

Glasgow and the Clyde Valley

FOREST KINDERGARTEN FEASIBILITY STUDY

April 2009



**Juliet Robertson, Penny Martin, Lynnette Borradaile, and
Steven Alker**

Creative STAR 
Learning Company

CONTENTS

SECTION	PAGE
Acknowledgements	5
EXECUTIVE SUMMARY	7
SUMMARY OF FINDINGS AND RECOMMENDATIONS	9
INTRODUCTION	13
What is a forest kindergarten?	13
Background to the feasibility study and its purpose	13
Project objectives	14
THE NATIONAL CONTEXT	16
Education and the Early Years Framework	16
Scottish Government's national performance framework	17
METHODOLOGY	22
The questionnaire survey within the pre-five sector	22
Audit and survey of local woodland sites	23
Survey of forest school trainees	24
RESULTS AND DISCUSSION	26
Pre- School establishment survey results	26
Site selection and matching with nurseries	46
Key contacts for each local authority area	47
Economic context of forest kindergartens	47
Socio-cultural context of forest kindergartens	48
MATTERS WHICH REQUIRE FURTHER ACTION, ANALYSIS OR INVESTIGATION	48
RECOMMENDATIONS	50
Forestry Commission Scotland and the Glasgow and Clyde Valley Green Network Partnership	50
Local Authority	55
Pre-School Establishments	57
REFERENCES	60

APPENDICES

- Appendix 1 Forest kindergarten summary
- Appendix 2 Forest kindergartens – a brief introduction
- Appendix 3 Questionnaire to all pre-school establishments
- Appendix 4 Site selection criteria - incorporating feedback from practitioners
- Appendix 5 Site checklist
- Appendix 6 Recommended site checklist for further work
- Appendix 7 Statistical overview, technical methodology and accuracy of the results
- Appendix 8 Staff training and the introduction of forest kindergartens
- Appendix 9 The Secret Garden Case Study, Fife
- Appendix 10 Expanding the horizons of outdoor play provision
- Appendix 11 Breakdown of costs involved when establishing forest kindergartens

“Personally I would like to wholeheartedly support this initiative. For a year we have been taking our children to Strathclyde Park for forest walks, giving them the freedom to lead their time in the woods and to learn to assess risks with our support. It has been a wonderful way to have taken the Curriculum for Excellence forward in our establishment. We would definitely love to be better equipped and trained. We wish the Forestry Commission great success in spreading benefits to be gained from Forest Kindergartens.” Respondent, Orbiston Nursery School

Forest Kindergarten Feasibility Study Part 2 – available separately

This section is provided separately to the Forestry Commission Scotland and associated staff/ project partners and provides information at local authority level across the project area

- Appendix 1 Feedback from forest school trainees to assess future capacity to support forest kindergarten
- Appendix 2 Forest Kindergarten regional results East Dunbartonshire
- Appendix 3 Forest kindergarten regional results East Renfrewshire
- Appendix 4 Forest Kindergarten regional results Glasgow City
- Appendix 5 Forest Kindergarten regional results Inverclyde
- Appendix 6 Forest Kindergarten regional results North Lanarkshire
- Appendix 7 Forest Kindergarten regional results Renfrewshire
- Appendix 8 Forest Kindergarten regional results South Lanarkshire
- Appendix 9 Forest Kindergarten regional results West Dunbartonshire
- Appendix 10 Forest kindergarten pilot sites and nurseries East Dunbartonshire
- Appendix 11 Forest kindergarten pilot sites and nurseries East Renfrewshire
- Appendix 12 Forest kindergarten pilot sites and nurseries Glasgow City
- Appendix 13 Forest kindergarten pilot sites and nurseries Inverclyde
- Appendix 14 Forest kindergarten pilot sites and nurseries North Lanarkshire
- Appendix 15 Forest kindergarten pilot sites and nurseries Renfrewshire
- Appendix 16 Forest kindergarten pilot sites and nurseries South Lanarkshire
- Appendix 17 Forest kindergarten pilot sites and nurseries West Dunbartonshire

“I would be keen to know more about forest kindergarten as we have a minibus in the centre that we can use for outings for the children. I feel if staff had more training on the benefits of this initiative to children we could plan it within our curriculum. Our children would benefit from this for their emotional wellbeing.” Respondent, Bluebird Family Centre

Acknowledgements

This feasibility study simply would not have happened without the support, advice, feedback and cooperation of the following people and organisations:

All 154 staff in the pre-school establishments who read the information, completed the questionnaire and gave us food for thought.

Maida Ballarini, Forestry Commission Scotland
Ally Corbett, Glasgow and Clyde Valley Green Network Partnership
Kay McIntosh and Christine Faruqi, Kinellar Primary School, Aberdeenshire
Liz Amphlett, Sammie Smith & Jane Whitaker, Abernethy Primary Nursery Class, Highland
Hamish Ross, Edinburgh University
Cathy Bache, the Secret Garden, Fife
Carol Craig, Centre for Confidence and Wellbeing
Chris Miles, former Early Years Officer, Fife Council
Sally York, Education Policy Officer, Forestry Commission Scotland
Bonnie Maggio, Scottish Officer, Forest Education Initiative
Jonathan Kitching, Adventure Aberdeen Team Leader
Sheila Hanlin, Coupar Angus Nursery
Anna Craigen Borders Forest Trust
Kate Hookham, in-service trainer, Mindstretchers Ltd.
Niki Buchan, Head of Mindstretchers Nature Kindergartens, Perth & Kinross
Claire Warden, Founder, Mindstretchers Ltd.
Allan Paterson, Aberdeen Environmental Education Centre
Fiona Lawrie, Pre School Development Officer, Aberdeen City Council
Joyce Gilbert, RSPB Education Policy Officer,
Stephen Wray, East Lothian Council
Ali Dreyer, Fife Council
Aileen Anderson, Grounds for Learning
Susan Falch Lovesey, Head of Environmental & Outdoor Learning, Norfolk County Council
Rena Tarwinska Central Lowlands Forest District, FCS
Marketing Profs online marketing forum <http://www.marketingprofs.com>

East Dunbartonshire

Mairi Gillies, Quality Improvement Officer
Lyn MacDonald, Assistant QIO & Support Officer Early Years
Lesley Scott, Greenspace Officer
Gillian Telfer, Biodiversity Officer
The Countryside Rangers, Mugdock Country Park

East Renfrewshire

Lisa McDill, Quality Improvement Officer
Jim Williamson, Outdoor Access Officer
The Countryside Ranger service

Glasgow City

Mark Irwin, SDE Officer,
Paul Cookson, Head of City Woodland Unit, Land & Environmental Services
Peter Wood, Assistant Woodland Officer
Raymond Goodall, Chair, Community Council, Jack Jardine Community Centre
Allison Greig, Senior Ranger, Pollok Park
Jackie Clark, Ranger, Pollok Park
John Parker, Ranger, Tollcross Park
Colin Crawford, Early Years Quality Improvement Officer
Myra Struthers, Quality Improvement Officer
Danny McCafferty, Quality Improvement Officer
Gerard McKernan, Quality Improvement Officer

Inverclyde

Joyce MacFarlane, Greenspace Officer
Charlie Cairns, Greenspace Team Leader
Linda Wilkie, Early Years Manager

North Lanarkshire

Brian Thomson, Greenspace Manager,
Helen Boyle and Mark Palmer, Senior Rangers, Palacerigg CP
Jamie Scott, Senior Ranger, Drumpelzier CP
Marian Cairns, Early Years Curriculum Development Officer
Judith Elliott, Childcare Development & Support Worker

Renfrewshire

Jan Mair, Staff Development Officer Early Years
Marianne McGuire, Quality Improvement Officer
Steve Edwards, Carts Greenspace project
Petrina Brown, Biodiversity Officer
Monika Thomson, Technical Officer Environmental Services
Andy Summers, Countryside Ranger Service

South Lanarkshire

Mike Brady, Countryside Ranger Team Leader, Chatelherault CP
Matt Muir (now retired), Senior Ranger, Strathclyde CP
Allan McRitchie, Early Years Coordinator

West Dunbartonshire

Susan Wright, Education Support Officer
Kathy Morrison, Quality Improvement Officer – Early Years
John Hamilton, Senior Outdoor Education Officer
Alan McMullen, West Dunbartonshire Environment Trust
Gillian Telfer Biodiversity Officer
Gillian Neil, Countryside Ranger Service

EXECUTIVE SUMMARY

The Creative STAR Learning Company, on behalf of the Forestry Commission Scotland (FCS) and the Glasgow and Clyde Valley Green Network Partnership (GCVGNP), undertook the forest kindergarten feasibility study between December 2008 and March 2009. The area covered by the study includes the following local authorities: East Dunbartonshire, East Renfrewshire, Glasgow City, Inverclyde, North Lanarkshire, Renfrewshire, South Lanarkshire and West Dunbartonshire. This accounts for one third of the Scottish population. This study is Phase 1 of a longer-term project to develop forest kindergarten activity in this area.

This feasibility study aimed to:

- Identify, and understand better, the factors explaining the under-use of local woodlands by pre-five establishments across Glasgow City and the Clyde Valley.
- Propose a variety of solutions to overcome the challenges identified.
- Identify at least one suitable woodland area in each local authority and match this with at least one pre-school establishment within each local authority in order to create a pilot project opportunity.
- Develop options, or a model, of how to implement recommendations to take forest kindergartens forward in this part of Scotland.

The research comprised two parallel surveys, within each local authority:

- An **online questionnaire survey**, with supporting information on forest kindergartens was sent to all pre-five establishments across the project area, in consultation with the Early Years service staff within each local authority. Responses were gathered regarding current provision of outdoor play and education, and barriers hindering the use of local woodlands and greenspace, both real and perceived. The survey also helped identify pre-five establishments interested in piloting a forest kindergarten, or at least engaging in more and regular use of local woodlands.
- An **audit and survey of local woodland and greenspace sites** was carried out with the support of the environment sector - including access officers, biodiversity and greenspace staff or countryside ranger services, and in conjunction with feedback from the early years sector. Site criteria supporting forest kindergarten activity, by the pre-five age group, were established. Using a combination of mapping and field survey, key sites accessible to the project area's pre-five establishments were surveyed. Where possible, these were selected near those settings, which expressed a desire to be involved in a forest kindergarten project, as soon as possible.

Pilot sites and associated pre-school settings were selected for each of the local authority areas surveyed, including five service areas within Glasgow City. Additional sites that offer further potential together with interest from other pre-five establishments are also described.

A wide range of quantitative and qualitative data has been analysed from the responses gathered from the pre-school establishments. Responses are analysed both separately and collectively for partner provider and local education authority settings. Data is available across the whole project area and also at local authority level where relevant. The summary

findings are presented within this report. The proposed pilot forest kindergarten sites and nurseries, and questionnaire results, for each local authority area, are presented separately as Report 2 appendices, for the project partners.

Overall we found a willingness among the majority of pre-school establishments to engage with forest kindergarten, and a feeling that regular access to local woodlands and greenspace is important. However, this is not matched by the proportion of settings that are providing regular opportunities for outdoor play, beyond their designated outdoor area. The responses highlight the need for professional development opportunities, and first hand experience for early years staff – building confidence and competence. In particular, developing understanding and skills relating to the process and the benefits forest kindergarten, and outdoor learning generally. This includes the spectrum of play opportunities offered, the advantages for young children’s physical, social and emotional development and the wider family and community benefits offered by return visits to familiar woodland or greenspace.

A model is provided to enable pre-school establishments to evaluate the progress of their outdoor play practice in the context of forest kindergartens and using nearby greenspace.

Given the complexity of a project involving so many local authorities and partners, rather than providing options as to how recommendations might be implemented, we have decided to raise some matters that we feel need still to be addressed, and to provide a raft of recommendations that the Phase 2 may prioritise, in the knowledge now of the competencies and talents of the Forest Kindergarten Officer in post.

Recommendations for further development in Phase 2 of the project and beyond are provided. These have been organised under three target audiences:

- Forestry Commission Scotland and Green Network Partnership, and the Forest Kindergarten Development
- Local Authorities involved with the pilot projects and encouraging forest kindergarten approaches more widely.
- Pre-school establishments to progress their outdoor play provision.

“Outdoor play is vitally important to young children. This kind of kindergarten would give children back the freedom that has been slowly taken away from them over the years. We do have to protect children but as a society we have cosseted them far too much. This kind of play prepares children for real life!” Respondent, Baldernock Playgroup

SUMMARY OF FINDINGS AND RECOMMENDATIONS

FINDINGS

- **Twelve potential forest kindergarten woodland sites are proposed** across the Glasgow City and Clyde Valley area. This includes one for each Local Authority area, and 5 sites for each of the Service Areas within the Glasgow City Council.
- Out of an estimated 660 pre-school establishments, 164 questionnaires were returned of which 154 were valid. This is a **return rate of over 23%**.
- **Over 60% of respondents are keen for their establishment to become involved immediately, or soon, in forest kindergarten.** This interest extends beyond those who already are getting children outside daily.
- **48% of all respondents believe it is very important for nursery children to visit woodland or greenspace regularly,** and 43% believe that it is essential.
- At the same time, **one out of seven centres is not enabling daily outdoor access.** The evidence is that those nurseries not keen on the idea of forest kindergarten provide less outdoor access for their children, and are likely to have no greenspace at all in their nursery grounds.
- **Overall, the results demonstrate poor use of local greenspace.** Characteristic of forest kindergartens are frequent, regular, visits to woodland, or other greenspace. The responses indicate that at present most pre-schools are not making frequent, regular use of their nearest greenspace.
- **Nearly three-quarters of the pre-schools can access greenspace or woodlands.** Most respondents can name their nearest greenspace. A few establishments have woodland beside their centre, or within the wider centre grounds.
- **The majority of greenspace is within walking distance of the pre-school establishment.** Just over 70% of these establishments say this can be reached within 10 minutes. Data is also provided for how much greenspace can be accessed by public, or private, transport and approximate travel time.
- **The reasons for visiting greenspace, or woodlands, ranked by respondents were quite similar. Learning opportunities** are ranked highest by both local authority and partner providers. **Play** is ranked much lower. This may suggest that respondents do not regard greenspace and woodlands as an important context for play.
- The **natural resources** offered by greenspace and woodlands were also highly valued.

- The value of greenspace and woodlands to support **physical activity and emotional well-being** were ranked of moderate importance. **Behaviour** and **quality of play** were the lowest ranked in terms of importance.
- **Partner provider and local authority nurseries differ in the factors that prevent staff from accessing their local woods or greenspace.** However, a common issue was **health and safety**, ranked of high concern by both providers. Undertaking **risk assessments** is regarded as a less significant issue.
- The **lack of staff** to help, and **lack of expertise** in using woodlands and greenspace for play, were key preventative factors **for local authority** staff. **Lack of suitable clothing** for children, **weather**, and **lack of parental support** were cited by **partner provider** nursery staff.
- The top three perceived **barriers for access** are the **lack of time and transport**, and the **cost of transport**. The top three **site related hazards** cited overall were **dog mess, general litter** and **drug related litter**.
- Some issues or barriers were **specific to individual local authority areas**. This data is made available separately.
- **Take up of forest school certificated training is very low amongst the pre-school staff.** Feedback from individuals across the project area, who have recently undergone forest school training, or are waiting to be trained, indicates some who may be able to provide local support.
- Both local authority and partner provider establishments, overwhelmingly identified **staff training** as the prime choice, for enabling them to take forward forest kindergarten.

