Sustainable Schools Challenge Workshop Report

22nd March 2024 Llandrindod Wells

Executive Summary

- All three schools are at different stages of their designs and builds which presents an opportunity to share learning with not only future schools involved in the challenge but also the current schools.

- Engagements have been comprehensive, involving stakeholders at various levels and ensuring that the projects reflect the values and aspirations of the community.

- Successes include the effectiveness of engagement strategies and the project's positive impact on the community, environment, and educational outcomes.

- Barriers identified highlighted the importance of careful planning and project management considerations. Timelines and plans, and the ability to stick to deadlines, serve as critical pillars in ensuring project success amidst evolving scopes, financial constraints, stakeholder expectations, and sustainability initiatives.

- Key themes elicited from over the day include improving communications (e.g. website, newsletter), better information provided for the projects (e.g. timber myth busting, case studies) and improved collaboration.

- Creating opportunities for pupils and the wider community to be involved in the build will foster a sense of ownership and collaboration.

- Children are seen as crucial stakeholders in the design and build process, however others caution against overestimating their technical abilities and decision-making capacities. The consensus suggests that involvement must be carefully managed and focused.

- People were divided about how easy it is to get information about the school projects. It is anticipated that information-sharing will improve, fostering a richer understanding of each school's progress and contributing to collective learning and success.

- There was an agreement that there is an urgent need to address the challenges posed by climate change which demands a fundamental shift in how we approach school construction.

- Results from MyEmoji suggest the day was successful in terms of the measures used for workshop attendees' wellbeing.

Contents

Introduction

The Sustainable Schools Challenge (SSC) workshop in Llandrindod Wells in March was an inspirational occasion for all involved in the project to date. Representatives from the three SSC schools, design teams, local authorities, the challenges judging panel, Welsh Government, Constructing Excellence in Wales, Down to Earth, and other stakeholders came together to engage in an enriching exchange of stories, challenges, and best practices.

The workshop provided a unique platform for all involved with the challenge to share insights, experiences, and successes, fostering a collaborative environment aimed at enhancing educational experiences and design innovation. This report seeks to encapsulate the essence of the day as well as a snapshot of each school's journey so far within the project, highlighting key themes and next steps in the project timeline.

Methods and structure

- Arrival activities
  - MyEmoji app measure start
  - Digital form 'opinion finder' questionnaire
  - Networking wall
- Welsh Government presentation
  - Highlighted the need to explore lessons learnt from the current round of sustainable schools and looking at the whole supply chain within this.
  - The new curriculum outlines were also mentioned as a pivotal component of the overarching project in particular encouraging learners to become ambitious and capable.
- School team presentations
  - Progress in the project to date exploring design, challenges and key themes.
- Down to Earth presentation
  - Information on Good Practice in Community Engagement and showed examples of Community led building projects to inspire and generate conversations.
  - Down to Earth shared case studies that embed inclusive and participative ways of working as well as ways of measuring impact.
- Constructing Excellence in Wales presentation
  - Information on sustainability and the construction sector, highlighting their zero-carbon hub in Wales, the development of a Welsh version of the construction playbook and their future generations directory.
- Down to Earth workshop – interactive discussions
  - What kind of engagements have happened so far?
  - What has gone well?
  - Barriers to engagement and progress and solutions
  - Next steps
- Down to Earth reporting back
  - Workshop highlights
  - Results of MyEmoji
  - Results of opinion finders
- Welsh Government plenary
  - Summary of day and next steps

Down to Earth workshops in the afternoon used inclusive and participative methods designed to capture opinions, feelings and thoughts. This gathered information and demonstrated use with the stakeholder group to boost community engagement and evidencing impact.

