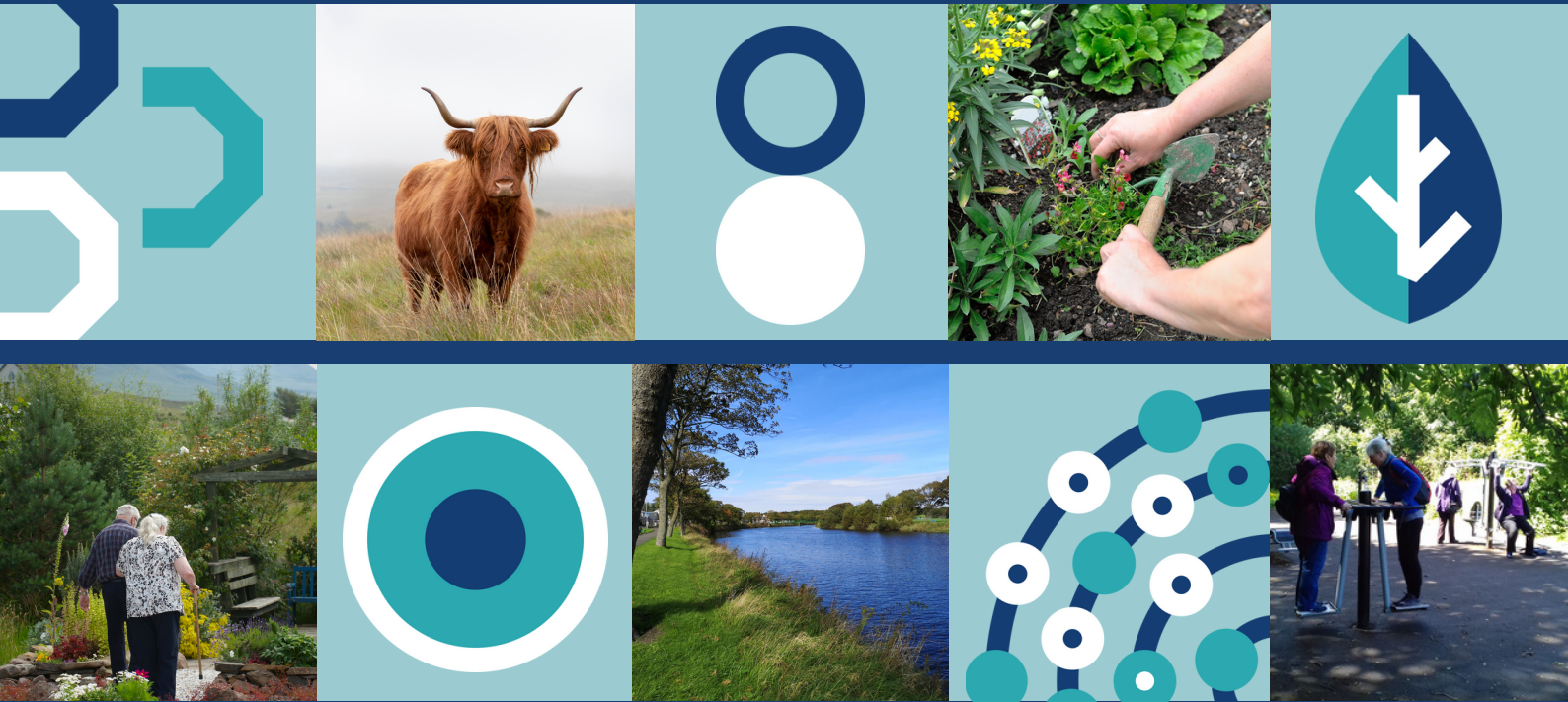


# An evaluation of Green Health Prescriptions across Dundee, Highland, and North Ayrshire

Briefing Report - March 2024

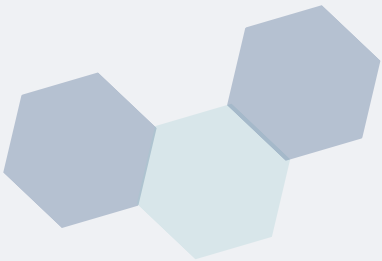


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## BACKGROUND

Three Green Health Partnerships are running across Scotland, in Dundee, North Ayrshire, and Highland as part of the Our Natural Health Service programme (ONHS), being led by NatureScot. The aim of the ONHS is to bring about change in the use of nature and green space to deliver health outcomes to the population. Green Health Partnerships co-ordinate a range of activities including: raising awareness of the benefits of green health and engagement with nature to the public and practitioners; developing new green prescription referral pathways; working with activity providers to deliver new or expanded services; and collating information about accessible green spaces/activities.