“I think it is very important for children to experience the natural outdoors. Our nursery does not have an allocated outdoor area; outdoor play is very difficult and manufactured. There is space which I have referred to in this survey within walking distance at a local loch where we often go to look at trees and feed the ducks etc.” Respondent, Meadowburn Nursery

RECOMMENDATIONS

Forestry Commission Scotland and Glasgow and Clyde Valley Green Network Partnership

- Forest School Leader and school grounds Early Years Facilitator and Trainer (Grounds for Learning) training would offer the FK Officer additional experience, competences, ideas and support in taking the project forward.
- Consultation with willing local Forest School Leaders, who may be involved or can help with identifying a cohort of confident and competent potential forest kindergarten leaders (trained or otherwise) to deliver pilots within each local authority area.
- Creating a support and communication network, involving all other potential partners and stakeholders, to enable the setting up and sustainability of each pilot.
- Providing pre-school staff from the centres involved, with access to support, training and advice; setting up a support network for pre-school staff.
- The pilot is effectively monitored and evaluated – building on the experience of action research (Learning and Teaching Scotland, HMle) and Forest School research programmes (New Economics Foundation and Forest Research).
- Developing generic guidance for local authorities on procedures and agreements for new forest kindergartens e.g. a generic agreement pro-forma, and good practice code – based on the experiences of Councils that already have something in place.
- Promote the *Forest School Scotland Guide for Leaders* as a useful tool for all pre-school establishments. Consider developing the content to provide additional guidance covering specific issues relevant to pre-schools.
- Create a year-round programme of play activities and ideas to provide initial support to pre-school staff, many of whom feel they lack confidence in working in a woodland context.
- Raise awareness at a national level of the vital contribution developing forest or nature kindergartens makes to strategic objectives. Consider developing a wider, national, partnership (including other Green Networks and National Parks) to support funding a national strategic officer.

Local authorities

- Local authorities have an obligation to carry out open space audits. When this qualitative assessment is taking place, the site selection criteria should be used to consider suitability for use as a forest kindergarten by pre-school groups.
- Audit the quality, quantity and type of outdoor play provision authority-wide as part of an improvement agenda, relating to meeting the expectations of a Curriculum for Excellence, the *Early Years Framework* and *The Child at the Centre*.
- Provide CPD sessions which meet the needs of pre-school staff, raise awareness and skills in developing a forest kindergarten approach for very young children.
- Develop a core team, from different departments across the local authority, to develop a coherent strategy, and the structures, guidance and support required, to take forest kindergarten approaches forward.
- Involve a wide range of professionals to support pre-school establishments - including school travel and road safety, Eco Schools, active schools and outdoor education, as well as planning, landscape and greenspace and countryside rangers.

- Look creatively at ways of supporting the 1 in 7 establishments who are not enabling children to have daily access outdoors, to develop this habit.
- Develop a long term strategy to ensure that designated outdoor areas at pre-school establishments have more greenspace and natural play features.

Pre-school establishments

- Develop knowledge and awareness of forest and nature kindergarten through reading literature and visiting establishments where this practice has been adopted.
- Access local greenspace more frequently and regularly.
- Adopt suggestions outlined in this feasibility study.

“St Paul's Nursery Centre is situated next to a large wooded area. At present we are encouraging staff and children to spend as much time as possible outdoors and in all weathers. We have many outdoor resources targeted at taking the curriculum outdoors and are fortunate enough to have a good supply of outdoor clothing. We have this fabulous natural resource on our doorstep and are unsure of how to use it to its full advantage. I have seen the benefits of this initiative in other establishments and would wish for the children in St Paul's to be as lucky. There is a whole new world out there for our children and we would appreciate any help you can give us to access it safely. Fingers crossed!” Sylvia and the St Paul's Children.

INTRODUCTION

What is a forest kindergarten?

Forest kindergartens have been established in Scandinavia for over 25 years. They are also called “nature kindergartens”. They have supplied the evidence that such experience is beneficial to children’s health and well being, self-esteem and confidence, perseverance and acquisition of knowledge and skills. Learning though play is child centred and enhanced with the freedom to explore using multiple senses. There are clear curriculum links and a high ratio of adults to children.

More recently, forest kindergartens have been developed in a more localised and *ad hoc* pattern across Scotland. In some cases the Forest Schools initiative has been developed and there is an increasing network of trained practitioners. Where there is a strong outdoor ethos, individual establishments have taken the initiative too.

Forest kindergartens are unique because they offer young children frequent, regular play opportunities in woodland and/or a natural setting, throughout the year, in almost all weathers. Most nurseries adopting this approach allocate one session per week or fortnight. However, this can increase to children being outdoors more than 80% of the time all year round, as exemplified by The Secret Garden in Fife and Mindstretchers’ Whistlebrae and Auchclone Nature Kindergartens in Perthshire.

A forest kindergarten approach is more than taking children to a woodland or natural habitat to play. How this is undertaken and the role of the adults is crucial to the experience and ethos created.

Background to the feasibility study and its purpose

Forestry Commission Scotland (FCS) in partnership with Glasgow and the Clyde Valley Green Network Partnership (GCVGNP) intend to develop and pilot forest kindergartens, nursery teacher training and pre-five educational activity across Glasgow and the Clyde Valley.

The purpose of the feasibility study across Glasgow and the Clyde Valley within the pre-five sector is to:

- 1) Identify, and understand better the factors explaining the under-use of local woodlands, by pre-five establishments across Glasgow and the Clyde Valley.
- 2) Propose a variety of solutions to overcome real and perceived barriers to using the green network for health and education.
- 3) Identify at least one suitable woodland area in each local authority.
- 4) Find at least one pre-school establishment matched to the woodland area within each local authority in order to create a pilot project.
- 5) Consider options, or a model, of how to implement recommendations to take forest kindergartens forward within this part of Scotland.

This study will guide the implementation of Phase 2 of this programme which intends to engage with private and local authority pre-5 establishments and work with them to increase regular pupil access to, and experiences of, woodlands and green spaces. This will have educational and health benefits for pupils both during visits and in the longer term. Families and local volunteers will also experience benefits by taking part in this pilot project.

Overall, a greater use of the outdoors amongst under-5s and their families is needed, leading to healthier lifestyles, stronger communities, as well as a better understanding of the local natural environment and resources.

The project intends to break down the barriers for schools and communities using green space and reduce false perceptions of using local woodlands. The programme will secure the successful delivery of Forestry Commission Scotland's strategies, Woods for Learning and Woods for Health, as well as the Scottish Government's national strategic objectives.

In the medium term, it is proposed to showcase the demonstration model with other authorities across Glasgow and the Clyde Valley and Scotland, promoting the health benefits associated with the pilots. This will help in promoting the development of green networks for long-term health and education benefits amongst under-5's and the wider local communities in regeneration areas.

Woodlands, as well as other green infrastructures, are environments that help people to be active and contribute to the delivery of Scottish Government programmes such as Healthy Living, Safe Routes to Schools, Eco Schools, Curriculum for Excellence and various workplace schemes run by the Centre for Healthy Working Lives.

Working in partnership with education departments of local authorities will increase awareness about the health benefits connected with the running of this programme amongst the public and educationists.

Project objectives

- To carry out a feasibility study across Glasgow and the Clyde Valley to identify current provision of outdoor play and education in local woodlands. This will also identify real and perceived barriers that prevent pre-5 establishments engaging in outdoor learning and willingness to participate in the pilot (Phase 1).
- To identify appropriate sites to pilot forest kindergarten in priority areas across Glasgow and the Clyde Valley, in partnership with GCVGNP, council and private nurseries and Scottish Lowlands Forest District (Phase 1).
- To develop a forest kindergarten demonstration model of in Glasgow and the Clyde Valley and disseminate the results to interested partners in the Clyde Valley as well as neighbouring areas. Guidance and best practice advice will be developed during the course of the programme and will be made available for dissemination throughout (Phase 2).
- To deliver forest kindergarten in partnership with council and private nurseries, prioritising WIAT woodland sites (Phase 2).

- To raise awareness and promote forest kindergarten in local authorities, education departments, health boards, private nurseries and Scottish Lowlands Forest District (Phase 2).

“I would be extremely keen to be involved in this. I am passionate about the importance of outdoor learning and would relish the opportunity to be involved in a local, ground-breaking initiative.” Respondent, Arthurlie Family Centre

THE NATIONAL CONTEXT

Education and the Early Years Framework

In the early years age group, outdoor play has always been recognised as an important part of provision.

Almost all early years settings are active in taking their children outside and keen to improve the quality of children's time outdoors. Staff understand the value of this experience. All local authorities within the Glasgow and Clyde Valley have offered in-service training and workshops about outdoor play within the last three years.

A Curriculum for Excellence and in particular *Building the Curriculum 2: Active Learning in the Early Years* advocates more play based active learning for all young children. In order to develop this principle, close attention to the environment for learning, including the use of the outdoors, is advised.

In December 2008 the Scottish Government published *The Framework for the Early Years*. This has raised the profile of this feasibility study because it includes nature kindergartens in its short and medium term action points:

- *"HMIE will continue to focus on the quality of energetic and outdoor play on all inspection activities. Evidence and reports will continue to include evaluations of outdoor learning and developments in such areas as Forest School Initiative."* Section 5: Priorities for Action – Short term action, p26.
- *"Nurseries and schools supporting outdoor learning and outdoor play. Trying out innovative approaches such as nature kindergartens is a medium term priority."* Section 5: Priorities for Action – medium term priority, p26.

The Early Years Framework also states *"Developing play spaces, and play opportunities for children and removing barriers to play is therefore a priority. This has wider implications for development planning and particularly provision of open space and green space."* p9.

The introduction of forest kindergartens throughout the Glasgow and Clyde Valley is therefore timely and welcomed by local authority early years teams who need to:

- Consider how they fit into the overall strategic improvements of their services.
- Use forest kindergarten developments as an opportunity for joined up working across council departments and in partnership with other agencies and bodies.

"As we have been a pilot for Forest School in our nursery I am currently pursuing ANY and EVERY means to allow us to develop this." Respondent, Woodlands Nursery

Scottish Government's national performance framework

The *Skills for Scotland strategy*, a *Curriculum for Excellence* and the *Early Years Framework* aim to equip Scotland's people with the skills, expertise and knowledge to help achieve the Scottish Government's five core strategic objectives:

- Wealthier and Fairer
- Healthier
- Safer and Stronger
- Smarter
- Greener

Forest Kindergartens are a useful way for local authorities to meet some of the targets within the Scottish Government's national performance framework. Forest kindergartens provide opportunities to meet national indicators across all outcomes and these are outlined below.

Wealthier and Fairer Scotland

- Forest kindergartens being introduced throughout Scotland will raise the status of Scotland as a truly innovative nation.
- Forest kindergartens make very good use of the natural landscape which helps foster the sense of local and cultural identity that is core to our sense of wellbeing and belonging.
- Forest kindergartens are an inclusive approach that promotes access for all. This has been documented through research by Borradaile (2006) and Murray and O'Brien (2005).

Smarter Scotland

Outcome: Our children have the best start in life and are ready to succeed

- Research into Forest Schools has shown that the approach helps children and young people develop self-confidence, social skills and an awareness of their impact on others and the world around them.
- Forest kindergartens involve different partners, local government, volunteers and the pre-school establishment working together to deliver on a shared vision of nurturing children in the important early years.
- Forest kindergartens improve children's levels of physical activity which can make a major contribution on their health with beneficial outcomes throughout later life.
- The low ratio of adults to children in forest kindergarten activities relies often on parental support and helps develop their own skills in playing with children outdoors.

Outcome: We have improved the life chances for children, young people and families at risk

- Forest kindergartens provide children with access to an environment that is conducive to learning and which provides the stability and experiences that may not exist in home life.
- Forest kindergartens are a way of harnessing the resources and enthusiasm of the public, voluntary and private sectors to ensure that there is greater opportunity for children, young people and families at risk to achieve positive outcomes.
- Forest kindergartens can help build the capacity and resilience of children, young people and families.

Outcome: Our young people are successful learners, confident individuals, effective contributors and responsible citizens

- Forest kindergarten provides a relevant and exciting context which develops skills for learning, for work and for life has the power to transform life chances. The approach ties closely to a *Curriculum for Excellence*. Children become better equipped for their futures in a globalised society by encouraging them to develop an understanding of, and passion for, science and the environment.
- Forest kindergartens are a way of improving the play experience in pre-school so that it can meet the needs of all children. Improving children's levels of physical activity helps education attainment, achievement, health and wellbeing in childhood and in later life.
- The Forest School Leader certification provides a formal route to continuous professional development for staff.
- A forest kindergarten approach encourages a “can do” enterprising attitude and developments of confidence, determination and persistence.
- Forest kindergartens are part of a broad learning experience and give opportunity for recognition of wider achievements during school years, in line with the Curriculum for Excellence.
- Forest schools have demonstrated that they raise the wider achievements of the lowest performing pupils, those disengaging from learning and those who require additional support to get the most from their learning.
- Forest kindergarten is a learning system which encourages young people to think about their impact on the environment, to care about being healthy, to fulfil their potential and to contribute to society and the economy.

In addition, research has shown that:

- Childhood experiences of natural spaces has been shown to affect behaviour and attitudes as adults, especially toward the environment (Ward Thompson *et al*, 2008).
- Children need experiences of “wild” nature such as playing in woods. This leads to a significantly more positive effect on their environmental attitudes as adults compared with “domesticated” experiences such as picking flowers or planting seeds (Wells and Lekies, 2006).
- Individuals who choose to take action to benefit the environment had an adult mentor as children, who took them outdoors (Chawla, 2006).
- Being “Nature Smart” is a recognised intelligence (Gardener, 2006).

Outcome: We are better educated, more skilled and more successful, renowned for our research and innovation

- Forest kindergartens give children the opportunity to discover the natural world and is a solid foundation for the further development of science skills.

Our society is now in a digital era and information technology is used extensively. Forest kindergartens have an important role to play in terms of providing real world learning opportunities that ensure education is well-rounded and broad in scope.

One example is technologies - a huge area within a *Curriculum for Excellence*. It covers food, textiles, craft, design, ICT, graphics and engineering. Forest kindergartens offer valuable hands on experiences in all these matters for children to test out their own ideas in a real world context.

