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Exploring the heritage of Lisvane & Llanishen Reservoirs through community involvement

An evaluation for Dŵr Cymru Welsh Water

Faaiza Bashir, Diane Crone, Rachel C. Sumner, Zofia Szekeres

10 January 2024



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Executive Summary

Background

The Lisvane & Llanishen Reservoir site is a significant area for ecology and biodiversity in the capital city of Wales, as well as being an important part of the local cultural heritage. Welsh government and The National Lottery Heritage Fund jointly funded the Community Woodlands project at the reservoir in 2020.

This study was an exploration into the heritage of the Lisvane & Llanishen (L&LI) reservoirs, through community involvement, at the Community Woodlands project. Dŵr Cymru, Welsh Water is a not-for-profit utilities company who lease and manage the reservoirs. The study explored how Welsh Water's community engagement activities at the reservoirs support the health and wellbeing of the local community, improve access to the green and blue spaces, and enhance biodiversity at the site.

The study was conducted by the Centre for Health, Activity and Wellbeing Research ([CAWR](#)) from Cardiff Metropolitan University for Dŵr Cymru Welsh Water (Welsh Water). The study took place during the summer of 2023 and was approved by the University's ethics committee prior to data collection taking place (approval number: Sta-7314).

Study aim and objectives

The overall aim of the study was to explore the central role of community involvement in the Community Woodlands project, and understand more about the heritage of the reservoirs and woodland from the perspectives of those involved in protection and regeneration of the reservoirs.

The study had three objectives:

1. **To investigate Welsh Water's role in supporting social and cultural history** – explore the social and cultural importance and significance of the reservoirs as a green space, a protection area for flora and fauna, and a site of heritage for schools, communities and visitors, and the role of Welsh Water's projects to enable this.
2. **To explore and understand the collective movement** - capture the lived experiences of members of the RAG involved in the preservation of the reservoir from 2001 to 2015.
3. **To explore volunteering** - to understand the experiences, motivations, and outcomes of volunteers taking part in activities facilitated by Friends of Cardiff Reservoirs, established in 2021.

To meet the aim and the three objectives, we investigated the experiences of people from three groups who were involved in the community engagement activities at the Lisvane & Llanishen (L&LI) Reservoirs. These included:

1. **Reservoir Action Group (RAG):** The RAG involved people from the community in protecting the reservoir from housing developments between 2001 to 2013.
2. **Dŵr Cymru Welsh Water (Welsh Water):** Staff and affiliates of Welsh Water involved in the Community woodland Project at the reservoirs.
3. **Friends of Cardiff Reservoirs (FoCR):** People who have volunteered at Lisvane & Llanishen Reservoir since the Friends group were established in 2021.

We collected data through interviews and focus groups from a total of 18 participants (six participants from each group) between May to July 2023. We analysed the data using thematic analysis (Braun and Clarke, 2019), which provided a number of key findings (themes) that are summarised below.

Key findings (*themes*) related to the overall objectives

A summary of the findings, related to the three objectives are presented below, along with quotations from the focus groups and interviews to provide the voices of those involved in the study (names of participants are pseudonyms – i.e., not their actual names).

Objective 1: The role of Dŵr Cymru Welsh Water (Welsh Water) in supporting social and cultural history

- The Community Woodland Project has made positive, long-lasting impacts on the green space and biodiversity, such as the removal of invasive species and reclamation of a pond.
- The positive environmental outcomes have been enhanced by community involvement, for example by supporting land clearance.
- Welsh Water has developed and rolled out an effective and popular volunteer and community engagement programme from the ground up, involving the local community.
- Working in partnership with local communities and organisations is perceived as positive by staff at Welsh Water. For example, employees saw the ecological benefits of working with Wildlife Trust of South and West Wales and the health and wellbeing benefits of programmes such as the development of a Story Trail when working with the local authority and a local university. In addition, participants spoke about seeing the value of involving people and supporting their personal development.
- Welsh Water activities at L&L Reservoir have delivered health and wellbeing benefits for volunteers at the site. It is anticipated that future activities will be delivered at the site (e.g., leisure activities and social prescribing) which will further contribute to the health and wellbeing of the local community and visitors.
- The volunteering opportunities, education programme and engagement with local groups, coupled with environmental enhancements at the site aligns with the principles of the Well-being of Future Generations (Wales) Act 2015, including 'A Healthier Wales', 'A Wales of Cohesive Communities' and 'A Globally Responsible Wales'.

What they said (supporting quotations):

I've been able to enable the regeneration of that small patch which has brought frogs back into the area, it may bring otters back, all of those things.

Dŵr Cymru Welsh Water employee, Manager #2

The Community Woodland Project ... really turbocharged our efforts and opened up all sorts of possibilities to do so much more, and actually within a very short space of time, and the idea being that we could start bringing the woodlands back into active management, deal with the INNS [Invasive Non-Native Species] and start maximising the biodiversity value of the woodland.

Dŵr Cymru Welsh Water employee, senior manager #1

... And then those [volunteers] who perhaps struggle to make relational ties maybe struggle with mental health and just in general, They've really established a friendship, a lot of them, and it's really important. ... I noticed that they're checking in with each other every week, and they then will go off and have coffee together outside of the sessions.

Dŵr Cymru Welsh Water employee, operational manager

They [volunteers] feel an immense sense of ownership for the site. They don't have any ownership but they feel as though it's theirs ... quite a sort of visceral way they want to be part of that So offering them an avenue for them to do that ... they want to be in there, they want to be part of it.

Consultant, wildlife/ecology

And what we didn't want to do right from the start was in any way sort of alienate ... the local community and a campaign ... They effectively saved that site, we've learned to turn it into something that brings a wider community, Coming along with us.

Dŵr Cymru Welsh Water employee, senior manager #2

And I think this is where working in partnership just made me achieve it. I wouldn't have achieved it if I didn't work it with external partners. So, for example, the Story Trail that has gone in, it was working with people in Cardiff Met and Cardiff Council [that made it happen].

Dŵr Cymru Welsh Water employee, manager #2

Objective 2: The collective movement – the experiences of the Reservoir Action Group

- The campaigners have strong emotional links to the Lisvane & Llanishen Reservoirs based on memories and personal histories.
- A fierce sense of justice motivated the group.
- The RAG campaign was strategic led by a core committee who were skilled and knowledgeable.
- The RAG activities gained strong local support from the public, local media and local politicians.
- The campaign success means a renewed future for the reservoirs and for generations to enjoy the space.

What they said (supporting quotations):

On the sheer professionalism of the campaign, ... you can't fault it because we had a firm strategy right from the outset about what we needed to achieve, how we needed to achieve it. And it was just clear all the way through.

Fighting for justice, isn't it? That's what it's all about. This, to us, was an unjust thing that they were trying to doit's a legacy for future generations. That's the way I looked at it from the early stage ...

The only reason we won was because we got the reservoir embankments listed as a Site of Special Scientific Interest for their internationally important collection of grassland fungi, and Llanishen reservoir registered as a structure of historic importance.

Quotations from members of the RAG

Objective 3: Volunteering – experiences, motivations and outcomes

1. Volunteering has provided positive experiences for those involved.
2. Motivations for volunteering included: personal wellbeing (enjoyment of the outdoors, seeking new challenges in retirement), social wellbeing (seeking connection), and to fulfil personal values (contributing to society, environmental principles).
3. Volunteering has had many benefits including: physical and mental wellbeing, gaining new skills (knowledge and understanding), and community cohesion (friendships, building identity, a sense of pride).

What they said (supporting quotations):

The main objective is really to encourage and facilitate community involvement with the reservoir project. ...so far, we've been about enabling participation, getting the community involved, sharing information, so working constructively with Welsh Water to make the best of the resource for the community...

I think human beings are meant to be outside, aren't they? ...You are part of the environment and when you go into a natural space you feel connected to the environment and all of the things in it, the animal life and the plant life and it's very grounding. ...

It's not just the physical benefits, it's the mental benefits. I think you just get that... I mean, I just enjoy being out in nature anyway, but when you finish that session, you get that sense of achievement, the sense that you've sort of contributed to something, you've made a difference, and that's positive, mentally.

Quotations from volunteers from the Friends of Cardiff Reservoirs

Conclusion

As part of the wider Welsh Water programme, the Community Woodland Grant has generated distinct positive outcomes that have benefitted the local ecology and biodiversity, provided a valuable community asset to be enjoyed by the local community, enhanced the health and wellbeing of volunteers, and is aligned to the principles of the Future Generations and Wellbeing Act 2015.

The positive outcomes for the woodlands and the regeneration of native flora and fauna were enriched by community involvement. This was initially through the campaigning activities of the Reservoir Action Group, and more recently, from the volunteers of the Friends of Cardiff Reservoirs.

There is evidence that the partnership work and community engagement activities at L&L Reservoirs have been perceived to have positive outcomes and influencing ways of working, and best practice, at other Welsh Water sites across Wales.

Recommendations

There are several recommendations arising from this study, these relate to practices at Welsh Water and volunteering and opportunities. These are presented below.

Recommendations - in relation to practices at Dŵr Cymru Welsh Water

1. Continue to use principles of sustainable development and Well-being of Future Generations (Wales) Act 2015 to inform activities in the Biodiversity Strategy and wider Welsh Water activities.
2. Continue to protect and enhance the local ecology of the blue and green spaces at Welsh Water sites for health and wellbeing of people, biodiversity and planetary health.
3. Continue to engage with local partners and organisations to support sustainable outcomes for the ecology and biodiversity of Welsh Water sites, and to facilitate volunteering opportunities.
4. Continue to provide strong leadership for ambitious and novel programmes.
5. Involve and engage with local communities, including co-creation where appropriate.
6. To further the reach of programmes, continue to utilise the local skills and knowledge of local organisations (such as the Wildlife Trusts, local universities, health partners and others).
7. Ensure there is senior executive support for staff based at sites to overcome barriers to enable the successful delivery of similar ambitious projects.
8. Include policies and actions that support the health and wellbeing of staff and volunteers.

Recommendations - in relation to volunteering and future opportunities at Lisvane & Llanishen Reservoir

9. Ensure equitable and accessible volunteering opportunities for local people.
10. Consider offering volunteering at different times and on different days to enable as many local people as possible to engage with the site and the volunteer role.
11. Proactively engage with marginalised groups (e.g. those from lower socio-economic groups, or who face barriers due to disabilities).

12. Pursue opportunities to establish links with local health, social service and third sector partners) to develop, for example, social prescribing opportunities (informed by the upcoming Wales-wide [National Framework for Social Prescribing](#)).
13. Promote a shared social identity amongst volunteers to enhance psycho-social well-being and community cohesion.
14. Offer support and training for people who are digitally excluded or less confident with the TeamKinetic system/technology.
15. Help volunteers to interact with one another so that they can communicate and make connections to build an independent network, potentially through promoting the chat function on TeamKinetic.
16. Promote the FoCR to raise knowledge, awareness and understanding of the group and their role to highlight them as a valuable asset for the local community, and to encourage further participation.
17. Continue to commemorate and value the successful campaign to save the site, by the Reservoir Action Group.

Acknowledgements

We are grateful to all of the participants who gave their time to be interviewed and who shared their experiences and valuable insight, and for sharing their newspaper clippings and photographs.

Background to the study

Dŵr Cymru Welsh Water (Welsh Water) is a 'not-for-profit company' that provides 1.4 million homes and businesses with drinking water. The Community Woodland Project, launched in 2019, funded by the Welsh Government Community Woodlands initiative and The National Lottery Heritage Fund, aims to boost the biodiversity and social value of the woodland framing Welsh Water's 110-acre Lisvane & Llanishen reservoirs site that it acquired in 2016. It complements Welsh Water's Enabling Natural Resources and Well-being (ENRaW) project, which aims to transform the whole site into a hub for health and wellbeing while protecting and enhancing its ecology – in line with the Well-being of Future Generations (Wales) Act 2015. It also contributes to [Welsh Water's Biodiversity Strategy 2022](#) that aims to maintain and enhance biodiversity and ecological resilience through all company activities.

