

## Nature Rehabilitation Ranger Service

NHS Lothian is in a unique position, 81 hectares (46%) of its estate is greenspace, which is potentially an asset to improve health and tackle climate change. Research consistently proves that regular contact with nature reduces stress, improves mood, and supports recovery. However, there are many barriers that prevent equitable access for patients, staff and the local community.

NHS Lothian Charity's Green Health Programme has developed a Nature Rehabilitation Ranger Service to tackle these inequalities and deliver biodiversity action. The Service employs 2 part-time Rangers whose role is to maximise the therapeutic role of greenspaces, support patient and staff wellbeing, and create a healthier, more welcoming and biodiverse environment.

The Rangers were assigned to Astley Ainslie Hospital and the Royal Infirmary of Edinburgh, which are vastly different sites in terms of natural environment and types of medical care provided, each bringing their own challenges and competing demands. These sites were selected because they were identified as NHS Lothian's largest greenspace assets, scored high for biodiversity, and addressed a resource gap, as all other major NHS Lothian sites already hosted Green Health initiatives which are supported by NHS Lothian Charity.



The Service recorded 1,181 Green Health engagements/activities in the first year - 58% with staff, 29% with patients, 12% with volunteers and 2% others.

### Astley Ainslie Hospital (AAH)

The AAH is a community asset and a significant place for nature with a combined 42 acres of mixed woodland and parkland. The hospital is reconfiguring in-patient services but supports approx. 40,000 out-patient appointments for rehabilitation services and the South-East Mobility and Rehabilitation Technology (SMART) Centre is located on the hospital grounds. 500 NHS Lothian staff are based on the site.

The Ranger delivers key elements of the Greenspace Management Plan for Astley Ainslie Hospital to support the improvement of the landscape. There has been a high level of in-depth engagements with patients, many of whom experience long stays or regularly return for recovery. This has allowed for sustained support through repeated interactions (e.g. recurring workshops for Lothians and Edinburgh Abstinence Programme patients). The Ranger has delivered bespoke wellbeing sessions for patients and staff such as group and 1-1 walks around the hospital grounds, nature-based crafts, and bird watching.



Aisling, AAH Ranger



Aisling is so knowledgeable, I am so grateful to be outside in nature today and not cooped up."

Patient



Lou, RIE Ranger



Lou's work brings beauty and balance into our busy days, and it's truly appreciated."

Staff member

### Royal Infirmary of Edinburgh (RIE)

The RIE has a large amount of greenspace over its 167-acre site and the Niddrie Burn Local Biodiversity Site (LBS) runs through the hospital grounds. The RIE is a major acute teaching hospital and treats approx. 120,000 patients per year supported by an 8,000 staff population.

Staff needs were identified working closely with staff groups and on-site Work Well facilitators. Weekly guided wellbeing walks and bespoke nature based workshops support staff wellbeing to mitigate high levels of stress and burnout. By training front line staff and equipping them with resources staff can facilitate nature-based activities directly with patients on the wards. Enhancement projects, e.g. planting 4,000 pollinator friendly early flowering spring bulbs across the site, are making the RIE a more welcoming and biodiverse space.

## Impact on patients

### How patients benefit

The Service is improving patient wellbeing, happiness and connection to nature. It creates opportunities for patients staying at or visiting AAH and RIE to benefit from nature, either by being outdoors or by having nature brought into them on the wards or departments.

Evidence from a [large scale research review](#) illustrates a positive association between exposure to and use of natural environments, alongside positive mental health outcomes (e.g. perception of wellbeing and mood).

The Service supports patients by directly creating opportunities for them to engage with nature as part of their treatment through activities such as bird watching or gardening. It also worked with over 50 NHS Lothian staff to improve their skills and confidence to use these activities as part of treatment pathways.

Patients consistently report high levels of satisfaction and positive outcomes from taking part in the Services' activities.



The Service recorded 342 Green Health engagements with patients in the first year (98% of the engagements were with patients at AAH).

### Better wellbeing

# 100%

of patients who took part in an activity agreed (83% strongly agreed) their wellbeing was better.



My mental health so much better for being outside, love the birds and plants."

Patient



I thoroughly enjoyed the activity and conversation generally lift my mood."

Patient



I was really not feeling well this morning, but after being outside in fresh air I feel so much better in myself."

Patient

### Increase in happiness

# 100%

of patients who took part in an activity agreed (89% strongly agreed) they feel happier to be able to get outside into nature.



Enjoyed the physical aspect of the walk. Very happy, had the time of my life."

