

Master of Business Administration dissertation

What is the best leadership style to connect people to nature, and can this help organisations deliver the Welsh Government's *Well-being of Future Generations Act (2015)* goals?

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ABSTRACT

A decade after it was launched, this dissertation looks at how organisations can help the Welsh Government deliver its *Well-being of Future Generations Act* (WFGA) goals of being a more equal, prosperous, community-focused, cultural, healthier, resilient, and globally responsible Wales, by leaders connecting employees and themselves to nature and creating a 'nature culture' in organisations across the country. This builds on research by White et al (2019), which found people who spent two hours per week in nature experienced many benefits including being happier, healthier, and more productive employees, and therefore building more efficient, profitable, and sustainable organisations. Plus, wider benefits of connecting people to place and community, the environment and planet, especially due to the stewardship being in nature inspires.

The quantitative and qualitative research conducted (in the form of an online survey and interviews with around 200 people in South Wales) found the WFGA is already engrained and making a difference in some sectors, especially the Welsh National Health Service, where research showed the benefits of nature access are already being embraced, e.g. social green prescribing. However, other managers questioned did not know about or implement the WFGA in their organisation's strategies, especially interviewees in the education and private sector – concerns were flagged by smaller private sector organisations that it could be time-consuming and costly to implement nature access activities in the workplace, or during working hours. Solutions were analysed, from free lunch break walks in local parks, to breaking the two hours of nature access down to a 20-minute activity in a green or blue space.

Research looked at what type of leadership styles were needed to create change, and introduce nature access opportunities within organisations. Based on definitions by Daniel Goleman (2015) and Kurt Lewin (1947), a 'commanding' style would help introduce new activities, a 'visionary' style would inspire employees to engage with nature, and a 'democratic' style could win employees over and embed a nature access culture. Empathy and emotional intelligence were found to be key leadership traits for this to be a success. Lewin's Three-Stage (Unfreeze-Change-Refreeze) Model of Change was recommended to help the shift in organisational culture.

Findings from research conducted showed appetite for this change is already present in organisations in South Wales: 78% of managers said accessing nature made them a better leader; 72% thought the employees they managed performed better, were more productive, and helped organisations succeed if they accessed nature regularly; 98% said they felt more connected to nature after accessing it; and 77% stating they want to look after nature more due to spending time in it. However, only 36% said their place of work offers nature access activities, yet 55% of managers questioned would be willing to give employees time off for activities.

Activities that could be organised by workplaces, local councils, health centres, community, or hobby groups, to help people access nature easily for the two hours per week needed were exhaustive. Research showed it is important that whatever activities employees do they are accessible and enjoyable for take-up, and are seen to give value for buy-in, to allow long-term cultural change to take place, otherwise 'green-washing' could occur. There are many options, from the larger companies having on-site green spaces and facilities for yoga classes, to start-ups conducting

walking meetings outdoors. If the time is spent volunteering, capacity gaps by conservation groups and local councils (e.g. litter-picking) could be met, as well as helping a stretched health service due to the mental and physical health benefits experienced by those accessing nature regularly. Interviewees reported feeling happier, calmer, energised, focused, peaceful and fitter when accessing nature.

Recommendations were given. From legislating for the WFGA to feature in all Wales-based organisations (including schools, so children grow up learning about, respecting and accessing nature as a lifelong habit, even attending forest schools), to legislating for the working week to include two hours spent doing nature-based activities – 77% surveyed said they would be more likely to access nature if they had activities arranged for them. Introducing a Welsh and word that translates to 'nature connectedness' was also recommended for a nature culture to embed throughout Wales (and the UK) in and out of workplaces, because all countries researched with a strong culture of nature connectedness had a specific word for this.

Accessibility was also found to be important, from access to paths in green spaces to public transport to them, with car parks and toilets with baby changing facilities, drinking water and disabled access. Also cafes for refreshments, giving another wider benefit of employment opportunities much needed in South Wales.

The dissertation also looked further than cultural change in Wales, because organisations do not exist and operate in a silo. Those that operate in a healthy environment, on a healthy planet, thrive – which brings together the link to workers'

access to nature and more profitable companies. And rethinking economics in a way that balances social well-being and planetary health to truly achieve the WFGA goals, was also researched. Including Kate Raworth's Doughnut Economics (2023), because it is not just about providing employees with nature access, but also about integrating nature culture into a holistic strategy that involves promoting sustainability, health equity, social well-being, and economic prosperity through nature-based solutions to get national benefits. This could position the country as kinder, cleaner and fairer, which could attract organisations and employees from around the world to Wales.

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed:

(candidate)

Date: 2 May 2025.

STATEMENT 1

This work is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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(candidate)

Date: 2 May 2025.

STATEMENT 2

I hereby give consent for my work, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

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Date: 2 May 2025.

TABLE OF CONTENTS

Title Page 1

Abstract 2

Declaration and statements 6

Table of Contents 7

Word Count 10

Table of Figures 11

Acknowledgements 13

Chapter 1: Introduction 14

- 1.1 <u>Overview</u> 14
- 1.2 Background 15
 - 1.2a Benefits of nature access 15
 - 1.2b Arguments against the benefits of nature access 18
 - 1.2c What does 'nature access' mean 19
 - 1.2d Do people around the world access nature? 20
 - 1.2e Pathways to nature connectedness 21
 - 1.2f The Well-Being of Future Generations (Wales) Act 2015 22
 - 1.2g Different types of leaders and leaderships 24

Chapter 2: Literature Review 29

- 2.1 <u>Overview</u> 29
- 2.2 Leadership 29

2.2a Analysing leadership 29

2.2b The theory behind leadership: Daniel Goleman 30

2.2c Change management: Kurt Lewin 32

2.2d Are leaders currently promoting access to nature? 36

2.3 The benefits of spending time in nature 39

2.4 Research on the benefits of spending time in nature for businesses 42

2.5 Welsh Government's Well-being of Future Generations Act (2015) goals 46

Chapter 3: Research Methodology 51

- 3.1 Introduction 51
- 3.2 Aims and Objectives 52
- 3.3 Research Rationale 54
- 3.4 Research Paradigm 55

3.4a The Research Onion 57

- 3.5 Research Strategy and Design 58
- 3.6 Data Collection and Analysis 62
- 3.7 Reliability and Viability 63

- 3.8 Limitations of the Research 64
- 3.9 Research Ethics 66

Chapter 4: Findings and Analysis of Results 68

- 4.1 Introduction 68
- 4.2 Survey analysis 68
- 4.3 Interview analysis 74

Chapter 5: Conclusion and Recommendations 85

- 5.1 <u>Conclusion</u> 85
- 5.2 Recommendations 89

Chapter 6: References 94

Chapter 7: Appendices 124

Appendix 1 – Interview questions 124

Appendix 2 - Survey 125

WORD COUNT

Chapter	Word Count		
1) Introduction	2703		
2) Literature Review	4693		
3) Research Methodology	3485		
4) Findings and Analysis of Results	3322		
5) Conclusion and Recommendations	2129		
Total word count	16332		

TABLE OF FIGURES

Figure 1: Hybrid working increased since the pandemic (ONS/Acheson, 2025) – available at: https://www.bbc.co.uk/news/articles/cp9x0819417o

Figure 2: The five pathways to nature connection (National Trust, 2025) – available at: <u>https://findingnature.org.uk/2019/01/28/5-ways-to-wellbeing-with-nature/</u>

Figure 3: Six Styles of Leadership (Goleman, 2000) – available at:

https://intenseminimalism.com/2015/the-six-styles-of-leadership/

Figure 4: The Six Leadership Styles (Goleman, 2000) – available at:

https://www.futurelearn.com/info/courses/professional-etiquette/0/steps/226344

Figure 5: Kurt Lewin Leadership Styles (Lindberg, 2022) – available at:

https://www.leadershipahoy.com/kurt-lewin-leadership-styles/

Figure 6: Lewin's Model of Change (Malik, 2022) – available at:

https://whatfix.com/blog/lewins-change-model/

Figure 7: What is Doughnut Economics? (Leeds University, 2025) – available at: https://pg-online.leeds.ac.uk/blogs/what-is-doughnut-economics/

Figure 8: The Research Paradigm (Malau-Aduli & Alele, 2025), available at:

https://jcu.pressbooks.pub/intro-res-methods-health/chapter/1-3-research-

paradigms-and-philosophical-assumptions/

Figure 9: Research Onion depicting the journey of inquiry from outer to inner layers (Saunders et al, 2009) available at: <u>https://www.linkedin.com/pulse/exploring-depths-research-design-revealing-layers-onion-borg-ellul/</u>

Figure 10: Types of Research Strategy (Saunders et al, 2009) available at:

https://www.researchgate.net/figure/Types-of-Research-Strategy-Adopted-from-

Saunders-et-al-2009 fig5 342314751

- Chart 11: Survey data Question 8
- Chart 12: Survey data Question 9
- Chart 13: Survey data Question 10
- Chart 14: Survey data Question 11
- Chart 15: Survey data Question 12
- Chart 16: Survey data Question 13
- Chart 17: Survey data Question 14
- Chart 18: Survey data Question 15
- Chart 19: Survey data Question 16
- Chart 20: Survey data Question 17
- Chart 21: Survey data Question 18
- Chart 22: Survey data Question 19

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CHAPTER 1: INTRODUCTION

1.1 Overview

This dissertation uses unique data, building on research by White et al (2019) to show how accessing nature benefits people, including employees and leaders, and therefore organisations, especially in Wales (UK) where the majority of people interviewed for both the qualitive and quantitative research (interviews and survey) live and work.

It defines accessing nature, and the different ways people can access nature. Whether organised activities in work time are needed to ensure employees spend time in nature – and what those activities would look like, and who should organise them. It analyses what type of leader best understands the importance of their employees, and themselves, accessing nature, using theoretical leadership styles identified by academics Daniel Goleman (2015) and Kurt Lewin (1947). It also looks at conflicting viewpoints: studies stating nature access does not benefit employees or organisations due to costs incurred by productivity loss or risk management, plus cultural resistance and concerns over 'green-washing'.

Research undertaken will show whether connecting people to nature is helping organisations deliver the Welsh Government's *Well-being of Future Generations Act* (2015), referred to as WFGA. Analysing whether, a decade after it was launched, it is enabling a cultural change of being in nature, and how it could do that by looking at case studies of other countries' nature connection culture. And if it is not, why not. The dissertation question – *What is the best leadership style to connect people to*

nature, and help organisations deliver the Welsh Government's Well-being of Future Generations Act (2015) goals? – is answered in the conclusion, with recommendations.

1.2 Background

1.2a Benefits of nature access

Studies show numerous health and well-being benefits are experienced when spending time (and moving) in nature for at least 120 minutes every week (White et al, 2019), best spread over two or more days per week.

Being in nature is one of the ways people are being supported by the UK National Health System to improve their wellness through social prescribing, instead of medication (NHS, 2025). Other listed benefits of nature access include improvements in mental health (from stress reduction to improved mood), cognitive function and reduced mental fatigue (Sharma et al, 2006). Physical health benefits including feeling fitter and sleeping better (Mughal et al, 2022).

Social benefits include connecting people and engaging with community groups, which can aid conservation efforts (Barker, 2024). People also reported a sense of connection to something greater than themselves when spending time in nature, adding benefits of spiritual and emotional well-being (Ryff, 2021).

There are many theories why these benefits are experienced when accessing nature, including Biophilia Hypothesis (Gaekwad et al, 2022), suggesting humans

have an innate connection to nature because we evolved in natural environments (Finding Nature, 2014). As people live increasingly busy lives in crowded places, natural spaces have been shown to have restorative qualities, providing a sense of refuge from the stress of urban life (Lau et al, 2014).

Lives of employees have changed over the years, with jobs becoming increasingly less physical and office-based with longer working hours (Lee, 2014). The COVID-19 pandemic (which led to global lockdowns during 2020-2021) saw working patterns temporarily change again, with UK-based employees working from home, which saw an increase in local nature activities (Person, 2021). This increase was short-lived, due to people returning to the office [Figure 1] (Copeland, 2025), and homeworking now being criticised (Conway, 2025; Ramirez, 2024), even starting to mirror sedentary office working (Al-Habaibeh, 2023).