The Green Health Partnerships were set up in 2018 to promote the use of green space for health improvement. Monitoring and evaluation of the partnerships from June 2018 to September 2021 showed that they have achieved a range of key objectives: promoting opportunities for green health activities including; undertaking awareness raising and capacity building activities; establishing or facilitating referral pathways; coordinating and delivering outreach and information activities; inclusion of green health in local policies and plans (Mitchell & Finton, 2022). This demonstrates evidence of how Green Health Partnerships have been embedded into systems across these areas in Scotland.

One of the major elements of Green Health Partnerships is the drive to setup and run Green Health Prescription (GHP) pathways, where service users receive a prescription from a healthcare professional, community service, or self-refer. The GHP allows healthcare professionals to connect patients with free or low-cost outdoor activities delivered and supported by the third sector, including charities and volunteer groups. At the time of this evaluation, Dundee, North Ayrshire, and Highland are in various stages of embedding the GHP into the referral pathways that they offer. It is, therefore, an ideal time to see what the people coordinating and participating in GHP think of it.

\*Mitchell, R., & Friton (2022). *Green Health Partnerships in Scotland - evaluation of the first three years*. University of Glasgow.

## THE THREE AREAS EVALUATED

The Green Health Prescriptions (GHP<sub>r</sub>) are running in Dundee, Highland, and North Ayrshire. The differences in setup and geography across the three areas are expanded upon below.



### Dundee

Dundee is the fourth largest city in Scotland with a population of nearly 150k, of which 37% live in areas within the 20% most deprived in Scotland, with the proportion of children aged 0-15 living in these areas even higher (44%). Dundee has a formal Green Health Prescription (GHP<sub>r</sub>) pathway, where service users can be referred to a green health activity via a GP or other health care professional (e.g., link workers), or self-refer. Working in partnership with NHS Tayside, Dundee City Council and Dundee Volunteer & Voluntary Action, local people are supported to access and engage with over 60 outdoor opportunities across the city.



### Highland

Highland is a council area covering one third of the land mass of Scotland, with a population of 235k people and includes the most remote parts of the United Kingdom. Old age, fuel poverty, and access to services are challenges, and Highland has 17 areas in the most deprived 15% in Scotland. Of the 65 GP practices, 29 have access to a Community Link Worker. It is through this social prescribing service that green health is promoted. Referrals also take place through the Active Health Project; an online social prescribing programme aimed at physical activity. Recently a Green Health link worker has been employed by the National Park Authority to deliver a structured GHP<sub>r</sub>.



### North Ayrshire

North Ayrshire is a council area comprised of rural and urban, island and mainland communities, inhabited by 134k people. and has high population levels (40%) of deprivation, resulting from unemployment, low income, and poor health. Transport difficulties and risk of isolation are additional challenges for rural communities. North Ayrshire utilises two methods of GHP<sub>r</sub>s: a formal physical activity referral pathway called Active North Ayrshire which is coordinated by KA Leisure; and social prescribing which includes multiple health and social care pathways e.g., community link worker, GP, Pharmacist, Physiotherapist.

The following six pages provide summaries of the themes that resulted from this evaluation based on the APEASE criteria (Acceptability, Practicability, Effectiveness, Affordability, Spillover effects, Equity). For a detailed breakdown of the methods used to generate these themes, please see page 11.



## THEME 1. ACCEPTABILITY

Do staff and service users think the GHP programme is acceptable? For example, attitudes or feelings about the programme.



### Positive perception of the programme and/or green space

Both the concept of the Green Health Prescription (GHP) programme and green space in general were viewed positively, with service users feeling grateful for opportunities to engage with activities and reports from both staff and service users that prescriptions had been beneficial.