Healthier Scotland

Outcome: We live longer, healthier lives

- Forest kindergartens supports children to follow healthier lifestyles and improved physical, social and mental well-being.

Outcome: We have tackled the significant inequalities in Scottish society

- Forest kindergartens make it easier for children to take actions and make choices that are good for their health and wellbeing, thereby taking more ownership of their health.
- The maintenance of woodland and other greenspace for forest kindergartens, promotes social inclusion and the regeneration of Scotland's most disadvantaged communities. This will build stronger communities and help address economic inequalities as well as inequalities associated with our built environments and access to our natural environments.

Health improvement is one of the themes included in the Glasgow and Clyde Valley Green Network Partnership agenda, which aims to provide opportunities to deliver health benefits by improving the landscape surrounding communities in regeneration areas and those experiencing multiple deprivation.

There is a growing understanding in health policy that sustainable health improvements can only be achieved through healthy environments and healthy lifestyles.

Being outdoors in natural spaces, especially woodland, is essential to children's wellbeing. During the past fifteen years there has been a growing body of research which indicates that direct, frequent experience with the natural world produces positive physical, mental and emotional benefits in children. For example:

- When it comes to concentration capacity, the children within Swedish outdoor pre-schools are more than twice as focused as children within a normal pre-school. Their motor skills are better. They are less frustrated, restless and sick. One key reason for statistically significant differences observed was attributed to the uneven surfaces and trees children encountered in the outdoor nursery's woodland environment (Grahn *et al*, 1997).
- In a nine month study of Swedish children attending the same nursery, one group had daily access to a natural landscape for at least two hours, the other group only occasional access. Significant differences were found in coordination, balance skills, and agility. The children felt more comfortable being in the natural environment and their knowledge about nature increased (Fjørtoft and Sageie, 2001).

Research has also identified health and wellbeing benefits associated with nature:

- The more greenspace there is, the greater the amount of physical activity in all age groups (Bell *et al*, 2008).

- Contact with nature has a positive effect in reducing the impact of attention deficit disorder in children (Taylor, A.F. *et al*, 2001) and (Faber Taylor & Kuo, 2009).
- The more plants, green views and access to natural play areas stressed children have the greater the results in terms of stress reduction (Wells & Evans, 2003). This is particularly important, when considering the most vulnerable children in our society.
- The presence of street trees may help prevent early childhood asthma in urban areas because of their impact on air quality (Lovasi *et al*, 2008).
- Myopia, or short sightedness, in children appears to be affected by the amount of time spent outside. The development of myopia is halved if a child gets three hours per day of natural light outside (Rose *et al*, 2008).

Safer and Stronger Scotland

Outcome: We live in well-designed, sustainable places where we are able to access the amenities and services we need

- Woods and greenspace in and around urban areas contribute positively to the well-being of local communities. Forest kindergartens use greenspace and provide an impetus for local authorities take joined up action to address some problems such areas face.
- Active use of a local woodland by forest kindergarten groups may also encourage the local community to take ownership of their local environment and access it more frequently, making it a safer place for all.
- Most forest kindergartens involve walking to a site, thereby giving children practical road safety skills. Children learn to look after themselves and learn skills such as what to do if they become lost.

Greener Scotland

Outcome: We reduce the local and global environmental impact of our consumption and production

- Forest kindergartens add an educational thrust to the need for Scotland to address climate change. Accessible resources 'on the doorstep' or within walking distance of settings provide a low carbon alternative to nursery 'trips' using transport.
- Forest kindergartens require frequent use of accessible and good quality woodlands. If the Scottish Government is to increase forest cover then this is an appropriate development which supports this target.

Outcome: We live in well-designed, sustainable places where we are able to access the amenities and services we need

- Forests are the original sustainable places! By utilising woods as a place for learning schools are contributing to a more sustainable approach to education.
- Forest kindergartens provide an impetus for local authorities, private and community sectors to ensure well-managed, accessible green and open space - urban design good enough for future generations to thank us for delivering the conservation areas of the future.

Outcome: We value and enjoy our built and natural environment and protect it and enhance it for future generations

- Woodland and other natural habitats rich in biodiversity contribute to the blend of natural, historic and cultural heritage in Scotland. They need careful management to

ensure that they can continue to be places where people live, work and prosper, and places that people enjoy. Forest kindergartens help children develop environmental understanding and skills for practical stewardship of our natural areas.

- Forest kindergartens enable pre-school to contribute to implementing the Scottish Biodiversity Strategy, moving towards a wider ecosystem approach to nature conservation and working to reduce the risks and impacts of invasive, non-native species in Scotland. Investment in increasing and managing Scotland's forest and woodland resources will contribute to this.
- Forest kindergartens raise awareness and understanding of our natural environment through projects like the Forest Education Initiative, and help deliver work on the UN Decade of Education for Sustainable Development. Forest kindergartens produce the environmentally-conscious citizens, using the land as the main resource for playing.

A useful summary of the research around the value of nature and its impact on children can be found on the Centre for Confidence and Wellbeing website in the “Flourishing Lives” section: <http://www.centreforconfidence.co.uk/flourishing-lives.php?&p=cGikPTE3Mw>

Why are woods and other greenspace good for play? *(Extracted and adapted from Woods for Learning Strategy, FCS)*

- Woodlands are a rich resource for a range of learning and play opportunities that can deliver **A Curriculum for Excellence**.
- Woodlands illustrate the complexity of sustainable development and climate change and provide an ideal link from the local to the global.
- Woodlands provide a relatively safe place to learn about safety and risk when compared to other outdoor environments and are cool in summer but provide protection from winter weather.
- Regular visits to woodlands are known to reduce stress levels and promote restorative health benefits and calmness amongst children.
- When compared with indoor environments, woodlands used for play and learning result in a greater duration and intensity of activity amongst children and contribute to children's health and wellbeing.
- Woodlands stimulate all the senses, help to motivate and enthuse children and make use of their innate desire to learn.
- As an outdoor learning environment woods are both sheltered and robust, expressing the changing seasons throughout the year.
- At 17% of Scotland's land, woodlands comprise a huge and accessible outdoor learning resource and 90% of all schools are within 1 km of woodland.

In summary, greenspace in general and woodlands in particular have a key role to play in enriching children's play by providing a safe and robust environment for stimulating challenging, active, relevant and fun experiences that can be connected to learning in other parts of their lives.

METHODOLOGY

The research comprised two main parts:

1. *A questionnaire survey within the pre-5 sector, to:*

- Identify current provision of outdoor play and education
- Explore actual and perceived barriers hindering the use of local woodlands, across the project area.
- Establish which pre-5 establishments might be interested in piloting a forest kindergarten, or at least engaging in more, and regular, use of local woodlands.

2. *An audit and survey of local woodland sites in association with the questionnaire, to:*

- Create site criteria that supports forest kindergarten activity by under 5's age group.
- Identify sites in each local authority area suitable for regular use by 30+ pre-5s, and their supporters using the site selection criteria developed and local knowledge.
- Identify key sites accessible to the project area's pre-school establishments, in particular those settings which expressed a desire to be involved in a forest kindergarten project as soon as possible.

Contact was also made with people who had recently undergone Forest School training to assess what capacity there might be to support forest kindergarten work in this area.

The questionnaire survey within the pre-five sector

Two concise briefing documents were put together in order to inform pre-school staff, education officers and other interested parties in the study about forest kindergartens and the feasibility study (**Appendices 1 and 2**). This information was distributed in order to ensure that the pre-school establishments had some understanding of a forest kindergarten.

An online questionnaire was set up (**Appendix 3**). This was distributed to pre-school establishments in every local authority via an education officer with responsibility for pre-school activities. Hard copies were offered to establishments where online access was not possible. All partner providers were included in the distribution lists. Local authorities have to work in partnership with these providers and therefore were important to include in the study. The actual distribution date to establishments varied in discussion with each local authority.

The purpose of the online questionnaire was to find out:

- The perceived importance of outdoor play provision on-site and in greenspace.
- The current levels of outdoor play provision including visits to local greenspace.
- Levels of knowledge about local greenspace.
- Factors preventing respondents from accessing local greenspace more often including accessibility issues and on-site hazards.
- Whether any pre-school staff were already undertaking forest school training.

- The level of interest in being involved in a pilot project or local authority forest kindergarten developments.
- Awareness of Forest Education Initiative and any involvement.
- The type of support pre-school staff would find most helpful in order to integrate a forest kindergarten approach into their practice.

In two local authorities, Renfrewshire and East Renfrewshire, the paper copy differed slightly to the online version that was distributed. In Question 18, the paper copy did not have the following categories: fear of an accident happening, undertaking a risk assessment, unsure about children going to the toilet outdoors and concern about Care Commission expectations. In Question 23, Guidance to ensure Care Commission expectations are met was offered as an extra option.

Using a database CRM system, the questionnaire data was downloaded, collated and analysed:

- Collective response from all authorities and all pre-school establishments.
- Collective response from all authorities but local authority establishments separated from partner providers.

The reason for this is to see if there are issues specific to either group of pre-school establishments.

Each local authority has a separate breakdown of data. This is to find out whether there were any authority specific themes or differences.

There were two questions, 17 and 23, that required respondents to rank a range of options. In order to compare the importance of the options, a weighting system was used:

Rank order (1 being most important, 6 being least)	1	2	3	4	5	6
Weighting points	6	5	4	3	2	1

Audit and survey of local woodland sites

In each local authority, one key woodland site was identified that linked to at least one positive response from a nearby pre-school establishment. Owing to the size of Glasgow City, five woodland sites were identified and recommendations from a recent forest school feasibility study were considered, and further checked in terms of suitability for pre-school use. This allows the forest kindergarten officer to offer specific pilot projects, subject to agreement with local authority early years teams (see **Forest Kindergarten Feasibility Study Part 2**).

Each local authority area offers an array of greenspace sites, of different types, character and quality. Within the time available it would have been impossible to visit them all. It was important to establish first what makes a good or ideal site in order to prioritise sites to survey on the ground.

Establishing site criteria

Contact was made with the Forest Education Initiative, Greenspace and Biodiversity Officers, Countryside Ranger Services, FCS forest district officers, local authority woodland and access officers and Scottish Natural Heritage area staff within the local authorities. The purpose was to find out about current use of local woodland sites and to locate potential woodland areas suitable as sites for forest kindergarten activities and within easy reach of local pre-school establishments.

Site criteria for forest kindergarten were established using a range of sources. The *Forest School Scotland Guide* was referred to in order to draft an initial 'wish list'.

Contact was made with existing forest school leaders and nature kindergarten practitioners for their views on this initial list of selection criteria for potential woodland or greenspace sites. Criteria were ranked on importance with an average score taken for each. Their responses were collated to develop a set of simple site selection criteria. These were circulated to local authority staff to seek their advice on potential sites locally (**Appendix 4**).

These criteria were further adapted to include key points shown in 'Assessing a Site for Woodland Learning: a Checklist', from *The Early Years Curriculum: a view from outdoors* by Gloria Callaway (2005). This created a working site checklist that was used for all sites visited to ensure consistency of approach (**Appendix 5**). Following the site surveys this has been further refined to create a final checklist that we feel would be best suited for any further development of this project (**Appendix 6**).

Mapping

OS maps and on-line mapping facilities (e.g. www.multimap.com) were used to establish the location and type of sites. In some cases additional site plans were provided as hard copies by helpful local authority staff. This included proposed WIAT sites (West Dunbartonshire), and maps showing greenspace and associated nursery and primary schools (East Renfrewshire). These additional pieces of information will be forwarded to the newly appointed Forest Kindergarten Officer. GIS mapping facilities at the FCS Hamilton office and GCVGNP maps were also made available.

Site visits

Site visits were carried out between February and March 2009. In some cases this included site meetings with local professionals with valuable local knowledge such as the countryside ranger, or biodiversity or greenspace officer; in some cases, staff based at an early years setting, and in one case an enthusiastic parent and community leader. Approximately three to four sites could be visited for detailed survey within each local authority area (more for Glasgow City), depending upon the ease of locating the site and size of the area. These detailed individual site report forms have been sent directly to the Forest Kindergarten Officer rather than included in this report.

Survey of forest school trainees

Contact details of those that had taken part in local forest school training were provided to the consultants. An email was circulated to ask specific questions on the stage of their training and potential to support further forest school or kindergarten activities in the

Glasgow and Clyde Valley area. Responses were collated and are shown in **Forest Kindergarten Feasibility Study Part 2, Appendix 1.**

“Our nursery grounds are all soft play areas with the exception of a small grassed area. The woodland area behind us would make an ideal additional play area for our children. The parents quite often remark that they would like to see this area used by the children. There is a family of deer living in the woodland and our children take great pleasure watching them when they venture out.” Respondent, Molendinar Family Learning Centre

RESULTS AND DISCUSSION

PRE- SCHOOL ESTABLISHMENT SURVEY RESULTS

General information

Questionnaires were received between 10th February and 23rd March 2009. From an estimated 660 pre-school establishments, 164 questionnaires were returned of which 154 were valid. This is a return rate of over 23%. The statistical overview, technical methodology and accuracy of the results are contained in **Appendix 7**.

Table 1 shows the responses per authority. There are 4 “unknown” responses which cannot be assigned to a local authority but which have been included in the “All pre-school” columns. Where results have been given as percentages, this has been rounded to the nearest whole number for ease of reading. The large response from Renfrewshire was thanks to Early Years Officers flagging up the questionnaire during visits to pre-school establishments and collecting paper copies.

The individual authority results are available separately in the Forest Kindergarten Feasibility Study Part 2 (**Appendices 2 – 9**) for the project partners and education officers to use.

Tables 2 – 4 are self-explanatory but provide a perspective of the audience we were reaching and the value of the briefing materials supplied.

Table 1: Breakdown of completed questionnaires

Authority	Count
East Dunbartonshire	14
East Renfrewshire	15
Glasgow City	28
Inverclyde	14
North Lanarkshire	15
Renfrewshire	38
South Lanarkshire	13
West Dunbartonshire	13
Unknown	4
Total	154

Table 2: Type of Provider

Authority	Count	Percent
LEA	104	68%
PP	46	30%
Unknown	4	3%
Total	154	100%

Table 3: Q1. Have you read the Forest Kindergarten Summary document accompanying this questionnaire?

Response	Count	Percent
Yes	149	97%
No	4	3%
Total	153	100%

Table 4: Q2. Have you read the Forest Kindergarten Brief Introduction document accompanying this questionnaire?

Response	Count	Percent
Yes	150	98%
No	4	2%
Total Responses:	154	100%

The perceived importance of outdoor play provision on-site

The respondents recognise the importance of children being outdoors regularly (**Figure 1**) and most establishments are getting children outside on a daily basis (**Figure 2**). It is a concern, however that 1 in 7 centres are not enabling daily access outdoors, given the social, cognitive and health benefits of outdoor play.