Survey question: 'In the past seven days, have you worked from home?' Some people answered that they had not worked at all in the last week

Source: ONS Opinions and Lifestyle Survey

ВВС

Figure 1: Hybrid working increased since the pandemic (ONS/Acheson, 2025)

Access to nature has been found to enhance workplace productivity (Klotz et al, 2023), with employees who take regular breaks in nature having improved focus, reduced procrastination, and increased output of higher-quality work and more creative collaboration within teams (Stenfors, 2019).

Tsunetsugu et al's (2013) study showed employees who worked in 'green spaces' experienced enhanced creativity, problem-solving and innovation. Barton & Pretty (2010) found staff who accessed nature had improved focus, decisiveness and mental clarity, due to employees breaking from the 'directed attention' required in work tasks, enabling better performance upon return (Albulescu et al, 2022).

Other studies show employees have recorded fewer sick days and lower absenteeism due to being healthier and happier (Largo-Wight, 2011), with improved employee engagement and job satisfaction, reducing recruitment costs (Benefits, 2024). This helps attract and retain staff, who want to work for employers who prioritise nature-related activities and well-being (Wild Eye Adventures, 2024).

Several studies (Kaplan & Berman, 2010; MacKerron & Mourato, 2013; Hartig et al, 2014; McMahan & Estes, 2015; Twohig-Bennett & Jones, 2018; Yao et al, 2021) show time spent in nature reduces workplace conflict and enhanced cooperation among employees. With collaborative activities in natural settings (e.g. team building), encouraging social interaction, communication and camaraderie, which

can enhance workplace relationships, morale and create a positive, values-based company culture (Brossoit et al, 2023).

Many companies currently advocate for nature access, like the UK Wildlife Trusts and World Wildlife Fund, who have 'employee toolkits' for their or any organisation's team leaders to put nature access plans in place (WWF, 2025; Ennis, 2025).

1.2b Arguments against the benefits of nature access

For the interest of critical thinking, arguments against accessing nature were sought. Although there were no solid arguments against, there were arguments against an organisation creating ways to access nature and allowing its employees to do so.

The main reasons were -

- Distraction from productivity: Newport & Bottoms (2016) argue nature access may detract employees from focusing on their work.
- Economic and space constraints: In urban areas where real estate is scarce, allocating land for nature has been argued as wasteful (Florida, 2019).
- Liability and safety: Outdoor spaces can create risks if employees access them, requiring additional management to ensure safety (Biederman, 2012), with legal implications if an accident occurred.
- Environmental harm: Some critics (Boyle, 2019) fear human presence in nature may inadvertently lead to environmental degradation.
- Inequality: Nature access is often argued to be a luxury that distracts from addressing more urgent social needs (Fraser, 2020).

 Cultural and aesthetic: Critics (Anderson, 1991) argue nature connections in organisations is often superficial (green washing) and does not address deeper environmental issues.

1.2c What does 'nature access' mean?

For the purpose of this dissertation and its research questions, nature access means spending time in green and blue spaces: areas with grass, trees, plants and wildlife, from urban parks and gardens to coastal walkways and beaches, mountains and countryside, whether it involves doing energetic activities or just spending time in a natural environment.

People engage in various nature activities depending on their interests, where they live, their physical abilities and resources – all are beneficial to health and well-being. These include activities in groups (organised by a club, local council, workplace, friends or family) with pets, or alone. From hiking to skiing, camping to birdwatching, cycling to wild swimming, photography to conservation volunteering, gardening to picnicking, nature offers many experiences – and the things people do are a mix of physical activities, relaxation, creative expression, and environmental connection.

However, to do this locally, it is important communities have access to nature and the ability to visit and move through natural spaces freely, whether paths or fields, to explore nature. Which means governments and local councils have to work together (e.g. like the UK Ramblers do) with landowners so laws and regulations ensure people have the right to access certain natural areas. Some countries or regions have public lands that are legally accessible to everyone (Gov.UK, 2025).

Other accessibility issues include social, physical and economic access: People from diverse backgrounds, regardless of socioeconomic status, disability, or geographic location, should not have barriers to engage with nature (EEA, 2023). Research looked at what else the public need, from transport to nature spaces, car parks, cafes and toilets with baby changing facilities, drinking water and disabled access. There should also be cultural and educational access, which could include opportunities to learn about or engage with natural spaces, through outdoor education programmes (e.g. forest schools), community nature walks, or ecotourism (Tonicha, 2025).

1.2d Do people around the world access nature?

The benefits of accessing nature are not new – many argue nature access is rejuvenated old behaviour that got lost in post-1980s busy, materialistic, urban lives (Labib, 2022).

Studies including the *Connectedness to Nature Scale* show the UK (including Wales) is one of the most nature depleted in the world, with the lowest nature connectedness in Europe (Mayer & McPherson Frantz, 2004; ARU, 2024; Barkham, 2022), which explains why there is no single word in the English or Welsh language (the closest word in Welsh is *cynefin* meaning a familiar 'habitat') for nature connection like other countries, where this is enshrined in a culture.

Many countries around the world practise nature access within their culture, naming activities. Like *shinrin-yoku*, Japanese for 'forest bathing', referring to the practice of

immersing in a forest environment to engage the senses and promote physical and mental well-being (Wikipedia, 2025; Organization JNT, 2022).

The Swedish say *friluftsliv*: connecting with nature through outdoor activities or enjoying nature leisurely for well-being (Guardian, 2023). In Finland, *sisu* means to embrace the wilderness for mental and emotional strength (Smirnova, 2022). Norwegians use the word *kos*, meaning being cozy in nature, including gatherings with loved ones in a natural setting (Simon, 2023).

In Iceland, *alveg* refers to being fully immersed in the moment, embracing nature's beauty, stillness, and power. It emphasises mindfulness, and the connection between people and the natural world (Nomadic Cosmopolitan, 2017). The Dutch say *g*ezelligheid, meaning a content atmosphere created by spending time in nature (Wikipedia, 2014). And in Quechua culture, *ayni* means reciprocity with nature – the connection between humans and the natural world (Wikipedia, 2025b).

All these terms (and more) reflect different cultural approaches to connecting with nature, highlighting its importance not just as a physical space, but also as a source of emotional, social, and spiritual renewal (IUCN, 2025).

1.2e Pathways to nature connectedness

To foster a stronger connection with nature, researchers created the 'Five pathways to nature connectedness' [Figure 2] (Finding Nature, 2019), which gives organisations a definition to work with:

1. Contact. Explore and get in-touch with the natural world.

- 2. Beauty. Take time to appreciate the beauty of nature.
- 3. Meaning. Consider what nature means to you.
- 4. Emotion. Find happiness through the wonder of the natural world.
- 5. Compassion. Think about what you could do for nature.



Figure 2: The five pathways to nature connection (National Trust, 2025)

1.2f The Well-being of Future Generations (Wales) Act 2015

When a culture has a word in its language to describe nature connection, accessing nature is often widespread and engrained in that population's way of life. If accessing nature is not enshrined in a country's culture, it is unlikely to have a specific word, and creating a culture of nature access requires strong leadership to create access opportunities, inspire people to engage, and steer behavioural change. If spending time in nature for at least two hours each week increases people's wellbeing, and benefits organisations by creating a more productive workforce, and therefore a more profitable economy, there is an argument for governments to legislate to help create a nature access culture. Not every country has a legal mandate for people to engage in nature-based activities, so many countries legislate for public access to nature – either through explicit laws like the UK's 'Right to Roam', or policies promoting recreation in protected natural areas. These laws reflect a cultural understanding of the importance of nature for public health and wellbeing (Service, 2015).

This has been done successfully in many countries, including Norway. *Allemannsretten* (Everyman's Right), where a law grants the public the right to freely roam and access natural areas for recreational purposes, is considered an integral part of Norwegian culture, promoting respect for nature and ensuring people enjoy nature responsibly (Tromso Outdoor, 2025).

Sweden has a similar law, *Allemansrätten*, a key feature of Swedish outdoor life for centuries. This right is not unlimited, and there are rules to ensure people respect the environment and private property (Visit Sweden, 2025). There are also similar laws in Finland, the Netherlands, Germany, Canada and New Zealand.

There are laws, but no particular terminology or culture in the UK. Scotland passed the *Land Reform (Scotland) Act 2003*, which gave people a legal right of access to most land and inland water. It applies to a wide range of outdoor activities and

emphasises responsible access through following a 'Scottish Outdoor Access Code' to avoid disturbing wildlife or damaging land (Scottish Government, 2025).

England and Wales have the *Countryside and Rights of Way Act 2000*, which gives people the right to walk freely on certain areas of open land. While access is not as broad as other countries, it has made significant strides in allowing people to access parts of the countryside previously restricted (Gov.UK, 2025).

In Wales, this was attempted indirectly (Gov.UK, 2025) by the WFGA, which gave the country "ambition, permission and legal obligation to improve our social, cultural, environmental and economic well-being" (FGCW, 2015), which could be used to argue for funding for both local Council-run nature access activities (Public Health Network Cymru, 2025), as well as legislating for the working week to include organisation-run nature access activities. Creating a circular, sustainable economy, plus alternative approaches to economic systems, like the Doughnut Concept (Raworth, 2017), were also looked at during the research process.

1.2g Different types of leaders and leadership

It takes leadership that believes in the benefits of regular nature access to engrain it into an organisation (and country's) culture. A leader who would create easy, free and accessible ways for everyone to be able to engage in nature – e.g. allowing workers two hours in work time to be in nature, through organised activities. But 'buy-in' would still be needed to create support and participation, especially to introduce across Wales.

There are many types of leadership styles, each with their own characteristics, strengths, challenges, and approaches to guiding others. Different leaders prioritise different aspects of leadership (Delgado, 2023). To decide what leadership style would be best placed to introduce nature access activities and culture, I looked at styles described by Goleman (2015) and Lewin (1947).

Goleman is a renowned psychologist and author best known for his work on emotional intelligence (EI), shifting the focus from traditional measures of intelligence (like IQ) to the importance of emotional and social skills in personal and professional success (Goleman, 2024). He applied EI principles to leadership in his work (Goleman, 2013), arguing that EI leadership is crucial for creating environments where people feel motivated, engaged, and productive.

His studies identified six leadership styles [Figures 3, 4], all with their own strengths and challenges, stating effective leaders can use multiple styles, moving fluidly between them as the situation dictates, to inspire, guide, and support teams (Lindberg, 2022).



Figure 3: Six Styles of Leadership (Goleman, 2000)

The Six Leadership Styles (Goleman)

	Commanding	Visionary	Affiliative	Democratic	Pacesetting	Coaching
The leader's modus operandi	Demands immediate compliance	Mobilizes people toward a vision	Creates harmony and builds emotional bonds	Forges consensus through participation	Sets high standards for performance	Develops people for the future
The style in a phrase	"Do what I tell you."	"Come with me."	"People come first."	"What do you think?"	"Do as I do, now"	"Try this."
Underlying emotional intelligence competencies	Drive to achieve, initiative, self- control	Self-confidence, empathy, change catalyst	Empathy, building relationships, communication	Collaboration, team leadership, communication	Conscientious- ness, drive to achieve, initiative	Developing others, empathy, self-awareness
When the style works best	In a crisis, to kick start a turnaround, or with problem employees	When changes require a new vision, or when a clear direction is needed	To heal rifts in a team or to motivate people during stressful circumstances	To build buy-in or consensus, or to get input from valuable employees	To get quick results form a highly motivated and competent team	To help an employee improve performance or develop long- term strengths
Overall impact on climate	Negative	Most strongly positive	Positive	Positive	Negative	Positive

Goleman, Daniel, "Leadership that Gets Results" <u>Harvard</u> <u>Business Review</u>. March-April 2000 p. 82-83.

Figure 4: The Six Leadership Styles (Goleman, 2000)

From these styles, many could successfully introduce access to nature activities – from a 'commanding style' to introduce them, to a 'visionary style' of leader who inspires people to engage with nature for long-term benefits to employees, organisations, and the country. For a culture to embed, a 'democratic style' leader would take longer to establish habits, but would be able to get employees to believe in a new scheme and engage.

Lewin was also a psychologist known for his pioneering research on leadership (Leadership, 2024; Lindberg, 2022), identifying three styles [Figure 5]. His work on group behaviour and dynamics laid the foundation for contemporary understanding of leadership – not just the behaviour of leaders, but the impact different leadership styles have on group performance, morale, productivity and individual behaviour (Leadership, 2022).