The Community Woodlands Grant (CWG) was jointly funded by the Welsh Government and The National Lottery Heritage Fund. The project aligns with Welsh Government's vision for National Forest for Wales venture. The CWG was a capital grant intended to restore, create, connect, and manage woodlands in Wales, through significant involvement with local people and community involvement. Organisations were asked to demonstrate multiple benefits spanning environmental, social, economic, and cultural wellbeing, and deliver accessible woodlands for all to enjoy ([Heritage Fund, 2022](#)).

The Community Woodlands Grant complemented existing Welsh Water activities, particularly the work through the [Enabling Natural Resources and Wellbeing \(ENRaW\) project](#). ENRaW provided capital funds for building footpaths and infrastructure for bird hides. The revenue funding meant a Partnership Manager was employed to work with the local community and develop a volunteering group. This also allowed training to be delivered to volunteers through the conservation walls (drystone walls) and roundhouse building structure. ENRaW funding enabled the creation of volunteering infrastructure which resulted in the 'Friends of' group being established.

Introduction to the study

The study explored how Welsh Water's community engagement activities at the reservoirs support the health and wellbeing of the local community, improve access to the green and blue spaces, and enhance biodiversity at the site. The study was conducted for Dŵr Cymru Welsh Water (Welsh Water) by the Centre for Health, Activity and Wellbeing Research ([CAWR](#)) from Cardiff Metropolitan University. It took place during the summer of 2023, and prior to data collection taking place, it was approved by the University's ethics committee (approval number: Sta-7314).

Study aim and objectives

The overall aim of the study was to explore the central role of community involvement in the Community Woodlands project and to understand more about the heritage of the reservoirs and woodland from the perspectives of those involved in protection and regeneration of the reservoirs.

The study had three objectives:

1. **To investigate Welsh Water's role in supporting social and cultural history** – explore the social and cultural importance and significance of the reservoirs as a green space, a protection area for flora and fauna, and a site of heritage for schools, communities and visitors, and the role of Welsh Water's projects to enable this.
2. **To explore and understand the collective movement** - capture the lived experiences of members of the RAG involved in the preservation of the reservoir from 2001 to 2015.
3. **To explore volunteering** - to understand the experiences, motivations, and outcomes of volunteers taking part in activities facilitated by Friends of Cardiff Reservoirs, established in 2021.

We set out to explore the following topics in the study:

- Benefits of volunteering outdoors and in nature.
- Exploring local heritage and community assets.
- Community cohesion.
- Storyline of involvement for volunteers.
- Understanding about collective action over time.
- Benefits and strengths of community engagement.

To meet the aim and the three objectives, we investigated the experiences of people from three groups who were involved in the community engagement activities at the Lisvane & Llanishen (L&LI) reservoirs. A description of these groups is provided in the next section. The groups included:

- **Reservoir Action Group (RAG):** The RAG involved people from the community in protecting the reservoir from housing developments between 2001 to 2013.
- **Dŵr Cymru Welsh Water (Welsh Water):** Staff and affiliates of Welsh Water involved in the Community Woodlands Project at the reservoirs.
- **Friends of Cardiff Reservoirs (FoCR):** People who have volunteered at Lisvane & Llanishen Reservoir since the Friends group were established in 2021.

Exploring the motivations, experiences and perspectives of campaigners, volunteers, and Dŵr Cymru Welsh Water employees and associates, was important to help understand the role of community involvement in the programmes that protected the local heritage at the site, through the Community Woodlands Grant. It was also important to contextualise the Community Woodlands project in the wider Welsh Water programme to open the reservoirs to the public, and the long history of the L&LI reservoirs heritage.

Method

Our approach to exploring the heritage through community involvement in the [Community Woodland Project at L&LI Reservoirs](#) is based on the recognition that (a) a wide range of people and stakeholders were involved in the wider story of the L&LI Reservoirs and (b) the Community Woodland Project is part of wider Welsh Water programme, including other funding streams, that align closely with one another.

As such, we explored the outcomes, benefits, experiences and challenges of the people involved in the Community Woodland project and closely linked activities at L&LI reservoirs. Using interviews and focus group (groups discussions) this has allowed us to provide meaningful and in-depth descriptions of the experiences and outcomes of being involved in the Community Woodland project, through three key stakeholder groups (see their descriptions below). This is with the recognition that many ecological, health and wellbeing benefits identified are contingent on the wider Welsh Water programme, such as the [ENRaW project](#).

Stakeholder groups involved in the study

Dŵr Cymru Welsh Water

Dŵr Cymru Welsh Water is a not-for-profit company which supplies drinking water and wastewater services to most of Wales and parts of western England that border Wales. As a not-for-profit organisation it has no shareholders and so any surplus money is reinvested back into the company. Welsh Water's dam and reservoir portfolio includes several visitor attractions, such as Elan Valley in Mid Wales. Visitor attractions include cafes and visitor centres, water sports, biodiversity facilities, and local communities can benefit from education hubs.

Reservoir Action Group

The Reservoir Action Group was a campaign group established in 2001 in response to plans for a housing development to be built on the reservoir site by Western Power Distribution. The local campaign ran over 12 years and involved opposing planning applications by Western Power, political lobbying, well attended public meetings, fundraising and awareness raising activities. More information about the campaign be found on their website: www.llanishenrag.com The Chairs of the committee are/were: Ted Thurgood, Andrew Hill, and from 2013 – present, Richard Cowie.

Friends of Cardiff Reservoirs

The 'Friends of' group was founded in 2021, and the development was supported by RAG and Welsh Water. Friends of Cardiff Reservoirs was a natural successor to RAG and is an independent organisation that works in collaboration with Welsh Water. FoCR is a volunteer-led, membership organisation that aims to support keeping L&L Reservoirs site as one to be enjoyed for generations to come, including through recreation and education. Community and volunteers' engagement on the site, with the support of Welsh Water, is a key part of this. More information about them can be found on their website: www.friendsofcardiffreservoirs.org

Data collection

Data were collected, using interviews and focus groups, from a total of 18 participants who agreed to take part in the research. Recruitment was conducted during May through to July 2023, and data collection during June and July 2023. All interviews and focus groups were recorded and transcribed verbatim before analysis. All participants provided written voluntary consent to take part in the research. Prior to any data collection taking place the study protocol was reviewed and approved by the Cardiff Metropolitan University's School of Sport and Health Sciences research ethics committee, (approval number Sta-7314). The table below provides information on the participants from the three stakeholder groups and the mode of data collection.

Table 1 Description of participants and mode of data collection.

Group	Role	Method	Detail
Reservoir Action Group (n=6)	Reservoir Action Group members	Focus Group	In person at Cardiff Metropolitan University
Dŵr Cymru Welsh Water employees (n=6)	i. Manager #1	Focus Group	In person, Welsh Water offices, St Mellons
	ii. Operational manager		
	iii. Senior manager, #1	Interview	Microsoft Teams
	iv. Manager #2	Interview	In person at Lisvane & Llanishen Reservoirs
	v. Senior manager #2	Interview	Microsoft Teams
	vi. Consultant (wildlife/ecologist)	Interview	Microsoft Teams
Friends of Cardiff Reservoir (n=6)	Friends of Cardiff Reservoir volunteers (n=5)	Focus Group	In person at Cardiff Metropolitan University
	FoCR committee member (n=1)	Interview	In person at Cardiff Metropolitan University

Recruitment of participants

Participants were recruited from the three key stakeholder groups. Participants from each group were recruited as follows:

Dŵr Cymru Welsh Water staff and programme partners

The primary contact at Dŵr Cymru Welsh Water identified individuals who were deemed to have insight and knowledge of the company's role in the programme, these included, for example, Executive Board Members, local councillors, consultants involved in the project, and Welsh Water staff directly involved and working on site.

Reservoir Action Group

The primary contact at Dŵr Cymru Welsh Water introduced the research team to the Chair of the Reservoir Action Group who was then asked to invite key committee members and those deemed heavily involved in the campaigning to take part in a focus group. Interested individuals then independently contacted the research team, and were subsequently formally invited to take part.

Friends of Cardiff Reservoir Deputy Chair and volunteers

The primary contact at Dŵr Cymru Welsh Water introduced the research team to the Acting Chair of the Friends of Cardiff Reservoirs (FoCR) who shared information about the study amongst members. Interested individuals then independently contacted the research team, and were subsequently formally invited to take part.

A member of the FoCR committee was interviewed separately from the volunteers for two reasons. Firstly to ensure other volunteers did not feel uncomfortable sharing experiences with a committee member (in case of any perceived 'power imbalance') and in the event that the committee member may have wanted to share information and experiences that may not have been appropriate to share directly with other volunteers.

Key findings (*themes*) related to the overall objectives

A summary of the findings, related to the three objectives, are presented below. Findings are presented with quotations from the interviews and focus groups. These may have been edited to ensure clarity, for example the removal of repeated words, and phrases such as ‘umm’, ‘err’, ‘OK’, ‘you know’ ‘so’. Care has been taken to ensure the participants meanings have been maintained. Where a name is presented, this is a pseudonym of the participant to maintain their anonymity. Where possible we have included the role (job/volunteer role), but due to some of the participants being identifiable by their role, where this is the case, we have provided a description of their role in the organisations, to ensure their anonymity.

Findings in respect to objective 1: The role of Dŵr Cymru Welsh Water (Welsh Water) in supporting social and cultural history

Five themes emerged from the findings related to objective 1. These themes are:

- How the Community Woodland Grant contributed to the local nature and ecology
- Volunteering
- The wider benefits and outcomes of the Community Woodland Grant and related L&LI Reservoir project
- Ways of working
- Challenges

The themes and their subthemes are presented below, followed by an explanation of each with supporting quotations from the participants (presented in italics).

How the Community Woodland Grant contributed to the local nature and ecology

This theme has three subthemes, reinvigorating the site including the ponds, and the development of the woodland plan with the community, and its subsequent implementation.

Reinvigorating the site

Welsh Water reinvigorated the pockets of woodland around the L&LI Reservoir site that had not been tended to for a significant period of time, providing opportunity for biodiversity to flourish. The L&LI reservoir site contains areas of some ancient woodland that has been established for over 300 years; it is a mature and established ecosystem. In addition, there are less established secondary forests. The urban location of the site means there has been a human influence too – both positive and negative.

the Community Woodland Project really gave us that opportunity to fast track what we were wanting to achieve anyway, but what we were looking to deliver over a long period of time working with volunteers. So it really turbocharged our efforts and opened up all sorts of possibilities to do so much more, and actually within a very short space of time, and the idea being that we could start bringing the woodlands back into active management, deal with the INNS [Invasive Non-Native Species] and start maximising the biodiversity value of the woodland. [Senior manager, Welsh Water]

Invasive non-native species (INNS) such as cherry laurel, were widespread and meant much of the woodland was inaccessible “*and it did actually just take over the woodlands here*” (Senior manager, based on site). A consultant on the project explained that whilst woodland is usually self-sufficient compared to other habitats, at the L&LI Reservoir site there was a threat to natural species from the laurel and had Welsh Water not intervened there would have been “*a distinct degrading of the woodlands on the site*” (Consultant). This, even within a short period of time, could spread to other neighbouring woodlands. If too many of these invasive species are present, local native species are

unable to flourish meaning biodiversity is limited; *“through the Community Woodlands Grant the capital funding meant that we could get rid of the cherry laurel”*. [Welsh Water employee based on site].

Work was also possible, through the Grant, to reclaim the ponds, which had been disused and overgrown. Reclamation of disused ponds lead to the return of birds and plants, see figure 1. Reclaiming these areas gave one of the Welsh Water managers (#2) great pleasure and pride:

One of my proudest things I think is the reclamation of the ponds.

Just the small area of Cardiff and [the Grant has] been able to enable the regeneration of that small patch which has brought frogs back into the area, it may bring otters back, all of those things, that small patch.



Figure 1 – The reclaimed pond, demonstrating enhancing biodiversity at the site.

The development and implementation of a woodland management plan working with local partners.

Welsh Water asked Wildlife Trust of South & West Wales, one of the regional Wildlife Trusts in Wales, to develop a woodland management plan. Woodland management plans helps landowners to understand what is special about a habitat or site, and the best methods to enhance biodiversity. This can include recognising what modifications and management techniques can help improve the site, what steps are needed to reach those goals, and how progress can be measured.