Patient



Happy and enjoyed every bit. Feel good after."

Patient



I loved being outside today, the fresh air, the sunlight, the peace, sense of wellbeing. It brought back happy memories of gardening."

Patient

### Increased nature connection

# 100%

of patients who took part in an activity agreed (79% strongly agreed) they feel increased connection to nature.



It was a great activity and it made me more interested in a outdoor activity, especially gardening."

Patient



Grateful to be out of the ward. Enjoyed things being pointed out, the evolution and progress of the trees, foliage and flora. It's lovely to spend time where I love, the outdoors."

Patient

## Patient case study – LEAP ‘New Shoots’ programme, AAH

### Integrating nature-based activities into an alcohol and drug treatment programme

Lothians and Edinburgh Abstinence Programme (LEAP) is a 3 month, semi-residential treatment and rehabilitation programme for individuals dependent on alcohol and other drugs. Patients participating in the programme were identified during consultation as a group that would specifically benefit from the Ranger Service.

For LEAP staff, the integration of nature-based activities in patient care plans is viewed as a valuable enhancement as LEAP patients receive a mix of clinical and therapeutic elements. Additionally, this targeted work directly tackles health inequalities, removing barriers to greenspace access for populations often excluded (like many in the LEAP programme).

Nature-based activities were integrated into the LEAP programme through weekly ‘New Shoots’ sessions led by the Ranger. By participating in these sessions, LEAP staff gained the skills necessary to lead outdoor activities independently, ensuring the programme’s long-term sustainability.



The Ranger led two blocks of weekly ‘New Shoots’ sessions (36 hours in total), engaging over 60 patients.

### Impact

LEAP’s PEER Support Manager has observed a remarkable positive change in LEAP participants since the ‘New Shoots’ programme was introduced: “Many participants have shown improved mood, increased social interaction, and a stronger sense of community. The structured and purposeful nature of the activities, combined with the Ranger’s compassionate approach, has helped individuals develop healthier routines and interests. This has significantly contributed to their overall progress throughout the treatment process.”



Outdoor ‘New Shoots’ activity offers opportunities to connect with nature and be creative

# 100%

of LEAP patients agreed (83% strongly agreed) their wellbeing was better after taking part in an activity.



Helped me deal with the heaviness of my addiction.”

‘New Shoots’ participant



It felt extremely beneficial to my mental well being and I felt a sense of contentment from being in the fresh air.”

‘New Shoots’ participant



Monday is my favourite day of the LEAP program as we are out in nature, my mental health is so much better.”

‘New Shoots’ participant



Felt a lot more connection and it lifted my mood a lot.”

‘New Shoots’ participant

## Patient case study – Nature resource boxes, RIE

### Natural resources support service improvement

The RIE is a large hospital, which can make the restorative benefits of the outdoors feel out of reach for patients with limited mobility or complex needs.

The Speech and Language Therapy (SLT) Lead at the RIE connected with the RIE Ranger in the staff wellbeing garden, which she and her team visited during their breaks. Knowing the therapeutic benefits of being outdoors for patient recovery, the SLT Team were eager to find ways to integrate the natural environment into their work. Many of the patients they support are recovering from a stroke and are unable to leave the ward, so the team explored what resources and materials they could use indoors.

The Ranger co-designed specific nature-based resources to support the delivery of specific tasks, such as assessments. These included real natural materials (e.g. pine cones, twigs) and pictures to gauge understanding. The Ranger provided nature themed matching cards to support the team to encourage patients' speech and various natural items for sensory engagement and to encourage touch and smell.

### Impact

The SLT Lead praised the impact of the collaboration, highlighting how it allowed them to access additional cost free resources to support patient rehabilitation in a more patient-centered way. The team noted how it has improved the way they work so they can deliver a better service to patients as well as increase morale of the team resulting in better patient care.



Patients respond better to these natural items so it has improved the way we work with patients therefore aiding their rehabilitation."

Hazel, Speech and Language Therapy, Site Lead,, RIE



The resources from the Ranger have really helped. They are a better talking point rather than just a pencil, patients engage better with natural materials."

Hazel, Speech and Language Therapy, Site Lead,, RIE



The SLT Team at the RIE is made up of 6 staff supporting approx. 1,400 patients per year. The team use nature resources regularly with their patients.



SLT Lead with nature resources supplied by the Ranger

## Impact on staff

### How staff benefit

The Service ensures staff can benefit from connecting to nature in their work space by offering bespoke workshops as well as regular lunch time sessions. The Rangers use creative ways to incorporate nature into indoor working environments and create relaxing and calm outdoor spaces for staff to take restful breaks.