Figure 5: Kurt Lewin Leadership Styles (Lindberg, 2022)

Key findings of Lewin's research (Leadership, 2022) help determine what kind of leader could successfully introduce access to nature activities and embed it into a culture – a democratic leadership was found to be the most effective due to valuing participation, collaboration and feedback (Economic Times, 2025). Although slower in decision-making, this style leads to higher morale, greater job satisfaction, and better long-term results (Aurora Training Advantage, 2025).

If people in democratic environments feel engaged and motivated, organised access to nature activities would have a higher chance of take-up, making it easier for a new culture to thrive. Lewin's change management work – using the Unfreeze-Change-Refreeze Model (Awati, 2022) – argues that in situations requiring organisational change, although autocratic leadership might be used to implement urgent or necessary changes swiftly, it is democratic leadership that can help facilitate participation and reduce resistance (Towler, 2025).

So a combination of leadership styles could work to create a cultural change for people, organisations and countries. Including Lewin's Situational Leadership, which combines elements of democratic and participative leadership, with an emphasis on prioritisation of employee engagement, collaboration, and inclusivity, which could also help an organisation introduce nature access activities and lay the foundation for a cultural change (Shriver, 2024).

CHAPTER 2: LITERATURE REVIEW

2.1 Overview

This chapter critically analyses secondary evidence, using resources sourced from books, articles, and academic papers. It defines definitions of leadership and explores explanatory literature for the topic in question: why and how people connect with nature, what benefits this brings to them and businesses, looking how nature connection can help deliver the Welsh Government's WFGA (2015) goals.

2.2 Leadership

2.2a <u>Analysing leadership</u>

There is a plethora of literature about leadership qualities – from early writings by Plato and Aristotle, to John C. Maxwell's *The 21 Irrefutable Laws of Leadership* (2022) and Simon Sinek's *Leaders Eat Last* (2019), plus how a good leader embodies a combination of key traits. There was not an issue finding research on this, with most writers agreeing good leaders have: EI, empathy, integrity, vision, adaptability, communication skills, decisiveness, accountability, and humility.

The idea that empathy is the most important leadership trait has been widely discussed by many thought leaders, from Brene Brown (2018) to Simon Sinek (2019) and Goleman (2006), all used for this analysis. This is because it allows leaders to connect with their teams on a deeper, more human level by building trust, fostering collaboration, enhancing communication, driving motivation, encouraging personal growth and improving decision-making (Business Insights, 2019), to create an environment where people feel valued, understood, and connected. Leaders who

lack empathy may struggle to inspire their teams or gain their respect, as employees might feel disengaged or unsupported (Meier, 2015).

Research shows spending time in nature can enhance empathy. A *Psychological Science* study (Weir, 2021) found people who took walks in natural environments exhibited more emotional stability and were better at reading emotions of others compared to those who walked in urban environments. A University of Plymouth study (Martin et al, 2020) found people with a strong sense of connection to nature were more likely to engage in pro-social behaviour, including feeling compassion towards others. A University of Hong Kong study (Poon et al, 2016) found spending time in nature helps reduce aggressive and hostile behaviours, making people more receptive to others' emotions and experiences.

If spending time in nature fosters empathy by improving emotional regulation, reducing stress, and enhancing compassion, a good leader would choose to spend time in nature themselves, as well as encouraging employees to engage in (and provide access to) nature-based activities. Goleman's definitions are used to determine what leadership style would be most likely to invest in employees' nature access (Goleman, 2000), and Lewin's leadership and change management work is used to determine how an organisation can make this possible (Lewin, 1947).

2.2b The theory behind leadership: Daniel Goleman

While Goleman does not specifically focus on access to nature in his work, his El framework, or quadrant (Ott, 2025), can provide insights into the type of leaders who would allow and encourage employees to access nature as part of their well-being

strategy. His theory breaks down his leadership styles into six categories [Figures 3, 4], which helps determine what kind of leader would recognise the importance of nature exposure and its impact on well-being (Goleman, 2020), and why leaders should encourage access to nature.

Literature states leaders with high EI would be particularly effective in advocating for access to nature because they show:

- Empathy, understanding the emotional and psychological needs of their teams, understanding employee well-being impacts not just mental health but also engagement, creativity and productivity (Goleman, 2006).
- Building trust, essential for creating work environments where employees feel supported enough to take time for their mental health, including spending time in nature (Brown, 2018).
- Motivating employees, and understanding nature exposure benefits for mental restoration and performance (Sinek, 2019).
- Sustainability and long-term vision, due to a strong sense of social responsibility, seeing the benefit of aligning organisational values with a commitment to sustainability and employee health (Grant & Lewis, 2013).

According to Goleman's work, a highly El leader (especially those who embody coaching, democratic, or transformational leadership styles) are most likely to recognise the value of allowing employee nature access. By fostering well-being through nature-based strategies, these leaders support not only the health and engagement of employees, but also create a more productive, innovative, and sustainable organisation.

2.2c Change management: Kurt Lewin

Many change management models which could help implement nature access activities (and culture) were looked at, including ADKAR: Awareness, Desire, Knowledge, Ability, Reinforcement: a popular framework developed by Prosci (2025), which focuses on guiding individuals through the process (Hiatt & Creasey, 2012; Nelson & Aaron, 2005; Kotter, 1996; Peters & Waterman, 1982; Rasiel, 1999; Rothwell & Sullivan, 2005). *Constructs in Field Theory* (Lewin, 1944) was also looked at, and *Managing Organizational Change* (Buchanan et al, 2021), which provides a more contemporary look at change models.

But it is Lewin's work that dominates this area, laying the foundation for understanding how different types of leadership affect group behaviour and performance (Northouse, 2012; Kenrick et al, 2014; Daft & Lane, 2023; Robbins & Judge, 2008). His Model of Change (also known as the Unfreeze-Change-Refreeze Model) [Figure 6] remains one of the most widely used frameworks for guiding and implementing change in organisations, and has become one of the foundational theories in the field of change management. It emphasises successful organisational change requires altering the mindset and behaviour of employees, which is needed to introduce a cultural change of access to nature in the workplace (Lewin, 1944).



Figure 6: Lewin's Model of Change (Malik, 2022)

'Unfreeze' is where an organisation or individual recognises the need for change and prepares for it, breaking down the existing status quo and creating awareness about the need for change. This stage involves addressing resistance to change and motivating individuals to change old behaviours or practices. Kotter's change model detailed in his book *Leading Change* (1996) can also be used to improve the organisation's preparedness for change and create a sense of urgency, with effective change communications also vital in garnering support for this change.

The 'change' (or transition) stage looks at new behaviours, processes, or practices implemented, and involves experimentation and the adoption of new ways of thinking

and working. But change requires support, training, and effective communication to help individuals adapt to new practices. Once the status quo is disrupted, change must be implemented. To make the transition as smooth as possible, an agile approach is needed that incorporates employee feedback.

The 'refreeze' stage solidifies the new changes and makes them part of the routine and culture (Lewin, 1944). The new behaviours are reinforced, with changes becoming the new normal. If this stage is not properly managed, the organisation or individuals may revert to old habits.

After analysis in relation to the dissertation question, it is Lewin's Model of Change that provides a simple, yet powerful, framework for understanding and managing change, and could be used to introduce nature access into the working week and create the 'buy-in' and culture to keep it there. Activities to help support this change include: 1) Identify and reward early adopters and change champions; 2) Collect employee feedback regularly; 3) Offer employee training and support, building on existing skillsets to allow employees to take over different and more responsibilities – ongoing training is crucial until the change is second nature (Lewin, 1944).

Lewin's model can also address the resistance to change brought about by people struggling to change routines – who may pushback, be sceptical or oppose the change – which reduces the risk of failure (Lewin, 1944). Evaluating the change, creating a plan, and integrating it into the organisation's culture and processes swiftly is imperative. This involves providing clear communications about the reasons for the change, involving employees in the process, addressing concerns, and providing support to help employees adapt (Kotter, 1996; Armenakis & Bedeian, 1999).

Nudge Theory (Businessballs, 2025) could also be used. A term coined by economist Richard Thaler which explains how to 'nudge' people into making a change that can be difficult at first, but once enacted can have long term benefits – e.g. putting your sports kit by the front door to ensure you take it to work, then go to the gym after-work.

Lack of leadership support is also a barrier. Kotter (1996) stated successful change initiatives require strong leadership and guidance. When leaders support and promote change, employees are more likely to prioritise and understand its importance. Leadership sets the tone for change by providing direction, resources, and alignment with an organisation's vision and goals. Without strong leadership, employees may feel uncertain and unsupported, leading to resistance and disengagement. To prevent this, leaders must communicate the vision, provide guidance and resources, and involve employees in the process. By demonstrating their support for the change, leaders can build momentum, creating employee buy-in, and increase the chance of successful implementation (Bass, 1990).

Burnes (2017) cited inadequate resources as something organisations need to address to make change successful. When resources are lacking, implementation can be compromised, and quality suffer. Employees may also resist change if they feel overworked, making it difficult to maintain momentum. Organisations should identify and allocate the necessary resources, whether securing more funding or staffing, re-prioritising existing resources, or finding creative solutions to resource constraints. This increases the chance of successful implementation and outcome.

Armenakis and Bedeian (1999) cite poor communication as a barrier: For change initiatives to run smoothly, communication must be clear and consistent. Poor

communications can lead to confusion, scepticism, or employee resistance, making it difficult to build engagement and sustain the change. A clear communications plan that outlines key messages, channels, and timing throughout the change process is needed – it should be tailored to the needs and preferences of different stakeholders and delivered promptly and consistently.

Kotter (1996) and Hiatt (2006) mention inadequate training, which employees need to implement change successfully. Failure to do so can result in frustration, mistakes, and resistance to the change, hindering its success. To prevent this, Buchanan and Badham (2008), plus Bates and Holton (1995), suggest investing in effective training materials, conducting workshops, providing coaching, and giving ongoing feedback and support to ensure employees possess the knowledge and skills needed to support the change and increase the chances of success and desired outcome.

2.2d Are leaders currently promoting access to nature?

There are many examples, including organisation-wide green initiatives, where leaders create green spaces in offices, encourage employees to take breaks in parks, or implement outdoor team-building activities to promote mental well-being. Other examples include: indoor plant walls, walking meetings, well-being programmes, sustainable transportation incentives (e.g. UK cycle to work scheme), and employee-led green committees which run events like staff litter pick-up days.

Statistics show green initiatives are steadily growing as more businesses recognise the benefits of sustainability, for the environment and employee well-being. A McKinsey study (2022) showed 70% of companies reported sustainability as a high
priority in their business strategy. Of these companies, a growing number are integrating green initiatives into their daily operations, including eco-friendly office spaces and employee well-being programmes. A *Harvard Business Review* report (McKinsey, 2020) showed companies with strong sustainability initiatives are 4.8% more profitable than those without. This highlights sustainability as not just an environmental concern, but also a financially sound business strategy.

Many studies have found employees that had access to green spaces in offices experienced reduced burnout, and improved recovery from stressful situations (NHS Forest, 2025), including a study by Human Spaces (2015) which found 58% of employees in offices with natural elements like light and greenery reported higher levels of well-being and productivity.

A 2019 University of Michigan and Kansas study (Korpela & Hartig, 2020) showed employees who took breaks in nature reported 21% higher productivity and 34% higher job satisfaction compared to those who took breaks indoors or at their desks. According to Team Bonding (2021), 83% of employees reported higher satisfaction when organisations offered outdoor team-building activities, with 73% saying these activities positively affected their job performance.

A Global Workplace Analytics survey (2021) stated 30% of companies offered financial incentives for employees to bike to work, with 20% offering public transport subsidies. This is a growing trend as part of larger efforts to reduce corporate carbon footprints. A report by CDP (2020) showed 38% of companies worldwide are setting

carbon emission reducing targets, including eco-friendly commuting options for employees, as part of their sustainability goals.

A Conference Board (2021) survey found 66% of employees prefer to work for organisations that prioritise sustainability and environmental responsibility. Many companies have employee-led green committees and offer opportunities to participate in environmental initiatives, from clean-ups to tree planting. An Edelman Trust Barometer study (2019) found 60% of employees prefer to work for employers that have a strong corporate social responsibility stance.