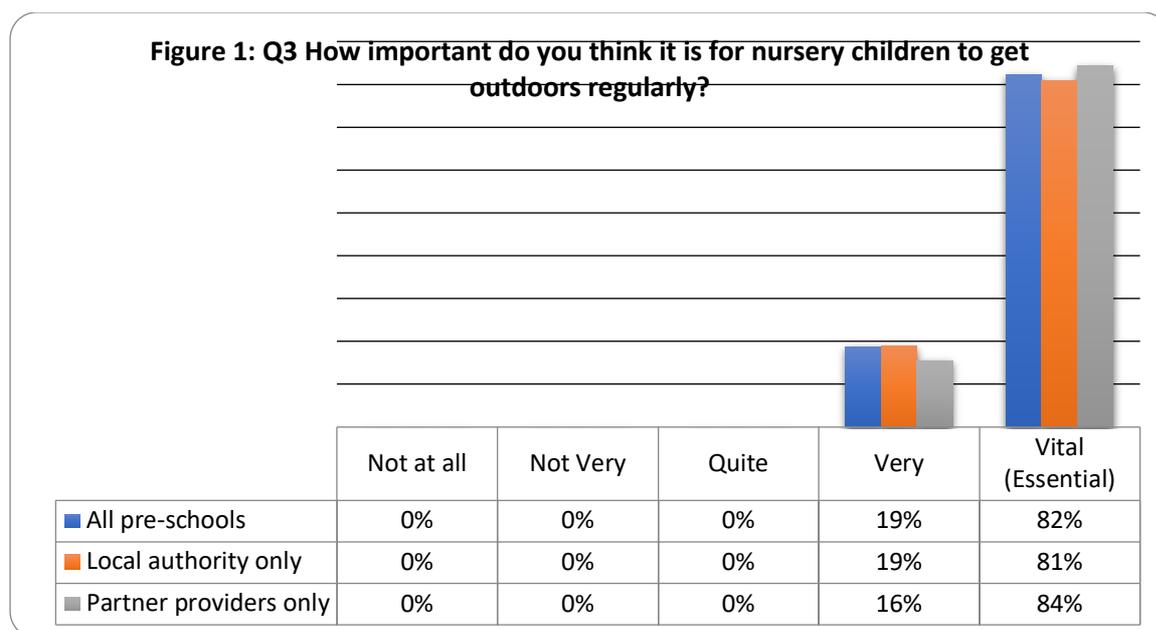
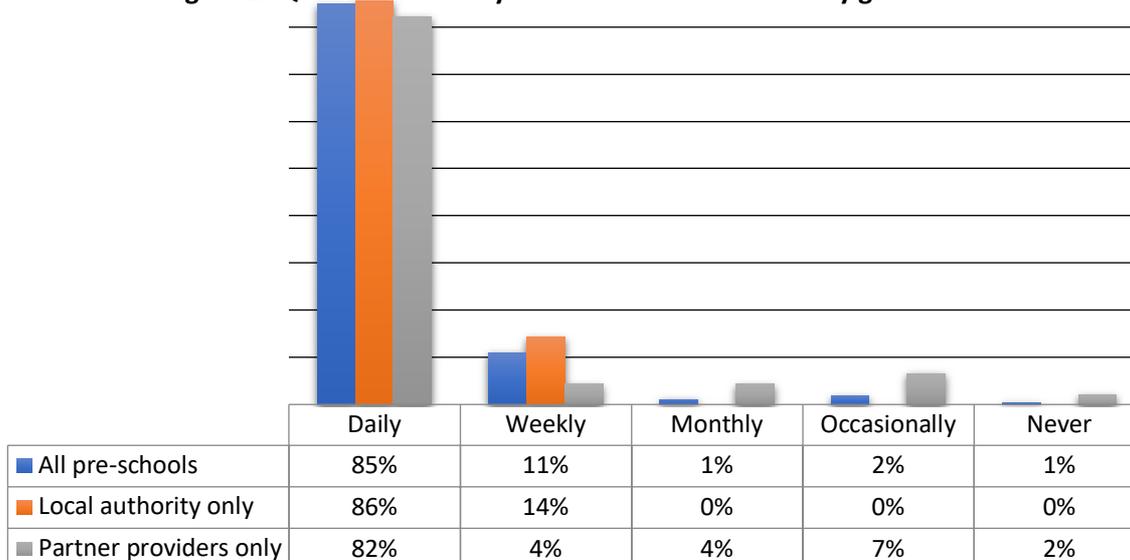


Figure 2: Q5 How often do your children use the nursery grounds?



The need for children to access woodland or greenspace regularly

The respondents, whilst recognising that greenspace or woodland is very important, do not rate this as highly as simply being outside (**Figure 3**). Possible reasons for this include:

- Lack of understanding and knowledge about the benefits of spending time in natural settings. Research about this has not been well highlighted within the pre-school sector.
- That one does not miss what one does not have! **Figure 4** demonstrates that less than one third of nursery grounds have greenspace. **Figure 5** indicates that those who do have greenspace in their nursery grounds consider greenspace more important than those who do not.

Figure 3: Q4 How important do you think it is for nursery children to visit woodland or greenspace regularly?

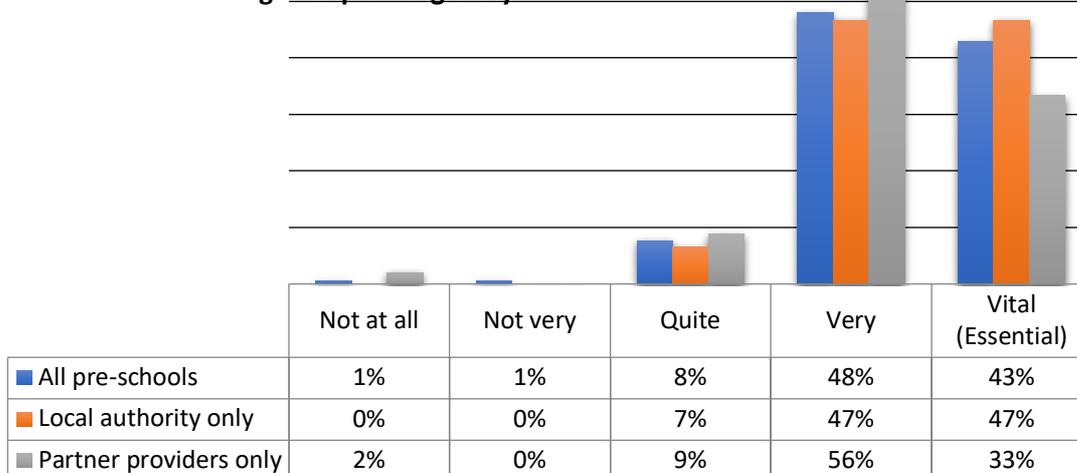


Figure 4: Q6 Do you have a greenspace or woodland within your nursery grounds?

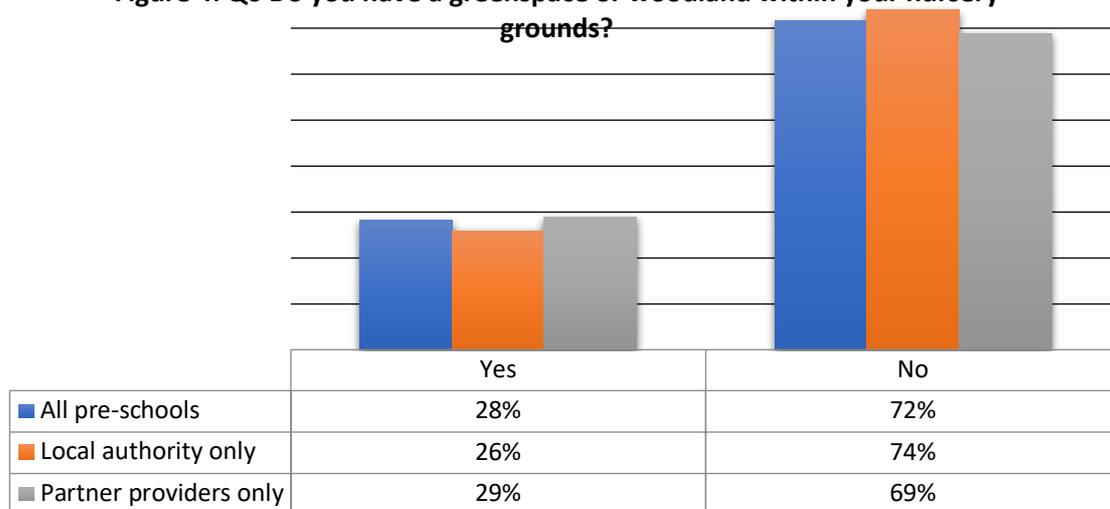
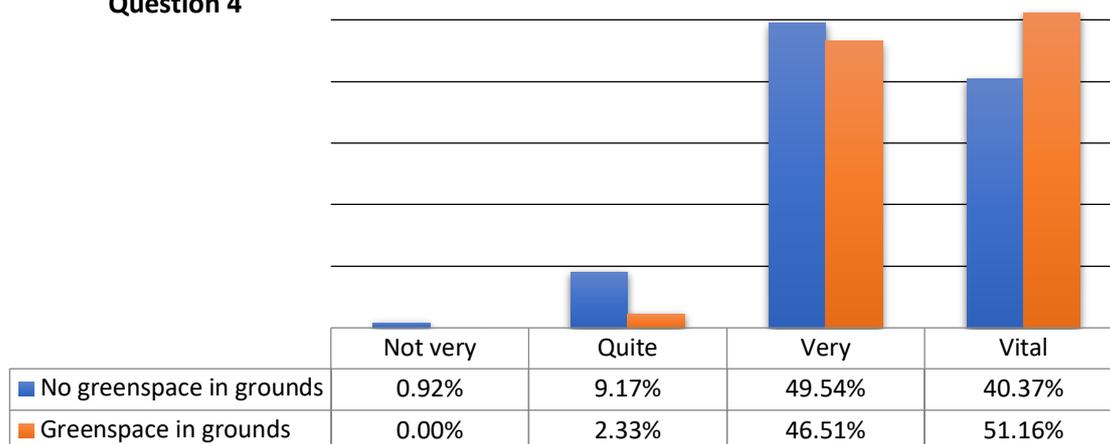


Figure 5: The impact of greenspace in nursery grounds on the response to Question 4



Accessing greenspace and woodland beyond the nursery grounds

Nearly three-quarters of the pre-schools can access greenspace or woodlands and most respondents can name their nearest greenspace (**Figures 6 & 7**). A few establishments have woodland beside their centre or within the wider school grounds. The majority of greenspace is within walking distance of the pre-school establishment (**Figure 8**).

In terms of sustainable development and environmentally responsible behaviour, walking is the ideal method for reaching woodland or greenspace. With young children, developing walking routines takes time so that stamina, speed and road safety awareness can be built up. The journey to and from the forest kindergarten site is an integral part of the experience. Children can observe changes in the local natural and built landscapes. Ambulatory activities can be undertaken en route.

These results do not mention the quality of the woodland area or greenspace. Some places may not be suitable owing to the terrain under foot, the accessibility of the site or other factors. The amount of greenspace suitable for use by the pre-school sector is likely to be significantly lower. The identification of further suitable sites in each local authority is needed and these mapped to pre-school establishments.

Consideration also needs to be given to how less-than-ideal sites can be safely used. Sometimes appearance can be deceptive and a site may be a hidden gem behind an unappealing access route.

The perception of pre-school staff about how children will manage or cope on a woodland site is another factor. This may come down to a process of experimentation or trial and error as expectations and beliefs will change as the adult and children become familiar with a forest kindergarten and settle to the different environment.

Figure 6: Q7 Can you access greenspace or woodland beyond nursery grounds?

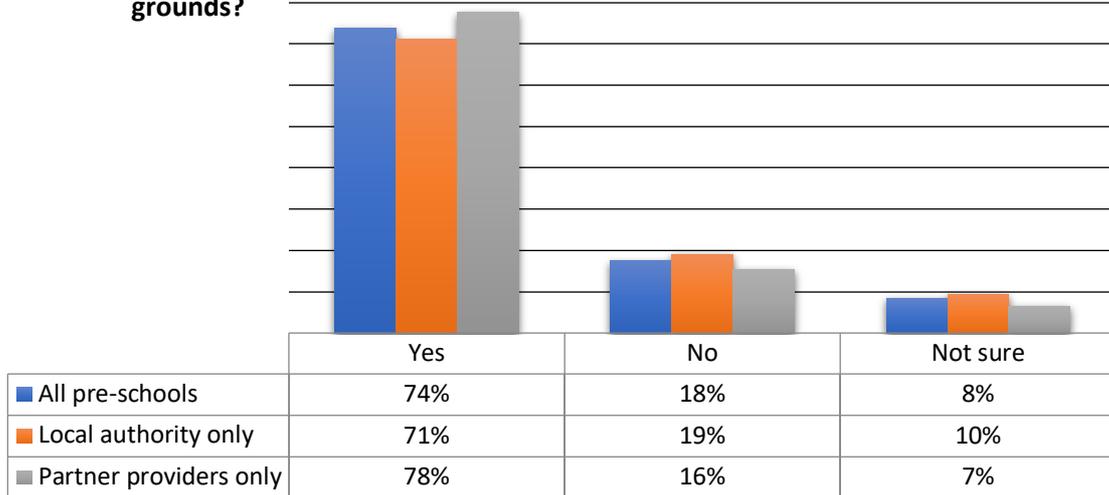


Figure 7: Q8 What is your nearest greenspace?

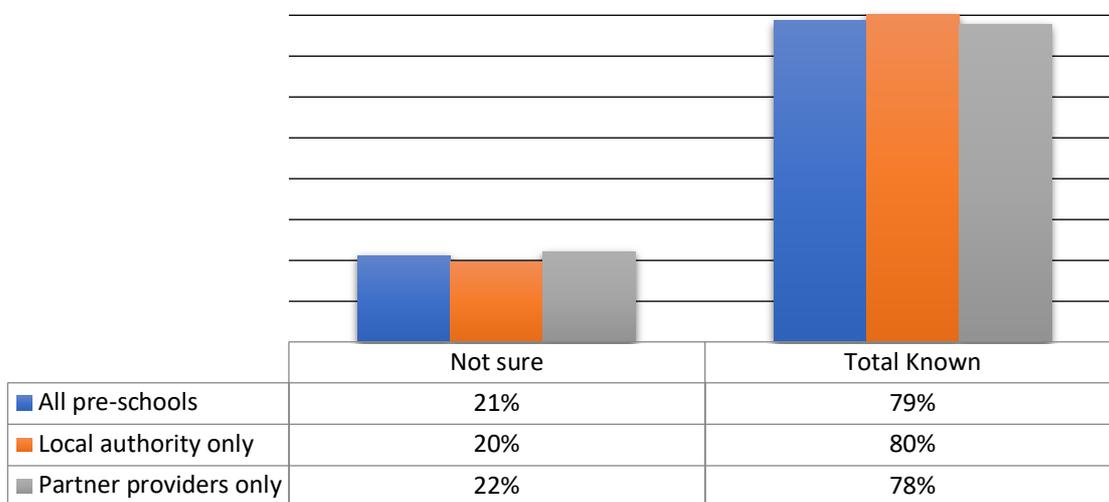


Figure 8: Q9 Does this site have trees?