Research from the [Centre for Sustainable Healthcare](#) shows greenspaces at hospitals play an important role in supporting staff wellbeing. The study states green spaces support: "Boosts in emotional and physical wellbeing, reduced stress, and a heightened sense of value and connection". While staff consultation indicates a strong desire to engage in nature-based activities, working in a busy environment creates challenges in participating e.g. staff find it difficult to take breaks.

The Service has supported staff to overcome these barriers and make time to connect with nature and the greenspaces at the AHH and RIE. A significant majority of those that participated reported positive outcomes for wellbeing, increased alertness returning to work and increased nature connection.

### Better wellbeing

# 100%

of staff who participated in an activity agreed (74% strongly agreed) their wellbeing was better.



"I always leave feeling happy and relaxed."

Staff member, AAH



"It makes my working day more joyful."

Staff member, RIE



"The activities are a welcome chance to escape the hospital and forget about work for a while."

Staff member, RIE



The Service recorded 670 Green Health engagements/activities with staff in the first year.

# 94%

of staff who participated in an activity agreed (74% strongly agreed) they felt less stressed going back to work.



"It was a really good activity over the lunch period and helped my productivity and motivation at work afterwards."

Staff member, AAH



"It has completely de-stressed me and I go back to work feeling much more relaxed."

Staff member, RIE



"I always feel stress-free going back to work after a guided walk."

Staff member, RIE

### Increased nature connection

# 94%

of staff who participated in an activity agreed (64% strongly agreed) they felt an increased connection to nature.



"Brought myself more present in the moment and more aware of surroundings. Able to connect things through searching for and listening for bird sounds."

Staff member, AAH



"So easy to come to work here and not stop to look at nature. Lovely to get the opportunity."

Staff member, RIE



"Helped me 'tap' into nature, and engage with a part of myself that I don't usually actively bring to work."

Staff member, RIE

## Staff case study – Guided wellbeing walks, RIE

### Unlocking existing wellbeing resources

Staff wellbeing is a key issue at the RIE, with large numbers of staff working in high pressure environments. The RIE Ranger identified that the long established “Wellbeing Walk” was an under used wellbeing resource available on site.

The 1 mile route, circling the RIE and RHCYP, takes approx. 30 minutes and is fully paved, well signposted and has seating to ensure accessibility for all. This provides an excellent opportunity for staff to meet their physical activity guidelines. Consultation indicated that although awareness and interest to utilise the wellbeing walk for wellbeing was high, staff would be more likely to take part if there were guided walks at set times.

Two regular weekly drop-in guided wellbeing walks were programmed around staff breaks. The Ranger adapted the walks to the interests of the attendees and weather, and highlighted the wildlife that could be seen at that time of year. A fundamental part of each walk was encouraging staff to use their senses to make it a more of a mindful experience to enhance wellbeing.



111 staff attendances were recorded in the 36 guided wellbeing walks with the RIE Ranger in the first year.

### Project impact

Feedback from the guided wellbeing walks shows they support staff wellbeing as staff reported reduced stress and anxiety. Staff said that walks helped them to return to work feeling refreshed and resilient, ultimately improving patient care and experience.



I had no idea there were so many interesting plants surrounding the RIE. I was only able to join for 20 minutes but in that 20 minutes I felt so welcomed and learnt so much! I felt energised going back into work.”

Staff member, RIE



I’ve regularly walked along the wellbeing trail in the RIE site previous to the guided walks but tended to spend my time thinking about what I need to do when I go back into the office, equally when doing with colleagues we always tend to discuss work. However since going along to these guided walks I notice more things going on in and around the site and learned lots of interesting facts about nature. I always feel stress-free going back to work after a guided walk.”

Staff member, RIE



The Ranger leading a staff member round some of woodland areas at the RIE



The lunchtime walks Lou leads have become a real highlight of my week. I always return feeling calmer, more grounded, and ready to take on the rest of the day with a clearer mind. It’s a small window of time that makes a big difference.”

Staff member, RIE



My mental health isn’t great and I had been off work for a while. Having a Nature Ranger available has improved my mental health and reduced my stress at work, I feel happier, more relaxed and connected with others attending the walks. I generally feel less anxious, stressed, and revitalised when I return back to work.”