Summary of Schools Progress

School	Local authority	Design Team
Bontnewydd	Gwynedd	TACP, Hydrock, Land studio
Glyn-coch	Rhondda Cynon Taf	Stride Treglown, Arda consulting, Blake Morgan, Wilmott Dixon
Rhosafan	Neath Port Talbot	Morgan Sindall, Arcadis, Hydrock

- **All three schools are at different stages of their designs and builds which presents an opportunity to share learning with not only future schools involved in the challenge but also the current schools.**

Glyn-coch

Glyn-coch school will be merging two school sites onto one just north of Pontypridd, Rhondda Cynon Taf and will be a hub for not only children attending the school but also the wider community. Challenges for the geographical area are amenities, transport, food poverty, education and adult literacy. Design workshops were carried out with the community at the heart of this.

Wellbeing was a key theme in the consultation and is central to the project. The Well Building Standard is also a driving force in the design of the school putting people at the core. The design of the school completely embodies the concept of Passivhaus.

Bontnewydd

Bontnewydd school located in Gwynedd currently has 2 buildings on site, a 1970's school and a Victorian building. The new school will be a shared space both for the school and community. An audit of the current buildings has been carried out to see what materials can be reused. How to quantify and how to reuse the materials is being explored. Bontnewydd are wanting to forge a relationship with the Centre for Alternative Technology and Woodknowledge Wales to inform the build. Passivhaus detailing will also be used. The building will be used as an opportunity for learning beyond the build, looking at the installation of a rooftop wind turbine, air source and ground source heat pumps and solar pv on the roof.

Rhosafan

Rhosafan school located in Neath Port Talbot will be a community-oriented school. There is already a community building that is well used on its current site. Outdoor learning is key to its design. Early emerging ideas of the project are 3 key principles 1) local identity 2) sustainable design 3) bringing children closer to nature. Ideas to date include a covered winter garden space, allotments, amphitheatres, biodiversity, SUDS learning and creating

habitats within the school site. Clever classrooms research was also mentioned as key to the design stage of the school.

Down to Earth workshop – interactive discussions

Results

<u>What kind of engagements have happened so far across all schools?</u>

- **Engagements have been comprehensive, involving stakeholders at various levels and ensuring that the projects reflect the values and aspirations of the community.**

  - ➤ *Engagements with children* – design workshops, landscape design, work with eco-council, environmental awareness raising and art sessions.
  - ➤ *Creation of promotional content* – video to showcase sustainability.
  - ➤ *Engagement with school staff* – regular meetings with school leadership teams and catering staff.
  - ➤ *Community engagement* – parent drop-ins, focus groups, community forums and meetings with local leaders.
  - ➤ *Technical engagements* – workshops and presentations given on quality standard and sustainable building practices.

<u>What have been the 'wow' moments and successes from engagements?</u>

- **Successes include the effectiveness of engagement strategies and the project's positive impact on the community, environment, and educational outcomes.**

  - ➤ *Broad and open conversations*
  - ➤ *Childrens enthusiasm and ideas* - particular interest shown on climate topics.
  - ➤ *Education on local species* – a lack of knowledge of local wildlife and nature has highlighted opportunities for the process.
  - ➤ *Passion and commitment of school staff*
  - ➤ *Community enthusiasm and engagement*
  - ➤ *Realisation of alignment with WELL building standard*
  - ➤ *Early relationship building*
  - ➤ *Positive feedback from parents and pupils*
  - ➤ *Collaboration across schools and departments*

<u>What kind of barriers are each of the projects facing?</u>

- **Barriers identified highlighted the importance of careful planning and project management considerations. Timelines and plans, and the ability to stick to deadlines, serve as critical pillars in ensuring project success amidst evolving**

scopes, financial constraints, stakeholder expectations, and sustainability initiatives.

- Balancing scope creep
- Legislation and scheduling
- Perception and end dates
- Change of mind set
- Managing expectations
- Financial constraints
- Community safety concerns
- Value versus cost
- Supply chain and resource management
- Timelines and project management
- Community engagement and approval
- Sustainability challenges
- Risks and market pressures

What action is being proposed for the next stages?