A Gallup (2022) study revealed 61% of employees who participated in wellness programmes (including nature-based activities), felt more connected to their company's values. These initiatives are increasingly part of organisation's well-being strategies. Deloitte's *Global Millennial Survey* (2020) showed 83% of millennials are more likely to stay with an employer who prioritises sustainability.

Organisations are now increasingly integrating green initiatives to attract and retain top talent. A KPMG report (2020) stated 80% of the world's largest companies report on their sustainability efforts. This reflects the growing trend of transparency and accountability, with organisations recognising green initiatives contribute to their reputation, legal compliance, and long-term financial performance.

Flexible, remote and hybrid working policies are another way to help give employees time to access nature. A leader with EI may promote this to allow staff to work from more natural, peaceful environments. Since the pandemic, flexible work policies

have gained popularity, with many organisations and leaders recognising work-life benefits – companies with stand-out benefits looked at include: Spotify (Spotify, 2021); Airbnb (Airbnb, 2022); Facebook (Meta, 2021); and Zoom (Zoom, 2025).

This suggests organisations with EI leadership understand when employees feel trusted and empowered to work in ways that suit their needs, individual satisfaction and organisation-wide success is achieved. Many organisations recognise the benefits of supporting their employees' mental health, including encouraging spending time in nature, by integrated this into their wellness programmes, including: Patagonia who offer staff paid time off for outdoor activities (Patagonia, 2025); Ben & Jerry's Mental Health Day policy (Ben & Jerry's, 2025); Google's staff wellness programme (Google, 2025); and The North Face's paid day off for employees to spend time in nature (North Face, 2025).

2.3 The benefits of spending time in nature

This dissertation research started from a study by White et al (2019), which looked at the relationship between nature exposure and well-being, by examining how much time spent and moving in natural environments was linked to better health and happiness.

Other studies showed nature exposure creates a desire to care about local natural spaces and the wider environment, especially Kals et al (1989), which shows emotional connections to nature are fostered by direct exposure, which can lead to increased environmental stewardship and pro-environmental behaviours.

Participants who developed an affinity for nature through personal experiences were more motivated to engage in conservation efforts and protect local natural areas. This connection to nature promotes a sense of responsibility toward both local and global environmental issues. Work by Mayer and Frantz (2004) shows individuals who feel connected to nature are more likely to care about and engage in behaviours that benefit both local and global environmental health.

White et al (2019) found people who spent at least 120 minutes per week in nature reported better mental and physical health and well-being than those who spent less time outdoors. Other studies show just 20 minutes in nature reduces stress regardless of age, gender, socioeconomic status (Harvard, 2019) – so White et al's (2019) two-hour threshold could be split into 20 minutes spent in nature daily.

The study emphasised time spent in nature did not have to be in remote wilderness. Even urban parks or community gardens was sufficient and provided significant improvements in well-being, making it more accessible to people in cities and towns.

White et al (2019) also explored why time in nature has such a strong effect on wellbeing. This is because of stress reduction, encouraging physical activity, social interaction due to connectiveness to people and place, plus mental restoration: Nature provides a restorative environment that helps people recover from cognitive fatigue and improves focus. This is in line with Attention Restoration Theory (Kaplan, 1989 & 1995), which suggests natural environments help replenish mental energy.

The study can also be used to look at workplace well-being. For businesses, providing employees with access to nature could significantly lower stress, enhance productivity and improve job satisfaction. Particularly relevant for workplace wellness programmes, where integrating outdoor breaks or nature-based team-building activities could foster both mental health and workplace cohesion.

Berto's Role of Nature in Restoring Attention study (2005) proved exposure to restorative environments like nature can help restore attentional capacity. It is rooted in the theoretical framework of Attention Restoration Theory (ART), which stated naturel (restorative) environments that are calming and not demanding on cognitive resources can help individuals restore their mental attention and reduce cognitive fatigue, particularly important for tasks requiring attention and concentration in the workplace (Berto, 2005).

This study also highlighted restorative environments as places that help students' focus, attention, and learning outcomes – schools and universities could integrate outdoor classrooms (forest schools) or nature breaks to help students recharge and improve their cognitive performance.

Kaplan's Theory (1995) suggests that natural environments are particularly wellsuited for this restoration, because they provide soft fascination (like the movement of trees or sounds of water), which draws attention in a gentle and non-demanding way. In contrast, urban or highly stimulating environments require more effortful attention, which can lead to mental fatigue. Therefore, natural settings allow for cognitive recovery by engaging the brain in ways that do not exhaust it.

However, there are considerations to the studies, like subjective variability: Individual responses to restorative environments can vary, depending on factors like personal preferences, cultural backgrounds, or past experiences with nature. Also, duration and context: The study focused on short-term exposure to nature (a few minutes to an hour). Long-term benefits of nature exposure (especially in relation to chronic mental fatigue or long-term cognitive improvement) still require further research.

But overall, leaders and organisations promoting access to nature for their employees of any kind can foster mental recovery, enhance focus, and improve productivity and overall well-being. This in turn helps make organisations more efficient, and therefore more profitable (Berto, 2005).

2.4 Research on the benefits of spending time in nature for businesses

Apart from the aforementioned, there is less direct research available about spending time in nature having organisational benefits. Most literature is about the connection between nature exposure and workplace well-being, under the subjects of organisational behaviour, psychology, and sustainability. These suggest organisations that encourage employees to spend time spent outdoors, or create greener work environments, experience improved performance, creativity, well-being and engagement (Human Spaces, 2015), which in turn benefits organisations.

A study in *The Journal of Environmental Psychology* (Alversson et al, 2015) found even brief exposure to nature can reduce stress and mental fatigue. Reduced stress means less burnout and absenteeism, improving overall employee well-being and reducing health-related costs to organisations. Nature's restorative effects are particularly beneficial for those in high-stress, high-performance jobs. A *Restorative Environments* study (Kaplan, 2007) revealed nature access improves attention span and reduces mental fatigue, crucial for roles requiring sustained focus and creativity.

Research by Kaplan and Kaplan (1989) found nature can improve cognitive function, leading to better problem-solving, increased creativity, and more effective decisionmaking. One experiment from Berman et al (2008) found participants who took a walk in nature scored higher on creativity tests than those who walked in urban settings. Improved creativity and innovative thinking is critical for organisations to stay competitive (Berto, 2017). Nature's ability to clear the mind and improve focus is important in professions where innovation and blue-sky thinking are necessary. Encouraging breaks in natural settings can also help employees recharge, leading to greater idea generation and effective brainstorming.

Employees who are mentally and physically well are more engaged in their work, which leads to improved productivity (Kaplan & Kaplan, 1989). A study by the American Society of Landscape Architects (2014) showed workplaces that incorporate access to nature have employees with higher levels of satisfaction, engagement, and productivity, and are more likely to feel motivated and committed.

Natural environments encourage employees to take breaks and move around, which improves cardiovascular health, promoting better sleep, and helping maintain a healthy weight. The more active employees are, the more likely they are to experience sustained energy levels and fewer physical complaints, making them

more focused and productive at work and less likely to take sick leave (Browning et al, 2014; Ulrich, 1991).

Kaplan and Kaplan (1989) and other environmental psychologists, found time spent in nature helps reduce blood pressure, lowers cortisol levels, and improves overall immune function. This also means fewer sick days and a lower overall healthcare cost for the organisation.

Nature-based activities, like team-building events outdoors, can strengthen team cohesion and improve collaboration. Nature often promotes a sense of shared experience and collective well-being, which can strengthen relationships between co-workers. A study by Baumeister and Leary (1995) on social bonding found that shared outdoor experiences build camaraderie and trust among team members, which is essential for a collaborative work environment.

Team-building exercises in nature also help employees disconnect from work stressors, allowing them to communicate more openly and creatively. Research from Virginia University (Shuffler et al, 2018) found outdoor team-building exercises helped teams' function more cohesively, increasing their problem-solving abilities.

When employees feel supported and cared for by their organisation – especially in terms of their mental, emotional, and physical well-being – they are more likely to stay with the company long-term. A study by the Society for Human Resource Management (Peng et al, 2024) revealed companies offering wellness initiatives, like nature-based activities, tend to have higher employee satisfaction and retention

rates. When employees are given opportunities to take outdoor breaks or have access to nature-filled workspaces, they feel more valued and likely to stay.

Offering nature-based wellness programmes also positions an organisation as one that prioritises employee well-being, making it an attractive place to work. Organisations that incorporate these are often seen as sustainability leaders. In today's competitive job market, many employees look for companies that align with their personal values, including a commitment to environmental stewardship. By supporting nature activities, organisations can improve their brand image and attract eco-conscious talent, as employees increasingly seek workplaces that value environmental sustainability (Hartig et al, 2014; Kellert & Calabrese, 2015).

Promote nature exposure is not just a wellness perk, but also an investment in the long-term success and health of both employees and the organisation. So there is a strong case for organisations to incorporate nature access into their employees' working week – and ensure their leaders and senior team also spend time in nature.

Doughnut Economics (Raworth, 2023) [Figure 7] was also looked at, which evaluates how businesses can and do not operate in a silo, and those operating in a healthy environment, on a healthy planet, with healthy workers, thrive – which brings together the link to workers' access to nature and more profitable companies. This introduces a transformative framework for rethinking economics in a way that balances social well-being and planetary health. The key ideas are similar to what the WFGA (2015) aims to do in Wales, hence researching it for this dissertation.





2.5 Welsh Government's Well-being of Future Generations Act (2015) goals

A decade after the WFGA (2015) was launched, this dissertation looked at whether increasing employees' access to nature could help achieve its aims. Research shows it would play a significant role due to strengthening resilience, promoting mental health, and enhancing an organisation's ability to cope with challenges, whether environmental, economic, or social (MHF, 2025). These all help to promote a better future for Wales.

1. A Prosperous Wales:

Access to nature can contribute to a more productive workforce, tied to economic prosperity. Studies show time spent in nature improves employees' mental health,

productivity, creativity, and problem-solving skills, all contributing to better work performance and more innovative outcomes (Gov.Wales, 2025a).

By promoting nature exposure, organisations can enhance employee engagement, reduce burnout, and improve overall workplace satisfaction – leading to higher retention rates and reduced absenteeism. This improves business efficiency and output, contributing to a more sustainable economy by fostering a healthier, more motivated workforce (Berman et al, 2008; Human Spaces, 2015).

2. A Resilient Wales

Resilience is about the ability of individuals and organisations to adapt to change and challenges. Access to nature strengthens resilience by promoting mental and physical health, reducing stress, and improving emotional well-being (Gov.Wales, 2025). These factors are crucial in preparing individuals and communities to face the challenges of the future, whether economic, environmental, or social.

Nature exposure has also been shown to help individuals manage mental fatigue, increasing problem-solving abilities, boosting resilience in the workplace and society. By promoting well-being through access to nature, Welsh Government could build a more resilient society better equipped to deal with future pressures (Kaplan & Kaplan, 1989; Barton & Pretty, 2010; Shanahan et al, 2016; Maller et al, 2006).

3. A Healthier Wales

One of the most direct connections between the WFGA and access to nature is through the goal of a healthier Wales. Shanahan's study (2016) highlights many

health benefits associated with nature exposure, including improved immune function, better mental clarity and enhanced cardiovascular health. It also demonstrates how nature can foster cognitive improvements, such as better focus and decision-making, critical for workplace productivity and overall well-being.

Healthier employees are more likely to be engaged in their work and contribute positively to their communities (Platform Wellbeing, 2025; Ackerman, 2024). By promoting nature, the WFGA aligns with creating a healthier workforce which translates to lower healthcare costs for government, fewer sick days and increased productivity for organisations and the economy.

4. A More Equal Wales

Access to nature can help reduce health inequalities by providing a level playing field for employees through promoting mental health and well-being across diverse groups. It is beneficial for people who may experience higher levels of stress, e.g. those in lower-income brackets or disadvantaged communities (Gov.Wales, 2025).

Employers can enhance workplace inclusivity by ensuring all employees have equal access to nature-based activities and green spaces. Outdoor breaks could particularly benefit employees from disadvantaged backgrounds who may not have access to nature in their personal lives, creating more equal opportunities for well-being (Hartig, 2014). Maller's work (2006) reinforces the idea that nature-based activities can foster well-being across diverse social groups, promoting inclusivity.