“ I think[...], because we have such an amazing kind of natural resource all around us, [...] fairly accessible for most people, you know, I do think it is something that works really well and I think, you know, most of the people we're talking to do kind of appreciate that. ”

Link worker

### Staff characteristics and communication skills

Activity providers were often viewed as skilled communicators, who were helpful, engaging and warm. Link workers who had knowledge of local activity options, helped to guide service users through the pathway and recommend activities aligned to service user interests. GPs who championed the GHP approach were able to reassure service users of its legitimacy. Service users may also prefer that the GHP is introduced to them by someone they know from their community rather than someone like a GP, as well as more diverse and representative activity providers.

“ I always take on more healthcare advice from my GP because whenever I get prescriptions, I always ask my GP if it's safe, if he has more available information, so how effective this form of treatment, for me to, it was more like my GP was very close to me and really helpful for most of the decisions I took. Even down to the point of opting for a Green Health Prescription, that has really helped my social wellbeing. ”

Service user

### Intrinsic and emotional influences

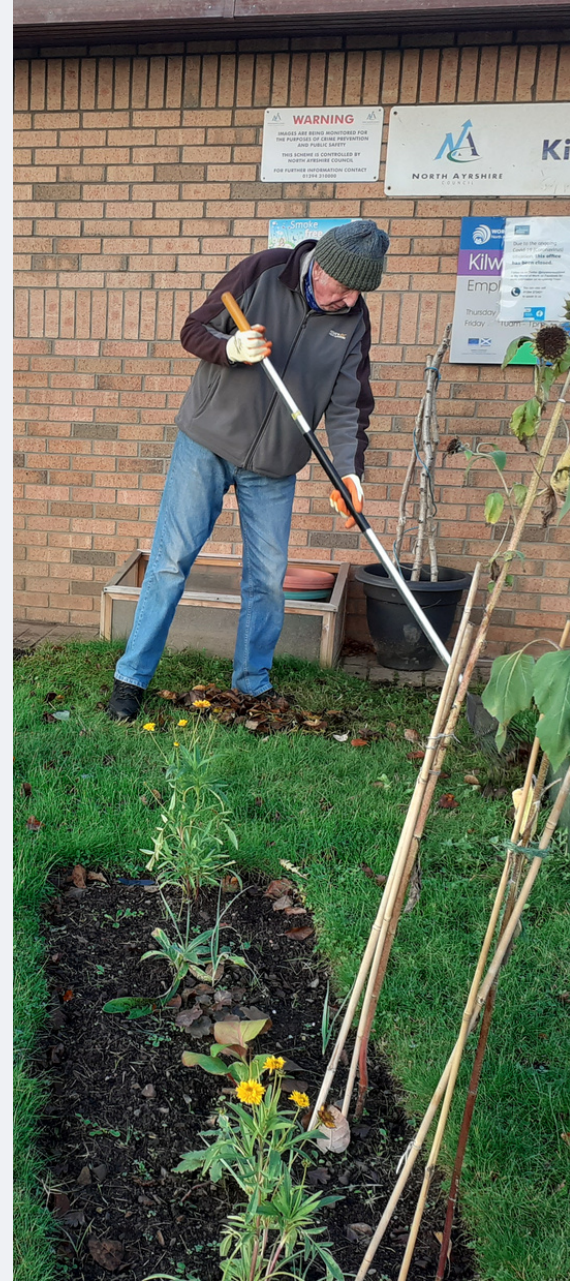
Service user participation in green health activities could be inhibited by feelings of isolation, anxiety, or low levels of motivation to change or interest in health and fitness. However, for some service users, acceptability may grow naturally over time as they attend sessions and become more 'comfortable'.

“ I think another thing that could be improved, or what I've seen is challenging is that often participants do not have the means in place to be able to actually attend the activities. So they might feel too isolated, they might be too anxious, they might be uncertain about how to do it or how to get there and I have seen that repetitively with participants. ” **Green Health project worker**

### Providing an alternative treatment and pathway

Some staff welcomed the addition of a non-medication-based option, but some service users viewed GHPs as inferior and possibly inequitable. Some staff perceived the GHP as more sustainable as it represented an open-ended offer, preventing service users from 'falling through the net' of time-limited exercise programmes. Referrers also felt they benefited from having a link worker in place to keep track of referrals and simplify the referral process. Others did not feel it was fit for purpose yet, with service users getting lost in the system and existing exercise referral pathways being used instead.