- **Key themes elicited from over the day include improving communications (e.g. website, newsletter), better information provided for the projects (e.g. timber myth busting, case studies) and improved collaboration.**
- **Creating opportunities for pupils and the wider community to be involved in the build will foster a sense of ownership and collaboration.**

For design in the short term

- Transparent Communication
- Timely Updates
- Collaborative Decision-Making:
- Engaging Workshops
- Using varied communication methods.
- Working with local suppliers.
- Agreeing on schedules and materials.
- Prioritising sustainable practices.
- Meeting WELL building standards.
- Hosting workshops for innovative ideas.
- Visiting sustainable sites for inspiration.

For design in the medium term

- Hosting drop-in sessions
- Digital parent surveys.
- Ensuring the right stakeholders are involved in discussions and decision-making.
- Engaging all stakeholders

- ➤ *School activities e.g. design workshops and engineering engagement.*
- ➤ *Mindset outcomes related to carbon, sustainable urban drainage systems (SUDS), and wellbeing.*
- ➤ *Identifying key priorities beyond program and cost, allowing for innovation.*
- ➤ *Engaging with the facilities management (FM) team throughout the design process.*
- ➤ *Ensuring stakeholder engagement remains continuous and ongoing.*

Non – essential but desirable actions for design

- ➤ *Involving children in practical building activities.*
- ➤ *Creating a "show home" full-size concept classroom.*
- ➤ *Enhancing internal finishes and daylighting.*
- ➤ *Encouraging children's involvement with suppliers and visits to factories.*
- ➤ *Allowing pupils to design part of or elements of the building.*

For construction in the short term

- ➤ *Using webcams for construction updates.*
- ➤ *Local Employment*
- ➤ *Communication*
- ➤ *Site Engagement: Facilitating visits and appointing a community ambassador.*
- ➤ *Budget Clarity*
- ➤ *Connecting contractors with teachers.*
- ➤ *Innovative building workshops*
- ➤ *Cost Discussions*

For construction in the medium term

- ➤ *Informing residents of site activity and mitigating measures.*
- ➤ *Considering mutuality to allow for community integration.*
- ➤ *Providing viewing portholes for children's engagement.*
- ➤ *Ensuring clarity on key dates and phases.*
- ➤ *Incorporating STEM engagement*

### Non – essential but desirable actions for construction

- ➤ *Steel signing ceremony*
- ➤ *Live construction site for educational purposes*
- ➤ *Utilise community skills for workshops and learning activities*
- ➤ *Outdoor classroom*
- ➤ *Workshops to engage the community*
- ➤ *Review operations for potential improvements*
- ➤ *Children being involved with building activities*
- ➤ *Material bank for construction needs*

Can children be engaged with every stage of designing and building new schools?

- **Children are seen as crucial stakeholders in the design and build process, however others caution against overestimating their technical abilities and decision-making capacities. The consensus suggests that involvement must be carefully managed and focused.**

Children can be involved with every stage of designing and building new schools

21 Responses
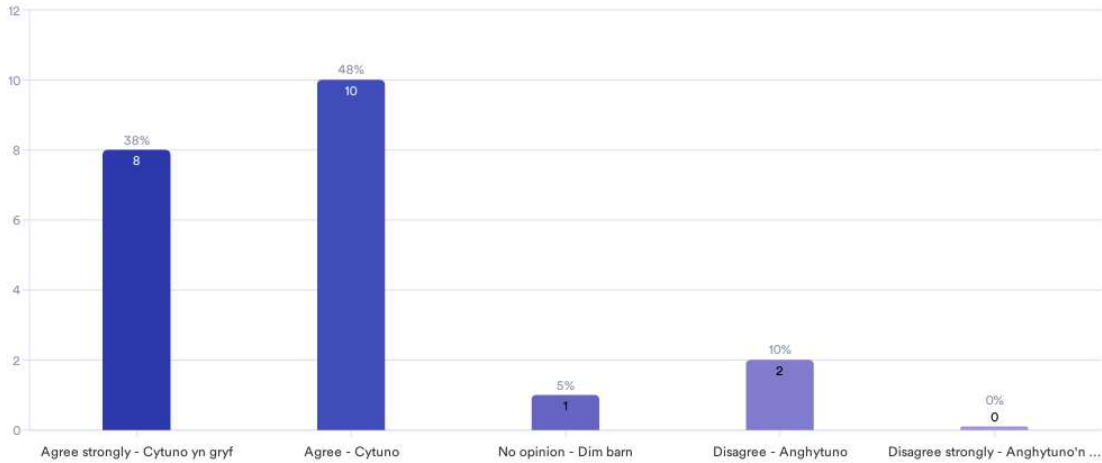
- **People were divided about how easy it is to get information about the school projects. It is anticipated that information-sharing will improve, fostering a richer understanding of each school's progress and contributing to collective learning and success.**

