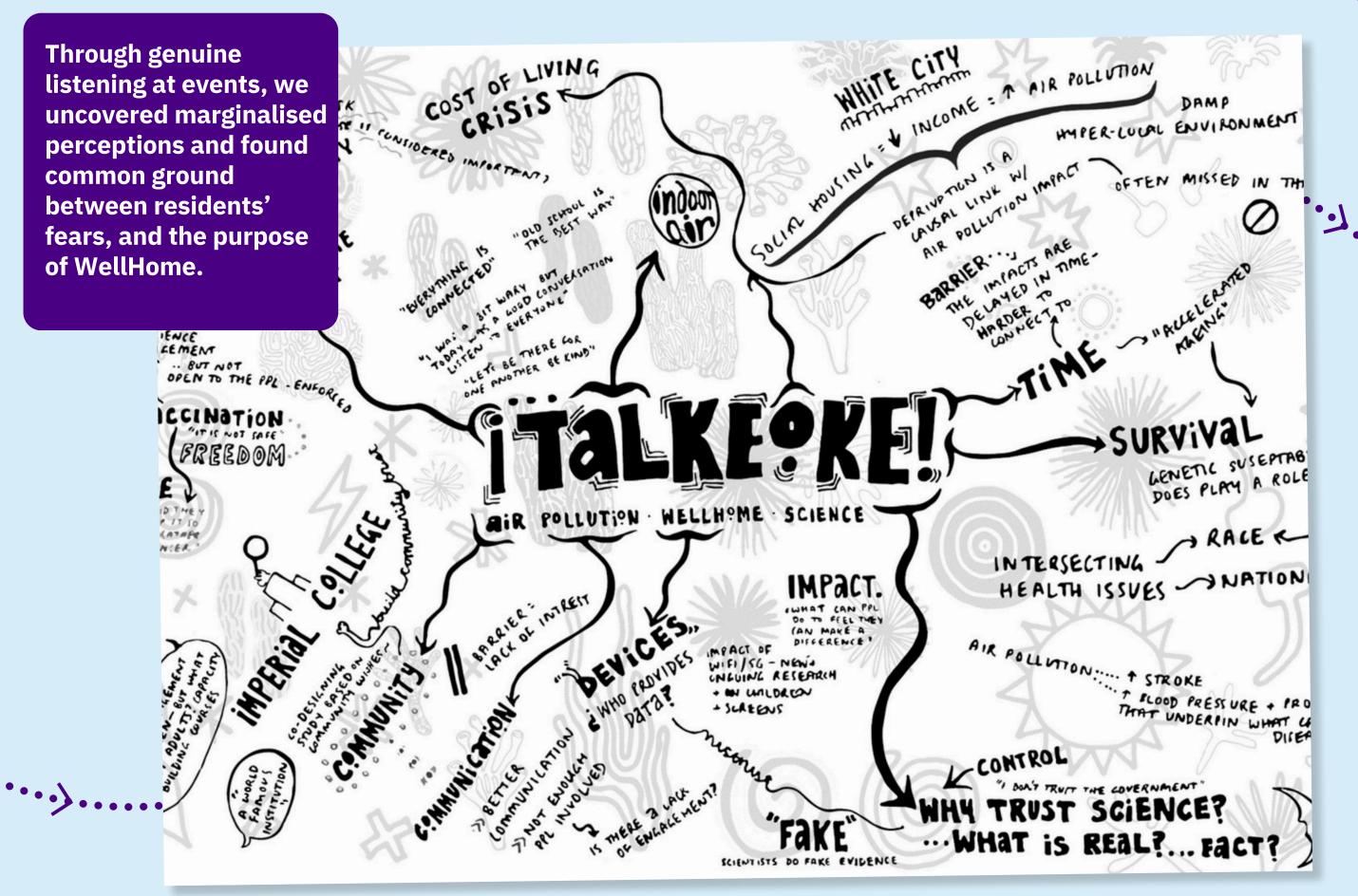
Local resident

"Air pollution also contributes to stroke..."

WellHome Scientist







Live illustration from Talkaoke event - by Mo Langmuir, 2022

08. Equipping and Empowering Community Ambassadors as Key Community Bridges

Awareness of WellHome was now growing strong in the community. We focused our efforts on **empowering our Community Ambassadors by enhancing their** strategic skills and involving them more deeply in the study.

Community Ambassadors visit the

Wellcome Collection

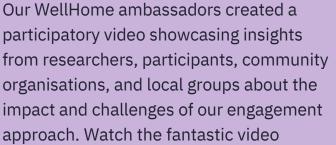
We welcome new and talented Ambassadors throughout our journey. Over delicious lunches, we decided engagement priorities for the year ahead, and reflect on challenges and opportunities.