“ I guess I tried to do green prescriptions before we had a link worker. My issue there was always the keeping track of everything that was available. Things were always updating, you know, and maybe I was sort of getting behind as well. So now, these days, we've got a community link worker, so I tend to think about her and refer people on to her, which is quite useful, it really helps and I tend to get feedback from her which I find very beneficial. It's good. ” **Referrer**



### Characteristics and variety of activities

Variety in activities seemed key for service users, with increased local availability and range of activities desirable. Some service users appreciated having providers to talk to or who were passionate about nature, or locations and activities where they felt comfortable. Some enjoyed activities that gave back to the community (e.g. community gardening), prompted specific feelings (e.g. calm), or provided opportunities to be mindful (e.g. time to think). Activities offering social connection were perceived positively, as was variety in intensities of exercise for different needs. Tailoring to service users' needs and interests, for example, offering options rather than a single activity, was also recommended.

“ It shouldn't be like, okay, this is what you're going through, this is what you have to do, it should be like this is what you're going through, these are a couple of things you could do that would make you feel better, and then work with you to see which of them fits you and then which of them best would help you get better. ” **Service user**



## THEME 2. PRACTICABILITY

Do staff and service users think the GHP programme is practical? For example, how easy it is for service users to get involved in the GHP.

### Awareness and knowledge of service

A lack of awareness of Green Health Prescriptions (GHPs) as a referral option was noted across areas. In some cases, this led to referrals to exercise schemes where a GHP may have been more suitable. Awareness about GHPs could be supported in two ways, firstly with improved communication to referrers from the wider Green Health Partnership work; secondly through a range of public facing messaging, such as social media, to inform potential service users about GHP. Interviews also noted that GPs and link workers sometimes had a lack of knowledge of what GHP entail, which could act as a barrier to service user engagement.

“ So maybe, again, strengthening that communication between Green Health and the NHS, for example. Or I think also utilising social media platforms a bit more, making sure that is always updated and that is transparent as well. Yeah, just ensuring that consistent communication is made across all platforms and across all sectors. That all, yeah, referrers are aware of everything consistently and also really know what Green Health is about. ”

**Green Health project worker**



### Communication format and style

Effective communication between service users and professionals was key for service user engagement. Having the opportunity to ask questions and get sufficient information made service users feel confident in engaging in green health activities. In some situations, communication about what was on offer could have been better, but remote or digital communication could be a barrier to service users without access.

“ Well, possibly better communication because I didn't get a referral through my GP, it was just, just by chance that I saw the information, so I think communications and maybe for some people that English is not their first language, that might be a barrier. ”

**Service user**

### Location of activities and transport

Location and transport infrastructure was often challenging for service user engagement. A wider range of activities in locations with adequate transport options may make green health activities more accessible.

“ Is there local transport links that will get you to that Green Health activity, you know, that would fit with the timings.... There's not trains that go everywhere and buses, bus routes can be a bit strange sometimes actually. ... I've learnt that they don't always directly link up all the times, you have to sort of change bus, you know, to get between different towns. ” **Link worker**

### Supporting initial service user engagement

Attending green health activities may be daunting for service users' experiencing anxiety, lack of confidence or other forms of mental ill health. Support from activity providers or link workers when attending activities was suggested to improve engagement. In addition, a buddy system with already existing service users accompanying newcomers was suggested as potentially beneficial.

“ ...And sometimes maybe that would make a difference is if there was more capacity for people that were really struggling to or just taking that first step along to a new activity, to a group, can be really hard for some people. So having somebody to chum them along to that... ” **Link worker**

### Referral processes and systems

In one area, a formal referral pathway is in place due to agreements made between referrers and link workers, including the ability to add to medical records and collect routine service user data. Where referral processes were disjointed, this was seen as a barrier to GPs engaging with the GHP pathway, with the perception that pre-existing exercise referral programmes are more convenient for referrers. Furthermore, lack of monitoring of patient feedback, and IT systems for Green Health referrals may lead to poor communication between referrers and link workers.