It's easy to find out information about the other schools in the Sustainable Schools Challenge

21 Responses
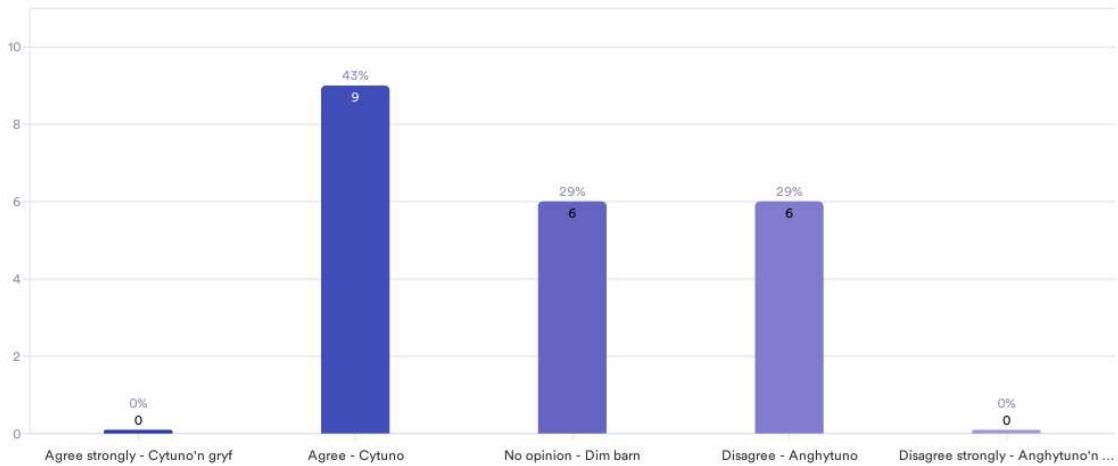
- **There was an agreement that there is an urgent need to address the challenges posed by climate change which demands a fundamental shift in how we approach school construction.**

We need to build schools differently to respond to the nature and climate emergencies

21 Responses

- **Results from MyEmoji suggest the day was successful in terms of the measures used for workshop attendees' wellbeing.**
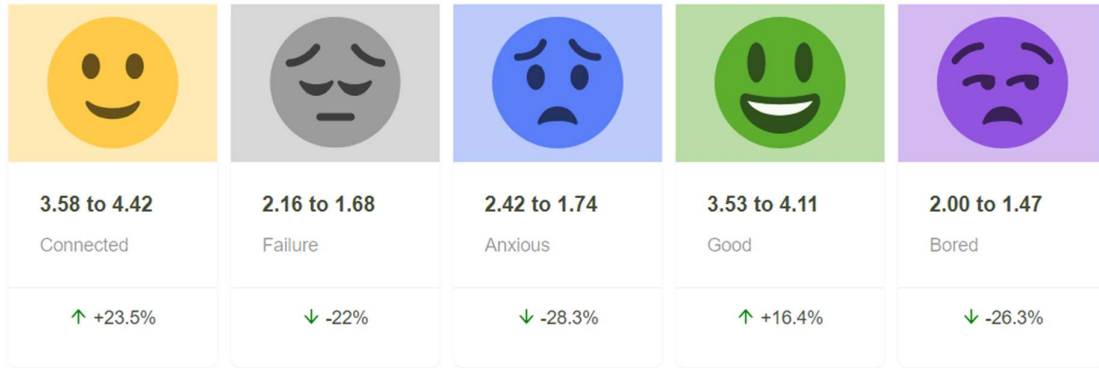