Despite the coronavirus restrictions posing difficulties for parts of the woodland management plan, Welsh Water recruited a woodland specialist who developed an implementation plan and a monitoring and evaluation tool to support ongoing work. This included a specific plan for volunteers on the site, so that they had a clear and comprehensive plan to follow.

What is notable about this is that whilst Welsh Water undertakes regular surveys and monitoring of its sites to meet national regulations, it typically uses large consultancies to undertake these requirements. However, in this instance, Welsh Water commissioned the services of a local environmental non-government organisation (NGO) to develop a woodland management plan. Welsh Water recognised that this brought additional benefits from the greater local knowledge and insight regional NGOs have

and promotes sustainability too. As a result of the positive relationship, Welsh Water have established a strong link with other Wildlife Trusts and environmental NGOs and are now working together at other sites across Wales. One of the managers at Welsh Water, gave the example of working with the Royal Society for the Protection of Birds at the Elan Valley (another Welsh Water site in Wales).

The way that we've worked with environmental NGOs like the Wildlife Trust at Lisvane and Llanishen has provided a blueprint for how we can work with them. And again, I think it's far more sustainable for us to be using local Wildlife Trusts to do survey work for us where they've got the expertise and the competence and to do the management. And it's better, I think, for the local community, it's more sustainable to be using local or regionally based environmental NGOs.

Manager #1

The implementation of the woodland management plan enhanced the biodiversity of the woodland, using sustainable practices. The woodland management plan was embedded into the site's Landscape and Ecology Management Plan (LEMP), which is a practical and live resource management tool, developed by Welsh Water to manage public access whilst protecting the most environmentally sensitive areas. The LEMP was seen as critical to the implementation of the woodland management plan. One of the manager's from Welsh Water explained the following about the LEMP and its role:

I hope that the people who work on this site read it [the LEMP] and use it. I wanted to write it so it's not just a document that sits on a shelf...

[Female name, A Conservation Officer at Natural Resources Wales], ... is amazing. She was so pragmatic. She always wanted things to work. She, always said 'I don't like saying no' and she said to me, 'I want to know that it's a living document', so it means that it can be updated using the SMNR [Sustainable Management of Natural Resources] principles, one of which is adaptive management and that things will adapt to the site and things will change.

Manager #2

The Wildlife Trust of South & West Wales developed a woodland management plan that could be utilised by volunteers and the local community moving forward to support the ongoing biodiversity and sustainability of the regeneration:

We also set out volunteer engagement action plans...so that the Rangers and the [new Volunteer Manager] of the site could basically just take their ... work programme from it so that they knew what they were doing terms of when and what they needed to monitor, when and what they needed to do. And we tried to prioritise that a little bit for them. But obviously, once you hand the plan over, then it's up to the management team, how ... to interpret that...

Consultant, wildlife/ecology

Volunteering

This theme focusses on the experiences of Welsh Water staff in developing volunteering and their initial thoughts on this new way of working; and how community engagement and volunteers supported the environmental management of the reservoir site. This theme has three subthemes.

The setting up and development of Friends of Cardiff Reservoirs Group

Initially Welsh Water needed to set up an infrastructure for a volunteer network. Welsh Water established a model for working with volunteers on their assets, which is a new endeavour for them. The, at the time, newly appointed manager on the site recognised lots of ambition and support for a community volunteering programme from Welsh Water management, but limited progress in terms of roll-out, due to the pandemic. However, the pandemic and its resulting restrictions, provided her with the necessary time to develop the systems and process for Welsh Water (e.g., policies and a framework) alongside supporting the community to set up Friends of Cardiff Reservoir. Here the manager (#2) recalls thoughts when planning what needed to be done for Welsh Water policies and infrastructure:

One of my first questions was ... 'That's fine. I can run, I can create and put volunteering programmes together. Who's your volunteering team? What's your volunteering policies [sic]? What's your structure?' ... 'Well, we haven't got that far'. ... they just had ... an overarching strategy of what they would like to achieve but nothing in place.

The establishment of the Friends of Cardiff Reservoirs (FoCR) group was one of the key outputs from the ENRaW Project. As the campaigning came to an end, the RAG approached Welsh Water and proposed the setting up for a 'Friends of' group in 2016 and this was established in 2021:

[Chair of RAG] said that 'we do want to work with Welsh Water' so, he said, 'the way I see it is our Action Group will stay in place until that reservoir opens. And we know that it's in safe hands'. So, I think they're hoping to hold their last meeting here.

Manager #2

I think a lot of 'Friends' groups sometimes form out of campaigns and against companies sometimes, so this is quite a nice way of being to, kind of, go 'well, we're working with you to enable that, to work with us.

Manager #2

The FoCR group is a natural progression from the RAG group. However, it was important that RAG and the FoCR were two separate independent groups, RAG was a campaign group with a different remit and motivation, which they achieved. Welsh Water and RAG agreed this was a good solution and worked together to set up FoCR. The FoCR Constitution was formed independently of Welsh Water and continues to work as an independent organisation, in partnership with Welsh Water.

The scheme is now managed by Welsh Water's Volunteering Manager. Volunteers work alongside Rangers (Welsh Water employees) to help on the site, and other experts such as ecologists or commissioned organisations. The benefit of working with Welsh Water to establish the FoCR group was that Welsh Water could ensure everything was in place to safely invite volunteers onto the site (in terms of health and safety and insurance), and support with the volunteering infrastructure (such as the website) and sharing ideas. The Community Woodlands Grant enabled the delivery of the volunteering activities and purchasing of tools and equipment for volunteers.

Whilst there were some initial concerns about working with volunteers, as it was a new concept and way of working for Welsh Water, these were soon allayed early on in the process. One of the participants, the consultant, stated that he had previously seen environmental management, laborious jobs such as land clearance, completed by paid staff or contractors, but realised that there were many jobs that could be undertaken by a volunteer programme:

... there's lots of jobs for people to do in woodland... it was a really nice opportunity for us to look at it, say ...some of these things the Rangers could do, well, much more

could bring in contractors to do, but actually, it makes an awful lot more sense to see whether you can get a volunteer network together to come in and do that.

Over time there was a realisation that there were many mutual benefits for both Welsh Water and the volunteers. The volunteers enjoyed this work and did not perceive it as exploitative, and in fact it provided wellbeing benefits for them, and a chance to be part of something special. As a consequence of this realisation, the wellbeing aspect became an active focus during the planning and delivery of the volunteer sessions:

... this was completely different because this was about the focus, wasn't on getting the job done per se, ..., but it was on the well-being of people who were there and this collaborative effort ... I had [to] rewire my brain a little bit... but once I got on board with what we were doing it was great because the focus was on the people, not necessarily about the task at hand.and I think it's fantastic because for them and for us, it was a real satisfying result ...

Operational manager

Volunteering processes and benefits

Volunteers (members of Friends of Cardiff Reservoirs) book onto volunteering opportunities via an online system (TeamKinetic). At the time of writing, just before the official opening of the site to the public, a regular Friday morning slot attracted regular attendees, and a waiting list with more wanting to attend was in place.

The benefits identified from volunteering by Welsh Water employees were:

- Making friendships, sharing worries about life and social support.
- Developing meaningful friendships that are sustainable off site.
- Experiencing the beauty of nature.
- Opportunities for getting out of the house and feeling less isolated.
- Being productive and helping with conservation activities.
- Pride in helping on a high-profile site. i.e. for some it's more special to protect an SSSI site than, for example, litter picking in the local park.
- Improved mental health and wellbeing – particularly those who struggle with relational skills.
- Training and skills.
- New purpose and drive.
- Confidence building.

The quotations below from one of the Welsh Water employees (Operational manager) who works closely with the FoCR, provide further support for these benefits:

They love it. They just keep coming back again and again and again, and I've been able to ... establish a real close relationship with a lot and we've talked. We've had a platform where we were able to talk about life and problems and shared anecdotes and, experiences that we have together, and I speak to a lot of them and they'll all come from different demographics and backgrounds. But the one thing they all share in common is they love to volunteer.

...they all say the same thing. They're able to get out of the house so whether they're working from home or whatever, ... they're able to get out of their four walls and they're able to come to a site of beauty in the fresh air and work on something collaboratively that produces a physical and tangible and successful result.

... And then those who perhaps struggle to make relational ties maybe struggle with mental health and just in general, they've really established a friendship, a lot of them, and it's really important. ... I noticed that they're checking in with each other every week, and they then will go off and have coffee together outside of the sessions, you know, just having this snowball effect...

One particular highlight of the FoCR group has been a volunteer who has gained sufficient skills and confidence to be recruited as a Welsh Water Ranger on the site:

Talking of success stories ... one of our regular volunteers... she's doing part time studying around environmental aspects but now she's starting as a paid Ranger...she's starting as part of [the Ranger's] team now... She's gonna [sic] be a real asset for our team, she really is.

Manager #1

Benefits of engaging volunteers

There were a number of benefits identified by Welsh Water employees and associates. These included making an environmental case, a business case and recruiting them as ambassadors.

Environmental case

The Welsh Water employees and associates described the environmental case for volunteer engagement in the woodlands in four areas. These are as follows:

- An upskilled local community who can utilise environmental management skills in the future on the site, or other local sites: *"monitoring skills, woodland management, ... coppicing. ...there's a whole range of practical skills ... they would benefit from it, become a more knowledgeable, engaged community as a result of that volunteering activity"*. Consultant, wildlife/ecology
- Encouraging connectedness and ownership between volunteers and the woodlands: *"It gives local communities a greater sense of ownership of the green and blue space that's on their doorstep. Yeah, there is a huge amount of interest. We've demonstrated that at Lisvane Llanishen, for members of the community, you actually want to get involved"*. Consultant, wildlife/ecology
- Educate people about the ecology and support positive behaviours to protect the site, as well as build trust between landowners and communities:

we saw it was a great opportunity to bring in the local community, educate them, as you said, to get them to understand the nuances in some of the important things because one of the things that the management plan identified was that we're going to have to remove an awful lot of trees... so it was important to make sure that the volunteers were part of that so that when they saw it, and the local community saw the results of that management action, they didn't immediately throw up their hands and say, 'What have you done to the woods!', they understood that it was necessary, so that the woods had a long term future.

Consultant, wildlife/ecology

- Involving local people and inviting them onto the site before it was open to the public. This enabled the local community to understand why decisions were being made, rather than being told when they were fait accompli. In this sense, the local community were taken 'on the journey' with Welsh Water:

We did a community engagement week, so we brought in primary schools... and I walked around the site with different groups.... saying this is what we've been doing and why we've been doing and explaining it. I think people don't really know what's going on until they see it and they can understand it... being able to bring people along as part of that journey and give them little insights into it... there's a lot of people now in that community who we've been able to bring on board with that ecology message and understanding the importance of [it].

Manager #2

Business case

Participants recognised that engagement with volunteers and communities (particularly early on in a project) is beneficial for the company from a business perspective in terms of stronger relationships with customers and financial value.

But also, at the end of the day, the amount of value and actual value you're getting out of it through volunteer time. It's not insignificant that that work would be picked up by the business... it's more than just cost neutral. It's actually bringing in financial support that wouldn't otherwise be there, as well as the community and environmental benefits. [It is] a business case that stacks up in quite a strong way.

Senior manager #2

This is important because a business case for community engagement can play a role in garnering long-term support and commitment from senior management in organisations, and demonstrates how volunteering can benefit companies and organisations and encourage others to take similar steps.

That's the key, ongoing engagement, local communities, ...that's something that we are learning from, and rolling out that, [to] other sites.

Senior manager #2

Volunteers as ambassadors

Education and messaging are key benefits and outcomes of volunteering supporting and enhancing an individual's understanding and can play a key role for them, as ambassadors of the site. To informally spread the messaging wider to friends and family in the community about how the ecology is being protected, for example, the impact of invasive non-native species or that dogs on site may threaten the waxcap fungi and SSSI status, is a role that the volunteers play in the local community.