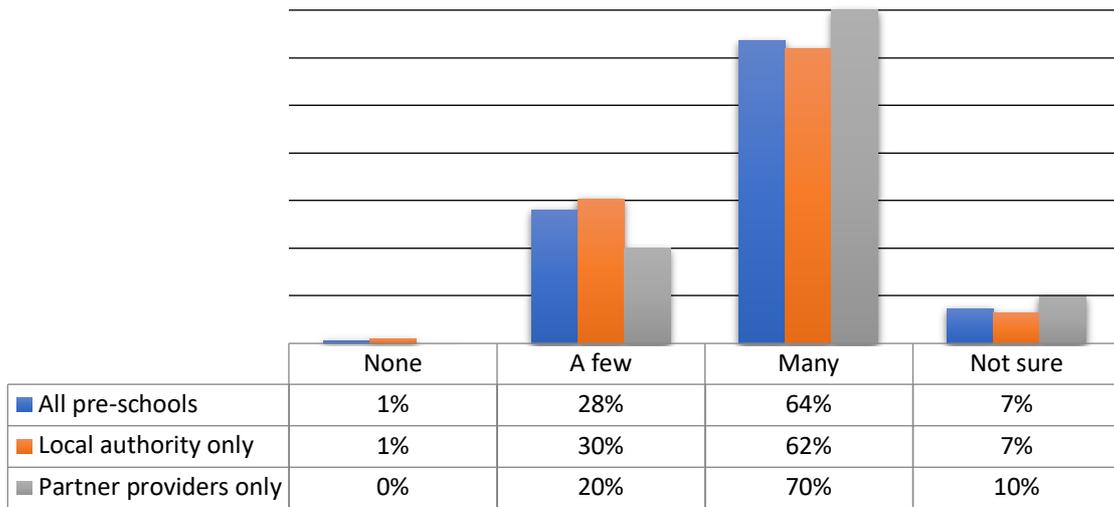


Figure 9: Q10 Is this site accessible by walking?

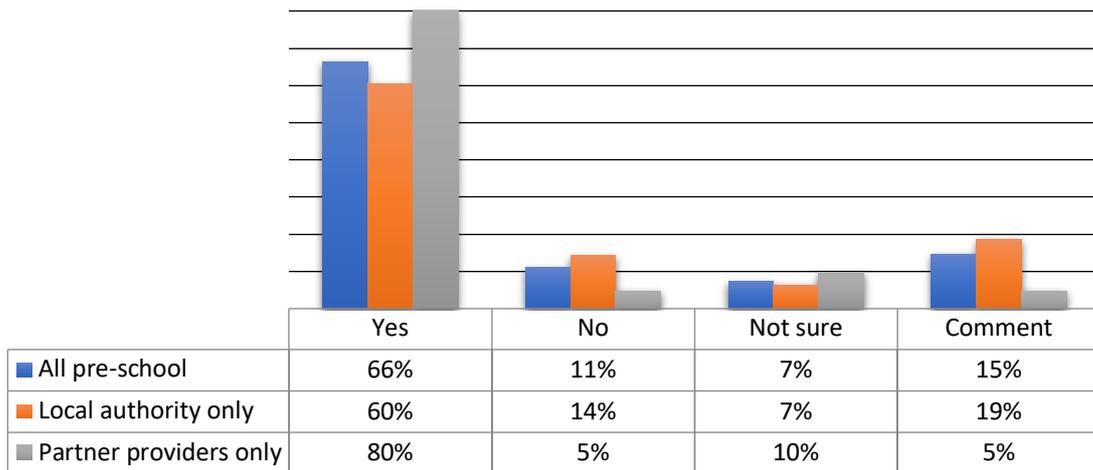


Figure 10: Q11 When walking with children how long does / would it take you to reach this site?

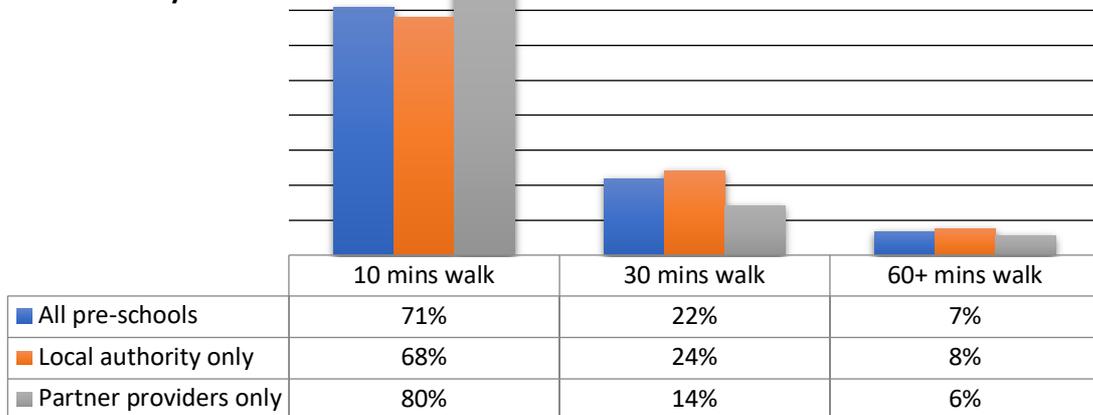


Figure 11: Q12 Is this site accessible by public transport?

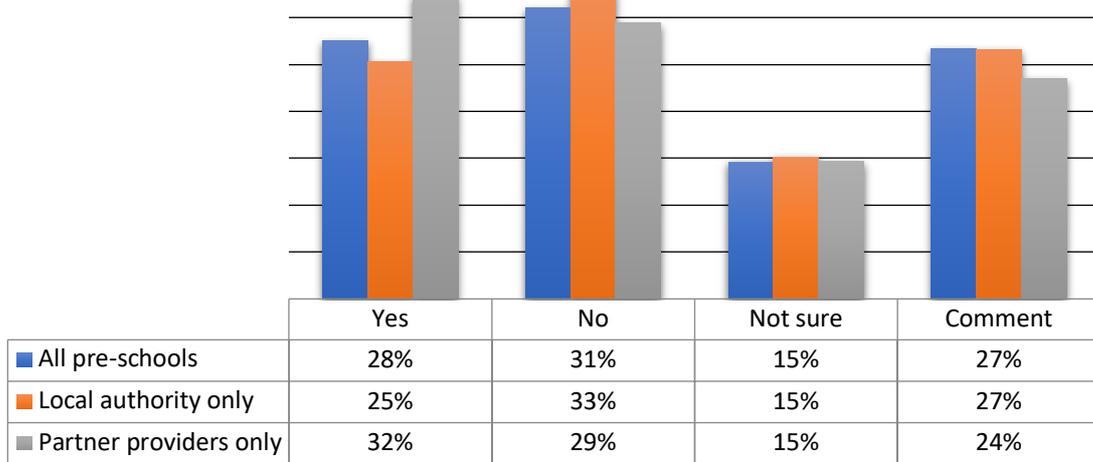


Figure 12: Q13 When travelling by public transport, with children, how long does it / would it take you to travel to this site?

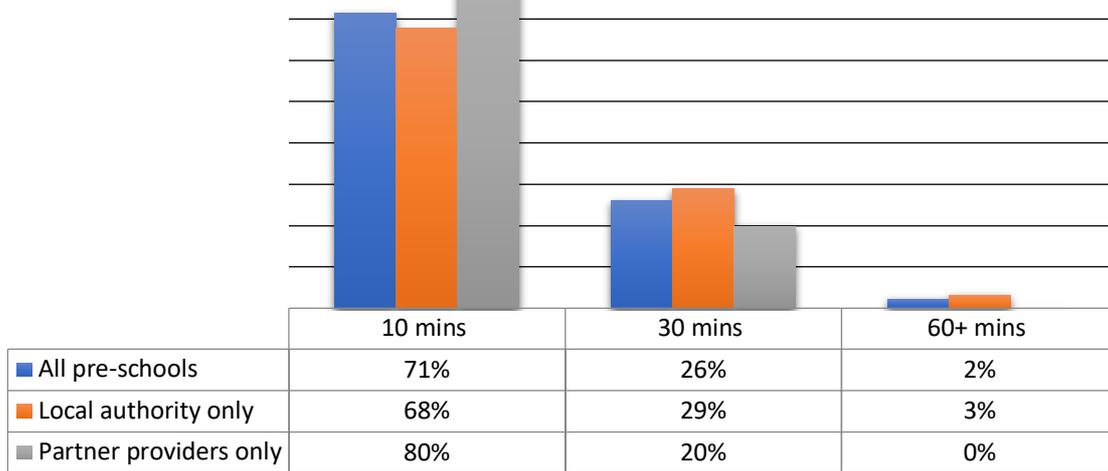


Figure 13: Q14 Is this site accessible by private car, minibus or hired coach?

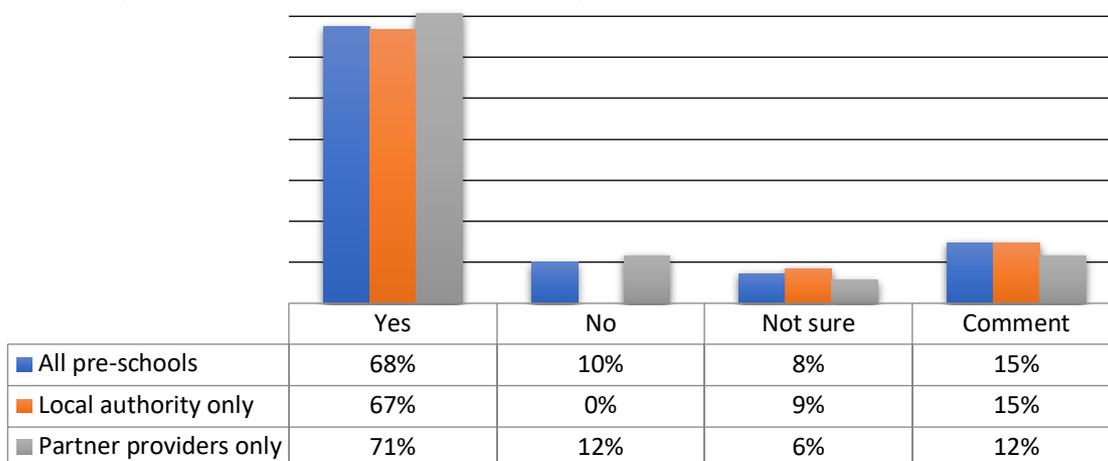
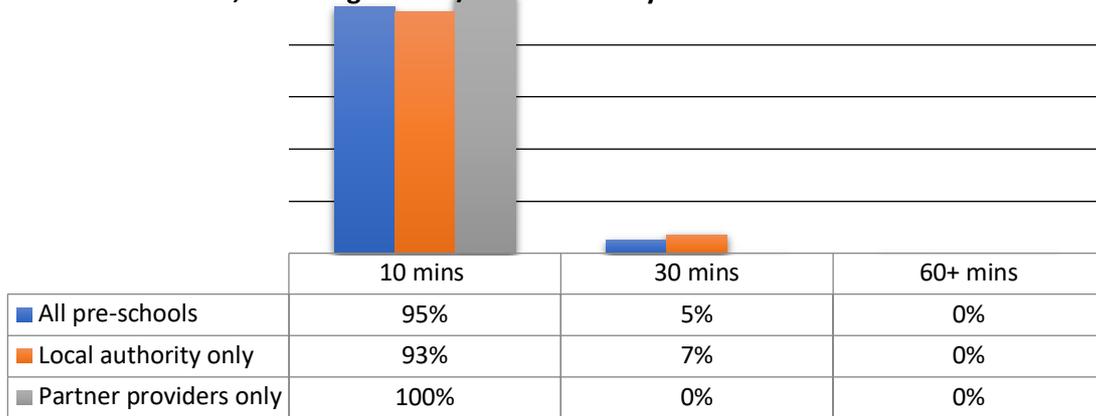


Figure 14: Q15 When travelling by private car, minibus or coach, with children, how long does it / would it take you to reach the site?

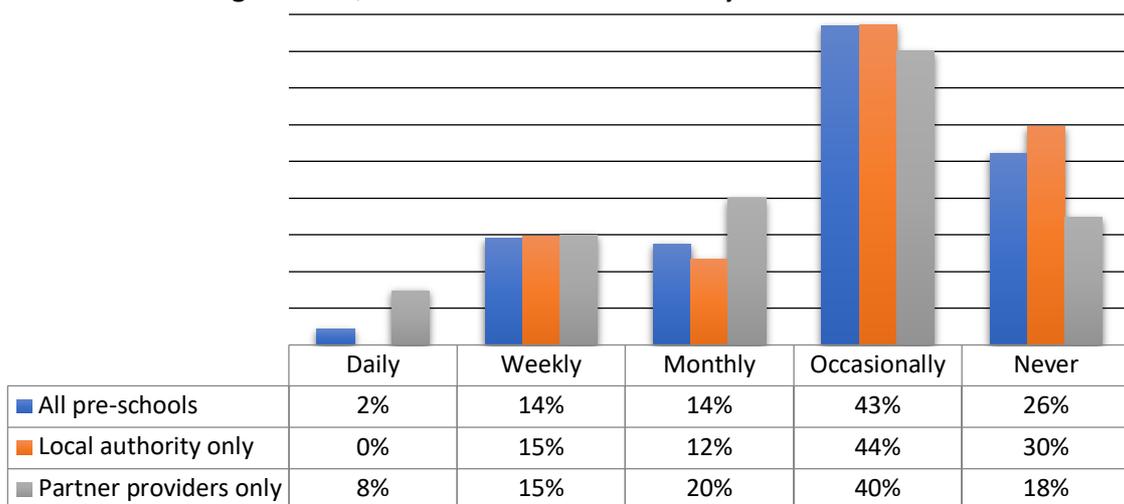


The frequency of off-site visits to greenspace or woodland

Frequent, regular visits to woodland or other greenspace are a feature of a forest kindergarten. This should be a minimum of once per fortnight, and ideally more often than this.

Figure 15 indicates that at present most pre-schools are not making frequent regular use of their nearest greenspace. Although the respondents recognise the important of greenspace (**Figure 3**), this is not followed through in terms of action. Thus at present, holistic support and encouragement is needed to enable more pre-schools to take their children to the nearest greenspace. Getting pre-school children off-site may be an issue in itself, aside from participating in forest kindergarten activities.

Figure 15: Q16 How often does the nursery visit this site?



Reasons for visiting woodlands or greenspace

The reasons ranked by respondents were quite similar (**Table 5**). Learning opportunities the highest ranked by both local authority and partner providers. This is a paradox in that it suggests that learning is perceived as more important than play! Yet high quality play is recognised as the most effective form of learning for children.