3.58 to 4.42	2.16 to 1.68	2.42 to 1.74	3.53 to 4.11	2.00 to 1.47
Connected	Failure	Anxious	Good	Bored
↑ +23.5%	↓ -22%	↓ -28.3%	↑ +16.4%	↓ -26.3%
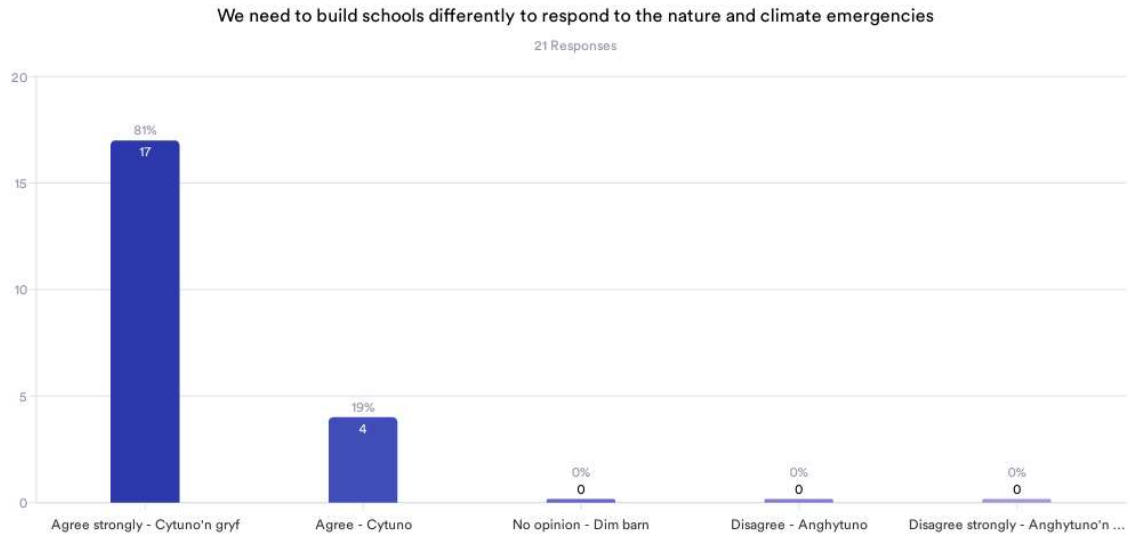
As can been seen above, there were average increases in positive emotions of 23% or more and decrease in negative emotions of between 16% and 26%.

When taking an average of the total scores, some of the detail can get lost regarding impact from one point of monitoring to the next. As is shown below, there are notable increases and decreases within the scale over the course of the session.

Start of session	End of session
52% felt connected or very connected to others	84% felt connected or very connected to others
36% reported very little feelings of failure	73% reported very little feelings of failure
52% felt anxious or rated neutral	5% reported feeling anxious and 10% voted neutral
47% felt good or very good about themselves	84% felt good or very good about themselves
21% felt bored or very much boredom	10% felt bored or very much boredom

Conclusions

The Sustainable Schools Challenge to date has demonstrated commendable progress in engaging stakeholders, fostering creativity among children, and addressing environmental and community concerns.

Through diverse and inclusive engagement methods, stakeholders at various levels have been involved, reflecting the values and aspirations of children and the wider community. Successes such as broad conversations, children's enthusiasm, and community engagement highlight the challenges positive impact. Despite facing challenges like scope creep and financial constraints, the challenge remains committed to overcoming barriers and achieving its goals through collaboration, innovation, and ongoing stakeholder engagement.