We delivered tailored training sessions for Ambassadors including:

- Imperial's Introduction to Air Quality Course
- Storytelling & Public Engagement
- Making Networking Work
- Schools Outreach

participatory video showcasing insights from researchers, participants, community organisations, and local groups about the impact and challenges of our engagement approach. Watch the fantastic video

HERE.



supported

WellHome fieldwork visits



29

POLLUTION

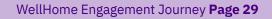
ZONE











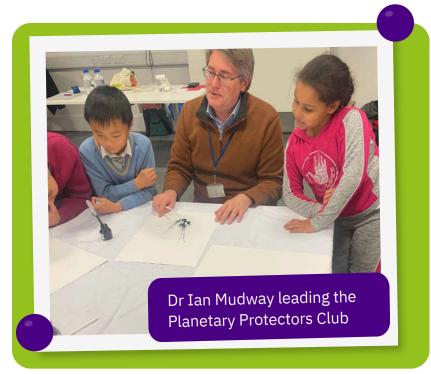


09. Sustaining Relationships and Growing New Ones

Autumn 2022

Educational activities

Together with our community partner NOVA, we launch the Environmental Research Group's first after-school science club for kids - 'Planetary Protectors'! Open to both new and existing families, the free club welcomes local families to learn about our changing planet, introducing the health impacts of air pollution, data science, energy challenges and activism.

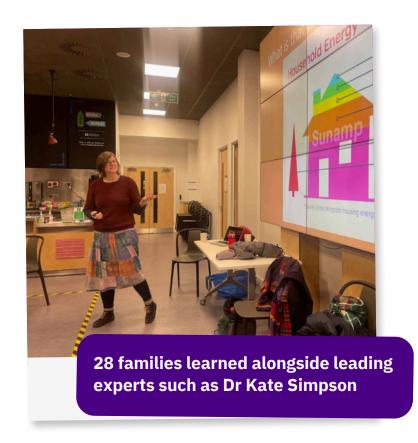






82%

of the families that attended said that the Planetary Protectors Club increased their knowledge of environmental challenges









Engaging with Schools

Utilising vital connections from the Ambassadors, we adapted our approach to work with schools in flexible and spontaneous ways. These included **pop-up stalls, conversations at school gates, and parents' evening talks**. This allowed us to engage with often-overlooked communities and groups.

We developed exciting WellHome and Breathe London assemblies, which explored indoor and outdoor air pollution, connecting researchers with school pupils.

The session had a profound impact on the participating teachers, with 100% of them expressing an increased motivation to learn more about the environment, health, and air pollution. Additionally, every teacher reported that their session significantly enhanced their knowledge of environmental challenges.

Pupils described our Air Quality workshops as: 'Really fun!'

'I enjoyed the quiz with the bubble suits'

30 schools engaged

19
in-person sessions

481
total pupils
reached

We distributed 200 educational packs. These materials, produced by WellHome in partnership with the Indoor Air Quality Working Party and The Invention Rooms at Imperial College London, included fun activities about air pollution for children to learn about it.

We also returned back to schools in Spring 2024 with various fun-filled assemblies and workshops!





'I only want to say it was really good and I love it'

Spring 2023

Gathering with Families: Sharing Meals and Insights

We had enrolled 56 families and marked the milestone by hosting our first Family Dinner, a warm and welcoming space for families to engage with experts, enjoy interactive activities, and connect with others, while savouring delicious local food! These dinners have been essential for acknowledging the contribution of our local families and partnership with scientists.





"I feel lucky to be part of it. This research has made me think of indoor air pollution more and change the activities at home. I am very keen to know things to do to better the air pollution."

Participating family

"I don't know what
I've done in the
world for the team
to come to my
home!"

Participating family





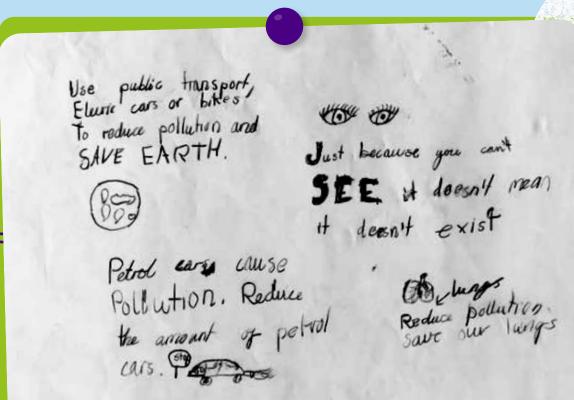
Tree of thoughts created by WellHome participants at family dinner



Children's voices in WellHome

Charcoal drawings from kids summer clubs in 2022, with Bubble & Squeak and artist Mo Langmuir.