5. A Wales of Cohesive Communities

Studies including Thompson Coon (2011) and Keniger et al's (2013) state naturebased initiatives in the workplace and community can build stronger social connections, and a more connected and resilient society. By fostering access to nature, organisations can promote a sense of belonging and community cohesion. With shared experiences in nature, like outdoor team-building activities or community events in green spaces, social isolation is reduced to create community spaces that encourage collaboration, shared responsibility, and social inclusion, essential for creating a more cohesive and inclusive society.

6. A Globally Responsible Wales

A key WFGA component is ensuring Wales contributes to global sustainability. Studies by Kellert (2018), and Zhou and Lee (2019), show how access to nature can promote environmental stewardship (e.g. encouraging conservation volunteering), and biophilic design – e.g. green roofs, office gardens – which promotes sustainable workplaces.

This encourages employees to adopt sustainable practices at work (e.g. reducing waste, conserving energy) and at home, helping create a more sustainable society and planet. This leads to healthier environments for employees, and organisations reducing their environmental footprints to align with broader sustainability objectives.

7. A Vibrant Cultural Wales

By promoting nature access, organisations can help employees connect with the cultural values and historical significance of their surroundings (e.g. walks incorporating cultural heritage), deepening a connection to an area and its

community. Czajkowski's (2017) and Chan et al's studies (2012) support the idea that nature can foster a sense of place, identity, and pride in local environments.

By promoting nature-based initiatives in the workplace, organisations can contribute to a healthier, more resilient, and equal society. Time in nature can also foster a deeper sense of social responsibility, community cohesion, and environmental stewardship, all crucial components of the WFGA's vision for future generations. But to truly achieve the WFGA's aims, it is not just about providing employees with access to nature in isolation, but integrating it into a holistic strategy that involves promoting sustainability, health equity, social well-being, and economic prosperity through nature-based solutions, as Raworth (2018) describes in her Doughnut Economic model, which contributes to achieving the broader WFGA goals.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Although research is available to show the benefits of spending at least 120 minutes per week in nature (White et al, 2019), and which of these benefits would be beneficial to employees and therefore business, there was a gap in research about how employees could access nature to gain these benefits to bring into the workplace: What type of leaders would not only be dedicated to making this accessible to staff, but also understand how it would benefit themselves as leaders to access nature; What accessing nature could look like for employees, and who could make this possible; How this could be a cultural shift, not just in the workplace, but also nationally – especially in Wales, where the dissertation research was undertaken.

To fill this research gap, both primary and secondary research was necessary, using an interpretivist approach that focused on understanding people's experiences and perspectives (Nickerson, 2024). This chapter looks at the Research Onion methodology process as developed by Saunders et al (2012) [Figure 9], which encompasses the entire research process in a series of layers: from the aims and objectives of the research; to the rationale behind the research; its design; paradigm; data collection and analysis stage; the data's reliability and viability; its limitations; and ethical considerations.

The research was conducted using a mixed methods approach to achieve the research objectives of this dissertation in line with how Cresswell et al (2010) describes successful research: "a process of steps used to collect and analyse

information to increase our understanding of a specific issue or phenomenon" – in this case, how accessing nature can benefit people, organisations, and a country's well-being goals.

The primary research involved a quantitative approach: an online survey using multiple choice questions not just for the ease of collecting data, but also for clarity of findings. Population sampling was random (probability), with the survey open to any respondents. Therefore, questioning a representative set of participants from the area focused on, generalisable to a population.

Qualitative research was also conducted, in the form of in-depth and open-ended interviews, by various leaders in the South Wales region, chosen for their variety: from owners of start-ups to managers in small local businesses and large multinational corporations; both male and female; from their 30s to 50s; in the private and public sector; middle managers of small teams to directors of large teams. This aimed to get the most representative data possible.

3.2 Aims and Objectives

The research aimed to analyse different leadership styles – focusing on those identified by Goleman (2015) and Lewin (1947) – to evaluate which style would help inspire people to connect with nature. And to identify which leadership style in the workplace would invest in employees' access to nature to create happier, healthier, more productive staff, using Berto's (2005) research which proved the restorative influence of nature on sustained attention.

The research conducted will show whether people need the time and access to nature opportunities (e.g. arranged walks or volunteering), to engage – concluding with not just what leadership style would encourage employees' access to nature, but why both employees and leaders should expose themselves to nature.

Using Raworth's Doughnut of Social and Planetary Boundaries (2018), the dissertation aims to evaluate whether organisations operate in silos, and whether those operating in a healthy environment, on a healthy planet, thrive – which brings together the link to workers' access to nature and more profitable companies.

The quantitative (surveys) and qualitative (interviews) research will provide data to analyse whether employees who spend time in nature experience better well-being and environment connection; If it makes people look after their local green spaces more; How they access nature, and whether they would do so more if their managers made provisions for this; If managers feel they lead better when accessing nature; If employees perform better with nature access; And whether organisations operate more efficiently and effectively in a cleaner, greener environment.

It will also evidence how the WFGA aims can be achieved if employees have access to nature – and whether this would enable a cultural change, so the population had access to nature culture within both the workplace and Welsh everyday life. It is hoped this will provide a conclusion with recommendations and credible, publishable research that proves access to nature can help promote a better future for Wales, which can be presented to Welsh Government.

3.3 Research Rationale

Even though Wales has had the WFGA for a decade, it is one of the most nature depleted countries in the world according to the 2023 State of Nature Report Wales (State of Nature, 2025), with polluted rivers (Owen, 2023), a rubbish problem (64% of Welsh streets are littered (Lloyd, 2022) and the largest polluter in the country – the Port Talbot steelworks – in the area where the research is focused on (Air Quality News, 2019). It does not have a culture or specific word in either of its languages (*Cynefin* is the closest in Welsh, but translates to 'habitat' and is more about an attachment to place and land of a country than nature (Adams, 2023)) for accessing nature unlike other countries, even though Wales has breathtaking nature to allow this, only 20% of the population spend time in nature daily, and only 40% do so twice a week (NRW, 2024). Yet 60% of adults living in Wales report anxiety that interferes with their daily lives and 30% report low well-being (MHF, 2023).

These statistics and more lay the foundation for this dissertation research. If people in Wales need to improve their well-being (even though the WFGA has been in place for a decade to help do this), and research shows nature access helps improve mental health, yet the Welsh population are not accessing nature often, there is a gap in research to show how making access to nature accessible via the workplace can help people, organisations, and therefore Wales. It is hoped a by-product of the main research may also show how people accessing nature would lead to people cleaning-up naturel spaces and putting pressure on the government to do so too (e.g. river clean-ups), plus organising or funding nature access events via local councils and community groups.

Ultimately, this research is being conducted to give evidence for how and why nature access should be made easily available for all people in Wales (and beyond). It should be significant research for this reason and published as an academic paper to give visibility to organisations and the Welsh Government, aimed at inspiring change to the benefit of the population, economy and country.

3.4 Research Paradigm

This is a set of beliefs and practices that guide how research is conducted – a framework including assumptions, values, and ideas that shape how researchers perceive and investigate the world [Figure 8]. It helps determine research questions, choose research methods, interpret results, and decide how to apply theory (Ulz, 2023). This research uses both quantitive and qualitative research methods, but is interpretivism: meaning the research is based on those that answered the survey and interviews, and because human behaviour is complex and unpredictable there are multiple realities, but that does not affect the data credibility.

A postmodern research philosophy is also applied to the methodology, emphasising the idea that reality is socially constructed – meaning 'truth' is not absolute and depends on individual perspectives and interpretations, therefore requiring a research approach that prioritises diverse voices, deconstructs dominant narratives, and acknowledges the researcher's own biases and influence on the study, often utilising qualitative methods like interviews and discourse analysis to capture rich, nuanced meanings (Wikipedia, 2025d). A paradigm is a world view based on a set of beliefs defined from first principles (Denzin & Lincoln, 1994) and is an important part of the dissertation research process. The research approach is described by ontological and epistemological beliefs of the researcher (Johnston, 2014) and combined with a methodological question to form a process of inquiry (Guba & Lincoln, 1994). Ontology can be defined as "the science or study of being" (Blaikie, 1993), and epistemology is the "how and what it is possible to know" (Chia, 2002). Early insights into research methods identified human nature as part of the ontological and epistemological debate (Morgan & Smircich, 1980).

The objectivist perspective regards reality as an external structure exhibiting object permeance. Positivism permits knowledge to be empirically mapped and deduced through quantified measures and pays little attention to the prejudices of the social actors. Whereby the researcher, however impartial, influences the research process and should not be ignored. Rather, the individual should be actively engaged to reflect upon what part of the discussion which has intrinsic value. This aids pursuit of knowledge, in order to participate in the research more effectively. The dissertation research questions use a pragmatic ideology that lets it weave different viewpoints and tools to respond to the research questions from a practical epistemological standpoint, enabling answers to be formulated and related in a practical manner.

The Research paradigm



Figure 8 – The Research Paradigm (Malau-Aduli & Alele, 2025)

3.4a <u>The Research Onion</u>

The Research Onion [Figure 9] depicts a process of inquiry described as the "choice of data collection techniques and analysis procedures" (Saunders et al, 2012). The onion layers represent philosophies on the outer layer followed by approaches, strategies, choices, time horizons to techniques and procedures on the innermost layer. The journey of inquiry is from the philosophical layer to the interior, making reasoned choices along the way – it is another way to work through different research stages.





Each layer of the onion has been discussed, from the philosophy used for this research, interpretivism, to the choices of research methods of survey and interviews, taking a mixed method approach, and mostly an induction approach to reasoning an argument: a subjective perspective where conjecture is formulated from patterns emerging from context of the value bound social phenomena. Highly regarded by interpretative philosophy (Ihuah & Eaton, 2013).

3.5 Research strategy and design

The Research Strategy [Figure 10] is the comprehensive plan created before the research was conducted. It outlines the overall approach and framework used in the research study, including the philosophy, theory, methods, data collection techniques, analysis procedures, and key considerations to answer the specific

research questions and objectives (Busetto et al, 2020). The majority of questions raised require exploratory research to induce and identify emerging patterns, and Saunders (2012) advise the use of surveys and expert interviews for this, which is what has been used. The theory was both inductive, because it built on the previous research that spending 120 minutes in nature is good for people (White et al, 2019).



Figure 10 – Types of Research Strategy (Saunders et al, 2009)

An online survey was created on Microsoft Forms with 20 mostly multiple-choice questions, plus an option to stay anonymous and receive the final research data. Designed to get the information needed in the easiest and fastest time for the participant possible, 180 people answered this. This is quantitative data gathering, within exploratory and descriptive research (Saunders et al, 2012).

A trial was conducted before the survey went 'live', where fellow students, the dissertation supervisor, and selected people were asked to undertake the survey and give feedback. Feedback included changing the age ranges (e.g. from 40 to 50 and

so forth, to 40-49 etc to stop confusion with repetition of ages) and a 'I am not working at the moment' to ensure retired people not asked to do the survey, but do, can be discounted from research that is aimed at managers. The GDPR statement was also tweaked, and a feature added where those wanting to see the final research could be emailed a copy.

The data collected through the interviews, which are then used to draw conclusions about how societies and individuals' function, is the ethnography: the term for the qualitative method for collecting data often used in social and behavioural sciences (HRPP, 2025). The selection of the 18 participants were made carefully, to ensure quality data – a mix of ages, gender, seniority, number of employees manage, and private and public sector, plus their ability to take the time to answer the questions thoughtfully, truthfully, and thoroughly.

Therefore, quantitative approaches should utilise descriptive statistics to pinpoint patterns for improvement and qualitative approaches should convey the narrative of the participants to highlight lived experiences (Science Direct, 2025). Qualitative research allows "inductive or theory driven development" focusing to study lived experiences and helping researchers to identify processes particularly those that emerge over time (Creswell et al, 2010). Whereas quantitative research is a mode of deductive inquiry to test hypothesis and create causal relationships through statistical analysis of numeric data (Science Direct, 2025). Ihuah & Eaton (2013) show pragmatism can connect data to theory using either or both qualitative and quantitative approaches. They can then be combined to form a mixed method like in this dissertation research.