Recommendations

The next stages should involve:

- Maintaining and improving communication including a shared website/ central online hub to share progress and learning between each of the schools.
- Exploring further links to be made with the curriculum and encapsulating its core purposes.
- Continued involvement from stakeholders, including regular feedback on project progression to put the learning into practice and achieve long-term success in creating sustainable learning environments.
- Developing a collective mindset on sustainable building practices with pupils, staff and community will be essential.
- Further inquiry into each of the schools individually is needed to evidence where each school is at with engagement of stakeholders.

Appendices

Appendix 1 - post it ideas flurries

What kind of engagements have happened so far during the sustainable schools challenge?

- Engagement with children
- Pupil engagement sessions
- Children
- Curriculum link with schools
- Kids and consultation
- Childrens design workshop
- Sessions with the school children including Eco Council on ideas for the landscape design – model making.
- Session with the school children on local wildlife, producing artwork which we can use in the designs going forward.
- Workshops with children.
- School council meetings
- Children part of interview process
- Children involved since the initial bid. Children hosted on open day for the architects. Children interviewed the architects.
- Interview planning workshop with pupils – school council.
- Meet the contractor Q and A at school with pupils.
- Meet the contractors day. Questions from pupils –How we will build the school – community use – can we have a dog
- Making a promotional video with the school pupils.
- Pupil video from Gwynedd submitted with application.
- YGG Rhosafan. Initial project launch and site visit with school head teacher.
- Headteacher
- Met head teacher and well-being dog.
- Visiting YG Rhosafan to see the current challenges and hear the head teachers vision.
- Staff
- Regular meetings with school leadership team.
- Catering team
- Parent drop in sessions.
- Community engagement session at school (design) with stakeholders (adults).
- Pupil staff and wider community – engagement sessions for bid.
- Community leads
- Community focus groups x 2
- Communication
- Social hub
- Community forum
- Attendance at community group meetings

- Community forum at Glyn-coch. Hearing the views of former head teacher and local resident.
- Glyn-coch – CEMS (Design) Community every 6 weeks. Head teacher (s) every 2 weeks. Pupil engagement meet the contractor.
- Mapping community areas. More informal
- Early engagement biodiversity and planning
- WELL building standard. Presentations. Workshops.
- Technical engagement with internal L.A stakeholders
- RIBA 1 initial plans and images shared.
- Cabinet member VLOG. Pupil/ staff.
- Visioning from what is to, what if and then what do we need to get there
- Internal DTM to review opportunities 4 challenging
- Stakeholder forum
- School design updates.
- Community CEM (customer experience management). Leaders from the community. Influenced our design and decision making.
- Engagement with sustainable materials manufacturers
- To come – rammed earth workshop with the pupils. The school is very engaged with the idea.
- Collaboration

Appendix 2 – post it ideas flurries

What has gone well/ Wow moments from the engagement?

- Broad and open conversations about challenges
- Childrens enthusiasm for being involved, great ideas especially on climate topics.
- Surprising that a lot of children didn't know what some species were in local area.
- The passion and commitment of school staff.
- Met centre manager. Community
- Enthusiasm – pupils, staff, community
- The difference a school dog makes for engagement
- WELL building standard! Realisation that most features are already being included!
- Good early relationship building.
- Clear direction on how the school will operate day to day.
- High response level from parents that don't engage.
- Early engagement with contractor and client team already developing.
- Ideas feedback from pupils
- Pupil engagement at sessions
- Well-being questions from pupils about provision of basic needs and teachers' jobs.
- Project boards positive response to the floor plan. Land studio's workshop with the children seeing their designs on the plans.
- Parents initial response to the new school.
- Early contractor involvement/ appointment. Tap into experience/ knowledge, whether supply chain or general experience.

- Collaboration across 3 schools/ DT sharing learning
- Council technical departments (combined) engagement.
- Collaboration cross silo cross co#
- Competition
- Different approaches to engagement e.g. children/ staff, existing building materials - circulating
- Glyn-coch's enthusiasm for more sport education (adults) and shared spaces not duplicating them.
- Realising that the children's design ideas covered everything thought of by the client team.
- Glyn-coch's openness to the new school
- Team buy in on importance and value of engagement
- Engagement with the customer
- Building fabric
- Sustainability of materials including robustness
- RCT are open minded and trust the process.
- Engagement with head teacher Level of excitement around project and community enhancement. Project specific opportunities identified as part of discussion.
- Legacy engagement – how will these benefit other schools and future considerations. Cluster engagement?
- Activity that is participatory and accessible e.g. rich pictures
- Social context, what can a new school mean to the local area – Port Talbot
- Client having sustainability as a key priority.

