THE CANAL ENVIRONMENT SOUNDSCAPE IN BIRMINGHAM – A PILOT STUDY

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1 AIMS OF THE RESEARCH

The aims of the study were to examine the sound experience of Birmingham's canal-side landscape and to investigate soundwalking as a methodology that could be used in future research. Thus this study forms part of the basis for primary research gathering in the wider area of landscape perception related to the evolving and regenerated canal landscape and the responses of a culturally diverse, 21st century UK society. The soundwalk approach was set in the context of the canal network in terms of its focus for urban regeneration, the strong identity of the canal corridor, including the emphasis on heritage, and as a unique part of the pedestrian public realm. Particular focus in analysis was placed on the sound identity associated with the chosen section of canal, sounds as signifiers of place, that is, whether any of the sounds heard were specific to the canal or whether a combination of sounds signified the canal landscape, and included dominant sounds; the group's ability to identify sound origins; the identification of changing sound scenarios as the journey progressed through different regeneration scenarios; and the impact that the soundscape had on the group's associations.

2 EXPLANATION OF PROCESS AND RATIONALE OF THE METHODOLOGY

The soundwalk was organised in three stages. The initial starting point, located within the pedestrian space of Brindleyplace, was chosen as a familiar location to the students with a strong (designed) sound identity relating to its water feature and no direct association with traffic. Brindleyplace is set in the general sound scenario of a pedestrian area within a busy urban centre and is also a typical meeting point where a journey might start. Secondly, the soundwalk itself, moving from Brindleyplace to the canal corridor, exposed the group to a range of place identities already visually defined, but yet to be defined in sound terms. Finally, we held a discussion session two weeks later to explore recollections of sound and to review the sound experience in terms of individual and group perception. The walk involved a group of eight students from the second year of Birmingham City University's BA Landscape Architecture programme, consisting of three female and five male participants, aged from their early twenties to their fifties, and two researchers. All were familiar with this part of Birmingham, but unfamiliar with this section of canal.

In both the soundwalk and the discussion session a combination of digital sound recording and note-taking were used to capture the sounds experienced and the group's verbal responses. There are limitations with this approach, as with any. Although the digital sound recorder was fairly adept at recording the nuances of background sounds, a few minutes of recording were obscured by the loudest sounds such as water and wind, which meant that some potentially insightful comments could not be heard on the recording during the transcription phase. In this respect, note-taking was valuable as an auxiliary recording technique, but again, not comprehensive. The discussion session was very useful in re-affirming responses the group made during the soundwalk, and in the more controlled sound environment of the seminar room, the recording was clearer and note-taking less

fraught. The time between the two sessions was specifically identified to allow the group to reflect on the soundwalk.[1] [2]

As identified, the soundwalk route began from Brindleyplace, the main square of Birmingham's regenerated, canal-side, city-centre development. Brindleyplace is a mixed-use area of upmarket bars and restaurants, corporate headquarters, shops, galleries and other leisure attractions. The area contains the Ikon Gallery of contemporary art and the Sea Life Centre, and is linked to the International Convention Centre, Symphony Hall and National Indoor Arena by pedestrian routes over the canals that separate them. From here, the group descended to the canal towpath and continued past the Sea Life Centre, crossing to the opposite towpath at the National Indoor Arena. From here the walk continued in a straight line, past the Farmer's Bridge lock flight at Cambrian Wharf, where canal boats are moored and a combination of residential and office premises surround the canal, and on through some emerging development areas still under construction. The route ended on the canal towpath under Ludgate Hill in the Jewellery Quarter area, approximately an hour after the group convened at Brindleyplace (Figure 1).

