

Supplementary Table S1. An outline of the stakeholder and community engagement events ranging from the project's conception to 2019.

Attendees	Date	Location and nature of event	Issues discussed
Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth	28/09/2016	Stakeholder meeting at Teats Hill	Discussed collaboration between Active Neighbourhoods and BlueHealth. Plymouth City Council presented an overview of how Teats Hill fits with Active Neighbourhoods as a whole as well as current plans and costings for improvement works. BlueHealth expressed that they could contribute a standalone feature as part of the improvement works.
Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth	29/09/2016	Stakeholder meeting at Plymouth Marine Station	Discussed how Active Neighbourhoods-BlueHealth collaboration would work in practice. Discussed phased implementation of Active Neighbourhoods work and stakeholder engagement strategy led by Plymouth City Council emphasising the aim to produce a 'Steering Group' for the project as a whole. Discussed how tendering for the renovation would normally take place. Discussed avenues for the acquisition of further capital funds.
Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth	04/11/2016	Stakeholder meeting at Teats Hill	Discuss first wave of BCLS survey administration and its methodology. Plymouth City Council advised on its content and suggested that visitors as well as residents could be interviewed. All discussed draft renovation ideas and what makes Teats Hill unique from other Active Neighbourhoods sites. Agreed to hold larger initial stakeholder meeting which covered the collaboration between Active Neighbourhoods and BlueHealth. Agreement to involve landscape architects within the BlueHealth consortium in the design of the project.
Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth	01/12/2016	Stakeholder meeting at Teats Hill	Discussed history, ecology, and infrastructure relating to the site, its current uses and some of the local issues and challenges relating to stakeholders and public engagement. Plymouth City Council also provided an overview of parks programmes across Plymouth, as well as best practice ideas and lessons learnt from these programmes. Landscape architects discussed potential plans for the site and agreed to 'work up' some proposals.

<p>Plymouth City Council, Plymouth Marine Laboratory, BlueHealth, Plymouth University, National Marine Aquarium, Plymouth Community Homes, Devon Wildlife Trust, Marine Biological Association, Buglife (conservation charity)</p>	<p>22/02/2017</p>	<p>First meeting of the steering group at Plymouth Marine Station</p>	<p>Briefed steering group on the Teat's Hill renovation project as a whole, confirmed the interests of key stakeholders (mainly the council and BlueHealth's involvement), discussed potential opportunities that could be made use of as well as potential local challenges and agreed on a timetable for the implementation of the project and for community engagement. Land ownership issues and business interests were discussed.</p> <p>The last hour was dedicated to a discussion of the opportunities and challenges related to the project. Opportunities included raising awareness of maritime history and of wildlife, reduction of anti-social behaviour, knock-on effects of improvements to social housing, chance to rebrand site e.g. as 'Mayflower Beach' and link to the Mayflower 400 event in 2020, exploit 'Britain's Ocean City' branding, and promote water-based recreational activities. Challenges included access issues (slipway used for informal parking), safety (the site had signs of anti-social behaviour), appearance of the site at present, engaging with local residents, potential 'over-measuring' of participants in the local area, and limited funding. Conflicts between attracting recreation and preserving the ecology of the site were discussed.</p> <p>Ways in which each stakeholder can help were then discussed. People agreed on the continuing involvement of the Steering Group in the project, facilitating on-site engagement activities, planting a wildflower meadow, designing and funding information boards, and hosting public consultation events. Ways to re-design/improve the site were then discussed. Creating a walking/heritage trail, improving slipway access and disincentivising parking, lighting for ball court, new facilities e.g. public toilets, kayak storage, barbecue space, space for pop-up facilities e.g. catering vans, creation of a boardwalk linking to the Barbican. Also discussed a redundant cabin being removed by the council in the next few weeks, the arrangement of future steering group meetings, finding out about land ownership issues where they were not clear previously, and engaging those stakeholders that could not make this meeting.</p>
<p>Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth</p>	<p>22/05/2017</p>	<p>Site visit for landscape architects to sketch initial ideas</p>	<p>Plymouth City Council and Plymouth Marine Laboratory accompanied landscape architects from BlueHealth on a site visit where initial design ideas were sketched and feedback given.</p>