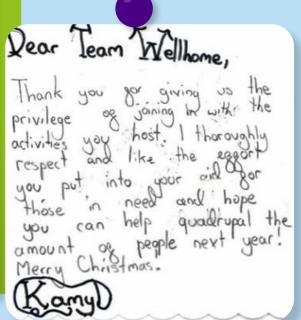


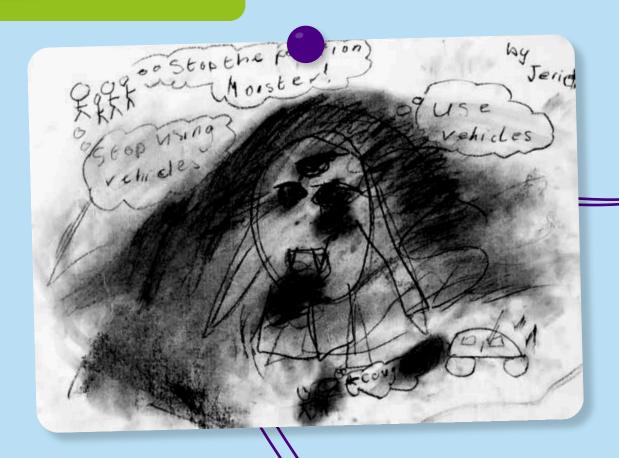




Christmas cards from participating WellHome family children









10. Connecting with the science: Co-Designing Reports with Families

Spring 2023

Co-designing reports

We held several focus groups with participating families to collaborate on the content and presentation of our reports.

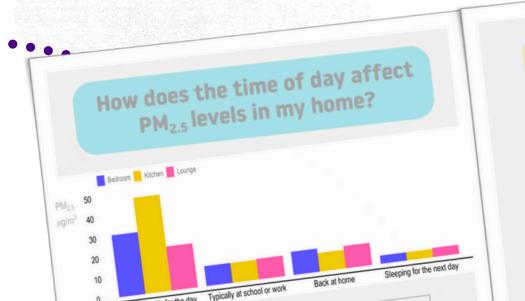
Their ongoing feedback continues to shape our understanding and interpretation of the results.

"You can feel people are really listening to us. All the team members are so kind. It was so great to be with people who are also going through the same breathing issues. I don't know how they gathered a whole team of people who are so nice – I always feel so connected."