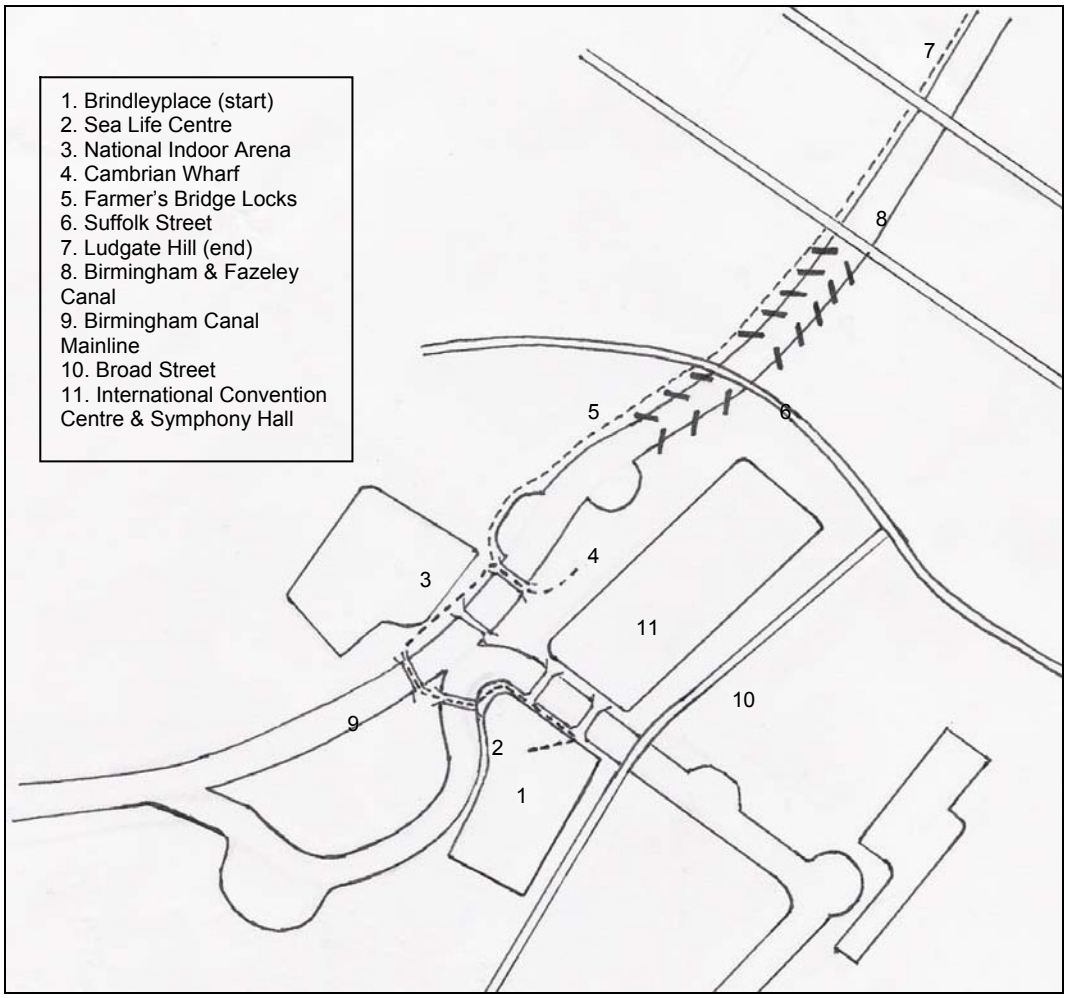
We suspected that it would be difficult, artificial, and undesirable for the group to separate their aural responses from their visual ones, thus comparisons between the lure of the visual environment and its sonic counterpart were included, choosing to start the route at the main square of Brindleyplace as it is a designed space with a strong visual identity and sound environment. The fountain in the square is the main visual and sonic focus of the space and pedestrians are directed to walk through it by the channelling of the walkway and the draw of the water sounds. It was anticipated that the group would find the contrast between this soundscape and that of the changeable canal landscape, as it passes through developed and developing zones, distinctive and that this would lead to comparisons between levels of engagement and their effects on the soundscape along the walk. The route was entirely pedestrianised. Brindleyplace is a car-free zone and the canal towpath is only accessible by foot or bike, making this a controlled aspect of the soundwalk. It also meant that traffic noise would be an external, background sound in all stages of the walk.