<p>Plymouth City Council, Plymouth Marine Laboratory, BlueHealth, Nudgeup (social enterprise working with local schools), MDL Marinas, Plymouth University, National Marine Aquarium, Plymouth Community Homes, Devon Wildlife Trust, and the Marine Biological Association</p>	<p>23/05/2017</p>	<p>Second meeting of the steering group at Plymouth Marine Station</p>	<p>Plymouth City Council updated on the planting of a wildflower meadow by Buglife and the removal of the disused cabin. Plymouth City Council also presented data from pulse counters which measured footfall through the site. BlueHealth presented updates on BCLS data collection, landscape design ideas and use of other tools (BEAT, BBAT, BSGIS). Ideas presented included an outdoor air theatre built using the slope of the slipway, playground improvements with nautical themes, and foghorn installations. Plymouth University suggested the potential for a 'common theme' linking all aspects of the redesign. The outdoor air theatre was received positively though some noted the potential for anti-social behaviour there. The use of the outdoor air theatre for pop-up events, local school classes, and play activities was discussed. Plymouth City Council outlined a schedule for public engagement. Nudgeup presented on local school engagement including ideas for redesign invented by school pupils within the virtual world 'Minecraft'.</p>
<p>Plymouth City Council, Plymouth Marine Laboratory, Plymouth Community Homes</p>	<p>22/06/2017</p>	<p>Stakeholder meeting at Teats Hill</p>	<p>Specific discussion regarding Plymouth Community Homes' involvement in the project. Issues raised were facilitating access to Plymouth Community Homes' owned residences (social housing) for BCLS data collection and how best to facilitate this (e.g. interviewers accompanied by housing representative), circulating BSGIS around Plymouth Community Homes mailing lists, and the potential to fund tenant-specific public engagement events.</p>

<p>Plymouth City Council, BlueHealth, Devon Wildlife Trust, Plymouth Community Homes, Marine Biological Association, and Plymouth University</p>	<p>02/08/2017</p>	<p>Third meeting of the steering group at Plymouth Marine Station</p>	<p>BlueHealth updated on BCLS data collection and agreed to send stakeholders a copy of the survey's content. BlueHealth also updated on BBAT work and additional design work. Costings were being developed for various aspects of the design ready for public consultations. Plans were collectively discussed and generally well received. Some issues were raised over the intangible sense of ownership some residents may have over the site and whether this might be lost in the process of redesign. Other issues were raised over safety aspects. Plymouth City Council stressed that playground improvements were a priority and how most redevelopments would likely be 'phased'. Potential alternative design elements were discussed, public consultation dates were outlined, and there was an agreement to involve local elected representatives at the next steering group meeting.</p>
<p>Plymouth City Council, Plymouth Marine Laboratory, and BlueHealth.</p>	<p>16/08/2017</p>	<p>First public engagement day at Teats Hill</p>	<p>A programme of family activities which tied into the history of Teats Hill (e.g. rope-making) were interspersed with opportunities to feed back on the proposed plans for the redesign of Teats Hill. Participants were asked to comment on changes they would and would not like to see and whether certain aspects were preferred to others.</p>
<p>Plymouth City Council, BlueHealth, and Devon Wildlife Trust</p>	<p>21/08/2017</p>	<p>Stakeholder meeting to discuss feedback from first public engagement event</p>	<p>Particular aspects of the design were not favourably received by the community (e.g. changes to the ball court and associated parking spaces were not desired; the boardwalk into the bay was seen as restrictive to accessing the beach itself and potentially too costly), but most other aspects of the design were well-received and there was a general sense that it was good to see a focus on Teats Hill as opposed to other areas of the city. BlueHealth agreed to revise costings for a new design based on this feedback. Stakeholders also met with potential contractors for the building work to discuss how feasible implementing some of the initial plans may be.</p>
<p>Plymouth City Council, Plymouth Marine Laboratory, BlueHealth, Plymouth Community Homes, National Marine Aquarium, and an elected representative</p>	<p>09/10/2017</p>	<p>Fourth meeting of the steering group at Plymouth Marine Station</p>	<p>Plymouth City Council updated on capital works and opportunities for further arts funding. Plans were about to be submitted to tender with playground being the priority. Plymouth City Council introduced the idea of a "Friend's Group;" a collection of stakeholders and the public who might voluntarily care for the site after the termination of Active Neighbourhood funding. The National Marine Aquarium offered space for meetings of such a group but others noted that there may be local resistance to this idea due to historic tensions between the aquarium and local community. The elected representative highlighted that they may be able to offer both space and administrative support for such a venture.</p> <p>BlueHealth updated on the first wave of BCLS data collection which had now been completed and the first wave of BBAT data collection which had also now been completed. The BEAT tool had also now been administered with support from the Marine Biological Association,</p>