Natural materials are the main resource in a forest or nature kindergarten. However, staff can decide to increase the availability of stones, wood, etc. in their establishment to provide similar opportunities to play with these items out with their habitat. Forest kindergartens go beyond resource provision to a much deeper experience.

Physical activity and emotional well-being were deemed to be of moderate importance. Interestingly, research undertaken by the Forestry Commission and Central Scotland Forest Trust (2009) demonstrates that the levels of physical activity on days where children undertake forest school activities is considerably higher than on other school days even when children have PE lessons.

Behaviour and quality of play were the lowest ranked in terms of importance. Again, this suggests that the respondents may not know the benefits of forest kindergarten on behaviour and quality of play.

The perceptions of the respondents are very important as they have completed the questions on the basis of what they know and understand. The results in **Figure 15** show poor use of local greenspace. It is likely that most of the respondents have very limited experience of being in woodlands with children. Thus it is important that staff have first hand opportunities to observe the wide range of benefits forest kindergartens can offer.

Table 5: Q17 Please describe the reasons why you would take children to a woodland or greenspace site, in rank order, with 1 being the most important reason, 6 being the least important.

Q17 Summary	All pre-schools		Local authority only		Partner providers only	
	Ranked Value	Percent	Ranked Value	Percent	Ranked Value	Percent
Learning Opportunity	627	23%	456	24%	167	21% (2)
Natural Resources	595	22%	398	21%	192	25% (1)
Emotional Wellbeing	464	17%	333	17%	129	16% (4)
Physical Activity	427	16%	295	15%	131	17% (3)
Better Quality of Play	394	15%	284	15%	104	13%
Better Behaviour	209	8%	146	8%	60	7.66%
Total	2716	100.00%	1912	100.00%	783	100.00%

Factors preventing staff from accessing their local woods or greenspace more often

In this section, the concerns and needs of partner providers and local authorities show some differences. **Tables 6 and 7** show the factors preventing respondents visiting their local greenspace more frequently. The percentages are based upon the number of respondents who scored this factor. For example, 17% of 154 responses stated that Care Commission expectations are a concern.

There were 23 valid paper returns. Thus for the categories: fear of an accident happening, undertaking a risk assessment, unsure about children going to the toilet outdoors and concern about Care Commission expectations, the results displayed may be slightly lower than the rest. Where this may be significant, is the concern raised about children going to the toilet outdoors. This factor has been ranked highly with 32% of local authority and 24% of partner providers stating this as an issue. Given that very little advice is readily accessible to staff on this matter, this result is not surprising.

Perhaps ironically, whilst health and safety concerns are highly ranked by both local authority and partner providers, the undertaking of risk assessments is regarded as a less significant issue. Yet undertaking a risk assessment is the opportunity to consider the risks and take positive action to reduce the likelihood or severity of harm. This is an area for further investigation. For example, one possible reason could be the paperwork involved rather than the process of risk assessment that is the preventative factor. Play England (2008) have produced a helpful document, *Managing Risk in Play Provision: Implementation Guide* which advises professionals working with children to consider the benefits of undertaking play activities in tandem with the identification of risks. Play England are now advocating a "Risk-Benefit Analysis" approach so that a more balanced consideration of undertaking play activities with children takes place.

When considering the introduction of forest kindergartens, it will be important to remember the differences and adopt appropriate strategies. For example, a standard 3-part introduction to forest kindergarten training package may not necessarily target either group effectively. Specific measures to address specific concerns will be needed.

The local authority breakdowns can provide another dimension to consider. For example, in North Lanarkshire where the pre-school centres have been issued with children's outdoor clothing weather is ranked low as a general barrier. Thus each authority may need to address specific issues rather than assume an approach based upon the collective results of all pre-schools in the Clyde Valley area.

Table 6: Factors preventing staff from visiting their local woods or greenspace more often

Preventive factor	All pre-schools %	LA %	PP %
Concern about Care Commission expectations	17%	19%	13%
Fear of an accident happening	11%	13%	7%
Health and safety concerns	44%	47%	36%
Lack of confidence in working with children outdoors	11%	14%	4%
Lack of knowledge about using woodland for play	30%	35%	18%
Lack of outdoor professional support	29%	34%	18%
Lack of parental support for visits	26%	22%	33%
Lack of staff	45%	50%	31%
Lack of suitable clothing for children	17%	10%	36%
Lack of time to integrate visits into curriculum	13%	13%	13%
Lack of time to plan and organise visits	15%	14%	18%
No known woodland or greenspace accessible to nursery	19%	23%	11%
No support from site manager/owner	4%	3%	7%
Nothing prevents us from going there more often	11%	11%	13%
Other	15%	20%	13%
Parental attitudes	7%	4%	11%
Undertaking a risk assessment for this activity	12%	15%	7%
Unsure about children going to the toilet outdoors	29%	32%	24%
Weather	23%	19%	33%

Table 7: Top 3 factors preventing staff from accessing their local woods or greenspace more often**Table 7a:** All pre-schools

Factor	Count	Percent
Lack of staff	68	45%
Health and safety concerns	66	44%
Lack of knowledge about using woodland for play	45	30%

Table 7b: Local authority only

Factor	Count	Percent
Lack of staff	51	50%
Health and safety concerns	48	47%
Lack of knowledge about using woodland for play	36	35%

Table 7c: Partner providers only

Factor	Count	Percent
Health and safety concerns	16	36%
Lack of suitable clothing for children	16	36%
Weather	15	33%
Lack of parental support for visits	15	33%

Accessing local woodland and greenspace

Both groups had the same issues appearing most frequently (**Table 8** and **9**). Transport and time are huge factors. However, given that most pre-schools are within a 10 minute walk of the nearest greenspace, this can mitigate the need for transport. In terms of developing children's awareness of, and familiarity with, their local neighbourhood, perhaps the benefits of simply getting children beyond their outdoor area need to be re-emphasised. The *Curriculum for Excellence* social studies experiences and outcomes explicitly cite the need for children to explore their local environment.

Table 8: Access issues

Access issue	All pre-schools %	LA %	PP %
Cost of transport	29%	30%	24%
Distance	23%	22%	19%
Have not visited nearest site	14%	15%	11%
Lack of transport e.g. minibus	38%	40%	32%
Not sure where nearest site is	1%	1%	0%
Other	14%	13%	8%
Parking on site	1%	1%	0%
Time	30%	26%	38%
Unsuitable ground for prams/buggies	5%	5%	5%
Walking route hazardous	14%	14%	14%
There are no access issues	20%	19%	22%

Table 9: The top 3 access issues

Access issue	All pre-schools %	LA %	PP %
Lack of transport e.g. minibus	38%	40%	32%
Time	30%	26%	38%
Cost of transport	29%	30%	24%

On site hazards

The hazards at each site are uniform between each group of respondents (**Table 10** and **11**). Here the issues raised are matters that need considering at a local authority and community level to encourage everyone to clean up after their pets and take their litter home.

However, very often, litter and dog mess are localised within specific areas. For example, one nursery class in South Lanark walk past a dumping spot every week to their woodland site. At first glance the wood may not appear ideal, but further into the woods, the place is fine. Dog mess is usually confined to path sides and entrance areas. Yet for peace and seclusion, forest kindergarten sites can be away from such paths. Thus it is very important for individual and thorough site inspections to take place rather than make assumptions based upon the overall look or community use of a site.

Table 10: *Known site hazards at nearest greenspace*

Hazard	All pre-schools %	LA %	PP %
Antisocial behaviours	7%	8%	3%
Busy public access	4%	5%	1%
Dangerous plants	1%	2%	0%
Dog mess	30%	27%	37%
Drug related litter	15%	15%	14%
General litter	23%	21%	27%
Trees in unsafe condition	2%	2%	4%
Vehicle access	2%	2%	1%
Not sure	10%	12%	4%
Other	6%	6%	8%
No significant hazards	14%	7%	10%

Table 11: *The top 3 site hazards identified by respondents*

Hazard	All pre-schools %	LA %	PP %
Dog mess	29%	27%	36%
General litter	22%	20%	27%
Drug related litter	14%	15%	14%

Forest Leader Certification

Anyone can apply and undertake the training to become an OCN Forest School Leader. The aim here was to find out whether there were pre-school staff unknown to the Forestry Commission who had this qualification. **Tables 12a-b** show that at present up-take of this training is very low amongst the pre-school staff (see also **Forest Kindergarten Feasibility Study Report, Part 2 Appendix 1**).

Table 12a: *Has anyone in your establishment gained Forest Leader Certification?*

Value	Count	Percent
Yes	0	0%
No	149	100%
Total Responses:	149	100%

Table 12b: *Is anyone in your establishment in the process of gaining Forest Leader Certification?*

Value	Count	Percent
Yes	2	1%
No	148	99%
Total Responses:	150	100%

Support for integrating a forest kindergarten approach into nursery

Q23 focussed on support needs and respondents were asked to choose six options and rank these in order of preference. When analysing these responses, the rankings were given a weighting and then compared (**Table 13a-c**).

Staff training was overwhelmingly the top preference here by both local authority and partner provider establishments. Further analysis in terms of identifying what type of training would be most helpful and about which aspects of forest kindergartens would be worthwhile. For example health and safety is a key factor needs serious consideration. But also activities which raise the confidence levels and self-belief that the staff can set up a forest kindergarten without being an outdoor or woodland expert. It must be reinforced that the philosophy of forest kindergartens is about enabling children to grow, learn and develop through effectively meeting their needs and interests. The setting may be different but not the pedagogical knowledge and skills of pre-school staff and how they interact and work with children.

With regard to the popularity of supported forest kindergarten sessions from an outdoor professional, there is concern here that ranger services, etc. do not have the time or remit within their work to accommodate this. Although trained OCN Forest School Leaders need groups to work with, there may be a need for local authorities to consider a local solution to this need in consultation with public, voluntary and private outdoor professionals in their area.

There is a good level of interest in respondents who feel that obtaining the OCN Forest School Leader certification would be helpful. However, no information was given to respondents about the cost or nature of this training, which has a high commitment level that requires to be sustained over several months. Further information about this is given in **Appendix 8**.

The Forest Education Initiative have already produced a forest school leaders pack which can be freely downloaded from <http://www.foresteducation.org/country.php?page=src&ctry=s> This is a useful starting point for pre-school centres.

Resource boxes to hire or buy may be a useful option for extending the philosophy and approach of forest kindergartens to centres which are not part of the pilot scheme. Care would need to be taken when setting these up to ensure that the boxes do not contain a pile of random resources, but chosen carefully with a specific theme in mind. For example, once a staff member has demonstrated an agreed level of competency in food hygiene, fire lighting and management of camp fires, then a box which contains a variety of simple recipes, key pieces of equipment and suggestions for camp fire celebrations with young children might be helpful.

Table 13: Support which respondents perceive to be most helpful when establishing forest kindergarten approaches in their setting**Table 13a:** All pre-schools

Summary Q 23	Ranked Totals	% of total responses
Training for staff	681	24%
Supported forest kindergarten sessions from an outdoor professional in the first 3 months getting established	391	14%
A forest kindergarten advice manual covering key issues	254	9%
Year round programme of possible activities	248	9%
Opportunities to gain forest school leader certification	246	9%
Information for all parents	205	7%
Resource boxes to hire or buy	201	7%
Training for parents and other volunteers	192	7%
Outdoor clothing provided at a discounted price	159	6%
Subsidised transport	158	5%
Guidance to ensure Care Commission expectations are met	142	5%
Other (Please specify at the end of survey)	6	<1%
Nothing required	1	<1%

Table 13b: Local authority only

Q23 Summary	Ranked Values	Percent
Training for staff	479	24%
Supported forest kindergarten sessions from an outdoor professional in the first 3 months getting established	290	15%
Year round programme of possible activities	176	9%
A forest kindergarten advice manual covering key issues	166	8%
Subsidised transport	156	8%
Opportunities to gain forest school leader certification	143	7%
Training for parents and other volunteers	132	7%
Information for all parents	125	6%
Resource boxes to hire or buy	118	6%
Outdoor clothing provided at a discounted price	102	5%
Guidance to ensure Care Commission expectations are met	86	4%
Other (Please specify at the end of survey)	6	<1%
Nothing required	1	<1%
Total	1980	100%

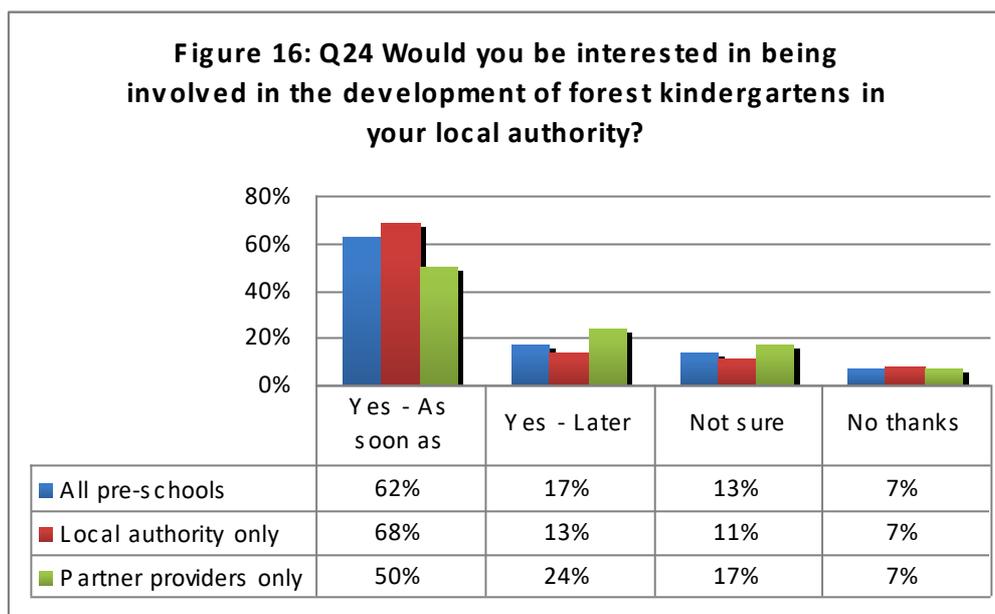
Table 13c Partner providers only

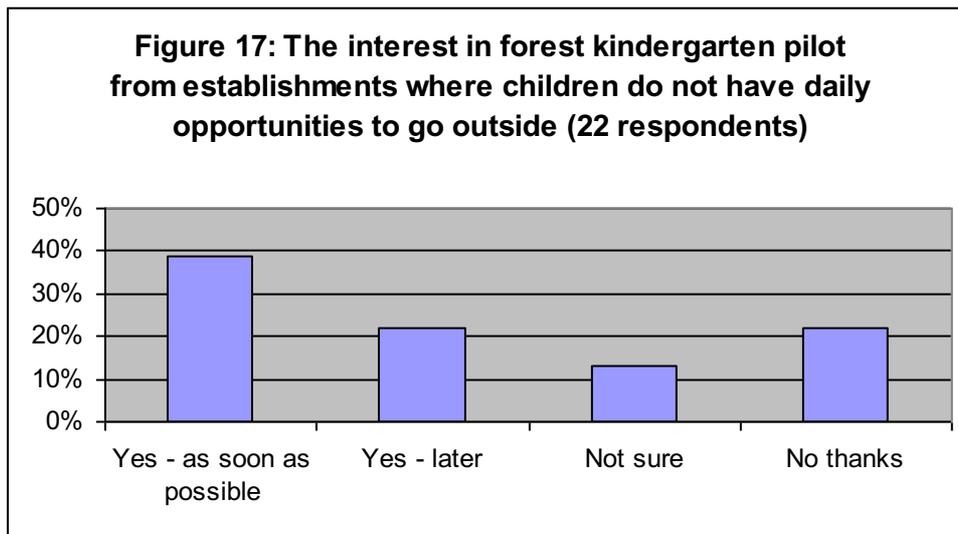
Q23 Summary	Ranked Values	Percent
Training for staff	190	22%
Opportunities to gain forest school leader certification	100	12%
Supported forest kindergarten sessions from an outdoor professional in the first 3 months getting established	96	11%
A forest kindergarten advice manual covering key issues	84	10%
Information for all parents	70	8%
Resource boxes to hire or buy	70	8%
Year round programme of possible activities	67	8%
Guidance to ensure Care Commission expectations are met	56	7%
Outdoor clothing provided at a discounted price	56	7%
Subsidised transport	47	6%
Training for parents and other volunteers	26	3%
Nothing required	0	0%
Other (Please specify at the end of survey)	0	0%
Total	862	100%

Willingness to become involved in developing forest kindergarten pilot projects

Figure 16 demonstrates the general enthusiasm by the respondents for finding out more and enabling forest kindergartens to become established in each local authority. The results are very encouraging and to be able to build upon this level of interest is an opportunity not to be missed.