The forty-five minute long follow up discussion session was held in the group's timetabled seminar room two weeks after the soundwalk to allow the group time to reflect on their experiences. By timing both the soundwalk and the discussion session to coincide with their timetabled weekly seminars, the existing routine and dynamics of the group relationships created as realistic and relaxed an experiment as possible.[3]

One of our major concerns with the notion of the soundwalk was the creation of an artificial user engagement. Many of the soundwalk guides and artists who employ soundwalks in their work[4] state that participants should not communicate with each other, but listen and then discuss the sounds they heard, before moving onto the next stop in silence.[5] However it was felt that this method denied the presence and effect of the body in the environment[6], creating an artificial situation and making the act of the soundwalk an abstract one. For this reason the group was allowed to behave as they normally would when out walking with friends; they contributed to the soundscape through their interactions with one another and their explorations of the landscape.[7] For example, at one point a participant consciously used the physical structure of the canal to produce reverberation, by whistling under a bridge and creating echoes. As one of the participants remarked during the discussion session, *"it's lovely to think that you leave a memory of yourself in sound."* In this way, our soundwalk not only recorded the participants' responses to the soundscape, but contributed, albeit fleetingly, to the soundscape of the canal.

Limiting the soundwalk to an hour in length was designed to ensure that the group stayed focused, that we did not walk too far away from the familiar starting point and that we did not over-run the allotted seminar period. Also, because this research was undertaken in January, we did not want the group to become too cold or be too far away from warm shelter in the event of rain.

A discussion at the start of the walk introduced the concept of a soundwalk and the topics of analysis including the identification of sounds as signifiers of place and dominant sounds. A questionnaire was not used, rather, we let the participants make observations, prompting when they



(Fig. 1) Shows the soundwalk route, indicated by the dotted line.
Drawn from a map produced by British Waterways.

strayed from aural to visual responses. It was felt that letting the participants chat amongst themselves would uncover greater insight into their moods and perceptions in reaction to their surroundings, as opposed to responding to potentially leading questions. The digital sound recorder was an invaluable tool in this respect.

3 CHRONOLOGICAL ROUTE SYNOPSIS

The sound experience is summarised below in terms of the group's interaction with the location and feedback in respect of the sounds experienced.

We begin our route near the fountain in the main square of Brindleyplace. The group notes the dominant sounds; a background fuzz and whoosh of water, people's chatter and footsteps. They mention a background traffic noise, but say that it is very quiet considering how close we are to Broad Street (a major route into the centre).

"The water's overbearing – I can't hear…"
"I think it's relaxing."
"I think it's romantic."
They make visual responses about how the looming buildings make it a corporate square, but say that the sounds created by the paving and speech bouncing off the buildings contributes to this. They talk about how the sound would be dampened by planting and the use of softer materials. We walk on through the fountain and then a narrow passageway into a small open area of restaurants that overlooks the canal. The sound of the water becomes very loud and dominates for a few seconds, but before and after this point, the sound of the group chatting can be heard on the recording.

A participant notes that the sound of the water has almost disappeared. There is some disagreement on where the sound changed, but we have stopped where it is 'appropriate', which is a visual and social response.[8] They remark that the space, rather than the sound gave direction, leading them from Brindleyplace to this area. They think it is easier to talk without the water sound and speculate on how uncomfortable it must be to sit on the terrace of the nearby Café Rouge. There is an underlying rumble, but they cannot identify it, saying it could be traffic or air conditioning units. Again, they mention how close we are to Broad Street and how quiet the traffic noise is. The group discusses relative sound levels and whether the soundscape here would be louder during times of higher usage, saying that we'd *"picked the wrong time to be here"* as *"everyone's gone back to work."* The group talks about how much busier it is here during the summer months and how there is a *"European vibe*." They cite the music and smells of the bars. The consensus is that there is too little sound to keep them here and we walk down the steps to the towpath. Whenever we walk, there is the sound of the trolley-bag that one of the participants brought with her, its wheels clattering on the paving bricks. The group chatters constantly.

Fifteen minutes into our soundwalk we stop on the towpath next to the Sea Life Centre because the sound has changed. The group notices the sounds of music from a nearby pub, the sound of birds and some background traffic.
"It has changed. It's quiet."
The sound of the bird-recording from the Sea Life Centre is strong, but the group feels that this does not 'count' as a bona fide part of the soundscape because *"none of it's natural."* They also think *"it's so annoying."*
"There's a bit of a rumble."
"It's the traffic."
"I think the only place you're gonna escape that is when you're by the fountain."
There is some disagreement about whether this spot produces more echoes than Brindleyplace, although they agree that the towpath between was more "echo-y" than both.