Plymouth City Council and various additional stakeholders	14/10/2017	Second public engagement day at Teats Hill	Similar to the first public engagement day, family activities were interspersed with opportunities to comment on more finalised site plans with issues that could be addressed during its construction. The revised plans were generally well received.
Plymouth City Council and BlueHealth	22/01/2018	Research and public engagement event at Plymouth Guildhall	Celebrating and developing community engagement event at Plymouth Guildhall. The Teats Hill project overview presented to other community groups, academics, and practitioners along with site plans and a specific focus on the stakeholder and community engagement approaches used so far in the project. The meeting represented an opportunity to learn about how other Plymouth-based projects were using community and stakeholder involvement in their work.
Plymouth City Council, Plymouth Marine Laboratory, BlueHealth, National Marine Aquarium, Plymouth Community Homes, Devon Wildlife Trust, the Marine Biological Association and Plymouth University	20/03/2018	Fifth meeting of the steering group at Plymouth Marine Station and site visit at Teats Hill	This was an opportunity for all stakeholders to see first-hand the ongoing development works at Teats Hill which were no under construction. Issues discussed including unforeseen issues faced during construction and the timescale of various improvement works. The dates and times of an official "open day" were discussed. The contractor providing the building work also suggested that an artistic compass feature could be installed in the centre of the outdoor air theatre free of charge if it was so desired (the contractor had a local connection to the area and saw value in the project).
Plymouth City Council and BlueHealth	04/05/2018	Site visit at Teats Hill	General site visit to view progress of the improvement works and determine the timescale to completion.
All stakeholders	01/06/2018	Third public engagement day at Teats Hill to mark the official opening of the site	As with previous public engagement days, the official opening day involved a variety of family activities, some of which were particularly focused on the outdoor air theatre. Local press covered the event. There were opportunities for BlueHealth researchers to recruit both stakeholders and members of the public for follow-up interviewing.
Plymouth City Council, BlueHealth, Plymouth Marine Laboratory,	12/12/2018	Sixth meeting of the steering group at Plymouth Marine Station	BlueHealth updated stakeholder on the findings of the second wave of data collection. Plymouth City Council updated on issues with the site's ongoing maintenance and the development of the "Friend's Group". Local arts groups updated on recent grant funding which had been received partly to facilitate the hosting of theatrical events at the open air theatre which link with the Mayflower 400 celebrations. Plymouth City Council also updated on the landscaping of the area of

Plymouth Community Homes and the National Marine Aquarium, local theatre groups, and an elected representative.			Teats Hill where the cabin used to be which included the planting of shrubs and flowers to attract wildlife to the area. Plymouth City Council also updated on spin-off funding to install a “range-finder” feature at the site.
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Supplementary Table S2: BlueHealth Community Level Survey (generic version used on all projects sites omitting the economic valuation used in Plymouth)	
Section	Description
Part 1: Green and blue spaces	<p><i>AN INTRODUCTION OR INFORMATION SHEET SHOULD BE PROVIDED BEFORE THE COMMENCEMENT OF THE SURVEY</i></p> <p>This section will ask you about green and blue spaces.</p> <p>Green spaces include parks, playgrounds and playing fields in urban areas, or woodlands, footpaths and mountains in more rural areas.</p> <p>Blue spaces include water and could be inland areas like lakes, canals, rivers, fountains and pools; urban coastal areas such as seaside resorts, harbours, ports and piers; or other coastal areas such as beaches, cliffs and headlands.</p> <p>However, these spaces do not include:</p> <ul style="list-style-type: none"> • Indoor locations. • Places which you visit as part of your job. • Private locations such as your own garden, land, pond, or swimming pool. <p>Q1. In the last 4 weeks, approximately how many times have you visited green spaces <u>outside of</u> <LOCATION> in your free time?</p> <p><input type="checkbox"/> Not at all in the last four weeks</p>

Once or twice in the last four weeks

Once a week

Several times a week

Q2. In the last 4 weeks, approximately how many times have you visited blue spaces outside of <LOCATION> in your free time?

Not at all in the last four weeks

Once or twice in the last four weeks

Once a week

Several times a week

Q3. In the last 4 weeks, approximately how many times have you visited green spaces in <LOCATION> in your free time?

Not at all in the last four weeks

Once or twice in the last four weeks

Once a week

Several times a week

Q4. In the last 4 weeks, approximately how many times have you visited blue spaces in <LOCATION> in your free time?

Not at all in the last four weeks

Once or twice in the last four weeks

Once a week

Several times a week

<PROVIDE BESPOKE INTRODUCTION TO INTERVENTION SITE>

Q5. In the last 4 weeks, approximately how many times have you visited <LOCATION>?

Not at all in the last four weeks (go to Q16)

Once or twice in the last four weeks

Once a week

Several times a week

This section will ask you a few more details about your most recent visit in your leisure time (i.e. for recreation and not work) to <LOCATION>. This could be anything from a few minutes to all day.