WellHome Participant

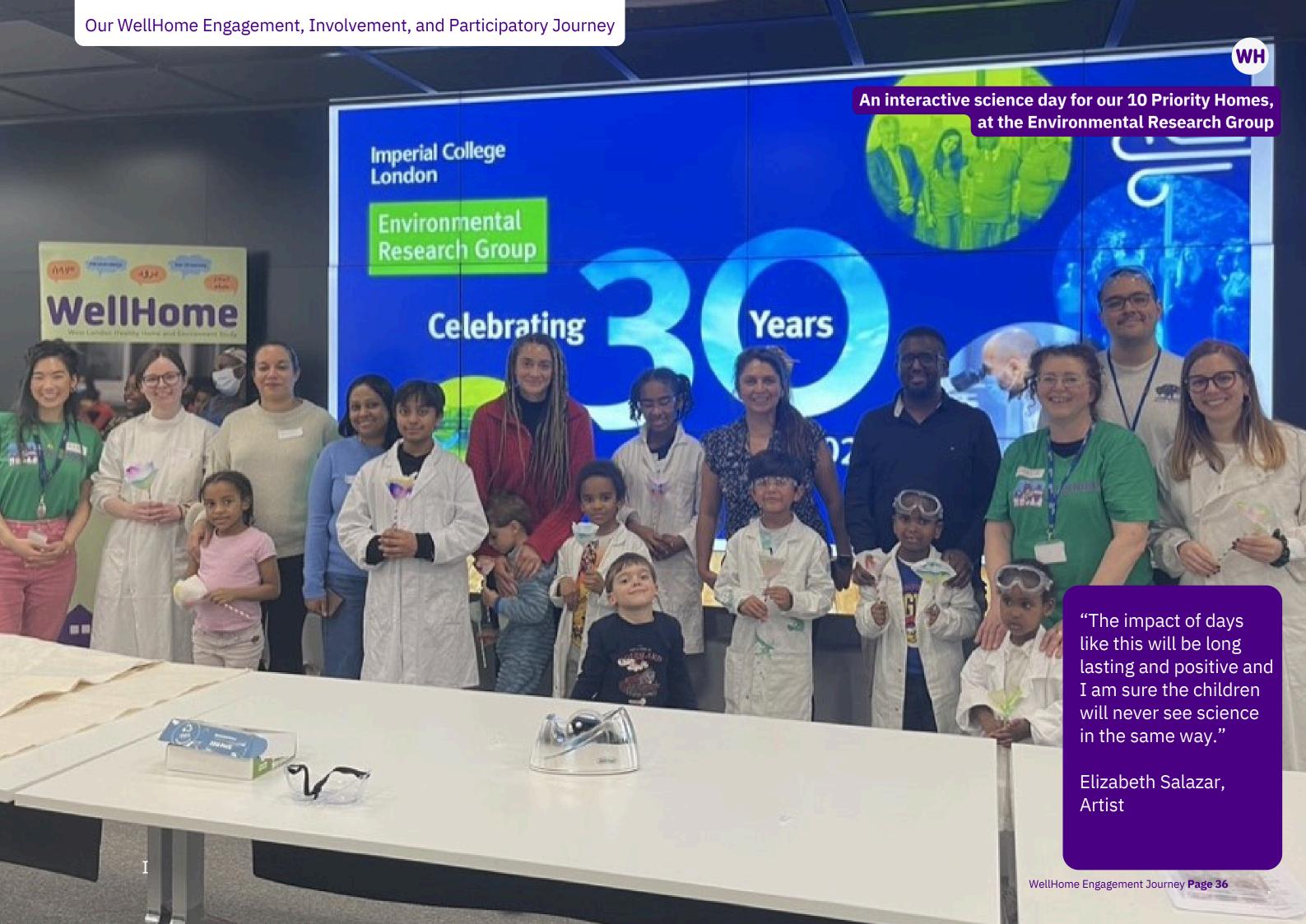


All of our focus group attendees felt that their **ideas were** heard and taken seriously.



21

families have participated in the co-creation of the WellHome reports.



What a Journey!



"Reflecting on our journey, we are filled with gratitude and pride for the work we have accomplished and the impact we have made. We have learned, grown, and celebrated many milestones along the way. The feedback and support from our community have been invaluable, driving us to continually improve and innovate. The dedication and enthusiasm of everyone involved have made this experience truly remarkable! Thank you to all who have been a part of this incredible journey."

Dr Diana Varaden Academic Lead

20k+

people reached in community engagement

118+ charities, community groups and businesses engaged

20 months of fieldwork.

1000+ hours

WellHome community engagement team

The WellHome Community Engagement Team was specially commended in the President's Awards for Excellence in Societal Engagement in Summer 2023

Munira Elmi, Swati Jain, Esther Lie Adam Skillern and Diana Varaden



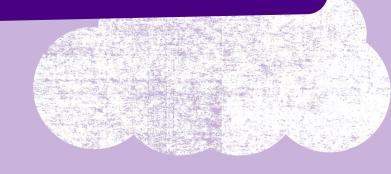


Universities: A crucial component of UK R&D



July 2024 Briefing

WellHome was celebrated in a report by CaSE (Campaign for Science and Engineering) for developing research that directly benefits local communities (Summer2024)

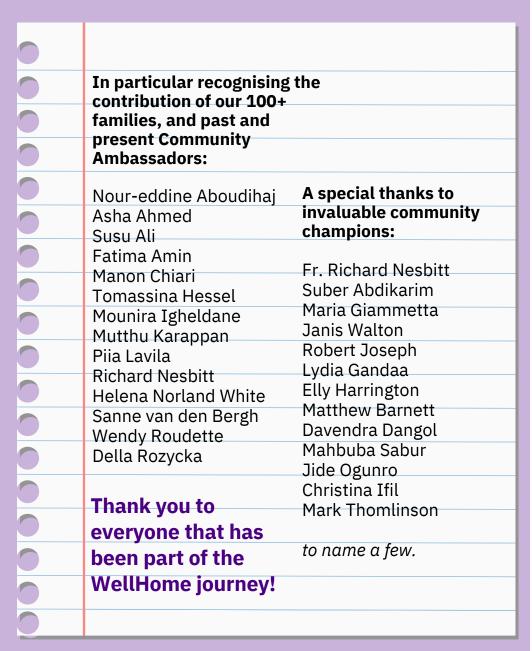




"Partnering with the White City community on the Wellhome study has been incredibly inspiring. Knowing that our collaborative efforts will lead to new findings that improve indoor air quality and the lives of individuals with asthma is truly motivating. Together, we are making a tangible difference in the health and well-being of our community."



Ian Mudway Academic Lead





The journey has been full of many rich memories, much of which could not be captured here.



For further highlights, videos and links, scan the QR code or visit:

Linktr.ee/WellHomeStudy

To stay up to date with the release of our final report, with recommendations for healthy indoor environments, sign up now: bit.ly/WellHomeUpdates

Get in touch, we'd love to hear from you.

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September 2024