We continue across the canal and towards Farmer's Bridge locks. We stop on the towpath next to a bridge because the sound has changed again. The NIA is above us. Before the sound of the wind dominates, louder traffic, some bird noises and what may be an aeroplane can be heard on the recording. The group cite the wind and the cars *"coming and going",* but feel that *"there's no dominant sound"* and that *"if you were to look at sound percentages…it would be fairly even."* The group disagrees about the frequency of the sounds, some saying they are intermittent while one participant talks about an *"underlying rumble",* but explains *"maybe it's me, because I live in the country and I notice it more."*

We continue towards the locks and cross the canal to a residential area of high-rise flats around a small park area. We have been walking for approximately thirty minutes. The chatter in the group becomes more exuberant as some of the participants cross over the lock instead of the bridge. We hear a distant rumbling and look to see some boys on skateboards near the moored canal boats. The group cites traffic noise, the skateboards and *"the water from the locks"* as dominant sounds.
"It sounds quite different to down there. It sounds more 'city'."
We hear the increasing sound of an unidentified machine, and look to see it is a City Council street cleaning vehicle. The group comments on the fleeting nature of many of the noises. We cross back over the bridge and continue along the towpath.

"There are a lot of water sounds here…this is the first place we've heard water, apart from artificial, artificially agitated."

As we near the tunnel underneath Suffolk Street, bordering the Jewellery Quarter, traffic noise becomes louder and combines with the water sounds from the overflows of the locks. A car alarm sounds. There is loud traffic noise from the street above. Again, the group thinks it is more 'city' here. As we pass under the bridge echoes and the noise of the trolley as it passes over the cobbles can be heard on the recording.

We reach a section of towpath flanked by a construction site on the near side and a recent office development on the opposite bank. There is a wooden walkway accessing the office buildings and we walk part way across before turning back. For one participant the sound of the walkway is particularly evocative, and she says *"walking across this, the sound of it does remind me of the beach, you know when you go out on the pier."*
One of the participants whistles and it echoes. Construction sounds of banging and drilling dominate and as we pass through a tunnel, they and the group's voices echo. Water sounds are heard under the tunnel.

We have been walking for about an hour and have reached our final stop under Ludgate Hill in the Jewellery Quarter. There are building noises in the background, some water sounds from the lock-overflows behind us and background traffic sounds. The group notes the contrast between the continuous *"hammering"* and *"construction sounds*" and the intermittent bird sounds. There is some discussion about time being a *"key part of the sound",* both in terms of frequency and also the time of day. They note that traffic noise and pedestrian noise will change depending on the time.
"You're very aware that things have encroached on this space."
"Yes, encroaching sounds."

4 ANALYSIS OF THE SOUND EXPERIENCE

The group's responses during the soundwalk and their reflections during the discussion session resulted in two initial observations. Firstly, in this location, the Birmingham canal soundscape is not a strong one. The majority of the sounds we encountered were external urban sounds and there were no specific signifying sounds. Secondly, the group's 'ideal notion' of a canal soundscape and the reality of the Birmingham canal soundscape experience are different.

The sounds that the group cited as 'dominant' at different points along the soundwalk included water, wind, traffic and construction. The most dominant of these, occurring at the start of our journey, was the (water sound) fountain at Brindleyplace. The consensus was that the sound was so dominant as to be uncomfortable at times; it annoyed one participant who usually enjoyed beginning his route into the city centre in that square and another commented that *"the water's overbearing…I can't hear."* The only other water sounds were those heard in the second half of the soundwalk near the lock flight at Farmer's Bridge. The water overflowing the locks made a pouring sound, but this was fleeting and dominated by the loud traffic noise as we neared the main road at Suffolk Street. Traffic noise and the more general sound of the 'city' were cited at other points; on the towpath near the NIA where *"the cars [were] coming and going"* and in the small park area near Farmer's Bridge where one participant remarked that *"it sounds quite different to down there. It sounds more 'city'."* The group noted how *"you can hear the wind"* near the NIA, but felt that despite its brief dominance, that it was *"sufficiently infrequent not to dominate"* and that the relative volume of the soundscape in this area was *"fairly even."* Towards the end of the soundwalk as we passed into emerging areas of urban regeneration, the group also cited the *"construction"* and *"hammering sounds."*