“ ...It doesn't stamp in the notes very well that we have referred a patient. Although I can do it through a computerised system, if the next GP comes along, when they look at the notes, they won't know it's happened. ... with the feedback, there's no way to know that the feedback has happened unless you enter the certain part of Elemental, which is in the notes. So the GP won't see all the pretty information sometimes that's been chatted about. ... it's like a completely separate service unless we go looking for it. ” **Referrer**







## THEME 3. EFFECTIVENESS

Does the GHP programme improve health and wellbeing outcomes for service users?



### Support for mental health

It was reported that service users experienced reductions in depression and anxiety, and those that had used green health in conjunction with or instead of mental health-related medication found it beneficial in reducing symptoms.

“... my psychiatrist really didn't want me to rely more on sedatives as a form of recovery for my mental health because they don't really have a lasting effect, well I think therapy was the better option but I think the best is Green Health, Green Health because the combination of Green Health and therapy sessions really helped with me.”

Service user

### Social and emotional benefits

Service users and staff reported that those engaging in green health activities increased their socialisation and connection with others, and associated benefits e.g., sense of community, increased mood, learning from others. Reported emotional benefits included improvements in mood, confidence, feeling less angry, a sense of calm, managing thoughts, self-empowerment, mindfulness, focus, and zest for life.

“When I join walks, people tell me stories of how they used to be lonely and not able to go for a walk like they do now and the amount of change that has come out of them just because of joining that group.”

Link worker

### Physical benefits

Service users reported changes in health behaviours such as healthier food substitutions and increased physical activity. This in turn led to the perception that a range of positive health outcomes were experienced including increased stamina and strength, sleep quality, and ability to control weight.

“I feel more able to, I've got more strength and stamina for the grandchildren and also within my caring role I can do things that perhaps someone of my age group if they didn't do these things might not be able to carry out.”

Service user



## THEME 4. AFFORDABILITY

*Is the GHPr programme affordable for service users? For example, getting there and engaging.*

### Importance of free access for engagement

Staff highlighted the potential for cost to be a barrier to engagement with green health activities. Activity providers emphasised the importance of activities being low cost or free at the point of access.

“ Yeah, so it's entirely free for service users and it would be very important to me that it remained so. Yeah, we'd only ever do it if it was fully-funded, yeah. ” **Activity provider**

Reassuringly, service users indicated that green health activities were affordable, highlighting the minimal attendance fees and efforts made by service providers to make activities accessible and affordable. Examples included, where possible, providing free refreshments and transport to enable engagement, and other efforts to reduce cost concerns such as accessing additional funding for activities to allow them to remain free or low cost.

### Need for specialist equipment

Even where attendance was free or low-cost, some green health activities required specific equipment or clothing to fully participate (e.g., waterproof clothing). In these cases, service providers were able to reduce barriers as much as possible by keeping requirements to a minimum or providing equipment and clothing where required.

“ I tried to make sure there's no barriers in terms of the clothing and things that people have to wear so I usually have a small supply of like waterproof jackets and trousers and boots and things like that that I can supply people, so they're not really expected to come out there like dressed for climbing up a mountain or anything, they're just sensible outdoor stuff. ” **Activity provider**

### Travel costs

Service users highlighted travel related costs as a key potential barrier to accessing and ongoing engagement with green health activities.

“ Initially it [cost of travel] was like a challenge but I began to enjoy the whole [green health activity] process, so it was more like it was really cost effective and it was worth it. ” **Service user**

Coordinating staff commented that there may be a need for additional financial support to cover the cost of travel for some service users to help encourage and maintain engagement.





## THEME 5. SPILLOVER EFFECTS

Are there unintended outcomes, whether good or bad, for GHP service users?

### ***Belonging through shared experiences and new friendships***

Meeting with 'like-minded' people that were living with similar experiences or conditions was seen as a positive. Participating in green health activities also provided a sense of belonging, sometimes connected to the local community. This could provide opportunities for friendships that could flourish outside of the sessions, helping to combat loneliness.