Staff member, RIE

## Staff case study – ‘Looking through a new lens’ photography project, AAH

### Connecting staff to nature for wellbeing

The AAH is rich with wildlife with dense woodlands and unique trees. However, its perception as a working environment can differ vastly. The ‘Looking through a new lens’ photography project sought to challenge that by encouraging staff to spend time on the site taking nature-themed photos.

Research shows the simple act of taking photos in nature can be of benefit: “Combining outdoor activities with photography can have lasting restorative impact on mental well-being. Slowing down, focusing on the present, and storing the moment helps create a deeper emotional connection...Photography, as a mindful activity, encourages deliberate observation and creativity, further supporting emotional resilience.”

The AAH Ranger connected with NHS Lothian Charity’s Tonic Arts Team to commission Stills: Centre for Photography to deliver a programme of photography workshops for staff in the Summer of 2025. A professional photographer guided participants in creative ways of capturing the hospital green spaces, teaching photography techniques while drawing on individual interests and passions in the environment. To bring nature indoors (which is shown to have many benefits) and to highlight the project to the wider hospital community, the photos were exhibited at the Tonic Arts Gallery in the SMART Centre which is used by approx. 40,000 patients and staff annually.

#### Project impact

The evaluation showed that the activities supported the participants’ wellbeing with them reporting positive improvements in mood and feelings of pride. All of the participants agreed that it increased their connection to nature and they had had a positive experience.



Staff member taking part in the workshop on the AAH grounds



16 staff attended 4 workshops

# 100%

of participants agreed (57% strongly agreed) their wellbeing was better after taking part in the workshops

Have a different perception of working environment. Never thought of taking pictures of working space. Even after a long day at work – felt rejuvenated.”

Staff member

# 100%

of participants agreed (57% strongly agreed) they felt an increased connection to nature after taking part in the workshops

Never done anything like this before and I got totally immersed in taking photos. I now appreciate the grounds in a way I had never before.”

Staff member

## Tackling climate change and biodiversity loss

### How nature benefits from the Service

The Service plays a crucial role in delivering actions in the [NHS Lothian Sustainable Development Action Plan](#) and [NHS Lothian Biodiversity Action Plan](#). They deliver enhancements that improve the quality of the environment for both people and wildlife and increase the sustainability of the NHS estate.

Environmental quality is proven to have a direct impact on people's physical and mental wellbeing, therefore tackling the twin threat of climate change and biodiversity loss is a core goal of the Green Health Programme. The Rangers bring a wealth of practical knowledge and work with staff and volunteers to ensure green space enhancements have the maximum impact.

The enhancements happen across a range of scales from simple planters to changes in grassland management practice and tree planting. Each project increases the diversity of the planting on the NHS estate and this in turn contributes to greater biodiversity and climate resilience on each of the sites.

# 20,000

early flowering crocus planted by the Service.

# 7

gardens and greenspaces diversified by the Service.

# £3,500

saved by year by transforming lawns to grasslands.

### Case study – Transforming grasslands

The Astley Ainslie Hospital has a large amount of open grassy areas that have little benefit for nature and require high inputs to maintain. Transition of amenity grassland into more diverse wildflower planting is a key action in the [Astley Ainslie Hospital Greenspace Management Plan](#). Led by the Ranger, a collaborative team, including NHS Lothian Estates and expert contractors, identified appropriate areas for the meadows and seed mixes. A variety of treatments were selected to suit the local climate and conditions to produce a diverse mix of native wildflowers and grasses for optimal biodiversity.

### Project Impact

2,500 sqm of diverse wildflower grassland were created resulting in increased biodiversity. The Ranger, staff and patients have reported seeing an increase in number of key pollinators such as bumblebees and butterflies, species which are currently in decline. The transformation has reduced surface water run and reduced the use of weedkillers and fertilisers which damage ecosystems. [Research](#) found wildflower meadows can absorb approx. 1.36 tonnes of CO2 per hectare per year more than maintained lawns preventing the harmful gas escaping into the atmosphere. The grassland's lower maintenance improves efficiency and reduces expenditure for NHS Lothian Estates.



Working on the transformation

The wildflower meadows are looking splendid. Suddenly seem to have burst into life!"



After – wildflower grassland

## Impact in pictures



**Thank you**  
Thank you to the Rangers for supporting the evaluation of Service and to patients, staff and volunteers who supplied feedback to compile this Impact Report.

Keep up to date with the Rangers and the Green Health activities taking place at the [Royal Infirmary Edinburgh](#) and [Astley Ainslie Hospital](#).

Go to the [Green Health Website](#) for more information on the Programme.

Compiled by Rebecca Caulfield, Evaluation Manager, NHS Lothian Charity