Q6. What date did your most recent visit to <LOCATION> take place?

<INSERT DATE>

Q7. And approximately how much time did you spend at <LOCATION>?

____ hours ____ minutes

Q8. On this visit which of these activities, if any, was the main activity you did?

By or near the water:

Walking with a dog

Walking without a dog

- Nordic walking (i.e. with poles)
 - Running
 - Cycling
 - Horse riding
 - Golf
 - Adventure sport (e.g. coasteering, climbing, paragliding, off-road driving, mountain biking)
 - Informal games and sport (e.g. Frisbee, bat and ball, beach ball)
 - Fishing (including angling, crabbing)
 - Hunting or shooting
 - Conservation activity (e.g. litter-picking)
 - Sunbathing
 - Visiting an attraction
 - Quiet activities (e.g. reading, meditating)
 - Playing with children
 - Appreciating scenery from your car
 - Eating or drinking
 - Socialising with friends
 - Watching wildlife
- On or in the water:
- Boating (e.g. yachting, canoeing, kayaking, pedalo/paddle boat)
 - Commercial boat trip (e.g. organised fishing trip, marine wildlife trip)
 - Paddling (i.e. walking in shallow water)

	<input type="checkbox"/> Swimming <input type="checkbox"/> Watersport (e.g. surfing, windsurfing, kitesurfing, Jet Ski) <input type="checkbox"/> Diving (e.g. Scuba diving, snorkelling) Winter activities: <input type="checkbox"/> Ice skating <input type="checkbox"/> Ice fishing <input type="checkbox"/> Snow sports (e.g. skiing, snowboarding, cross-country skiing, sledding) <input type="checkbox"/> Any other activity Q9. And how long did you spend doing this main activity? <input type="checkbox"/> ____ hours ____ minutes
Part 2: Perceptions of Teats Hill	Perceived environmental quality, safety, community engagement etc. How much do you agree with the statements below about your visit? Q10. "It made me feel happy" (7-point scale of strongly disagree to strongly agree) Q11. "I found the visit worthwhile" (7-point scale of strongly disagree to strongly agree) Q12. "I was satisfied with the visit"

	<p>(7-point scale of strongly disagree to strongly agree)</p> <p>Q13. "I felt part of nature" (7-point scale of strongly disagree to strongly agree)</p> <p>Q14. How many adults aged 16 and over, including yourself, were on this visit? (options of 1-10 or more)</p> <p>Q15. How many children aged under 16 were on this visit? ((options of 1-10 or more)</p>
<p>Part 3: Background information</p>	<p>Questions concerning the respondent's health and well-being and socio-demographics.</p> <p>In this section we would like you to tell us a little about your health in general. We are interested in your health so that we can explore any links between general levels of health and the kinds of environments people spend their leisure time in. Remember that your responses cannot be linked to yourself or your home location in the large majority of cases.</p> <p>Q16. All things considered, how satisfied are you with your life as a whole nowadays? (10-point scale of 10=extremely satisfied to 1= extremely dissatisfied)</p> <p>Q17. How satisfied are you with your health? (10-point scale of 10=extremely satisfied to 1= extremely dissatisfied)</p> <p>Q18. How satisfied are you with how safe you feel? (10-point scale of 10=extremely satisfied to 1= extremely dissatisfied)</p>

Q19. How satisfied are you with feeling part of your community?

(10-point scale of 10=extremely satisfied to 1= extremely dissatisfied)

Q20. And overall, to what extent do you feel the things you do in your life are worthwhile?

(10-point scale from 10= completely worthwhile to 1= not at all worthwhile)

Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks.

Q21. "I have felt cheerful and in good spirits"

At no time Some of the time Less than half of the time More than half of the time Most of the time All of the time

Q22. "I have felt calm and relaxed"

At no time Some of the time Less than half of the time More than half of the time Most of the time All of the time

Q23. "I have felt active and vigorous"

At no time Some of the time Less than half of the time More than half of the time Most of the time All of the time

Q24. "I woke up feeling fresh and rested"

At no time Some of the time Less than half of the time More than half of the time Most of the time All of the time

Q25. "My daily life has been filled with things that interest me"

At no time Some of the time Less than half of the time More than half of the time Most of the time All of the time

Q26. How is your health in general? Would you say it is...

Very good Good Fair Bad Very bad

Q27. Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?

Yes a lot Yes to some extent No

Q28. During the last 7 days, on how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your breathing rate?

(Scale of 0-7)

This final section asks you some background information about yourself, your household and your family. The questions are not meant to be intrusive, but will assist in understanding the kinds of people who visit green and blue spaces. Again, the survey is anonymous – we will not be able to identify you as an individual.