The soundwalk led the group through areas of differing sound experience, in terms of the types of sound present and the group's ability to distinguish them from other sounds. At some points the group qualified the sound as being 'city', notably where the sounds of traffic and general urban buzz

were dominant, but they never qualified the quieter or more 'natural' sounding areas as being 'rural' or 'country,' restful or relaxing.[9] While the canal route we walked was definitely part of the urban pedestrian route associated with 'lo-fi' soundscapes, its sound environments were both 'lo-fi' and 'hi-fi', in that we passed through areas where it was difficult to identify individual sounds and others where sounds were clearly distinct from one another.[10]

In the follow-up discussion session it was apparent that the group had discussed the soundwalk and revised their earlier reactions, or else forgotten some of the sounds they had cited during the soundwalk. One participant spoke on behalf of the group saying, *"We didn't really consider the sounds to be that dominant except the water [at Brindleyplace]…it was too loud."* A little later the group disagreed on the dominance of the water overflowing the locks, with one participant feeling that *"it stayed with you the whole way through, because it's always stepping down, there's always an overflow",* but then revised this by saying that *"it turned into a constant and became like the traffic and you just forgot about it."* Other participants said they didn't *"remember that"* and *"I really wasn't aware of any water noise at all, and when I did hear it, it was quite fleeting and disappointing."* Despite the presence of this range of sounds, the group felt that the route was generally *"quiet."* All the sounds we encountered were fleeting, either because we moved out of hearing range, as with the water sound at Brindleyplace and the construction sounds later on, or because they were intermittent, as with the traffic noise and the wind. This led us to the belief that the urban canal soundscape is fairly neutral and it is the journey that creates a soundscape, comprising external sounds that are *"superimposed upon this canal."*

In the discussion session we uncovered a consensus of an ideal canal soundscape, based on the participants' associations. This ideal soundscape included the sound of a *"gravelly path"*, birds, *"rustling reeds",* working locks, boats *"chugging"*, echoes and wind noises. From the recording and the comments the group made during both sessions, it is evident that some of these ideal aspects were present in Birmingham's urban canal soundscape, for example, the group cited the wind, overflowing locks and echoes along the towpath at various points during the soundwalk, but still felt that this did not constitute an ideal soundscape. This suggests that while not all of the ideal elements must be present, a different combination of ideal sounds to the ones identified during the soundwalk are more preferable and indicative of 'canal.' The group discussed the notion of sounds as indicators of place, agreeing that despite the presence in the soundwalk of some of their ideal sounds, those sounds, without the visual context of a canal, were not sufficient place indicators and could be mistaken for *"a river or even a drain."*

Several issues arise from this study. Participants tended to assess the soundscape of the canal in relation to their life experiences, in that they expected sounds based on previous (childhood) encounters with the landscape. Thus comparisons were made between the soundscape experienced and the soundscape expected. This included the level of reminiscence that the participants demonstrated during the soundwalk. They discussed visiting Brindleyplace in the summer evenings, trips to the Sea Life Centre when they were younger, and for some of the parents in the group, associations with their children on boating trips. One participant associated the sound of the wooden walkway we crossed with visiting the seaside. The majority were memories they associated with the places we passed rather than the soundscape, but we decided to encourage the group to explore their experiences of canals during the discussion session because it was such a striking and unexpected aspect of the soundwalk. Each participant had different prior experiences of the canals, including the Black Country Museum *"where the men stick their legs up on the side of the tunnels"*; the wildlife of the canal at Henley, which is *"a very different experience"*; fishing on the Grand Union Canal; walking the towpaths at Worcester; and walking country canals *where "when we'd see a boat going through all the kids would help push the locks open."* This led us to question whether memories of childhood experiences informed the participants' perceptions of the urban soundscape as adults, and also the types of sounds that they remembered. The group themselves believed that they sought the sounds they most wanted to hear. The participant who opened locks as a child was the same man who remembered the sounds of the water overflowing the locks during the soundwalk and accepted that he *"was the one who actually went and looked at the overflows and…was a bit more involved in it."* The woman who lived near a rural canal felt that the urban canal soundscape was *"dead"* because nothing lived there and believed that *"years ago*

there would have been the sounds of horses," but stated that *"I like birds and wildlife so maybe I'm more susceptible to it."* The notion that it is essential to consider 'the interaction between people's characteristics and their perception of sound[11] was further supported by the participants' reminiscences and could form the basis for further study.