We educate as best we can, and then we get this Chinese whisper effect ... where more than any ... comms message could ever deliver for us because they [the volunteers] care and they take ownership. They're passionate then to tell their friends, their families, their neighbours. 'You shouldn't be doing that, that's wrong. Do you realise that this is having an adverse effect on the environment?' And a lot of people will be mortified at that and it's purely out of ignorance that they carry on in this way, and as soon as they're informed, they will change their behaviour overnight.

Operational manager



Figure 2 - Important messages about waxcap fungi and other information aimed at educating visitors to protect the ecology and biodiversity of the site is shared on signs by DCWW, but also informally by volunteers and community members.

The wider benefits and outcomes of the Community Woodland Grant and related L&LI Reservoir project

There were a number of identified benefits and outcomes identified during the interviews and focus groups. These included health and wellbeing, community engagement, the impact on climate change and pollution, ways of working for Welsh Water, and the project in the context of Welsh Government policy. This theme includes four subthemes: health and wellbeing benefits; community engagement; supporting the climate agenda; and context of the project in wider Welsh Government policy.

Health and wellbeing benefits

Welsh Water's wider programme to reinvigorate the reservoir site and make it accessible to the local community was seen as "invaluable" in terms of enabling increased access to local green and blue space that communities can enjoy;

... there's a public health value... you look at the future look at the woodland project itself and the health benefits of being able to go from... quite a busy urban area into an area that is now actually far more open and welcoming and a bit of oasis of calm And that value is significant.

Senior manager #2

It was also identified that there were benefits through activities based at the Visitor Centre, through the health and wellbeing education hub, such as mental health awareness, and also others planned for the future:

... we're hoping ... [to provide] opportunities for social prescribing once we're open so we see ... the opportunity for working with referral agencies to prescribe water sports activities, health walks around the reservoirs and volunteering

Senior manager #1

Community engagement

The L&LI reservoir site is different to other Welsh Water sites in that it is situated in a highly populated urban area. Welsh Water have worked with the Reservoir Action Group throughout this project to

enable positive outcomes, and this along with other volunteering and community engagement activities, has allowed Welsh Water to strengthen their engagement with local people and their communities.

And what we didn't want to do right from the start was in any way sort of alienate ... the local community and a campaign ... They [the community] effectively saved that site, we've learned to turn it into something that brings a wider community [together], got to make sure that they were coming along with us and making sure that we were actually doing things in partnership as opposed to against each other.

Senior manager #2

It has also been an opportunity for Welsh Water to gain recognition and publicity for positive work they have always been committed to. Welsh Water invests significant amounts of resource to add value to local sites, such as infrastructure development, but much of that work "goes unnoticed" (quotation from the Senior manager #2). In contrast, the L&L project has brought to the fore the environmental, social and health and wellbeing benefits to the local community, in a very public way, at a site with a significant historic and cultural value. This has been recognised at senior level in Welsh Water that this enables "a totally different conversation with the customers that you usually would" and contrary to other sites where criticism and scrutiny is voiced from the local community:

...there a few projects that we do, where we're able to point to environmental enhancement, to community enhancement, recreation enhancement, all of these things because not all projects are designed to do those ... so to have the opportunity to do something of this scale, and this sort of community importance allows you to have a totally different conversation with the customers that you usually would.

Senior manager #2

Supporting the climate change agenda

The ENRaW and Community Woodlands Grants have protected an important carbon store (waxcap fungi grassland and woodland area). By doing this they have made a valuable contribution to the air quality in the area:

One of the reasons why we were successful at being able to apply for the Community Woodlands [Grant] is because a lot of the funding was aimed at areas of deprivation. ... I broke it all down and this area is one of the most deprived in Wales for air pollution... and getting people to understand the waxcap fungi is a carbon sink, [and improving] the woodlands is helping your health well-being being...[and] ...hopefully the air in this place.

Manager #2

Context of the project in wider Welsh Government policy

The project was developed strategically to ensure it would meet the objectives of the Wellbeing of Future Generations (Wales) Act (2015) to benefit future generations by implementing sustainable structures and working practices. For example, the development of the woodland management plan that included the development of a 'Friends of' group:

I see the vision, but I know you have to go back 10 spaces to put the structures in place to make sure that it's a sustainable vision. I think if you just go for the vision, then it could collapse ... You've got to make it sustainable. So, it wasn't my vision to create a 'Friends of' group, I just went, 'OK, how can I make that happen in a sustainable way?'

Manager #2

Another participant recognised that the Wellbeing of Future Generations (Wales) Act (2015) helped Welsh Water to plan the activities at L&LI Reservoir in a way that would be beneficial for communities in respect to wellbeing:

The Lisvane and Llanishen project is a fabulous example of the Well-being of Future Generations Act influencing local planning matters because we have, right from the beginning, our aspiration, the vision was to create a hub for health and well-being, and to put well-being at the heart of everything that we do there.

There was also recognition of its potential impact on economic impact in terms of employment and an increase in economic activity, and also for the environment, long-term:

... But in terms of sustainability, we have got a business model that we've developed ...probably like 45-50 staff we'll be appointing on that site, so it's not an insignificant development in terms of job creation, there's obviously visitor spending on site and the ripple effect through the tourism multiplier through supply chains or directly as well... generat[ing] economic benefit. It will also generate well-being benefits through having access to high quality green and blue space, and the activities that we'll be offering and should appeal to a wide range of different audiences and will encourage lots of people to visit ...

Senior manager #1

Ways of working

The participants discussed the impact of the project on ways of working, and indeed how these changed or were adapted to meet the needs of the project, and also ways of working that made the project a success. This theme has four subthemes, key roles to facilitate success, partnership working and engagement, ways of working in the future and balancing obligations.

Key roles to facilitate success

Key roles, such as the manager #2's role, were seen as critical to success of the project. The vision and 'can do' attitude of the person in that role, was recognised by the other participants:

I think the value of having somebody,.... in charge of the project, who was willing to reach out and not as an ecologist..., but was very happy to buy in the expertise ... I think that really was so important to [the] success of the project ... just having somebody who was prepared to drive that and work with us,... I can't overvalue the role that it played in this in this project. It was really important to have somebody like that there.

Consultant, wildlife/ecology

However, the toll of being such a critical part in the project also had its costs:

...this project has sometimes felt like it [was] all too much, and for one person [at] times ... I've heard that term health and well-being, it's felt like everybody's health and well-being, but my own ... and it has impacted, the amount of work that has been thrown at me has impacted [on me] as well on my family.

Manager #2

Partnership working and engagement with new local partners

Successful engagement with new local partners, such as the local Wildlife Trust, has resulted in both trust and confidence for Welsh Water and potential local partners to explore further engagement with one another, for example, on other sites. The L&L Reservoir Project has enabled a tangible model of partnership working that can be replicated elsewhere:

And they've [local organisations] been able to see the difference that we've made and that's created that positive culture with those groups. It then meant when we were looking at our site at Llandegfedd, which came under huge criticism from..... [and] I was able to speak to the CEO [of the local Wildlife Trust] and [discuss how], 'we want to work with you...let's take the same model of what we've done [at L&L]'.

Manager #2

This partnership working made it possible to meet project goals. A number of examples were provided, two are presented here:

(i) The story trails

This example included a partnership between a local school, the reservoir and the nearby university where a primary education lecturer and a creative writing lecturer worked with children at the local primary school to develop a story based on the reclaimed woodlands. Woodland paths had been constructed by volunteers and wooden sculptures erected to help to mark out the story trail, which enables visitors to hear the 5-part story via QR codes located on the sculptures (see figure 3), commissioned for the project.

And I think this is where working in partnership just made me achieve it. I wouldn't have achieved it if I didn't work it with external partners. For example, the Story Trail that has gone in [thanks to] working with people in Cardiff Met and Cardiff Council ... Story Trail[s] [are] around Cardiff. There are different Story Trails that are broken into parts and it's all part of the Child Friendly City, which is part of the UN [Child Friendly Cities Initiative]

Manager #2



Figure 3 - Sculpture that features as part of the 'Story Trail', a trail developed in collaboration with partners including local school children, Cardiff Metropolitan University and Cardiff Council.

(ii) Water Safety Ambassadors scheme

This second example of meeting the project needs through partnership working was developed with the Aquatic Programme Manager at Cardiff Metropolitan University's Met Sport programme. It was

designed to raise awareness about the dangers of swimming in reservoirs and open water and the risk of drowning targeted at young people;

*...peers are trained up to know what to do if they see somebody in difficult[y],
...young people trained up to know what to do. Some typically spread the water
safety message to their peers...*

Manager #2

Influencing the future – community engagement and ways of working

The project was recognised as successful for Welsh Water in terms of increasing their understanding, knowledge, experience, and confidence about community engagement. Through this experience, it was acknowledged how this has influenced their work, will inform future ways of working and has supported their way of working, including at a strategic level:

*[at a] strategic level ... it has influenced how we work. It's given us greater
confidence to do more of this type of thing and the benefits, in terms of local
communities ... there is a genuine interest, people want to get involved, they want to
be part of something. They want to make a difference and we're starting more and
more to give people opportunities to work with us to make that [happen].*

Senior manager #1

There was also an awareness from senior staff of a significant change in a way of working from consultation and engagement to a more co-production approach:

*And I think we the way that we've engaged with communities has been different
through the Community Woodland Project and the ENRaW [project] ... it's been more
in the realm of co-creation, rather than Welsh Water leading and communicating
what we're doing. ... we've taken it to a different level. I think we've always done
community engagement as an organisation ... but it's been very much us telling
people what we're doing, rather than actually working with them to create, I
suppose, a shared vision and to co-create and deliver enhancement.*

Senior manager #1

The L&L reservoir project and the development of new policies such as the volunteering policy, has also influenced working across other sites, for example through the adoption of this policy in other Welsh Water sites:

*...it was Lisvane Llanishen and [the] second site was North Wales because of the
Osprey project. But now it's [Volunteering Policy] across all of our sites with all of the
Rangers really excited about working with volunteers.*

Manager #2

Balancing obligations

Participants discussed the balancing of roles that Welsh Water have in the community, for example being a utility company but also having a role to play in the protection and enhancement of the environment and the impact this can have on communities and for green and blue spaces. There was a commitment that Welsh Water was 'Welsh and part of the community' and can have a positive impact on the environment but as a utility company they might be aware of reputational risk in respect to public criticism and their primary role in the supply of water and treatment of wastewater.

I think it will always be challenging because we've got to meet those needs. What I think it has helped is how we communicate that message. When I first started working with Welsh Water, they didn't like to talk about the environment and one of the reasons is because, they're not going to open themselves up to challenge... But we've got that anyway, so I think actually they've started now. I've seen a huge... [increase in]... promoting all the positive things that we've been doing and ... have been doing for years. But I just don't think that...people understood... I've seen the way that they work with ecologists and how much money they spend working with ecologists and how they do all of the environmental studies ...it's just about how to then communicate that message I think has changed.

Manager #2

Welsh Water is a not-for-profit company, which means it does not have shareholders, however, the company still needs to maintain a profit, reinvesting back into the company and its investment programmes. As such, the Executive team must balance several needs, accepting that the company must operate in a financially sustainable manner but also recognising environmental and community concerns are also a priority to be addressed before any commercial focus can be applied. The sign at the entrance to the site is an example of this commitment, see figure 4, plus comments from one of the senior managers:

...something I've discussed at length...[is] the balance between community, the environment and commercial. And naturally, this isn't about making huge amounts of money, but it can't make a huge amount of loss either.

But, but first and foremost, there are environmental and community concerns. And we get those two right first, and then you move into the commercial, then that's the right way around. If you do it the other way around...commercial first, then environment or community, then that is probably why you're [on a] hiding to nothing. And it's making sure we get that right focus.

Senior manager #2



Figure 4 - Sign on the gate to the reservoir site whilst it was closed for renovation demonstrating commitment to sustainability.

Challenges

Participants discussed a number of challenges that they had encountered through the project. These included the COVID-19 pandemic and associated restrictions, the conflicting priorities and objectives relating to land use, and health and safety challenges.