“ . . . I think that opportunity and watching how these people suddenly bonded and became good friends and were then taking it further to meet up in their own time and stuff like that, that's how positive giving somebody an opportunity in a green space just to crack on and do what they want to do has for people. ” **Activity Provider**

### ***New skills and experiences***

Gaining new skills through activities such as planting and gardening helped service users with addiction recovery, confidence, and feelings of success. New experiences (e.g., leading a green health activity) were perceived to break down barriers and led to feelings of increased self-esteem.

“ . . . another thing which I'd never really kind of known much about was kind of like collecting things, you know, like foraging for things that just grow naturally kind of all around you, like things like dandelion, you know, we did that and we made dandelion cake, like the wild garlic, collecting that as well. . . So that was interesting as well, kind of learning all these new things. ” **Service user**

### ***Openness with others***

Participating in green health activities opened service users up to new social experiences and being connected with others. This could be in the form of being more tolerant and listening to others in the group, which in turn made them more willing to share experiences and gain an understanding of other people.

“ . . . it helps you to, you know, to also share with people, I think that's one of the important things, you are able to build trust in people and that way sometimes you even don't know when you start sharing, and the process of sharing you begin to get other people's perspective, and you know, your perspective is also well improved, and I think and overall it's more like a peer support kind of thing, that happens. ” **Service user**



## THEME 6. EQUITY

*Does the GHP programme benefit (or not) certain groups of service users over others?*

### **Inaccessible activities for mobility and disability**

Some activities by their very nature (e.g., accessing wooded areas) did not cater for people living with mobility or disability challenges. Some suggested a more tailored approach to green health activities, to support those with differing physical abilities. Others, however, felt that where possible accommodations were made (e.g., seated options), but that sometimes these were online or home-based options.

“ So obviously it wouldn't have been ideal for somebody that was in a wheelchair or used a walker or whatever, but I know she has had people attending the course, one woman who's using a mobility scooter and another elderly lady who has a walker and it was just fewer activities. There's just more done in the garden rather than going into the actual forest. ”

**Service user**

### **Intersectional cultural barriers**

There were several mentions of activities possibly not being attractive to different cultural groups or men, and that this might be partly to do with help-seeking not being as easy or socially acceptable in these groups.

“ ...the culture that they come from mental health is a complete taboo so you can't, you know, you can't talk about it, they would never allow themselves to be referred onto something because that would be an identifier that they were experiencing poor mental health which would be just completely unacceptable in their culture and their families and things. ”

**Activity provider**

### **Minimising travel difficulties**

Travel issues were often cited as a potential problem whether that be a need for a car, or issues with public transport (e.g., social anxiety, mobility challenges). However, there were examples of activity providers collecting service users from bus stops, and even one activity providing transport from people's homes.

“ I think there's a few who might struggle to actually come to us because they don't, again they don't really have that confidence to actually jump on a bus, they don't know where to get off. I have had to go hunting for people before [laughs] because, and the bus stop's just right beside us, but they've got off earlier and stuff like that. ”

**Activity provider**

### **Flexible options for those caring or working**

There were comments around the (un)availability of sessions during evenings and weekends for those with working and/or caring responsibilities. Activities were, however, able to engage parents with young children.

“ I suppose the other barrier is those who work, there are not an awful lot of activities that are available in an evening and in a weekend so I have had patients before that want to go out and do things, but it might be like ad-hoc activities that they end up engaging in. ”

**Link worker**



## RECOMMENDATIONS

The following recommendations have been developed from data across interviews with staff and service users, and are likely to lead to improvements in multiple aspects of the APEASE criteria (e.g., Acceptability and Effectiveness).



### Recommendation 1

Focus efforts on improving IT infrastructure, data linkage, and collection of routine data which should include information about socio-demographics, reach, uptake, and behavioural and health outcomes. This will allow referrers to see the progress that service users make and build a robust evidence base on the benefits of GHPs to guide future funding and policy.



### Recommendation 2

Use the data from this report (and local case studies) on how acceptable and effective service users have found the GHP to enhance messaging for staff, and public facing communication about the benefits of building green health activities into your life.