Single perspectives from the interviews can also be enriched through the triangulation of both approaches to give an enriched context. Triangulation highlights similarities in diverse standpoints and viewpoints through the mixing of methods and data sets, such as the mixing of surveys and interviews (Olsen, 2004). Bias may be removed by making the research conclusions or evaluation of findings more generalisable (Golafshani, 2003). "When several methods produce the same results, you can be a lot more secure in the validity of the findings" (Bernard, 2011).

Pragmatism relies on the expertise of the researcher to determine the intrinsic values that will form and interpret data. The mixed method is utilised in this study to collect qualitative data from personal accounts obtained via management interviews and quantitative data from surveys. An ethnographic study of the socio-cultural aspects of the managers' viewpoint induced by unstructured questions would produce the deepest understanding (Saunders et al, 2012; Ihuah & Eaton, 2013). Unfortunately, ethnographic interviews are time-consuming to perform, and so a semi-structured interview format with the use of open-ended questions would allow the dialogue to be managed and done online.

Looking at timing, both the surveys and interviews were conducted over a six-week period, so cross-sectional in design, meaning the outcomes are taken into consideration during one time slice period – however, because the interviews were done over six weeks, it could also be considered longitudinal, because they were collected at multiple points in time.

Managers interviewed were not always able to be physically present due to where they (and the researcher) live, work, and how busy they are, so all interviews were conducted over email to have a level playing field. The questions were all the same (in appendices), and even though delivered online, they were arranged from short general questions to longer specific questions to build rapport, comfort and engagement into the interview process. There were also some closed questions, designed to allow the interviewee to reflect on their own internal judgement through deductive reasoning (Brewerton & Millward, 2001).

3.6 Data Collection and Analysis

Two different sets of data were collected: 180 online surveys and 18 interviews. The qualitative data was in the form of interviews, using the same questions [Appendices]. These were all transcribed and kept by the author but not submitted due to word length constraints of Moodle and to protect the interviewees' anonymity. Answers were put on a spreadsheet and analysed using content and thematic analysis, which is why asking the exact same questions was important, with findings giving additional and more detailed information to the online survey results, as discussed in the findings chapter.

For content analysis, certain words, themes and concepts were highlighted, which helped quantify and analyse the presence, meaning and relationships of the topic (CUMSP, 2023). Then thematic analysis was used to identify and present the recurring themes within the interview answers. This was done in five time-consuming steps: 1) Familiarisation with the text by multiple readings; 2) Highlighting the interesting elements to include in the dissertation; 3) Putting similar findings from

different interviewees into groups; 4) Reviewing themes for significance; 5) Writing up analysis from the interviews. The benefit of this approach allowed for the provision of in-depth information, helping to identify unexpected results.

The quantitative research was conducted by a multiple-choice online survey, using Microsoft Forms (see appendices) which collected and presented the data. A trial was conducted before the survey, and feedback allowed for the tweaking of questions before making the survey available for answering. When all the answers were in, there were no incomplete responses or duplicates (because the setting only allowed for one answer per email address, and there were no double names, so no double answers via two different email addresses).

Many analytical tools were used, from the mean and median (average of the results) to standard deviation (variation) and inferential (to find the properties of a population) of the statistics when preparing for the findings. Correlation and regression analysis, which looks at the relationship between the findings, was also used in analysing the results, as well as the composite measures with questions that allowed for more than one multiple choice answer (Bewick et al, 2003).

3.7 Reliability and Viability

Reliability is the "extent to which data collection technique or techniques will yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data" (Saunders et al, 2012). The data collection methods used for this dissertation were checked by an experienced dissertation supervisor before enacted. The online

survey was trialled before questions tweaked, and the same questions used for all the respondents. Interviews were also all conducted using the same questions for all interviewed – most face-to-face, and a few online.

Every attempt has been made to ensure the researcher remains objective and unbiased throughout the investigative process. Bias being limited by deriving the questions for primary data collection from the underpinning literature. A neutral and simple vocabulary was adopted throughout the primary investigation. The cost of this dissertation was minimal, using computer software and programmes (Microsoft 365) provided free by UWTSD, which allowed for the creation of the online survey, the collection of answers, and the presentation of findings. The only costs incurred were travel for the researcher to meet with those interviewed before questions were emailed.

The researcher has previous experience of reviewing appropriate literature for investigations at this level, therefore the organisational and technical knowledge of the researcher will be utilised through the data collection stage of this investigation. This was used as a benchmark to ensure relevant progress has been made throughout this investigation to accommodate the given timeframe.

3.8 Limitations of the Research

The research had three main limitations:

1) Access to the internet – even though research was aimed at managers, it could be a mistake to think all managers are computer literate and online. Those that are not, would not be able to participate in the online survey or interviews, and would not

have known about either due to being advertised on social media platforms and the survey link and interview questions being emailed to people.

2) Although the survey was answered by people outside the interview area, and even in some instances by retired managers and students, due to time and budget the interviews were undertaken in three areas: Neath Port Talbot, Swansea and Cardiff. Although most of the largest organisations and employers in Wales are in these areas (Barry, 2020), it does mean the research can only present findings of South Wales, not the whole of Wales or the UK and elsewhere. South Wales has an industrial past, with high unemployment (Statista, 2025) and a lack of multi-national companies, so care was taken to interview both private and public sector employees at the interview stage but may have a public sector bias at the survey stage. This is also because the social media connections of the author are mostly public sector. Also, South Wales is surrounded by easily accessible nature, including spectacular beaches and mountains, so arguably it is easier and cheaper for managers, employees and organisations to make access to nature more attractive than in more urban areas. This dissertation ensures it gives options for access to nature that would be available in any scenario, including urban parks.

3) The survey would have naturally been answered by those that felt strongly about accessing nature – or are really opposed. Those that are indifferent, and possibly the people most needing the benefits of nature access because they are not doing so in their spare time, may not have answered the survey. To try to mitigate this, candidates were sought for interview who did not access nature in their spare time – this was especially important research, to understand how to entice people into

nature who do not already do so, or who do not like to. Research was sought into these reasons behind the push back from managers, employees and organisations against accessing nature – and whether there are negatives to accessing nature.

3.9 Research Ethics

A completed Ethics Form was submitted alongside this dissertation to ensure all ethical considerations were made before the commencement of research. For this investigation, participants choose to answer the online survey and could do so anonymously. All interviews with managers were saved without name – just age, sex, locality, role, and whether private or public sector. Again, those approached for interview had the choice to turn down the opportunity to participate.

CHAPTER 4: FINDINGS AND ANALYSIS OF RESULTS

4.1 Introduction

This chapter will examine and discuss data collected through the primary investigation as detailed within the Research Methodology Chapter. The raw data from the survey exercise was entered into an Excel spreadsheet for data analysis. This chapter also analyses responses to a series of structured interviews undertaken to get more details to answer the dissertation title question.

4.2 Survey analysis

180 people (roughly equal gender split, with 53% female, and 64% aged between 41 and 60 years of age) answered the 20-question survey between November 2024 and March 2025. 35% were from Swansea, 16% from Neath Port Talbot, and the rest from Cardiff and elsewhere. With 60% working full-time, and 54% working in the private sector, and 46% working in the public sector.

Pie charts were created to illustrate findings from 11 of the survey questions:

Chart 11: The majority surveyed (and 100% of under 40-year-olds) believed accessing nature made them a better leader – and there was a roughly equal split between male and female managers (43%).

8. If you answered 'Manage people', do you believe accessing nature makes you a better leader

More details



Chart 11 – Question 8

Chart 12: Research shows most managers surveyed believe their employees

perform better if they access nature regularly.



Chart 12 – Question 9

Chart 13: The majority of workplaces of those surveyed do not currently offer nature access activities.

10. Does your place of work offer organised nature activities

 More details

 • Yes
 54

 • No
 88

7

59%

Not sure

Chart 13 – Question 10

Chart 14: Just over half of those surveyed said they would be willing to give employees time off work each week to attend organised nature activities – these were mostly male managers (63%) aged between 41 and 60 years of age (68%).



Chart 14 – Question 11

Chart 15: A large majority of those surveyed said they accessed nature more than one hour per week – more details were sought in the interviews.



Chart 15 – Question 12

Chart 16: A smaller majority surveyed said they currently attend organised activities in nature – the interview answers provide more detail.



Chart 17: All those surveyed experienced positive things when accessing nature.



Chart 17 – Question 14

Chart 18: There was a slightly higher amount of those surveyed that said they would be more likely to access nature if they could attend organised activities than not – again, further details got from the interviews.



Chart 18 – Question 15

Chart 19: Most people surveyed accessed nature away from their local area, whether for holidays or weekend walks, people are spending time in nature further afield.



Chart 19 – Question 16

Chart 20: Most people surveyed would help organise nature activities at work or locally – with a large amount answering 'not sure', uncertainty on details of what is involved and the time it would take may lead to less people answering 'yes'.

17. Would you be willing to help organise nature activities for your workplace or in your local community

More details




Chart 20 – Question 17

Chart 21: An overwhelming result used in my analysis: Nearly all surveyed felt more connected to nature after accessing it.

18. Do you feel more connected to nature after accessing it
More details
Yes 177
No 1
No 1
Not sure 2
98%

Chart 21 – Question 18

Chart 22: With a convincing majority answering they would be willing to clean-up their local countryside while accessing nature.

19. Do you feel more likely to clean-up your local countryside during and after accessing it

More details



Other



1

Chart 22 – Question 19

4.3 Interview analysis

Over-and-above the survey results from 180 people, 18 people were interviewed to get more detail on the dissertation topic. Each person was a manager in the South Wales area focused on (Swansea, Neath Port Talbot, and borders of Cardiff), and selected to have a mix of private and public sector, early to mid and senior management career, aged between 30 to 65, and in a variety of jobs and sectors.

This included (public sector): doctor/GP practise manager, Fire Service training manager, college administrative manager, deputy head teacher, senior occupational therapist, university lecturer/consultant, civil servant director, local council manager, volunteer manager, (private sector): dentist/surgery owner, personal trainer, founder/CEO of a technology company, business development director at a multinational company, senior engineer, dog walking/boarding kennel owner, tourism business owner, hairdressing/beauty salon owner, baker/café owner.

Due to the difficulty of getting face-to-face interviews with all the people interviewed, a preparation telephone call or face-to-face meeting happened with each individual, followed by questions sent by email so every interviewee answered the same way for uniformity. Interview answers were put into a summary table (transcripts kept by the author to ensure anonymity), with questions and select quotes below.

Eighteen questions were asked, the first to give permission to securely store answers in line with UWTSD GDPR guidelines, and the second to get the interviewee's personal details. Question 18 asked for further comments. The word 'nature' used in questions was defined for the interviewees as "areas with grass, trees, plants and wildlife, from parks to coastal and rural countryside".

Question three asked if nature was accessed for at least one hour per week, how it was accessed, and what activities were done, when, where, for how long, and with whom. All interviewed (apart from one person who did not access nature at all, apart from when on holiday) accessed nature for at least one hour a week. Those who lived rurally, had a dog, competed in sporting competitions, or were part of active hobby groups (e.g. hiking), accessed nature the most actively. Others with children and gardens accessed nature for long periods too, but less actively. Those who worked outdoors (e.g. walked dogs, led organised walks), plus had outdoor hobbies (e.g. triathlon, rock climbing) accessed nature the most.

Question four asked if the interviewee believed they were a better leader for spending time in nature? And if so, why? Unsurprisingly the person who did not access nature and lived in an urban environment replied that they did not believe accessing nature made them a better leader. The rest did. Comments:

- "I am clearer and calmer in myself... it helps to improve my empathy to myself, others, and the environment I'm in."
- "It lowers stress... impact of stress on a leader/employer can make their ability to effectively manage their staff more difficult. This leads to ineffective working practices and a potentially unhealthy working environment."
- "Spending time in nature has a positive effect on physical and mental health, and leadership abilities."

- "Time in nature has great benefits for my management abilities and wellbeing. I spend lots of time at my screen, so I take the opportunity to be in nature to help me disconnect and feel calm."
- "I feel grateful and reflective when in nature. Open spaces allow me time to think."
- "Accessing nature helps me to lead better because of improved decision making - being in nature gives you enhanced focus and clarity, allowing you to think things through in an environment away from the workplace."
- "Time spent walking makes me feel less stressed and I can then manage a team more effectively. Walking also allows me to have a fresh perspective on problems in the workplace."
- "Being in nature is a great way to embrace mindfulness, escape the structured world and hit the reset button. It allows me to be more focused not only on myself, but on my work and the team I lead."
- "Nature makes me happy: Happier people are more productive people."