Q28. Do you have a dog?

Yes No

Q29. Which of the following best applies to you?

- I have access to a private garden
- I have access to a private communal garden
- I have access to a private outdoor space, but not a garden (balcony, yard, patio area)
- I don't have access to a private garden or outdoor space

Q30. Including yourself, how many people – including children – live in your house regularly as members of the household?

(options of 1-10 or more)

Q31. And how many of these are children aged under 16?

(options of 1-10 or more)

Q32. Which of these descriptions best describes your situation (in the last seven days)? Please select only one.

- In paid work (or away temporarily) (employee, self-employed, working for your family business)
- In education, (not paid for by employer) even if on vacation
- Unemployed and actively looking for a job
- Unemployed, wanting a job but not actively looking for a job
- Permanently sick or disabled
- Retired

Doing housework, looking after children, or other persons

Other

Don't know

Q33. Do you belong to a minority ethnic group in the UK?

Yes No Don't know

Q34. Which of the following best describes your marital status now?

Married, in a civil union, or living with your partner (cohabiting)

Single, separated/divorced/civil union dissolved or widowed/civil partner died

Neither of these

Prefer not to answer

Q35. Which of the following describes your household's total annual income after tax and compulsory deductions, from all sources? If you don't know the exact figure, please give an estimate.

Less than £10,858

£10,858 to under £14,548

£14,548 to under £18,132

£18,132 to under £21,715

£21,715 to under £25,994

	<input type="checkbox"/> £25,994 to under £30,754 <input type="checkbox"/> £30,754 to under £36,691 <input type="checkbox"/> £36,691 to under £44,714 <input type="checkbox"/> £44,714 to under £58,620 <input type="checkbox"/> £58,620 or more <input type="checkbox"/> Prefer not to answer
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Supplementary Table S3: Questions asked of the stakeholders	
<i>Introduction</i>	<ol style="list-style-type: none"> 1. How long have you known the site? 2. How often do you spend time there? 3. Who, if anyone, do you spend time at the site with? 4. How long have you been involved in this project? 5. How were/are you involved in the project?
<i>Perception of Space</i>	<ol style="list-style-type: none"> 6. How do you feel about the site (Teats Hill site)? <ul style="list-style-type: none"> • What does the space mean to you? 7. How do you feel the space has changed over time? <ul style="list-style-type: none"> • What did you like about the space before, what do you like about it now? • What didn't you like about the space before, what don't you like about it now? 8. What do you think is the most important/ significant change that was made?
<i>Spatial Benefits</i>	<ol style="list-style-type: none"> 9. What does the change mean for other people? For the surrounding area/ people using the site?

	<ul style="list-style-type: none"> • How does this space benefit the local community? • Do you think people are benefiting? • Have you seen people using the space differently? <p>10. If you were a tour guide, what would you include in your tour and why?</p>
<i>Process / Experience</i>	<p>11. Describe your experience being involved in the Teats Hill Project.</p> <ul style="list-style-type: none"> • How do you feel about your experience with the Teats hill project? <p>12. Would you be able to reflect on the process of the project?</p> <ul style="list-style-type: none"> • Could you talk about your engagement with others during the project • Reflect on the experience, A) planning and design of the project, B) implementation of the project • How do you feel about these aspects of the project? • What are the positives and negatives coming from the experience? <p>13. Is there anything we haven't covered that you think is important?</p>
Questions asked of the residents	
Introduction	<ol style="list-style-type: none"> 1. How long have you lived here? 2. What motivated you to move here? 3. How often do you spend time here? 4. How do you fit visiting/spending time there into your daily routine? 5. Who, if anyone, do you go with? 6. What activities do you do at the site? <ul style="list-style-type: none"> • Why do you go there? 7. How does your experience change through the year?

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| | <ol style="list-style-type: none">8. How do you feel about the site?9. How do you feel the site has changed over time?<ul style="list-style-type: none">• What is your earliest memory of the site?• Any other memorable experiences if any?• What did you like about the space before, what do you like about it now?• What didn't you like about the space before, what don't you like about it now?10. How have your activities changed over time, if at all?<ul style="list-style-type: none">• What do you like about the space?• Why do you come the space?11. There have been some changes over the past year, how do you feel about the way they've been implemented?<ul style="list-style-type: none">• Can you describe any particular changes you've noticed?12. If you were a tour guide what would you include in your tour and why?<ul style="list-style-type: none">• What is the motivating force for using the space (specificelement/ feature)?13. Is there anything we haven't covered that you think is important?<ul style="list-style-type: none">• Can bring in the maps here as a prompt |
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