Appendix 3 – bricks in the wall

What are the barriers?

- Balancing scope creep through the stages.
- Legislation area schedules!
- Perception and end dates
- Change of mindset!
- Managing expectations
- Time (programme) - needed upfront to make sure we achieve best possible outcome.
- Timescale
- Community integrated school – safety.
- Value vs Cost – Red lines – Aspiration vs delivery
- Cost x3
- Money
- New technology – expensive
- Planning
- Archaeology
- Community approval
- Reuse of materials

- Ensuring both school sites are engaged fairly and equally (merge of 2 schools on 1 live site)
- Timber – insurance! Supply chain (limited?)
- Time
- Program. Managing expectations regarding school opening date!
- Time to develop the new ideas/ approaches
- Time scales
- Timescale – tight timetable
- Internal cladding inside
- Increase in building costs
- Managing expectations
- Enough pupils involvement?
- How to ensure ALL pupils play a part
- Community approval and understanding of the project
- Revenue costs in the new building
- Nutrition! Ensuring compatibility with the WELL building standard. Alignment with current Local authority catering requirements.
- Reluctance to challenge the norm regarding SUDS, Green/ blue roofs etc
- Risks?
- Cost of construction.
- Facilities management of new and emerging technologies and solution.
- Market pressures – on contractors
- Supply chain resilience
- BSA
- Opening up the design to allow the amount of community use that is required while keeping pupils safe/ considering safeguarding concerns.
- Potential for opposition to doing something differently.
- Easement!
- Focus on vehicle use/ parking/ highways

Solutions

- Timber – insurance! Supply chain (limited?) = Find an insurance broker who will be able to help. Felindre used as an example – quality control in the factory enabled insurers to confidently see timber would be safe (Hale group timber). Go directly to forests. Get fire officers involved.
- Money = Match funding. Additional grants. Keeping things simple. Building "lean". During construction stages may see costs go up. Contractor involvement can help to see this.
- Internal cladding inside = correct treatments. Early engagements with fire officers.
- Standardisation relating to fire and timber use

Appendix 4 - Menu for change

What is being proposed on the next stages/ next steps. Method: Menu for change.

Design starters

- Open and honest staff pupils and community
- Keep them all on the same page
- Share timeline – explain
- Work with key representatives
- Pupil workshops to learn
- Communication - media, internal comms parents, gov's and pupils
- Information – social media
- Agree 'local' meaning
- Supply chain engagement – local labour, local material, local skills and training
- Refine and agree brief schedule of accommodation
- Targets and palette of materials
- Focus the approach
- Choice of materials
- Timber frame supplier – review programme
- Thermal bridge calc (Passivhaus)
- Nourishment – WELL
- National grid capacity!!!
- Ideas workshops with pupils
- Internal spaces – discussions regarding spaces, flexible learning spaces.
- Viewing panels
- Visiting pupil groups
- Informal consultation – children, staff, community
- Early engagement with pupils
- Take on views of early concept.
- Visits to other sustainable sites

Design Mains

- Drop in sessions targeted towards the community
- Digital (parent surveys)
- Getting the right people around the table
- School assemblies
- School council meetings
- Staff meetings
- Parents and communities (CEM) at key stages.
- School activities – design workshops/ nets and jigsaw
- Engineering engagement with school and community
- Mindset outcomes – carbon, SUDS, wellbeing