Question five asked if the employees managed to access nature? And how they access it? All 12 people who answered "yes", said it was mostly with friends and family in their spare time, in their local area. The local area referred to has both coastline with beaches and mountains with countryside. One manager said employees could access nature on-site due to an employee 'environmental centre', including allotments and beehives. However, there is only a 10-20% take-up, which the manager reported was not "a lack of want to access nature in my team, but choices based on weather or the ease of being able access to local countryside".

Another manager's (college administration) team do not access nature at all, and grumble when a walk-talk meeting is arranged. This could indicate that people who choose a desk-based indoor job may not want to access nature. The manager (deputy head teacher) who did not access nature, answered "I do not know whether those I manage access nature or not – we do not talk about it". However, there was a green space at the school, so nature was accessed with the children especially "on break times" on a limited basis. More than half of those interviewed (10 managers) mentioned their teams accessed nature more now than pre-pandemic.

Question six asked whether the interviewee believed those who access nature are more productive in the workplace, and how? Only two interviewees did not answer "yes" – one private sector manger said it was a "case-by-case situation depending on personality types", and the teacher said "accessing nature has no impact on my own productivity", but they do not access nature, so it may be something that could be disproved with further research.

Others who answered "yes" commented:

- "Accessing nature makes people happy, healthy, confidence in themselves...
 This is positive, especially in dealing with the public as my staff do."
- "... they're able to think in a more rounded way. If they've been moving in nature, they're less likely to be anxious and have greater brain plasticity."
- "... more energy and motivated to work... more resilient and less sick days."
- "... people I manage who are active in nature outside of work time... bring new perspectives to work."

- "Those who access nature show more emotional intelligence and empathy which is valuable in the workplace. They have more energy as they're exercising and therefore less lethargic and more productive."
- "I notice physical benefits... a positive improvement in energy... more physically fit... made the workplace environment more productive... mental health benefits too... allow a person to recharge, which is very important in dealing with stress and anxiety."
- Walking... allows the individual to communicate with others and feel part of a community. It gives the opportunity to discuss worries away from the office."
- "I found employees feel more relaxed in the work environment with colleagues... improved communication can lead to less workplace conflict."

Question seven asked whether the interviewee organised activities in nature for their employees? Just under 50% (8 out of 18 – although two that do not organise events are mostly based outside, so you could argue they do not need to and employ less than 10 staff) either arrange or have access to nature activities organised by or through their work at least once a year. These include on-site activities in a large private sector company, which also "encourages staff to volunteer for activities we co-ordinate, like clean ups."

One manager reported a bi-yearly organisation "well-being day" and six interviewees mentioned arranging meetings whilst walking. Another spoke of "social prescribing", another "walking supervision", due to having green spaces on the hospital sites they work on. One held team meetings outside when the weather allowed, another made sure team-building days were organised to take place outside. Two mentioned staff got a few days off a year for volunteering, which could be in nature, and others said staff enjoyed break times outside when the weather was good.

Question eight asked whether interviewees believed they were better leaders if they organised nature activities for their team? And whether their teams would be more likely to attend activities if organised in their work time? Many had mixed feelings about being a better manager if they organised nature activities. Some were wary, saying they might "if my team felt safe to participate", and some were positive "organising nature activities would improve my leadership skills" and "I feel so much calmer, grateful and reflective when in nature. Open spaces allow me to think. I believe that a person's personality is what makes them a great leader. Leading with creativity and compassion is essential in my role". All except one manager felt they would be better leaders if they accessed nature, at some point in their working week.

Some managers thought their staff would "jump at the chance to do activities in work time" whilst others said their teams would not. One manager said "I believe it would be down to the individual employee and their preferences" and another commented "if done regularly the likelihood is more staff members would get involved if the activities were having a positive effect on those attending". Further research would probably need to be done within companies on this. But giving people time to access nature, with activities organised for them, was deemed to be positive if certain professions – like teachers and GPs – could work around it, and private sector businesses were not losing money.

Question nine asked why those managers who did not organise activities in nature for the staff they managed did not? And question 10 asked if they thought the Welsh Government should legislate for employers to do this? Those working in the private sector cited "being busy" as a reason why they did not organise activities in nature, and thought legislation would not help, especially with small and medium-sized businesses and start-ups. "Even an hour out of the office can be expensive for an employer, especially smaller companies struggling to make money in a tough economic environment" and "There are currently far too many stresses and financial strains on SMEs and larger companies as it is" – citing actively supporting access to nature activities in "outside working hours".

Public sector managers were more supportive (apart from those that managed doctors and schoolteachers whose fixed hours would not allow for this), with one saying their staff would only be interested in access to nature activities if they were arranged in work hours: "I think it would be good if it was legislated" and "Authorities should help create the conditions to make it safe to be in nature", with some wondered what this would look like, and "how would it work?". But legislation was not championed by any private sector interviewee: "Legislating would be counterproductive and likely to drive business away and out of Wales" and "I don't think it should be legislated, however I do think it should be encouraged".

Question 11 asked whether managers would like to organise nature events in the future now their attention has been brought to it, and whether they thought their team would more likely attend if it was in working hours. It also asked whether the organisations themselves should fund the nature access activities, or whether the

local council or government should, with activities run by external people – e.g. like the Neath Port Talbot Nature Walks used for this research.

The answers to this varied between roles and who managers worked for. 100% of those interviewed said they were in favour of organised access to nature activities in theory, due to the positive side effects. However, the feasibility of a manger being able to organise it every week was questioned, due to holidays, sickness, and busy periods. Teachers would not be able to take two hours out of their working week when class times are scheduled, for example, and they would have to do so during paid preparation time or inset days. Schools and public sector organisations have budget constraints to consider too.

Others were happy to release employees for externally organised and funded activities. Those that worked in larger organisations suggested in-house was possible, citing a weekly yoga class arranged by HR departments rather than managers. Others mentioned regular away days, or outside meetings when the weather allowed. Arranging a walk was deemed the easiest to do, and free (apart from cost to company for a manger and staff being out of office), but not everyone can do that, and would interest remain high in winter?

Question 12 asked managers that organise activities whether their employees accessed nature before they started attending their events? And if they have seen (or been told) a difference in participants' wellness, fitness, focus, and happiness since accessing nature? Of those who organised walks, there was an equal mix of those who had accessed nature before from walking to professional sport, and those

that are experiencing it for the first time. One manager commented "I have noticed that the more time people spend in nature, the healthier they become." With 100% of comments reporting positive benefits of spending time in nature "saw a huge difference in their wellness, focus and happiness", a doctor commented: "I regularly witness positive effects of accessing nature in my staff and patients – those who make positive changes to their lifestyle, such as increased access to nature, and increased physical activity, improve their general health and have a more positive outlook. This has a direct positive impact on their mental health." Another manager said "Staff talk to each other more when out in nature, they bond, have more confidence, and boost morale".

Question 13 asked whether the interviewee, and those they manage who access nature, feel more connected to nature after spending time in it? And question 14 asked whether they believed people would be more likely to protect and keep the local countryside clean after spending time in it? All except one manager (who did not access nature) felt more connected to nature after accessing it. One said being outdoors "makes me feel very appreciative and respectful of nature" and another thought teams accessing nature together was beneficial "the more resilience that is needed, the more a team bonds". Another commented that "the more time people spend in nature, the more they want to spend time in nature. This leads to more noticing and understanding of nature, which then leads to nature being loved more". Another commented staff did not know enough about their local environment.

Most managers believed accessing nature "gives people ownership to protect the environment for themselves and future generations", that "people would be more

likely to keep the countryside clean when it is a space you enjoy and benefit from", and "the more we love the spaces we use, the more we want to preserve and look after them", plus people would "care more for the environment if they spent time in it" which is needed due to "how much litter and fly-tipping is in Wales?!". The fact that having beautiful nature on the doorstep "makes accessing nature easier" was mentioned, but reoccurring were comments about the current state of nature from polluted rivers and nature depletion to the problem with rubbish everywhere which could "spoil the experience of being in nature", and could be researched further.

Question 15 asked about the WFGA, and whether the interviewee believed its aims of creating a "healthier" and "more prosperous" Wales for future generations can be achieved if leaders and employees have regular access to nature? Question 16 asked whether Wales-based businesses would be more profitable if leaders and employees were more productive due to accessing nature, benefitting the Welsh economy?

Of the 18 people interviewed, only nine had heard of the WFGA, with only three (all public sector) using it within their work, and it playing a part in either their or the employees they manage job description. Senior public sector workers were part of the six that had not heard of it. Those that had were complementary, commenting on how it can "help lower sickness leave which is a big negative for the Welsh economy" and "If leaders and employees have regular access to nature it can only have a positive effect... go a long way to an overall healthier population... positive effects can only lead to better working practices, leading to a more productive

workplace and therefore an overall benefit to the economy" and "With more people engaging in nature there are secondary benefits to the economy."

However five managers thought it "meant well" but had not been integrated or enforced "not entirely sure how successful the WFGA is" and "there needs to be more direction in the curriculum". A private sector manager commented "it is not clear how the WFGA can benefit Wales. It feels too complicated and detached from the day-to-day activities staff and businesses do." Another "it feels more of a public policy tool rather than something business can contribute to – a lever to stop Wales from progressing".

Finally, the author asked whether access to nature for the Welsh population should be a Welsh Government priority? 100% answered "yes". However, a public sector manager commented that "access to nature should not be a stand-alone priority, but part of 'well-being' legislation carried through all organisations in the country, and part of life from nursery to care homes".

Worries were mentioned: a public sector manager warned "the only way organisations would support this would be if the Welsh Government made it mandatory", and private sector mangers were nervous about enforcing this without evidence it was financially viable "without buy-in investors may go over the border".

In final comments, lack of investment to help people access nature areas was mentioned, including walking and cycle route signs, car parks, and other amenities like toilets "investment by local councils via government can make all the difference".

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Building on research by White et al (2019) – that found spending two hours in nature per week benefits people's mental and physical health – this dissertation researched the leadership styles that would best:

- Connect people in Wales to nature;
- Identify the most effective nature access activities;
- Enable the delivery of these activities;
- Make the case for this approach, including the benefits and overcoming the arguments against;
- Deliver change to create a national culture of nature connectedness;
- Assist in the delivery of the Welsh Government's WFGA goals: helping to create a more prosperous, community-focused, cultural, healthier, resilient, more equal, and globally responsible Wales.

Using styles identified by Goleman (2020), there was not one obvious style that could successfully introduce activities to connect employees to nature across Wales, and also believe in why they are doing it, embrace nature connection themselves (78% of managers interviewed for this dissertation thought accessing nature made them a better leader), changing a workplace culture so both the organisation and employees buy into it too.

Research showed leaders need EI to do this, with a combination of styles: A commanding style to introduce new activities, and a visionary style to inspire employees to engage with nature. For a culture to embed, a democratic leader could

establish habits, and would be best suited to get employees to engage and embrace nature activities.

Further, research for this dissertation found effective leadership can provide direction, resources, and alignment with the organisation's vision and goals to introduce nature access activities – but without strong leadership, employees may feel uncertain and unsupported, leading to resistance and disengagement. To prevent this, leaders must communicate the vision, provide guidance and resources, and involve employees in the change process. By demonstrating their support for the change initiative, leaders can build momentum, create 'buy-in', and increase the likelihood of successful implementation.

Research also showed only 36% of people questioned said their place of work currently offers nature access activities. Lewin's change management work, using the Unfreeze-Change-Refreeze Model, could be best applied in a situation requiring an organisation to introduce nature access activities swiftly, and lay the foundation for a cultural change. Kotter's (1996) change management work is also useful for looking at how leaders can actively support and promote change.

When leaders have successfully convinced both the organisation and employees to introduce nature access activities, there are endless options. The two hours per week could even be split to 20 minutes per day, which is especially good for managers of employees working on a factory line, in the private sector and for SMEs, who show resistance to employees being paid to access nature during work time or being away from their 'desk' for 120 minutes of a working week, even though

nature access activities could potentially involve other useful work, such as building connections with colleagues.