Figure 17 demonstrates that this interest is not simply from establishments who are getting children outside daily. This suggests that this group of respondents may have circumstances beyond their control or which limit their ability to take children outside. This could perhaps do with further analysis.

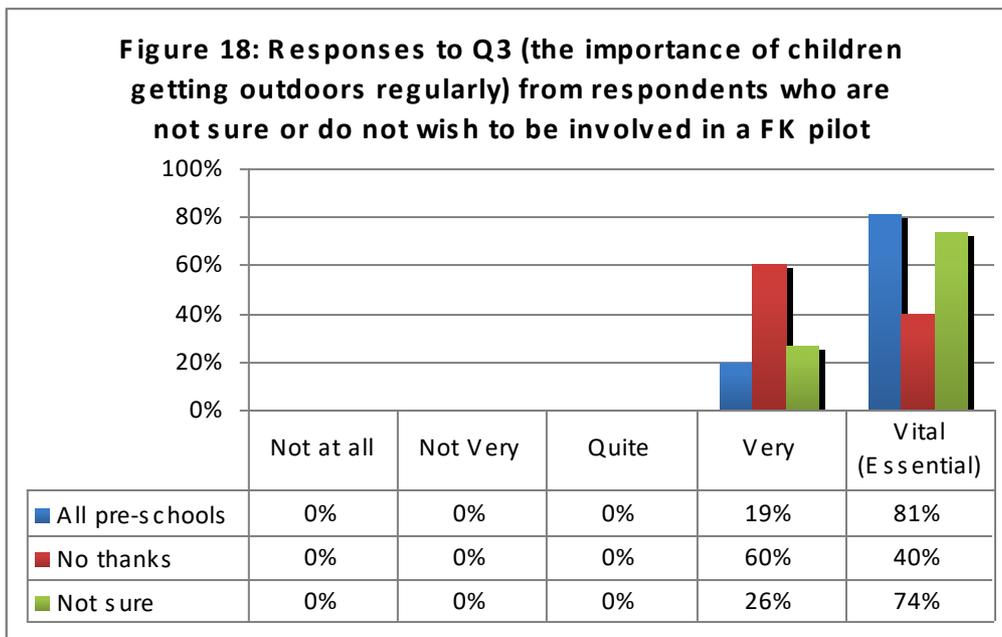


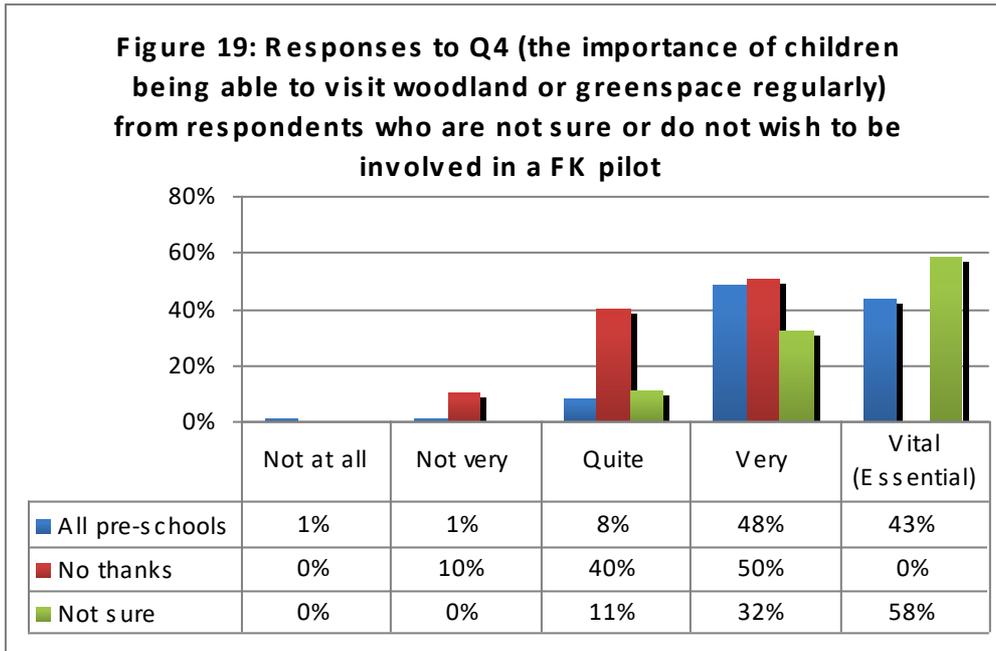


The “Not Sure” and “No Thanks” respondents

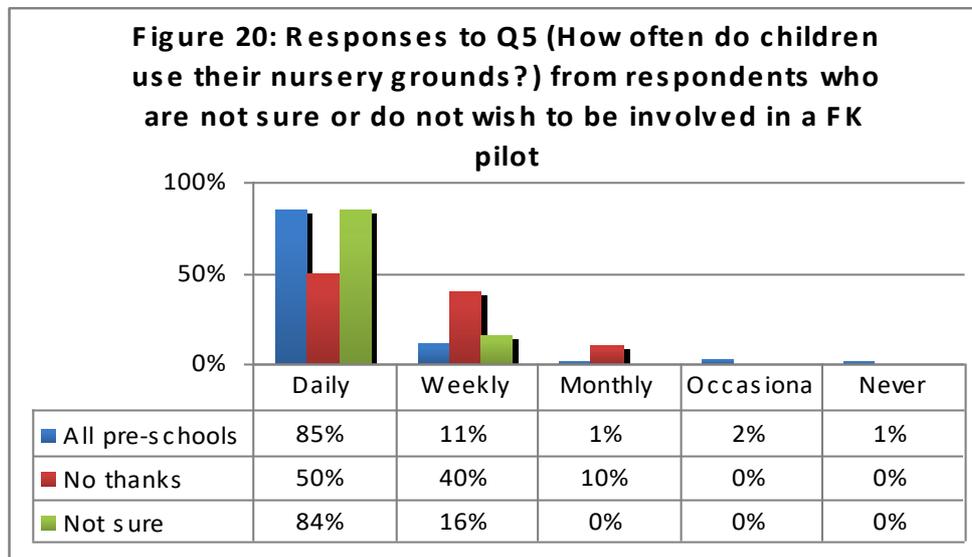
The “Not Sure” group comprises of 19 respondents and the “No Thanks” group has 10 respondents. The responses of these people to specific questions were analysed to see if there were any patterns or connections which might identify particular issues which could be addressed.

The “No Thanks” group rate being outdoors and having access to greenspace as less important, but the “Not Sure” group have results much closer to the mean response from all pre-schools (Figures 18 and 19).





The access to outdoor play (**Figure 20**) and the amount of greenspace (**Figure 21**), also throws up some more information. Again, the “Not Sure” group have results much closer to the all pre-school mean. The “No Thanks” group ensure less access to being outside than the mean and have no greenspace at all in any of their nursery grounds!



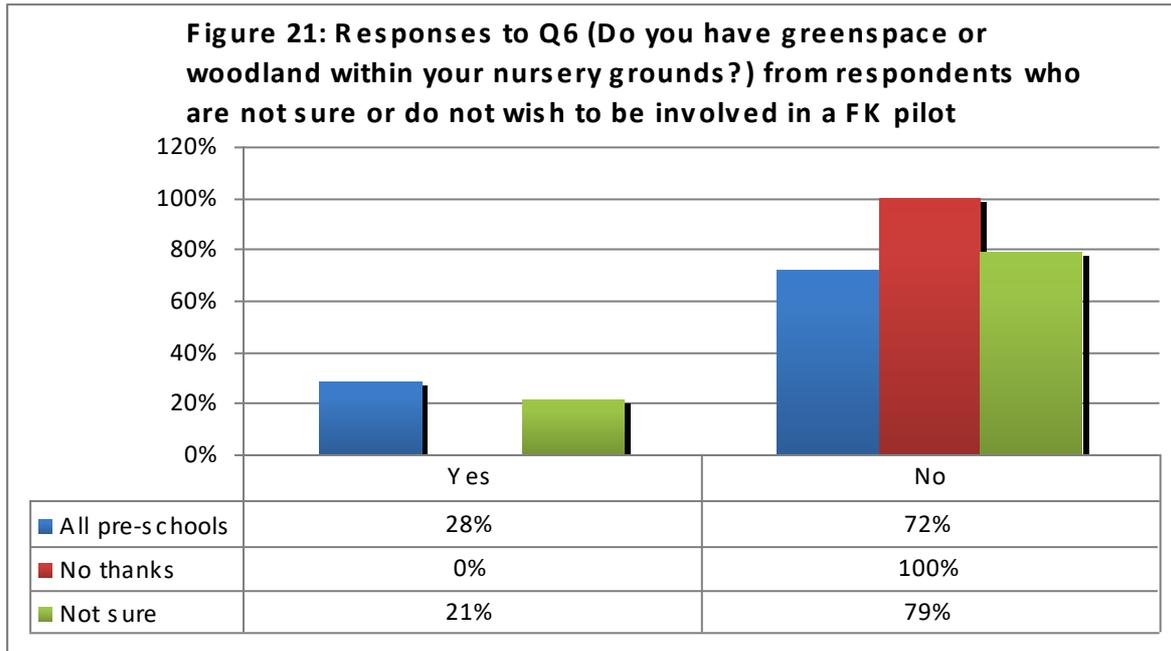


Figure 22 shows Q7 responses which suggest that these groups feel they are less able to access greenspace locally. This would require further checking to find out whether this was due to lack of knowledge and confidence or lack of natural habitats. The responses from this group to Q9-15 were insufficient upon which to comment.

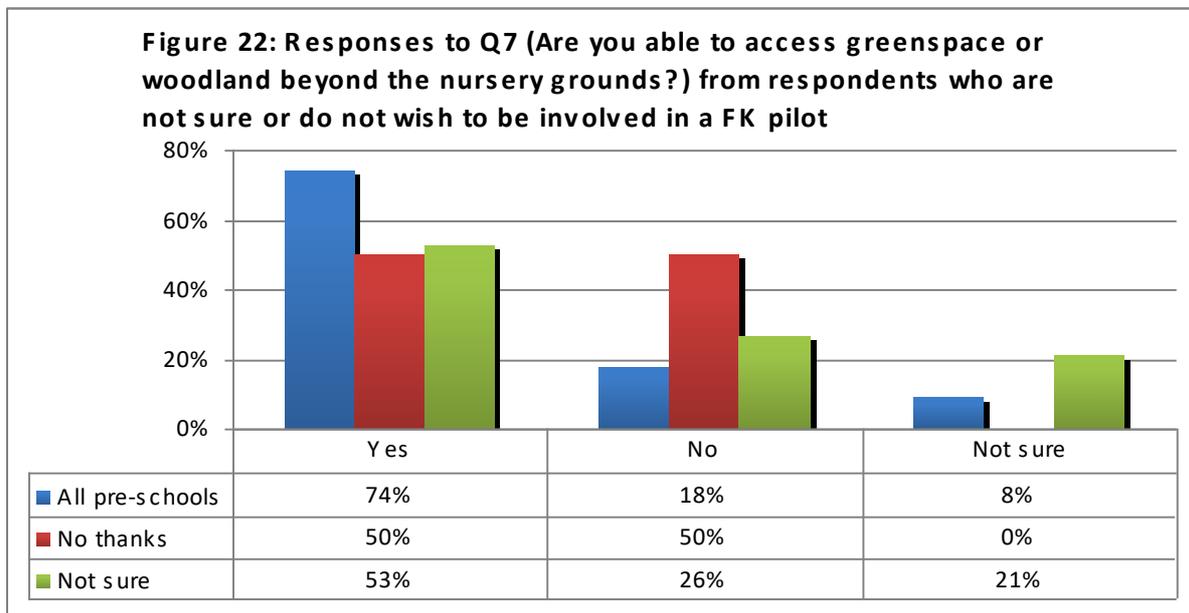
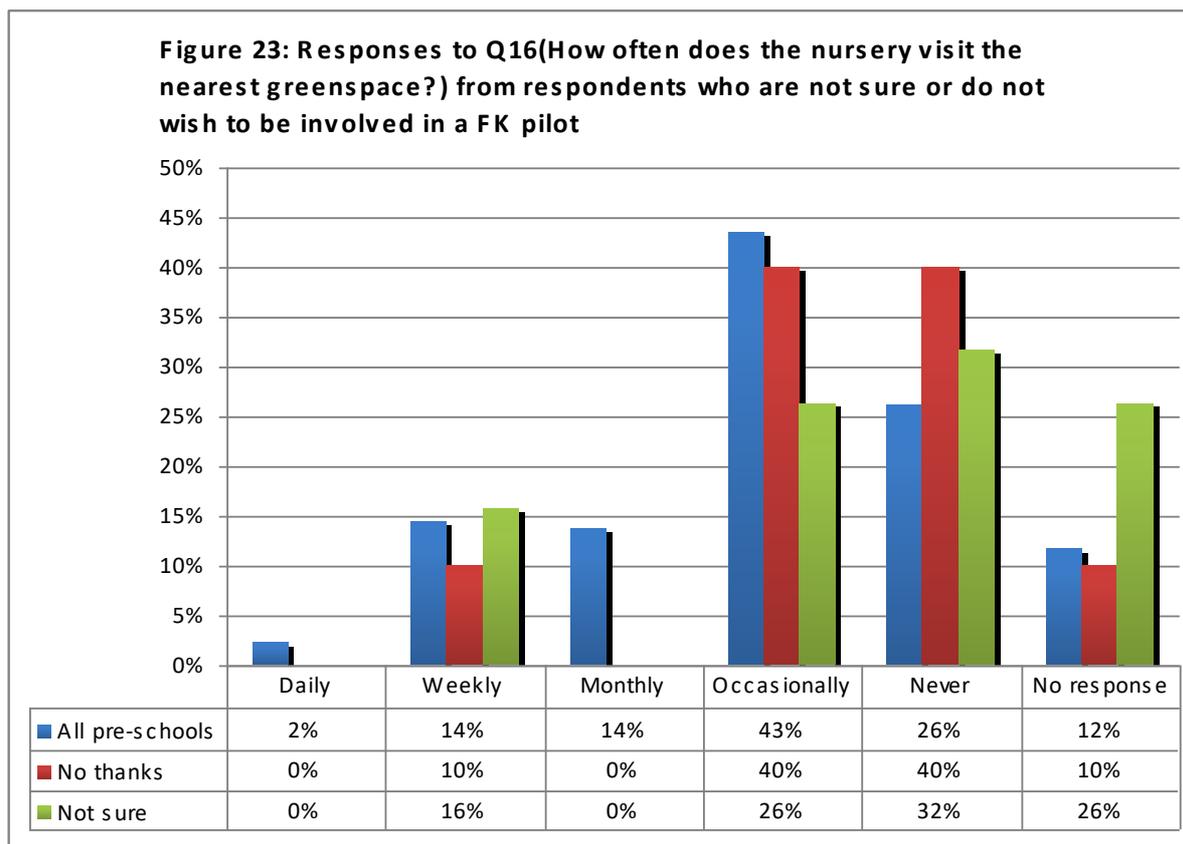