### Recommendation 3

Invest in an ongoing programme of training and support for staff across the system to know how, what, and where to refer and to be able to confidently champion green health. This could include considering it alongside existing treatment and making sure people feel they are being offered an option of the same standard as exercise referral or mental health services.



### Recommendation 4

Build on the support already provided for service users with anxiety or low confidence, particularly in the initial stages. For example, by strengthening the buddy system on offer in each area to ensure attendance at their first green health sessions.



### Recommendation 5

Invest in long-term funding for staff who have the capacity to maintain what is available and identify new opportunities to build the portfolio of activities on offer.



### Recommendation 6

Continue to explore ways to tackle accessibility and travel barriers by prioritising access for service users in the most deprived groups, and maintaining free or very low cost activities.



### Recommendation 7

Wherever possible, increase the range of activities, locations, and timings offered so that the GHP can be tailored to the needs of a wide range of service users.

# METHODOLOGY



This evaluation adopted a pragmatic mixed methods approach. Pragmatic evaluations draw upon quantitative (e.g., collection of numeric data), qualitative (e.g., interviews), or combined approaches, and allows the social, political, environmental, and cultural context of individuals or groups to be considered. The aims of a pragmatic evaluation are to maximize the applicability of evaluation findings to real world service delivery, and to generate evidence that is relevant to partners and wider stakeholders.

The main data collection approach was via interviews with 4 referrers, 5 link workers, 7 activity providers, and 13 service users, with good representation across the three areas. The purpose was to explore how Acceptable, Practicable, Effective, Affordable, and Equitable the Green Health Prescriptions (GHPr) are, and whether there are any adverse Spillover effects (APEASE criteria; Michie, Atkins & West, 2014; West et al., 2020). Definitions of each theme are provided here:

- A** **Acceptability:** Do staff and service users think the GHPr programme is acceptable? For example, attitudes or feelings about the programme.
- P** **Practicability:** Do staff and service users think the GHPr programme is practical? For example, how easy it is for service users to get involved in the GHPr.
- E** **Effectiveness:** Does the GHPr programme improve health and wellbeing outcomes for service users?
- A** **Affordability:** Is the GHPr programme affordable for service users? For example, getting there and engaging.
- S** **Spillover effects:** Are there unintended outcomes, whether good or bad, for GHPr service users?
- E** **Equity:** Does the GHPr programme benefit (or not) certain groups of service users over others?

Under each one of the six APEASE criteria the analysis produced 'sub-themes' which were topics that appeared in quotes from multiple interviews, and often across stakeholder groups (e.g., both referrers and activity providers).

\*Michie, S., Atkins, L., & West, R. (2014). *The Behaviour Change Wheel: A Guide to Designing Interventions*. Silverback Publishing.  
West, R., Michie, S., Chadwick, P., Atkins, L., Lorencatto, F., Chadborn, T., & Sallis, A. (2020). *Achieving behaviour change: A guide for national government*. Public Health England.



## CONCLUSION

This evaluation has provided detailed feedback of staff and service user perceptions and experiences of the Green Health Prescription (GHP) programme. Staff and service users generally found the concept of using green spaces and the GHP acceptable, and there were reported improvements in a wide range of physical and mental health, and social outcomes for service users. The GHP was also considered affordable in terms of the limited (if any) cost to attendees of the green health activity sessions. There were some service user barriers to entry such as travel in terms of cost and location, and for those with mobility issues with some activities having limited accessibility. Although service users perceived that referrers, link workers, and activity providers were often good communicators, there were times where awareness of the GHP and knowledge about the finer details of what was on offer were lacking. Relatedly, the main barrier for staff, particularly those referring people into the programme, was the lack of strong underpinning IT infrastructure in terms of noting that a referral had been made, communication with link workers, and feedback and data capture to reflect on service user progress. Without improved data capture the GHPs will not be able to effectively evidence service user outcomes, to guide future policy and funding decisions. Subsequently there is real danger that key strategic aims of government and NHS Scotland, such as valuing green space and increased provision of green health activities for health (e.g., Climate Emergency & Sustainability Strategy, 2022), will remain unfulfilled.

\*NHS Scotland (2022). Climate Emergency & Sustainability Strategy. 2022-2026



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