Covid-19 restrictions

Early in the project, the Covid-19 restrictions relating to social distancing and access, in addition to the lack of planning permission and facilities on the site adaptations were needed to be made. These included, for example, developing student placements online, rather than in person. However, whilst these restrictions prevented some activities happening as planned, such as a social prescribing programme, they did allow for capacity to move forward with other activities. For example, completing tree safety assessments to ensure future planned activities would be safe for community engagement, and the development of the volunteer management policy and associated administration processes.

Whilst some activities did not occur due to these restrictions, there are hopes this will develop in the future, particularly as the infrastructure has been developed to enable it:

I feel like we weren't able to deliver success [for social prescribing]...I think this site has huge potential for social prescribing, but it has to be open. I don't think prescribers can prescribe this site and the activities, ... [we] started working with the [Health] Cluster in North Cardiff [who] were able to subscribe people [to] become members of the Friends of group.

Manager #2

The conflicting priorities and objectives for land use

Finding the balance between protecting ecology and allowing people to enjoy nature is a challenge faced by many organisations with the responsibility of managing both land use and community access. There is no exception at the reservoir site, where for example, because of the presence of the waxcap fungi, dogs are not allowed on the site. There is a risk if dogs were allowed access, that nitrate levels from their urine would affect the growth of the waxcap fungi. Waxcap fungi a sensitive species to such nitrate changes and therefore at risk if dogs were on site. Managing this potentially contentious issue was challenging:

it has been quite challenging trying to maximise access on the one hand, but doing it in a way that minimises the negative impacts on the site ecology because it is an ecologically very sensitive site and, also, it's an operational reservoir as well. So, it's ...been quite...a balancing act.

Senior manager #1

Health and Safety challenges

Navigating health and safety was a challenge especially with the new way of working with volunteers. Because working with volunteers was new for Welsh Water, the novelty of this made it difficult, at times, to explain to other Welsh Water employees/colleagues that this approach did align with health and safety policies of Welsh Water. An example of this challenge was provided through the construction of the drystone wall building. This was conducted by a charity and volunteers whereas 'normally' this would have been built by a commissioned company with the necessary insurance for construction. But, through communication and explanation, and the implementation of appropriate policies, Welsh Water personnel were able to ensure policies and procedures were adhered to, whilst supporting meaningful

community involvement in the project. Support from senior management to this way of working supported this and was crucial to its implementation.

Future plans

The final theme includes future plans for Welsh Water. During the discussions with the participants, innovative extensive plans and intentions were shared including creating greater accessibility and an inclusive offer, social prescribing, corporate volunteering, a reward scheme and a greater programme of activities for volunteers to be involved with based on a range of interests. A reward and recognition award scheme is currently being developed for volunteers, and there are ambitions to achieve investors in volunteers award for the current Welsh Water volunteer offer:

I've got lots of plans to offer fully accessible volunteering across Wales so looking at lots of different ideas of how we can make it accessible and have a varied menu of how people can access wildlife. ...It's pan disability as well as ... people with mental health, learning difficulties, learning disabilities.

Manager #1

Findings in respect to objective 2: The collective movement – the experiences of the Reservoir Action Group

Four themes emerged from the findings related to objective 2. These themes and their subthemes are presented below, followed by an explanation of each with quotations from the participants.

Key motivations for the Reservoir Action Group members

Key motivations included the value of nature, memories of recreation and emotions connection to the site, and a sense of seeking justice.

The value of nature

In previous years, when the blue and green space at the L&LI reservoirs was accessible to the local community, it was regularly visited and valued by members of the RAG. Individuals enjoyed and appreciated walking at the site, the nature of the urban sanctuary, and the wildlife that included grass snakes, toads and birds.

One individual explained that walking at the site made them feel better in terms of physical and mental wellbeing (i.e., coping with a sedentary job) whilst another connected with the beauty of nature and highlighted the potentially therapeutic and spiritual benefits it could bring to be in a “Shangri-la” with “peace and tranquillity”.

In addition to positive personal experiences for individual members, the idea of the ‘green corridor’ became a key phrase throughout the campaign. The ‘green corridor’ or ‘green wedge’ is the area of green space that runs through the city of Cardiff and is important ecologically and symbolically in the urban area. In this sense, nature is not only something that people experience individually at Lisvane & Llanishen Reservoirs, but a collective idea to rally around for everyone in Cardiff to protect against future threats to green and blue spaces in the city. This idea presented below:

Right from the start, RAG had formulated our strategy and [the] biggest part of that was establishing the Cardiff Northeast green wedge as it was called, so this green corridor. ... And that was, I think, a very, very important thing to establish right from the outset. And all the different groups then bought into that, and it was a real focal point, I think, as a challenge to Western Power. I think, so, we have a strategy for the future, if you like. It's not only winning the campaign, but where actually the reservoir sit[s] within the framework of Cardiff because it's part of the green corridor, so you can sort of walk from the middle of town right the way up to Caerphilly Mountain.

Samuel

Memories of recreation at Llanishen Reservoir

Utilising Llanishen reservoir for recreation activities, including fishing, walking, and sailing were fond memories discussed by the group. This was a key feature of the cultural heritage of the site, as something to share with family members and to pass down to future generations. RAG members shared stories about learning to sail and teaching sailing and took pride in the fact competitive sailors learnt to sail there, including the Olympic medallist Hannah Mills.

I and quite a crowd of us were helpers who would go out with the children in the boats and give them a bit of confidence and just help them with the sailing. And I regarded Llanishen reservoir as an ideal location for teaching children to sail. Because it was big enough that they could get up to speed and get a bit of excitement. But it wasn't too big that it became a sort of threat or a danger to them if they capsized, you could be with them very quickly. And I did that for many, many years.

Robert

Strong emotional connection to the local reservoirs and seeking justice

The announcement in 2001 that a housing development was planned on the reservoir site was met with upset from members of the group. Robert said: *"when it was suddenly announced I was absolutely, shocked because there'd been nothing said"*. Members expressed their concern and anger through emotive language, such as *"gobsmacked", "mad", "tamping", "worry", "outrage" and "depressed"*. The language suggests a strong emotional connection to the reservoir site and that instinctive/visceral reactions led to members wanting to speak out and take action to protect the reservoirs.

Justice was the key motivator that led to members pursuing a relentless campaign spanning two decades. This began with the shock of the initial announcement as mentioned, but continued as the campaign went on, as the perceived aggressive tactics of Western Power Distribution became more apparent. The aggression was in relation, firstly, to the lack of communication with the community, secondly, the lack of care of the site itself and, thirdly, in their interactions with the campaigners in the planning battle. Samuel used the analogy of the film Erin Brockovich to outline how he saw the campaign – where citizens take on a corporation to protect a national asset.

Fighting for justice, isn't it? That's what it's all about. This to us was an unjust thing that they were trying to do ... it's a legacy for future generations. That's the way I looked at it from the early stage. ...

Samuel

The participants also described some of the tactics that had been used and one story in particular where a cleaning up process of the stones around the reservoir was put into place to prevent the findings of lichens during an ecological survey:

And then they were worried that the lichen, because this was well over 100 years old, the lichens on the banks. They were worried that they were going to get listed for the lichen because they already had a SSSI on the [recording sound distorted]. And they sent a guy around with a pressure washer to pressure wash all these stones and he did... he was working on it for about a week cleaning these stones so that they couldn't do an ecological survey to find out what was there cause the[y] were already finding waxcap fungi there, which they can't find anywhere else in Europe, so generally, it was very aggressive.

Matthew

However, the campaign was successful, and much celebration was had when this was announced in the local papers, see figure 5 below.



Figure 5 – Newspaper cutting detailing the campaigning success for the RAG to protect their local blue and green space, and images of the iconic placards that lined North Cardiff in the 2000s. Cutting shared by one of the RAG members.

Key events and memorable times in the campaign

Exploring the lived experiences of members of the RAG including recalling key events and their meaning to them, these included public meetings, input at the public inquiry's, raising funds for the campaign, both low points and turning points of the campaign.

Public meetings

Three public meetings were highlighted by the group, both as fond memories for them as individuals as well as key moments in the campaign:

- 1 A public meeting, early in the campaign (4th December 2001) to inaugurate the campaign at the local Rhydypennau Primary School. 600 people attended and was described by one participant as 'brilliant'. Participants stated what a pleasant surprise it had been to see large numbers attend and noted that that there was not enough room in the school to host everyone. This response was captured in the local Liberal Democrat Focus newsletter which had the headline 'Massive response to reservoir campaign'.
- 2 An outdoor public meeting at the car park by the reservoir.
- 3 A public meeting in a Lecture Theatre at Heath Hospital in 2003 just after the first planning meeting. This meeting updated members on campaigning matters and again, large numbers of people attended, around 700, and the group had booked the largest lecture room they could find to accommodate them all. The South Wales Echo covered the story, see figure 6 below.



Figure 6 - Newspaper cutting showing an example of public support at Heath Hospital, from South Wales Echo (29 January 2003), shared by one of the RAG members.

Input at public inquiries

Four public inquiries were the key milestones of the campaign and formed the most important elements of the RAG campaign. In each inquiry, the campaign group was one of the key participants (usually along with Cardiff Council and Western Power Distribution).

It was not within the scope of this study to explore these events in detail, but further information is available on the [RAG website](#) and in a forthcoming book, by Richard Cowie, due to be self-published in 2023. However, the text below from an email received by one of the RAG members, after the focus group took place, demonstrates how intense and extended the campaign was for the RAG members:

Three planning Inquiries took place in 2006, 2008 and 2011. There was also a fourth inquiry into our attempt to declare the Nant Fawr Meadows, alongside the reservoir, as a village green. Again, this was an initiative started by [name of the second RAG Chair]. This would have stopped Western Power putting in their proposed access from Rhyd-y-penau Road, but unfortunately this failed on a technicality. All of these inquiries stretched our funds to the limit. Western Power had a high-powered legal team, led by [male name], a leading London QC, assisted by another barrister and senior partners from the solicitors, [name of solicitors firm]. Western Power must have spent millions on legal fees, money was no object to them. The only reason we won was because we got the reservoir embankments listed as a Site of Special Scientific Interest for their internationally important collection of grassland fungi, and Llanishen reservoir registered as a structure of historic importance. This also supported its setting or surroundings. In the final inquiry, the planning inspector

decided that water was a more appropriate setting for a reservoir than a housing estate.

Winston

RAG employed barristers to represent them, which was extremely expensive, and was the main aim of the fundraising activities. One main barrister was sympathetic to the cause and acknowledged the knowledge the RAG committee held, as Robin explained, “*he [the barrister] said, ‘I’ll come up when I need to speak’ and that’s how legal costs were able to [be] kept lower*”. On one occasion however, a less experienced barrister represented RAG, and this was deemed as disastrous:

There was one planning inquiry where [former Chair] had economised a bit on his legal representation and there was this poor young ... trainee barrister or a new barrister and she was in the inquiry, and I just remembered the poor thing trying to stand up to [male name of Barrister] and we were all up in the public gallery and ... I just remember her sitting at a desk just looking down... Her law firm shouldn't have put her in that position. Very unfair, and I remember (a woman's name), one of the ladies who supports us. I was sat with [her] up in the public gallery and [she] said ‘Tell her to sit on the side and I’ll go down’ and argue’... it was horrible. It was horrible.

Robin

Raising funds – the walking group

One campaigner in the focus group was a keen walker and spent time organising walks around Llanishen, and beyond, to raise funds and publicity for RAG. It was highly successful because local politicians also got involved. The Save Our Cardiff Reservoirs Walk (SOCRW) group ran parallel to RAG, but the founder then joined the RAG Committee. It is an example of how the community came together for the campaign. Politicians from across the political spectrum took part in the walks including Julie Morgan AM (Labour), Eluned Parrott AM (Liberal Democrat), Jonathan Evans MP (Conservative), and Rhodri Morgan Former First Minister (Labour). The participant who organised three of the walks, said “*we had the politicians involved as well, they supported it very well*”.