- Identify the precious things
- No been led by only programme and cost (allowance for innovation)
- Release time for important things to happen.
- Engaging with FM team throughout design
- Insurance approval for timber frame.
- Continued stakeholder engagement
- WELL building standard/ Passivhaus/ building with nature
- Low VOC materials and alignment with client brief. Solution to derogate and notify maintenance team.
- Creation of the product book (book of materials)
- Inspiring the whole design team
- Ongoing engagement with stakeholders
- Contractor to come on board
- M and E team
- Landscape input
- Formal consultation – PAC, planning application
- Present updates/ ideas taken on board

Design Desserts

- Anything children can do to practically (physically) help build smaller features.
- 'Show home' full size concept classroom
- Engage more with MSMES and VCSE within supply chain
- Daylighting
- Enhanced internal finishes.
- Involvement of children with suppliers/ visits to factories etc
- Pupils designing part of/ element of building

Construction starters

- Webcams to demonstrate progress
- Defining 'local' for TRT/employment opportunities
- Regular news bulletin – letter drops
- Site visits
- Observation areas
- Community ambassador
- Newsletters
- Celebrations and events
- Budget.
- Clarity
- Operations
- Contractor introductions, meet teachers to align activities to new curriculum
- CAT – rammed earth workshop

- Rammed earth spec in the tender for contractor
- Revenue group with community and user to establish cost (estimates)
- Skills activities, learning session
- Site visits
- Help in landscape – allotments etc
- Demonstrations
- Visits to supply chain factories

Construction mains

- Inform residents of site activity and mitigating measures that will be put in place.
- Consider mutuality (?) to allow community integration.
- Viewing portholes for children's engagement
- Gap – structure
- Open door – community meetings
- Key dates – viewing
- Staff rep on project management team
- Panel of pupils – they communicate back to school
- Radio reach – pupil interview construction/ design team
- Phasing
- Operations
- Buy into construction methodology
- Viewing area for safe viewing and engagement with school
- STEM engagement delivered and community engagement
- Confirm construction costs and manage budget.
- Contractors involvement
- Early engagement
- Warranties and insurances information needed asap
- Make sure to keep involved during construction (living hub) site walks
- Simple construction methods
- Standardisation
- Regular site visits – maybe not just their school – see the construction live

Appendix 5 - Opinion finders comments pages

Children can be involved with every stage of designing and building new schools

Opinion Finders

Comments

9 Responses- 12 Empty

Data	Responses
Having attended a number of well run consultations that have delivered impressive outcomes I'd fully recommend	1
Engagement needs to be carefully thought though and focussed.	1
Children have often been overlooked in the design stage as the focus is always historically on the build stage. With a switch to focussing on more involvement during design this will hopefully be easily addressed.	1
Maintaining engagement with children throughout the design process is fundamental to the outcome and success of the project. Involving children in the build aspect of a project, as much as feasible, can be rewarding and a great learning experience.	1
They are the ultimate end user and their opinions are vitally important.	1
Health and safety concerns on site and lack of technical knowledge and understanding of the processes we have to go through - SuDs/Planning/procurement regulations. We can engage with children and involve them to an extent, but they can't act as decision makers.	1
Input can certainly be provided, via engagement, but not technical / statutory design considerations	1
Absolutely- the earlier the better	1

It's easy to find out information about the other schools in the sustainable schools challenge

Opinion Finders

Comments

5 Responses- 16 Empty

Data	Responses
Some Information available in public domain but this workshop is good.	1
We will find out today. This will be a great opportunity to see where everyone is and share valuable knowledge on this important strategy. Future sessions will also help.	1
The challenge has been communicated effectively by the project team and documents issued with ITT.	1
Webpage is not up and running as of yet.	1
I haven't been involved for long enough	1

We need to build schools differently to respond to the nature and climate emergencies

Opinion Finders

Comments

4 Responses- 17 Empty

Data	Responses
If we keep building the same we will get the same results. There is a lot more data and innovation available to really start pushing the boundaries on sustainable construction.	1
We are consistently exploring sustainable methods and alternatives, challenging typical construction techniques.	1
Climate change is a huge consideration in all developments.	1
Sustainability targets have changed so I feel we are working in the right direction.	1