Previous research has shown – from reduction of stress (White et al, 2019), to Attention Restoration Theory, which Kaplan describes (1989 & 1995) at how natural environments help replenish mental energy – access to nature activities would undoubtedly be good for employees, organisations, as well as managers. Research for this dissertation shows 72% of managers interviewed thought those they managed performed better and helped organisations succeed if they accessed nature regularly, with 55% of managers questioned being willing to give their employees time off for activities. However, being just over 50%, government legislation may be needed to ensure organisations adopt these practices – which is elaborated on in the recommendations.

With a similar temperature to the Netherlands, Germany, and Scandinavian countries where nature connectedness is embedded in the culture, Wales could look towards approaches which have helped create this culture there, from a specific word in their language to getting children into nature early through forest schools – with a primary school educator interviewed for this dissertation not believing in the benefits of nature connectedness, this seems to be especially important in Wales. However, it is important to note, that this was not an opinion shared with the majority of those interviewed, with 83% of managers interviewed already accessing nature for an hour or more each week.

Following these more traditional measures to get the Welsh population better connected with nature will help the Welsh Government realise its WFGA goals. In this specific dissertation question, Raworth's Doughnut Economics (2023) is particularly useful to understand how organisations do not exist and operate in a silo in Wales. Those operating in a healthy environment, on a healthy planet, within a circular economy thrive – which brings together the link to workers' access to nature and more profitable companies. Again, it is countries that already have a nature connectedness culture that champion rethinking economics in a way that balances social well-being and planetary health, so Wales could too, to truly achieve these goals. This is because it is not just about providing employees with nature access in isolation but integrating it into a holistic strategy that involves promoting sustainability, health equity, social well-being, and economic prosperity through nature-based solutions to get benefits nationally.

Research conducted for this dissertation showed those working in the NHS (including a GP and senior occupational therapist manager) were already following WFGA guidelines and the most positive about nature connection – potentially due to the success of green social prescribing. Overall, 98% of those questioned for the dissertation said they felt more connected to nature after accessing it – with 77% stating they want to look after it more due to spending time in it. Therefore, using the two hours per week of employee nature access time for litter-picks, for example, could help replace a street cleaning services reduced or cut across South Wales due to resource-limited local authorities. Schoolchildren could even spend time cleaning up naturel spaces around their school, encouraging them at an early age not to litter, also those required to do community service, or in low security prisons. More

research could be conducted on the latter, including the relationship between prisoners spending less time in cells and more time in nature cleaning it up, and what benefits (if any) this has.

5.2 Recommendations

1 *Creating a specific word in Welsh and English for 'nature connectedness'* Research shows countries where people connect to nature the most, have a word for that in their language. If a culture of nature connectedness is wanted in Wales, then the Welsh Language Commissioner (and relevant committees) should devise a new Welsh word for it. There is the word *Cynefin*, which translates to 'habitat' and means "attachment to place" (Adams, 2023) – but that is more a connectedness between Wales, its people and landscape, rather than meaning the connection between people and nature, so a specific Welsh word for that should be created. With 29% of the Welsh population claiming to speak Welsh according to the 2023 Annual Population Survey (Gov.Wales, 2023), cultural activities in Welsh on the rise (Future Generations Wales, 2025), and the younger generation embracing environmental activism more (Poortinga et al, 2023), the word could enter the daily vocabulary swiftly. Being a bilingual country, an English word would also be a recommendation.

2 Legislation to allow employees to spend two hours per week connecting to nature Research for this dissertation shows where organisations align their work to the WFGA, they work towards its goals and create a more sustainable circular economy. If the Welsh Government legislated for all organisations to align their work to the WFGA, then nature connectedness would enter workplaces' strategy and culture, and be part of leadership. This is especially important in some SMEs who struggle to

spend on 'extras', like giving employees time for activities, as they build their company up. Legislation would ensure every employee in Wales would be able to connect to nature – an ambitious target would be to enforce a 40-hour working week, with the legal 30-minute daily lunch break, plus two hours a week for nature connectedness activities, and employees would still work a 35.5-hour week – slightly longer hours than the advocated four-day week, which showed many benefits to workers after a Autonomy Institute trial (Autonomy Institute, 2023). Research by Deloitte shows ambitious change backed by legislation takes three to five years to become culture (Deloitte, 2025), and with the momentum of spending more time in nature and working differently post-COVID still being strong, it is recommended the Welsh Government acts swiftly.

3 *Make nature connectedness activities easily available and accessible* Larger organisations – like multinational companies and the NHS bodies several of the managers interviewed for this dissertation worked at – will be able to create nature connectedness activities easier than SMEs. They can pay for yoga classes onsite, or arrange offsite activities, or even allotments and beehives as one manager from a large private sector organisation explained. However, to ensure all employees can access a nature activity of their choosing (if it is not enjoyable, people who do not access nature already would be less likely to want to join), funding should be made available for external people or companies to run activities, especially because only 46% of managers interviewed for this dissertation would be willing to organise activities to connect employees to nature – like the Working with Nature NPT walks, which are run by this dissertation supervisor and a UWTSD ecologist, who got funding from a local council to take people around local nature spaces, helping

people to be, understand and love their local nature more. With high levels of unemployment in rural Welsh communities (BBC News, 2023), people can be trained to run these events and then be employed by organisations to ensure each worker spends two hours per week doing them. Money spent on funding, would be saved by a reduction of benefits and the health benefit savings. These events can also be tailored for all abilities.

Activities can also be run by already established groups, like the Ramblers and the Wildlife Trust, who always need volunteers for various projects. Another consideration is to make the two hours nature access activities per week a volunteering scheme. Schemes like this have been up-and-running for many years and are well-supported. Organisations like Welsh Water (Barnes, 2024) have given 16,000 hours from 700 volunteers into the community – with local council cuts and issues with litter across the country, litter picks, for example, could prove to be a way where employees could access nature and also help the government clean-up the country, again helping reach the WFGA goals.

4 Accessibility and amenities

By making nature access part of Welsh culture, accessibility to green spaces is key. This includes public transport to nature areas which have disabled access, are dog and child-friendly, with cafes, car parking, and free toilets. The investment in these will be recouped by revenue from the cafes, car park costs, the gain in better health, employment and tourism. It can also provide spaces for youths to get involved in sporting activities outside school, and destinations for school trips. Groups like the

Ramblers also need to have access to public footpaths (and agreements with landowners to cross certain fields), which means legislation.

5 Prevention is better the cure

Many of the negative health issues Wales is experiencing – including mental health and obesity – which are a strain on the NHS's resources, could be helped or even prevented with people spending more time moving in nature. There is also research to show that green social prescribing, where a doctor 'prescribes' a patient alternatives to chemical medicines, including nature access activities, will be as or even more effective (NHS Choices, 2025) and help a population connect with their countryside. The Welsh Government could ensure GPs in Wales are trained to 'nature prescribe'. This would also help meet the WFGA goals.

Other preventative ways to create a culture of nature connection, is to start when children are in school – this is especially important if older generations are not accessing nature, and children are not being encouraged to by peers. Although too low a percentage to make a national statement, the fact that the two people from the education sector who were interviewed for this dissertation did not have teams that accessed nature, believed nature access helped leadership, or promoted it, is worrying. The news that a GCSE in natural history will start in UK schools soon is positive (Officer, 2022), and making it part of the curriculum, could be a step forward. As could looking towards Scandinavian countries for inspiration in the education sector, where forest schools were devised in Denmark in the 1950s to connect children to nature, promoting learning and good health (Flores, 2022).

Summary comment from the author: If these recommendations are put in place, and the WFGA goals are reached, the positive ramifications could reverberate even further, with 'Brand Wales' being known as a kinder, cleaner, more natural country for people to visit and live in, which would attract businesses, jobs, and economic growth. Plus, help address the country's nature depletion and planetary health.

CHAPTER 6: REFERENCES

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CHAPTER 7: APPENDICES

Appendix a – <u>Interview Questions</u>

• I am happy for my details to be stored and used for the MBA dissertation project in guidance with the UWTSD GDPR guidelines *(interviewee typed their name with the date under this question to shows their authorisation).*

• What is your occupation, sex (female, male, other, prefer not to say), age, and area of South Wales you live and work in?

• Do you access nature (nature = green and blue spaces with grass, trees, plants and wildlife, from parks to coastal and rural countryside) for at least one hour per week? In a few sentences, explain how you access nature in your average month – what activities (walking, for example) you do, when, where, and for how long, and with whom.

- Do you believe you are a better leader for spending time in nature? Why?
- Do your employees/those you manage access nature? Do you know how?

• Do you believe those that do access nature are more productive in the workplace? If so, explain how.

• Do you organise activities in nature for your employees? If so, please elaborate.

• Do you think you would be a better leader if you organised nature activities for your staff/those that you manage? Are they more likely to attend if these activities were organised in their work time?

If you do not organise activities in nature for those you manage, why not?
 Do you think the Welsh government should legislate for employers to do this?

• Would you like to do so in the future? Do you think they would be better attended in people's free time? If so, who should organise/fund them – companies? Local council? Walking groups?

• If you organise walks, did your attendees access nature before? Have you seen a difference in people's wellness, fitness, focus, happiness since accessing nature?

Do you think people/you connect more with nature if doing activities in it?
 Do you believe they/you are more likely to protect and keep the local
 countryside clean if spending time in it?

Have you heard of the Welsh Government's Well-being of Future
 Generations (Wales) Act of 2015? If so, do you believe the aims of creating a
 "healthier" and "more prosperous" Wales for future generations can be
 achieved if leaders and employees have regular access to nature? And would
 Wales-based businesses be more profitable if leaders and employees were
 more productive due to accessing nature, benefitting the Welsh economy?

• Therefore, should access to nature for the Welsh population – enabling companies, councils, people to organise activities in nature – be a Welsh Government priority?

• Do you have any further comments?

Appendix 2 – <u>Survey</u>

The survey was created on Microsoft Forms (see images), and is available to fill-in via this link:

125

https://forms.office.com/Pages/ResponsePage.aspx?id=-

REPTm4EBUWcuNshUjEeletxFG5wiZhNkW2NKati8otUNThYVVdON1ZWSU9OSkt WWFI1QkI5VzkyTS4u



am happy for my details to be stored and used for this dissertation in guidance with the University of Wales TSD GDPR guidelines	;
Yes	
O No	
Are you	
Female	
Male	
Not listed	
I would prefer not to say	

3. I am			
Under 30 years of age			
O 30-40 years old			
41-50 years old			
51-60 years old			
Over 60 years of age			
I would prefer not to say			
4. Do you live in			
🔘 Swansea			
O Neath Port Talbot			
C Elsewhere			
5. Do you work			
O Part time			

- O Full time
- $\bigcirc\$ I am not working at the moment

6. I wo	rk in the
\bigcirc	Private sector

O Public sector

7. Are you an

- Employee
- O Manage people
- O Both

8. If you answered 'Manage people', do you believe accessing nature makes you a better leader
⊖ Yes
○ No
O Not sure
9. Do you believe the employees you manage perform better, are more productive, and help businesses succeed if they access nature
⊖ Yes
O No
O Not sure
10. Does your place of work offer organised nature activities
O Yes
O No
O Not sure
11. Would you be willing to give employees one-two hours off work each week to attend an organised nature activity
○ Yes
○ No
○ Not sure
12. Do you access nature
O For one hour per week
O More than one hour per week
O I don't access nature
13. Do you attend organised walks or activities in nature
◯ Yes
○ No
I want to, but I can not access any in my area

14. When I access nature I feel
O Happier than when I don't
Calm and peaceful
C Energised and focused
Fitter and healthier
O Connected to nature
O All of the above
15. Are you more likely to access nature if you could attend an organised nature activity (by your workplace, local community or Council)
⊖ Yes
○ No
O Not sure
16. Do you access nature further than one hour from your house
O Yes
○ No
O Not sure
17. Would you be willing to help organise nature activities for your workplace or in your local community
○ Yes
○ No
○ Not sure
18. Do you feel more connected to nature after accessing it
○ Yes
O No
O Not sure

19. Do you feel more likely to clean-up your local countryside during and after accessing it

O Yes - I pick-up litter when in nature

O No - I do not pick-up litter when in nature

O I only pick-up litter on an organised clean-up

20. Thank you for taking time to fill out this survey. Your answers will help with my research into leadership and access to nature. If you would like to get the results, please put your name and email address below, and I will send it to you after submission in May 2025. Otherwise, just write N/A

Enter your answer

ENDS