Low points in the campaign

Two low points were recognised by the campaigners who spoke passionately, forcefully and in detail about the campaign. The first was a setback at a public enquiry when at the initial hearing there was an inspector who was sympathetic to RAG’s arguments, but the subsequently a second inspector was appointed following Western Power Distribution’s appeal and the submission of an amended application. The second inspector was not seemingly so sympathetic to the campaign, and this was seen as devastating for the campaigners; “*felt very low at that point*”. The second low point was the request from a reservoir engineer to inspect pipes running along the bottom of the reservoir which resulted in the draining of the reservoir. The RAG was unable to fight against this decision because it was made as a safety issue under the Reservoir Act 1975. The impact of this on the RAG members was significant, partly because of the symbolic act of draining the reservoir:

One of the worst things that happened, I think another low point was at the start of the second inquiry, the 2008 inquiry. Western Power got the reservoir engineer who’s in charge of reservoir safety to do an additional report. [the] inspection...found that there was some pipe running along the bottom of the reservoir that needed to be inspected, and he said that the only way of inspecting this was to actually drain all the water out of the reservoir.

FoCR committee member

Turning point - Reservoir listing as building of historic importance for Wales and CELSA Steel (UK)

The 'turning point' of the RAG campaign was the designation of Llanishen Reservoir as a Grade II Listed Building by [CADW](#) on 24/07/2009 (Ref 87591); thus the reservoir was deemed as being of "special architectural or historical interest to Wales" (CADW, 2023). A RAG member, who had previously worked at Cardiff Council in the Planning department, explained that the achievement by the second RAG committee Chair, finally defeated Western Power Distribution:

Llanishen Reservoir is the 4th, [and] last, in the in the stream of reservoirs starting in the Beacons. The top three were already listed for their historic interest and for reasons best known to them, Llanishen Reservoir hadn't been because I think they were arguing that it was...only a storage reservoir. It's not a huge impounding reservoir. But [the second Chair of the RAG], ...an architect... put in a submission which we all wrote in support of for the listing and put in very, very cogent arguments which wasn't accepted the first time round...It went into a High Court hearing, which I attended, and my abiding memory of that is the judges determination...he'd been forced into doing it by lunchtime because everybody had to go elsewhere in the afternoon. So we went away for an hour, came back and without notes...he went through point [by] point and completely rejected Western Power's arguments and as a result, the reservoir was listed...so I think that was a very, very significant point.

Robin

Robin explains that whilst the remaining process was "more complicated after that and took a bit longer", effectively the efforts from the Chair at the time, were the key pivotal moment that finally "swung it". The successful listing of the reservoir included its actual structure and also the setting, which meant that the planning appeal from Western Power Distribution could not be successful and, according to the RAG members, the Barrister for Western Power, at the inquiry, "knew he'd lost".



Figure 7 – Photo of Andrew Hill (former RAG Chair, left), Julie Morgan MS (centre) and Richard Cowie (former RAG Chair, right). Photo taken from www.westwaleschronicle.co.uk published 18th September 2023

The activities of the RAG did not end when Western Power Distribution left the site, as Winston, explained, via an email, sent after the focus group:

When Western Power walked away 2013 they left Llanishen reservoir empty, damaged and officially abandoned. The reservoirs were bought by Celsa Steel who wanted to secure their water supply from Lisvane reservoir. The UK steel industry was undergoing a crisis at the time, with high energy costs and cheap Chinese steel

flooding the market. They did not have time or money to spend on the reservoirs then, they were just trying to keep their business afloat. When we did finally meet with the Spanish CEO of Celsa, he turned out to be a lovely guy. He admitted they knew little about reservoirs but seemed keen to take into account our wishes to see Llanishen reservoir refilled. Although it took considerable time, during which we had to be very patient, they negotiated a deal with Welsh Water to restore the reservoirs and open them as a public amenity, at the same time ensuring their water supply. It was a great deal, which was a win for Celsa, a win for Welsh Water and a win for us. Welsh Water spent a lot of money restoring the reservoirs. We are very grateful to both companies.

Winston

Features of the campaign

The features of the campaign included the strategic effort to achieve the aim, and the key leaders who led the campaign, the strong local support, and remaining apolitical.

Strategic efforts

The RAG campaign was a highly organised, strategic campaign that involved professional, highly educated citizens on its core committee. Key individuals made the campaign a success, including individuals with a background in politics, local authority planning and broadcasting:

On the sheer professionalism of the campaign, ... you can't fault it because we had a firm strategy right from the outset about what we needed to achieve, how we needed to achieve it. And it was just clear all the way through. No one was in any doubt as to what needed to be done and that to me is very important.

Samuel

One of the RAG members, with a background in political campaigning, was focused on ensuring RAG maintained efforts on outcome-focused activities rather than petitions, for example, because they would have minimal impact on decision-makers.

We organised this meeting early in 2003 at the Health Hospital so that we could brief members as what to write and how to approach the planning applications ... [name of RAG member with a background in campaigning] was dead against people standing with placards at places and also was dead against petitions. I mean, he thought petitions were a waste of time and all through we encouraged individual people to write as individuals to their .. local politicians ...

Winston

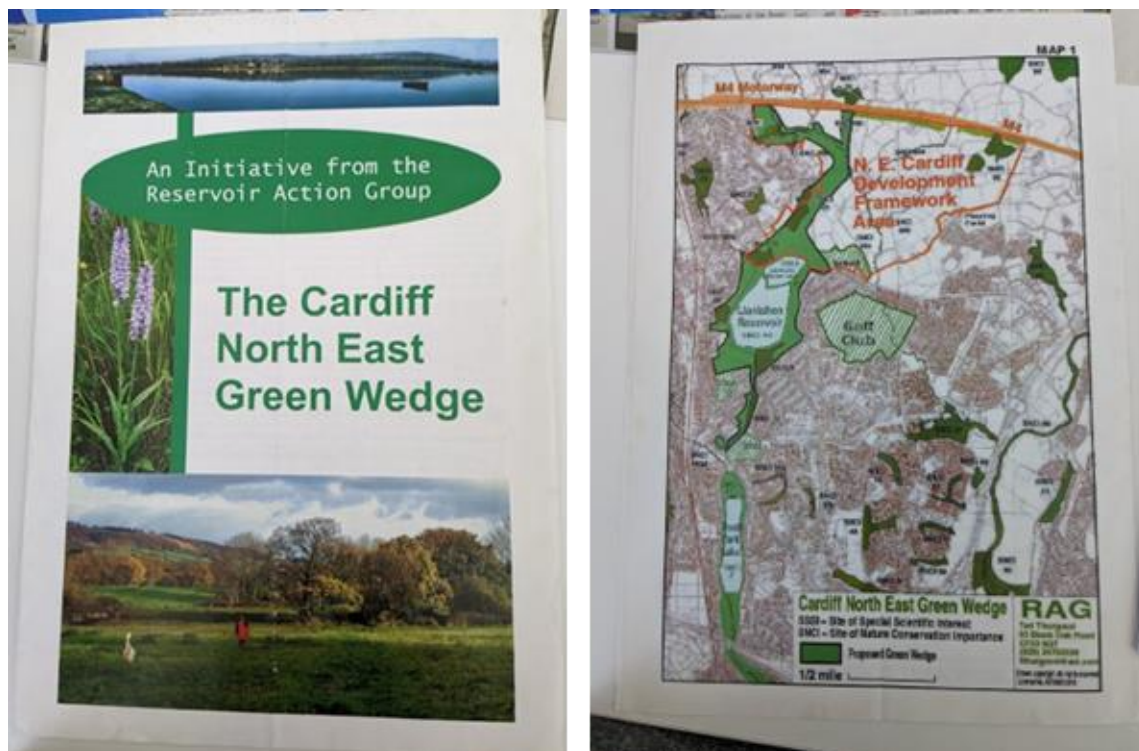


Figure 8 - An example of literature developed by the RAG about the 'green wedge' (and later 'corridor') that people rallied around. Shared by Samuel.

The leaders in the campaign

Each member of the group was vital to the RAG campaign, and were valued for their skills and differences: *And that's basically what you've got here...all these wonderful people with all these different skills. Different personalities and all the rest of it and we all came together...*

Samuel

Two people were discussed in the focus groups and viewed as being key to the campaign, both the former Chairs of RAG. The founder and original Chair was heavily involved in one of the main political parties in Wales and used his knowledge, network and political prowess to lead a strategic and ultimately successful campaign:

[the Chair and founder of RAG] was really politically clued up and had lots of contacts and knew how the political system worked. And that was a great help to us...

Winston

RAG members spoke positively about his hard work, decision-making and leadership. They also spoke with good humour about his astute decisions, such as to remain party apolitical and to focus the campaign on activities such as planning battles rather than public demonstrations and petitions.

In the RAG committee we discussed these signs [blue placards] and ...they were going to be quite expensive, and we thought, 'ohh, that's ... a lot of money to spend on the signs'. [Founding Chair of RAG] was absolutely adamant that we needed these signs and he sort of more or less browbeat us into agreeing... and it turned out, it was such a good move. You know, [he] really knew what he was doing about when it came to campaign.

Winston

The second Chair of RAG, also played an important role in sealing the success for Reservoir Action Group, including the successful listing of the reservoir as a Grade II Listed Building by CADW and the fourth planning application to have the reservoir designated as a village green.

Strong local support

Winston explained there was an *"enormous response from the local community"*, in terms of, for example, distributing leaflets, attendance at local public meetings and *"just massive, massive support from everyone who lived locally"*. Support was demonstrated through fundraising activities too, such as the walks mentioned above, buying and selling merchandise and donations:

In the early days, everybody mucked in. Anybody in the area that had a skill that could do paintings or, china or anything like that.

Samuel

Yeah, pottery. It was a proper community. And we have some very, very generous benefactors as well. People who make donations. I mean, one was actually a five-figure donation.

Winston

The local Echo newspaper was also supportive of the campaign. They conducted a poll of its readers on whether the paper should support the campaign which resulted in them supporting the RAG campaign. Participants in the focus groups and discussion agreed it was a key factor for the campaign's success.

Campaign crossed party political boundaries

The campaign crossed political boundaries which resulted in individuals and political parties able to support it, regardless of political affiliation. The support was demonstrated through committing of fundraising campaigns like walks, committing funds (e.g., the Liberal Democrats) and attendance at meetings and press events. This was due to the strategic way the RAG members took their campaign forward, but it was also fortuitous that the reservoir site is at the meeting point of party-political boundaries in North Cardiff, and so became a campaign that each party wanted to be involved in.

Yeah, because they normally want to score points against each other, but in fairness they worked together, and it was a common [cause]

Robert

Impacts of campaigning on the committee members

The impacts of volunteering on physical health, mental wellbeing and social health of the RAG members were discussed and focussed on their feeling of campaigning together for a shared and common cause. In terms of social wellbeing, the group recognised that they were able to make new friends, were buoyed by the support of the local community and gained self-worth from standing up to the challenge and 'fighting' the development. As Robert puts it: *"I think we started off on the feeling if we were gonna [sic] go down, at least we were gonna [sic] go down fighting, you know?"*

I was told in the early days by various people 'there's no way you're going to win this. You're up against these people who are very powerful, and they've got lots of money and you're wasting your time' and these are people who knew a few things about things. And I said, 'Well, I'm going to do my damndest to fight them'. And I said, 'I know I belong to an organisation now that is like minded'. And I said 'these, people have got a real fight on their hands'. And that was the whole focus of it.

Robert

In terms of physical health, Matthew jokes that their health improved as they were taking part in demanding activities, such as placing placards posts in the ground, implying the manual job made him stronger. In terms of mental wellbeing, nobody identified with feelings of 'stress' from volunteering for RAG, only concern over the outcome of the campaign, and disappointment from decisions in the planning processes.

Also, I think everybody knew what they were doing. I mean, what I was doing wasn't that much different from what I've been doing when I was working for the city planning department, so in that sense, it wasn't stressful where you had to think 'I don't know what I'm doing here, what do I do?' I knew what I wanted to do. So, the only stress, if it existed at all, was in anticipating the outcome.

Robin

Findings in respect to objective 3: Volunteering – experiences, motivations, and outcomes

Five themes emerged from the findings related to objective 3. These themes and their subthemes are presented below, followed by an explanation of each with quotations from the participants. The first theme presents a brief background and introduction to the FoCR that arose in conversations, followed by the themes, getting involved and motivations for volunteering, activities, benefits of volunteering and perceptions of the volunteer management system developed by Welsh Water.