The group were unanimous in their disappointment with the sound experience because *"it wasn't as good an experience"* as they had expected and because of *"the lack of sounds."* They also agreed that they did not *"feel safe"* on the towpaths, but attributed this to physical factors such as being *"trapped by wall or trapped by water"* and a lack of engagement in some areas, a consequence of which being a quiet soundscape. One participant likened the canal to a tomb and felt that *"if they were being used again, that would bring with it all these different sounds."* When asked if there were any sounds that made them feel more secure, the group suggested *"the bird sounds maybe",* which may suggest that visual, rather than aural, environments primarily affect our notions of safety.[12]

5 CONCLUSION OF THE PILOT STUDY

It was possible to broadly divide the soundscape into different components – internal sounds produced by a specific aspect of the canal, and external sounds produced as part of the interaction passing through different canal side elements. The internal sounds i.e. those produced by the water or specific aspects of the canal architecture were weak, contrasting with the visual elements of heritage that is such a strong aspect of canal and city regeneration.

Internal sounds included those produced by interaction, such as echoes and the sounds of walking. These varied in nature and were commented upon, but were still weak compared to the visual experience, the physical interaction with the texture of the paving or the encounters with locks, bridges and tunnels, which invited touch, and also in comparison to the sound experience of Brindleyplace.

External sounds were varied. There was a general buzz of urban noise, and although it was not dominant it did characterise the canal corridor as an urban /city pedestrian area, while other sounds were fleeting but dominant while they lasted. The strongest of these were the sounds of traffic passing over the bridges.

We identified the specific sounds generated by the canal as weak and understated, in contrast to the visual and tactile elements that were strongly stated and reinforced in regeneration, which although they produced sounds, tended not to signify place identity on their own.

The stronger sound experience related to encounters with adjacent activities, further emphasising the weak nature of the sounds associated specifically with the canal. These external sounds could be defined as sound encounters as part of the journey, facilitated by the canal route. We call this 'sound voyeurism' by virtue of the nature of interaction i.e. the sound is experienced as adjacent to the canal, not part of it.

The participants held associations of the canal soundscape generated by expectations i.e. the participants associated the canal structure with sounds and actively listened for them; there was a sound expectation which was not forthcoming.

It is suggested that while the visual, heritage and tactile elements are all emphasised in the canal regeneration, the sound elements are largely neglected. This is in strong comparison to the designed public space of Brindleyplace (the start of the soundwalk) where noise (of the water feature) is a strong and dominant aspect of the design upon which the whole square is focussed.

We consider that the use of soundwalking as a methodology for investigating the user experience and perception of the canal landscape's identity, highlighted the poor emphasis on sound as part of the regeneration process, although it was identified that there was potential to utilise the inherent

canal sounds (to mainly emphasise the noise of water) to create a strong sound identity, but that this would require additional intervention.

6 METHODOLOGICAL ISSUES

Several issues arise from the pilot study regarding the use of an existing student group as test subjects. As a test group they have previous experience and expectations of the canal landscape, which are re-visited whilst forming perceptions of the new experience of the soundwalk. The use of a group with a shared identity and existing relationships was both pragmatic and appropriate, as it was important to test our methodology on willing participants before contacting potential focus groups comprising people from the local community. Future potential participants include groups from a diverse range of cultural, ethnic and social backgrounds mirroring the diversity of the urban context. In this way we could further investigate the importance of prior experience of the canal land/soundscape in forging responses to new soundwalks. Using different focus groups would also identify potentially new shared responses to ideal canal land/soundscapes.

There are potential limitations. The pilot study was based on the (correct) assumption that the focus group had prior experience of the canal landscape and as such would be able to draw on their memories and associations in perceiving the soundscape. However, other focus groups of individuals without prior experience of canals (non-visitors or people with no cultural tendency/ history of canal engagement) will draw on different experiences to those of the research team in responding to the new experience of the soundwalk. It may be useful in future focus groups then, to follow a three-stage methodology, comprising the soundwalk and post-walk discussion, with the addition of a pre-walk discussion to ascertain the group's existing experience of canal landscapes. In this way, the methodology would follow a 'before, during and after' pattern, to enable us to chart any changes in perception more accurately.

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