Friends of Cardiff Reservoirs (FoCR)- background, introduction and future plans

Friends of Cardiff Reservoir is a community group that was set up in 2021 by Welsh Water and Reservoir Action Group. It aims to promote and facilitate community involvement in the L&LI Reservoir site and has different aims therefore to RAG. This is explained below by one of the participants:

The main objective is really to encourage and facilitate community involvement with the reservoir project. So, we're different from RAG. The Reservoir Action Group, they were really campaigning group with a point of view and would make representations. Our members might want us to go in different direction, but so far, we've been about enabling participation, getting the community involved, sharing information, so working constructively with Welsh Water to make the best of the resource for the community...

Committee member

In the initial days once the group had formed, due to site restrictions and the pandemic, there were limited activities the group could be involved in. However, since these restrictions were removed, the FoCR now meet on a monthly basis with a formal agenda and review minutes, discuss topics such as the website, social media, insurance policies and links with other organisations (e.g., Keep Wales Tidy and Flat Holm Society). The Committee members are individuals who have, or have had, professional roles in charities, schools, public health, accountancy and education. Since the creation of the FoCR there have been two chairs, sadly the founding Chair, Paul Davies, passed away on 29 December 2022.

The FoCR have a logo, which was designed via a competition at one of the local primary schools, Rhyd-y-Penau, where children designed possible logos, with one was chosen as the winner and then created into a formal logo by a design company. The logo is below in figure 9, and shows the water, water sports, the waxcap fungi and wild life.



Figure 9 - Friends of Cardiff Reservoir logo.

The FoCR are an independent constituted group who have a positive working relationship with Welsh Water. A Welsh Water representative attends the monthly meetings and there is a standing agenda item to share site updates with the FoCR. The relationship with Welsh Water was explained as:

Making sure that people are in place to run the activities and the Rangers are there and so on and that's done with Welsh Water. So, sort of agreeing a programme of work with them. It's [a] very joint enterprise.

But also in terms of the volunteering opportunities... They normally have a list of things that the Rangers, or whoever, would like help with, and we have some ideas of what would be quite good to do.

Committee member

The Committee recognises potential conflict that could emerge between a 'Friends of' group and a company who manage the site but efforts are made to avoid such scenarios:

It works well. I do think we have to be careful to steer away from any controversies ... this project, it's involving the community offering volunteering opportunities.

Welsh water ... currently under the cosh for things...in Hailey Park...and so on. There's a Friends of Hailey Park and so you think 'we don't want to be on one side or the other of that argument'.

Committee member

One member of the committee identified that there is mutual benefit in the 'Friends of' group and Welsh Water working together. For example, funding applications for projects are more likely to succeed when an organisation work in collaboration and recognise the importance and value of working with a community group. The positive outcomes are mutual and there is no evidence of an inequitable relationship:

I think it's an advantage to them to have us, so they apply for community funding ... which helps fund many of these activities, but they probably struggled to get that bit accepted, unless they have some sort of arrangement with a voluntary group... So there's symbiotic mutual benefit from that.

Committee member

The FoCR has been successful in recruiting a large number of members. Two hundred and thirty people are members of FoCR and around half of these have registered on the volunteer management system, and 70 people have taken part in at least one volunteer activity. The volunteers opt into activities advertised on TeamKinetic (the volunteer management system) and they can log their hours to see how many volunteering hours have been completed. In total, at the time of interviewing for this study, summer 2023, prior to the official opening of the site, over 900 hours of volunteer time had been logged. According to one committee member there are many benefits for the volunteers, including:

I think it gets people doing more exercise, knowing more about nature, appreciating the environment, changing people's attitudes about protecting the environment, about species and so on.

Committee member

In terms of future plans for the FoCR and its activities, they are keen to involve further groups such as the Scouts, local schools, and to work with more marginalised groups such as asylum seekers and

refugees, who are exempt from seeking paid employment. To date environmental projects have been at the fore of activities of the FoCR due to the nature of the project but in the future, there are plans to expand the range of opportunities, and for volunteering opportunities to be at different times so that people who work during weekdays can also join in.

Getting involved in, and motivations for, volunteering

How participants got involved in volunteering and their motivations for doing so, are presented in this theme. Motivations for getting involved included connections and memories of the site, protecting nature and the environment, contributing to the community, and making new connections).

Getting involved in volunteering

Several of the volunteers learned about the opportunity to volunteer through the Welsh Water newsletters or via social media, for example: *"I think I first heard about it from a newsletter, maybe that came through the door". Florence.* As a result, Welsh Water and FoCR were able to reach out to new audiences and people (i.e., not just people who were involved previously in RAG). In fact, some had not ever heard of or been to the site despite living locally. This resulted in a mix of people with memories of RAG campaigning, but also individuals who were forging brand new relationships and memories with the site. Volunteers were highly motivated and passionate, and many participants took part in other environmental volunteering and campaigning elsewhere.

I do a lot of volunteering I belong to community gardens so I do volunteer there in my local hub, and the Save the Meadows and Save Hailey Park so there is an awful lot of volunteering right now.

Janet

I volunteer for various different organisations...I volunteer for the Woodland Trust, doing the ancient tree inventory. You go out and you look for ancient trees, and then you record them so that they can hopefully be protected. I also work up at Forest Farm with Coed Caerdydd which is the tree planting initiative.

Florence

For one retired volunteer it was an opportunity to do something rather than be at home:

"But my, my kind of logic was ... rather than be retired and sit on my bum at home and do nothing, I want to do something."

Ray

Motivations for volunteering

Connection to and memories at the L&LI Reservoirs

The connection to the blue and green space was clear to the researchers and appeared to be a strong motivator for the participants, though it was not explicitly articulated. Two participants lived very close to the reservoir site and shared memories of time spent there:

Lovely walks with the kids, it was quiet. And I remember finding a bee orchid at the car park. And some really quite rare plants actually. And loving these waxcaps. Just on my own, nobody was there to tell me, but I knew what they were.

Eliza

it was really the place to live actually ...the reservoir, it's just part of our life right from the beginning...

Janet

The practical aspect of volunteering at the reservoir that is close to their homes was also noted by participants. It was recognised that it was nice to not have to travel or rely on a car to attend the sessions.

Protecting nature and the environment

Volunteers spoke about a desire to protect the environment, and for Florence she was motivated to volunteer to contribute to protecting the reservoir site for future generations: *“But I’ve got an interest in the environment and ecology. I did a bachelor’s in 2019 in Natural Sciences. And I’m starting a Master’s ...[name of University redacted for anonymity] in biodiversity, wildlife and ecosystem health.”* Florence

Making a contribution to the local community and doing something beneficial

Participants volunteered because they wanted to do something beneficial for the local community: *“I like doing things that involve your local community ...getting involved in useful ... contributing to this social structure of an area.”* Adam. Furthermore, the cultural significance and history of the site gave one participant a desire for it to succeed:

Well, I think there’s a ...cultural weight. There’s a responsibility to that history to actually make this work as a project. And the fact that Welsh Water see it as a pilot of how to involve themselves with the community and their volunteering on some of their other sites as well, so that feels quite important because it’s really doing something that might transfer more widely.

Committee member

Making new connections, including during retirement

Volunteers spoke about how retirement had given them the time to pursue either existing hobbies or new interests. Ray was drawn to the novelty of the activity but also later in the session reflected that self-esteem and confidence is important to maintain following retirement, and volunteering can be an important factor in facilitating that:

I was looking to getting involved in volunteering, and I knew that was down the road. Because it’s like 10 minutes’ walk, so I just thought, oh, I’ve never done that before.

There’s context in terms of what happens after retirement, because for me, you finish working full time, you’ve got all that confidence from working full time so do you retire and then stop, start something completely different, do you use some of what you already have moving into that first phase of retirement or do you stop and not do anything. And for me, I’m learning how to retire, and volunteering is one option out of that. Do we have the same self-worth? Do you create a new self-worth?

Ray

Adam also speaks about making new connections and getting involved with his local community, but demonstrates that people have multiple intentions to get involved in volunteering, rather than one distinct aim. Here he speaks about educational opportunities that are appealing to him as a teacher:

And, of course, I’ve got half an eye on the fact that, when I retire, I’m going to be living around here. And because the environment is important to me, and also a bit about the educational opportunities at the centre they’re building there and that appealed to me as well.

Adam

Activities

Participants in the study had taken part in a range of activities including conservation, ecology and land management work, information sessions (e.g., tree identification, waxcap fungi counting) and training such as Mental Health First Aid training.

I started with the waxcap counting with the ecologist, and then kinda [sic] cutting down the greenery, raking grass, drystone walling...

Ray

In addition, information and education sessions took place, and also practical sessions such as building structures for the site, such as a drystone wall:

I've done drystone walling, some clearing round the ponds. We had to clear out willow and then ... I went to a session which was about tree identification, but it wasn't really about doing anything as such, I think there's [plans] just to upskill volunteers so when they eventually open the facility, we'd be able to guide members and public around or whatever.

Adam



Figure 10 - The reservoir today, taken July 2023, and figure 11 – Volunteers build a drystone wall at the site. Image shared by Friends of Cardiff Reservoirs.

One participant also complemented Welsh Water for the good quality, appropriate manual handling training for volunteers, which, for them, had not been experienced when volunteering elsewhere with other organisations.

Some activities took place over several sessions, for example the building of the bug house, and others were just a one-off session. Participants enjoyed the sessions and the structures they created, some of which provided new experiences and knowledge about the local ecology:

It was a properly designed thing. And I never knew what a bug hotel was. Designed it in terms of the different materials and the different layers to attract different animals and whatever. But that was a team effort, so disappear off and ... come back another week and build it. And you're thinking 'wow, that was absolutely superb'.

Ray

Future volunteering activities are planned and there are intentions for FoCR volunteers to welcome visitors to the site as ambassadors, and to continue with supporting the ecological infrastructure at the site, such as building a structure for birds.

Experiences and benefits of volunteering

Experiences

Some good experiences were recalled by the participants in relation to their volunteering, related to the activities detailed above. Furthermore, it was also felt that Welsh Water recognise volunteering and community involvement is of value and is an outcome for the project, in addition to completing the important activities and tasks the volunteers do in their sessions. There was acknowledgement that Welsh Water have the resource to outsource many of these tasks but have a commitment to the local community to get involved and play a part in the site:

So, the volunteers are sort of icing on the cake. I think sometimes the effort is as much as encouraging the volunteering and getting the involvement of people as much as the actual cause. They could just pay a contractor to do some of this but it's, it's involved in the community and getting people involved. Yeah, getting people connected to the reservoir.

Committee member

Benefits

There were several benefits identified from taking part in volunteering including physical and mental health, a sense of achievement and positivity, providing people with a local connection, an opportunity to get outdoors, and learning and sharing new experiences.

Physical and mental health

Ray shared that the drystone walling activity (that required manual handling work) helped him gain strength in his back, and explains that outdoor volunteering at the reservoir could help other people with maintaining their physical health through enjoyable outdoor activities:

It helped my back. I'm quite sporty and active anyway. With the drystone walling, it went through a number of phases, we had to find the stones, move the stones, and this was over a number of sessions, and then eventually you got to build the wall. So you got to know all about the logistics of how to start building a wall and preparing for it. But the fact that you got to build the wall, and you were at it for 8 hours, you were absolutely knackered and you really appreciated the amount of effort involved in building something like that. Getting up at 8am in the morning and going for a couple of hours to do some cutting of something and the mist is on top the water and the birds are on the water and you think 'this is just mmmmmmmmm [i.e. a nice feeling]'.

Ray

Mental health benefits from volunteering provided people with a sense of achievement and a feeling of positivity, for example Florence identifies being in green and blue space as contributing to these feelings and providing a sense of achievement through contributing to something:

It's not just the physical benefits, it's the mental benefits. I think you just get that... I mean, I just enjoy being out in nature anyway, but when you finish that session, you get that sense of achievement, the sense that you've sort of contributed to something, you've made a difference, and that's positive, mentally.

She further elaborates that taking part in the activities and sharing her experiences with other people who are not volunteers with FoCR gives her a sense of pride, and something to talk about with them that is of interest:

And to take pride in something that's, you know, a lot of people don't know about it. People ask what you've done on the weekend, and you say, 'I've built a drystone wall and they're like 'where you've done that?' and you tell them about the reservoir and people don't even know it's there.

Florence

A feeling of local connection

The participants explained how volunteering at the reservoirs had given them the opportunity to be more connected with local people, which was linked to different types of connections for different people. These connections included:

1. A sense of connection to the community – *"Connection as well, connection to your community, feeling like you belong in an area by contributing. I think that's really important, and I think that's really missing from a lot of aspects of society and I think volunteering really gives an opportunity to feel connected to the people in your local area."* Florence

2. Connecting with people with different life experiences:

...doing volunteering you get to meet all sorts of people from all sorts of walks of life. ...You come out of a professional silo, and you get to know learn about what other people do and that's been a really important part of all the volunteering things I've done really...

it's more about meeting people... like, I spoke to [name redacted] about what he did in the steel works... and I wouldn't have a clue about anything like that and I learnt things from that from the brief conversation with [name redacted] and that enriches you, doesn't it?

Adam

...since I've retired I think you miss the mixing with people, you know, you used to be with people in work. So I think it's a way of not only doing what I enjoy, but also meeting other people and really interesting people, because you get people from all kinds of backgrounds and ages.

Florence

3. Connecting people (a member of Welsh Water staff) who shares the same hobby: *"... a bizarre unseen benefit for me is that I'm a wood turner and [name redacted], one of the wardens, it transpired in the conversation, he did green oak work back when he was younger, and both of us have gotten loads of logs, ... both our wives have threatened to divorce us unless we move our logs and I said, 'I've got a garage full of logs', so we've been swapping logs. How sad is that? But it would have never happened if, you know."*

Ray

Getting outdoors

One volunteer recognised that being able to spend time outdoors is positive for wellbeing and the opportunity for social interaction:

I just love being outdoors. Just the fresh air. Just enjoying your surroundings. And of course, there's the social side of it too, volunteering, so I don't mind as long as you've got the right clothes on, it doesn't matter what the weather is like...

Florence

It was also commented upon that the blue space, the reservoir, provided a sense of calm and peace for people: *"especially when you stand in the reservoir it's absolutely tranquil and calm and there is no traffic noise, there's nothing, and it's wonderful, it's a really calming place."*

Eliza

There was also evidence that people felt connected to nature being outdoors volunteering which was beneficial: *"I think human beings are meant to be outside aren't they? ... You are part of the environment and when you go into a natural space you feel connected to the environment and all of the things in it, the animal life and the plant life and it's very grounding. ... As we become more and more ... urbanised, we lose that and I think that affects mental health."* Adam

Another participant also commented that as well as appreciating being away from a desk, outdoor volunteering was an opportunity to do an activity that was similar to his interests that he couldn't pursue through paid employment: *"...tried woodworking jobs for tree fellers and stuff like that, but I'm not competent [he does not have qualifications] to do it, so this is the next best thing."* Ray

Learning new knowledge and skills and sharing with others

There was evidence from the participants that volunteering had allowed them to upskill in new areas, including some areas, they may be less confident with:

The dry stonewalling is physically demanding work and not something I'd normally be interested in. But I did really enjoy it. ... So, it's really interesting to go along and upskill myself in those sorts of areas as well.

Adam

As well as learning skills directly from training, participants also enjoyed sharing their experiences and new found knowledge between their fellow volunteers, and that this created for them a form of social network:

and it makes you aware of other volunteering opportunities that you might get involved in...and a lot of volunteers you meet often volunteer in other places so there may be a volunteering scheme you're not aware of that might interest you so in a way it's a sort of network. ...

Ray

They also enjoyed sharing their knowledge about nature with members of their friends and family: *"I was boring my partner with tree identification...I'm not boring her, she's quite interested really..."* Adam

Volunteers also acted as promoters of the FoCR through the sharing of their experiences of volunteering and of the site, in the hope to raise more awareness and encourage more people to get involved in volunteering:

And that's the good thing as well, it's guessing what you've done, it makes more people aware, and it may encourage other people volunteer as well so it's positive all round.

Florence

Volunteer perceptions on the volunteering management system

Everyone with the exception of one participant spoke positively about the volunteering management system in terms of the range of the activities, communications with the Volunteering Manager and ease of using the software. One participant had not yet begun using the management system, TeamKinetic and expressed concern about her ability to utilise the online system.

One participant, Florence, commented that it was helpful to have a variety of activities displayed on the volunteering system as she could choose ones that were suitable for her, especially she manages an injury which restricts some physical work for her. Ray described the ease of the volunteering system; *“with the click of a button, you can log yourself in”* and praised the communication with the Welsh Water staff through the system; *“And yeah, there's no hassle, the communication around that is absolutely superb”*.

One area that Adam mentioned that could be improved, would be to have a method of communication between volunteers, as the Kinetic system does not allow for this. This would allow further social interaction and discussion amongst people who have built connections: *“some people might really benefit from being able to build social connections through it a bit more by knowing who's going to be there”*.

There did however appear to be some lack of clarity over the roles in the volunteering, and of the roles of the FoCR committee, Welsh Water, and the RAG. Participants appeared largely unclear about the Friends of Cardiff Reservoir group committee's role in the volunteering set up, and one participant associated their current volunteering activity with Welsh Water and the Kinetic system only. There was also some confusion over whether you had to be a member of Friends of Cardiff Reservoirs to be able to volunteer.

Summary of findings

The following key findings emerge in respect to the three study objectives:

Objective 1: To investigate Welsh Water's role in supporting social and cultural history – explore the social and cultural importance and significance of the reservoirs as a green space, a protection area for flora and fauna, and a site of heritage for schools, communities and visitors, and the role of Welsh Water's projects to enable this.

Objective 1 summary findings:

- The Community Woodland Project has made positive, long-lasting impacts on green space and biodiversity, such as the removal of invasive species and reclamation of a pond.
- The positive environmental outcomes have been enhanced by community involvement, for example by supporting land clearance.
- Welsh Water have developed and rolled out an effective and popular volunteer and community engagement programme. There is evidence this is influencing wider Welsh Water practices at other sites across Wales.
- Working in partnership with local communities and organisations is perceived as positive by staff at Welsh Water. For example, employees saw the ecological benefits of working with Wildlife Trust of South & West Wales, the health and wellbeing benefits of programmes such as development of a Story Trail working with the local authority and the neighbouring university. In addition, participants spoke about seeing the value of involving people and supporting their personal development.
- The Welsh Water activities at L&LI reservoir have had health and wellbeing benefits for volunteers at the site. It is anticipated that future activities at the site (leisure activities and social prescribing) will further contribute to the health and wellbeing of the local community, and visitors to the site.
- The volunteering opportunities, education programme and engagement with local groups, coupled with environmental enhancements at the site aligns with the principles of the [Well-being of Future Generations \(Wales\) Act 2015](#), including '[A Healthier Wales](#)', '[A Wales of Cohesive Communities](#)' and '[A Globally Responsible Wales](#)'.

Objective 2: To explore and understand the collective movement - capture the lived experiences of members of the RAG involved in the preservation of the reservoir from 2001 to 2015.

Objective 2 summary findings:

- The campaigners have strong emotional links to the Lisvane & Llanishen Reservoirs based on memories and personal histories.
- A fierce sense of justice motivated the group.
- The RAG campaign was highly strategic and the core committee members were skilled and knowledgeable individuals.
- The RAG activities gained strong local support from the public, media and local politicians.
- The campaign success has resulted in a renewed future for the reservoirs and for generations to enjoy the space.

Objective 3: To explore volunteering - to understand the experiences, motivations, and outcomes of volunteers taking part in activities facilitated by Friends of Cardiff Reservoirs, established in 2021.

Objective 3 summary findings:

- FoCR is an independent organisation that works collaboratively with Welsh Water to provide a range of activities and opportunities for volunteers.
- FoCR works with Welsh Water to support the biodiversity and aesthetic of the L&LI Reservoirs, including undertaking conservation and education activities.

- Volunteers are motivated by a variety of reasons including: personal wellbeing (enjoyment of the outdoors, seeking new challenges in retirement), social wellbeing (seeking social connections) and to fulfil personal values (contributing to society, environmental principles).
- Volunteering has many benefits including: physical and mental wellbeing, gaining new skills (knowledge and understanding) and community cohesion (friendships, building identity, and a sense of pride).

Conclusions from the study

The Community Woodland Grant has generated distinct positive outcomes and is part of wider Welsh Water activities that have benefitted the local ecology and biodiversity, health and wellbeing of volunteers and aligned to the principles of the Future Generations and Wellbeing Act 2015.

The positive outcomes for the woodlands and the flora and fauna were enriched by community involvement. This was initially through the campaigning activities of the Reservoir Action Group, and more recently, the wave of volunteers through Friends of Cardiff Reservoirs.

Welsh Water and RAG have demonstrated that campaigning groups and companies can work together to achieve shared outcomes. Whilst there have been complexities in the story of L&LI Reservoirs, there is evidence of a shared respect by both parties for a site that has cultural and environmental importance, which contributes to the wellbeing of local people and the biodiversity of the environment.

Working together to develop the Friends of Cardiff Reservoirs group has borne a new group of 'custodians' for the site. The RAG campaign was monumental and should be commemorated and remembered. The baton has now been passed to FoCR and the group will continue to have positive impact for the future.

Key individuals throughout this campaign have been instrumental in the success of the programme, including the RAG for their campaign to save the site, and more recently employees of Welsh Water, and members of the FoCR. It is important to acknowledge that all Welsh Water employees, campaigners, volunteers, and supporters who have been involved in the story of the L&LI reservoir have contributed to an important area of nature that will serve, and hopefully be protected by, generations to come.

Recommendations

Several recommendations are made from the findings of this study. These are presented in two sections, one in relation to Welsh Water and their working practices, and the second in relation to volunteering at the reservoir site.

Recommendations - in relation to practices at Dŵr Cymru Welsh Water

1. Continue to use principles of sustainable development and Well-being of Future Generations (Wales) Act 2015 to inform activities in the Biodiversity Strategy and wider Welsh Water activities.
2. Continue to protect and enhance the local ecology of the blue and green spaces at Welsh Water sites for health and wellbeing of people, biodiversity and planetary health.
3. Continue to engage with local partners and organisations to support sustainable outcomes for the ecology and biodiversity of Welsh Water sites, and to facilitate volunteering opportunities.
4. Continue to provide strong leadership for ambitious and novel programmes.
5. Involve and engage with local communities, including co-creation where appropriate.
6. To further the reach of programmes, continue to utilise the local skills and knowledge of local organisations (such as the Wildlife Trusts, local universities, health partners and others).
7. Ensure there is senior executive support for staff based at sites to overcome barriers to enable the successful delivery of similar ambitious projects.
8. Include policies and actions that support the health and wellbeing of staff and volunteers.

Recommendations - in relation to volunteering and future opportunities at Lisvane & Llanishen Reservoir

9. Ensure equitable and accessible volunteering opportunities for local people.
10. Consider offering volunteering at different times and on different days to enable as many local people as possible to engage with the site and the volunteer role.
11. Proactively engage with marginalised groups (e.g. those from lower socio-economic groups, or who face barriers due to disabilities).
12. Pursue opportunities to establish links with local health, social service and third sector partners) to develop, for example, social prescribing opportunities (informed by the upcoming Wales-wide [National Framework for Social Prescribing](#)).
13. Promote a shared social identity amongst volunteers to enhance psycho-social well-being and community cohesion.
14. Offer support and training for people who are digitally excluded or less confident with the TeamKinetic system/technology.
15. Help volunteers to interact with one another so that they can communicate and make connections to build an independent network, potentially through promoting the chat function on TeamKinetic.
16. Promote the FoCR to raise knowledge, awareness and understanding of the group and their role to highlight them as a valuable asset for the local community, and to encourage further participation.
17. Continue to commemorate and value the successful campaign to save the site, by the Reservoir Action Group.

References

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