Figure 23 shows that these the “No Thanks” and “Not Sure” groups take their children off-site less frequently than the all pre-schools mean. Interestingly 25% of the “Not sure” group did not answer this question.



Finally when considering those respondents who are not sure or do not wish to participate in a pilot scheme, the mean total responses have been listed in **Table 14**. Clearly the “No Thanks” group do not perceive any more barriers to using their local greenspace than the mean response. In combination with their responses to Q3-7 &16, this suggests that this group are perhaps less inclined. The “Not Sure” respondents, though, perceive more barriers. Their responses to Q3-7 &16 suggest that this group has more fears but are committed in principle!

Table 14: Mean total preventative factors from different groups

Group	Mean response
All pre-schools	7.3
Not sure	8.4
No thanks	7.2

Awareness of Forest Education Initiative groups

The results in **Tables 15a-c** show that the pre-school sector has little or no knowledge of FEI or local FEI groups. This suggests that if the FEI wish to act as a support group for pre-school staff wishing to develop forest kindergartens, then consideration needs to be given as to effective ways of raising its profile within the pre-school sector.

Local FEI groups depend on the goodwill of volunteers to give their time and commitment. Usually there is a diverse range of individuals from public, private, community and charitable organisations including representation from the education sector. Development of FEI local cluster groups within the Clyde Valley should be considered.

Table 15a: Do you know of a Forest Education Initiative (FEI) group in your area?

Value	Count	Percent
Yes	11	7%
No	140	93%
Total Responses:	151	100%

Table 15b: Have you ever contacted a Forest Education Initiative (FEI) group?

Value	Count	Percent
Yes	10	7%
No	138	93%
Total Responses:	148	100%

Table 15c: Are you involved in your local Forest Education Initiative (FEI) group?

Value	Count	Percent
Yes	3	2%
No	145	98%
Total Responses:	148	100%

Site selection and matching with nurseries

Forest kindergarten pilot sites and nurseries for each local authority area are shown in **Forest Kindergarten Feasibility Study Report, Part 2 Appendices 10 – 17**.

Sites proposed as potential pilot forest kindergarten sites do not necessarily offer the 'best' quality site in terms of natural character. Matching a pilot site with a potential pilot early years setting was a balancing act, where accessibility was seen as key. This also means that some nurseries may have responded in a highly positive manner, but were not highlighted as immediate priorities for action as they had no reasonable sites accessible to them, for any reasonable delivery of a forest kindergarten experience. Likewise, some country parks for example, provide an excellent range of high quality habitats with positive management and support staff but participating nurseries would require transport to access them. The costs involved make it unlikely that their forest kindergarten would be a regular and repeated experience. It is important however that these keen establishments are supported to maintain their enthusiasm and enable their outdoor provision to develop.

The timing of the survey dissemination by some local authorities and return of the survey data meant that sites were visited before the survey feedback was received. Sites in these cases had to be selected from initial feedback from local professionals such as greenspace or access officers and did not necessarily reflect local early year establishment interest or location. As a result some sites need further investigation to ensure a good match for the pilot areas.

Most proposed sites will require further investigation and management work to ensure they are suitable for use.

Also, the pre-school establishments which completed a questionnaire have been the main ones matched to sites. It would be helpful for the Forest Kindergarten Officer to liaise with

Early Years Officers in each local authority and seek agreement over the pre-school establishments suggested. There may be additional factors which require further consideration before deciding the most appropriate establishments to involve in the pilot project.

Key contacts for each local authority area

These are shown in **Forest Kindergarten Feasibility Study Report, Part 2 Appendices 10 – 17** *Forest kindergarten pilot sites and nurseries*. They include, for example, local authority early years contacts, countryside rangers, biodiversity and greenspace officers.

These local authority areas are also covered by the FCS Central Lowlands Forest District Office and the relevant forest district officers for each of the study areas are shown below:

West Dunbartonshire & East Dunbartonshire

Robin Lofthouse (Forest District Officer FCS) robin.lofthouse@forestry.gsi.gov.uk

Renfrewshire & East Renfrewshire

Robin Lofthouse (Forest District Officer FCS) robin.lofthouse@forestry.gsi.gov.uk

Inverclyde & Glasgow

Robin Lofthouse (Forest District Officer FCS) robin.lofthouse@forestry.gsi.gov.uk

North & South Lanarkshire (shared remit)

Robin Lofthouse (Forest District Officer FCS) robin.lofthouse@forestry.gsi.gov.uk

Jeremy Thompson (Forest District Officer FCS) jeremy.thompson@forestry.gsi.gov.uk

Peter Mitchell Forest (District Officer FCS) peter.mitchell@forestry.gsi.gov.uk

Economic context of forest kindergartens

Scotland is now in an economic recession. This will have an impact on the capacity of local authorities and public agencies such as Forestry Commission Scotland to support the introduction of new initiatives. The effects are likely to last several years. Thus when promoting and introducing forest kindergartens, it is important to stress the resource benefits once the start up costs have been met:

- The woodland or other natural habitat is the main resource.
- Any equipment, such as bushcraft and fire lighting tools, will last many years with good care.
- Increasing the use of local woods and other greenspaces increases the value of these places as a community resource.
- Once staff have developed the confidence and habit of taking children beyond the school grounds, then it becomes part of a routine and culture of an establishment rather than yet another initiative to be squeezed into the day.
- Funding for pilot projects can be sought from a wider range of sources because environmental and community improvements required for the woodland areas. For example local authorities can access the Woodlands In and Around Towns (WIAT) grants.

It is necessary to undertake rigorous, succinct evaluations of the impact and effectiveness of forest kindergartens on children and staff. There is good evidence from previous research about the benefits of forest schools, but this should link to local and national initiatives in order to provide sound justification for continuing to support this pre-school approach.

Socio-cultural context of forest kindergartens

Over the years, our education system and culture reflect an increasingly indoor attitude. Staff, parents and children are all used to spending lots of time indoors. Outdoor knowledge such as names of common wild plants and animals has diminished. Skills such as tree climbing, fishing in streams or lighting a fire are not endemic to childhood experiences. Many adults are fearful of undertaking activities beyond a designated area with children. We live in a consumer based society where children have a lot of plastic toys but little natural resources which stimulate the imagination.

Forest kindergartens with their outdoor philosophy are in direct contrast to many of our sociocultural values. Commitment, time and patience from all involved will be needed to change perceptions and attitudes. Staff in pre-school establishments need advice and support on this matter.

Some pre-school staff worry about forest kindergartens adding to their workload and being another initiative demanding time which is already a precious resource in a routine-laden centre.

The 'low tech' nature of Forest kindergarten belies the wealth of experiences and learning opportunities it provides for children. It may be necessary to emphasise this to parents and carers who may regard the simplicity of the forest kindergarten experience as a backward step in their child's development and education.

MATTERS WHICH REQUIRE FURTHER ACTION, ANALYSIS OR INVESTIGATION

The following suggestions have been drawn from the survey results and associated research and discussions with those interested in the promotion and implementation of forest kindergarten in the Glasgow City and Clyde Valley area. They are not presented in any order of priority, but cover the spectrum of issues we feel have been raised and we suggest require further consideration. They contribute to and provide a context for several of the recommendations made in the final section.

1. Further liaison with local authority Early Years Officers and thereafter those settings identified as keen to engage with forest kindergarten should be established as soon as possible. This should maintain their interest, without raising expectations beyond what is possible. Hopefully, in most cases, this will progress to actual delivery of forest kindergarten in pilot areas.
2. Local authorities and others wishing to promote forest kindergartens will need to seek advice and consider what capacity they have to deliver this in their area. This may be

able to be supported by the local Ranger Service, or it may require a local solution in consultation with outdoor professionals working in the public, private or voluntary sector e.g. local Forest School leaders, or the FEI network.

3. Contact should be established with and between the owner/managers of the proposed pilot woodland sites and the staff of the pre-school establishments, identified in each local authority area, to further investigate whether they can match the requirements of the pre-school establishments.
4. The identification of further suitable sites in each local authority is needed and their accessibility to pre-school establishments mapped. This study has only been able to investigate a small proportion of the resource available, but it is of variable quality and requires field visits. The identification of sites within walking distance of nurseries should be treated as high priority to help address nursery staff concerns about lack of transport and its costs.
5. Encourage local authorities and partners to consider how less-than-ideal sites can be safely used, where these are the most accessible sites to nurseries keen to engage with forest kindergarten. Site surveys suggest that initial appearances can be deceptive. Key local contacts identified both in this report together with further local and community development contacts can help address access issues and litter problems in order to support forest kindergarten in otherwise favourable sites.
6. Consider developing a generic strategy to manage perceptions of pre-school staff about how children will cope in a woodland site. Increasing familiarity of forest kindergarten experiences can help to manage expectations and beliefs in both adults and children.
7. Consider supporting local authorities in developing the wider holistic staff support and encouragement needed to enable more pre-schools to take their children to the nearest greenspace. Aside from the issue of forest kindergarten itself, this may first involve overcoming issues of getting pre-school children off-site.
8. Explore practical ways of involving the Care Commission representatives in the provision of training, with the nursery staff and site managers on site and activity specific risk-benefit assessments. This should help to develop a balanced approach to health and safety issues, in order to enable more positive outdoor practice including forest kindergarten activities. This is likely to require being addressed through separate local authority gatherings.

“A forest kindergarten would be a welcome and highly used resource within West Dunbartonshire. We look forward to this initiative being taken forward further in the near future.” Respondent, St. Peter’s EECC

RECOMMENDATIONS

All children have the right to be outdoors. From the research available it would appear that more time children spend outdoors in natural habitats, the greater the health, social and cognitive benefits. Children need to have the highest quality pre-school provision possible. Thus the forest kindergarten approach must become an essential part of the routine and ethos of every pre-school establishment.

In order for forest kindergartens to become effectively established, joined up work, effort and activity has to take place at a school, authority and national level in partnership with the Forestry Commission Scotland and other agencies and organisations. A holistic and thorough approach that takes account of all the personal, social and structural factors will ensure success. It is on the basis of such thinking that the following recommendations are offered.

FORESTRY COMMISSION SCOTLAND AND GLASGOW AND CLYDE VALLEY GREEN NETWORK PARTNERSHIP

1. Recommendations for the Forest Kindergarten Officer (FKO) and Green network partners

Close liaison within each local authority, including Early Years Officers, Care Commission representatives, and all those with woodland or greenspace site management responsibilities, is required to complete the groundwork involved in establishing a pilot project (see above section).

Recommendation	Lead partner	Cost implication	Priority
1.1. When developing the pilot project involve at least one pre-school establishment from each local authority. This may not happen simultaneously however. There is sufficient interest from pre-school establishments in each local authority. There are suitable woodland sites which require little work and liaison to get them into shape. This will allow each local authority to begin working toward the Early Years Framework priority with support. It will also enable other pre-school establishments to visit and see a forest kindergarten in action locally.	FKO	Capital – see Appendix 11	High

Recommendation	Lead partner	Cost implication	Priority
1.2. Ensure that the staff involved in the pilot project have access to support, training and advice in order to establish and run forest kindergartens. The options highlighted in Appendix 8 can be used to decide what training is most appropriate within the identified budget and how this can be delivered.	FKO	Capital – see Appendix 8	High
1.3. In conjunction with the pilot pre-school establishments and relevant contacts in Part 2 Appendices 10-17 ensure that identified pilot woodland sites have appropriate management agreements, insurance and preparation required to be used for forest kindergarten activity.	FKO	Capital – costs will vary according to preparation required	High
1.4. Plan awareness raising activities with parents and children in consultation with the pilot pre-school establishments. This may involve developing presentation material, putting together simple workshops and taster sessions. Also, consider options such as negotiating special discounts on behalf of all pilot establishments with outdoor clothing companies.	FKO	Time rather than money!	Medium – high
1.5. Develop a support network for pre-school staff involved in the forest kindergarten pilot scheme. Regular opportunities for face-to-face meetings which allow ideas and issues to be aired and shared may be welcome. A chance to visit each other's woodland sites and outdoor space can help too. A GLOW group or similar online network may assist effective communication.	FKO	Time rather than money	Medium - high
1.6. Contact the people undertaking their Forest School Leader training identified in Part 2 Appendix 1 and investigate the possibility of involving them in supporting the pilot pre-school establishments. Through close liaison with Forest Education Initiative groups and staff, future applicants for Forest School Leader training could be matched with planned forest kindergarten activity within Glasgow and the Clyde Valley.	FKO FKO	Time rather than money	High Medium

Recommendation	Lead partner	Cost implication	Priority
1.7. Monitor and evaluate the intention and impact of the pilot forest kindergarten project. The questionnaire (Appendix 3) and the “Expanding the horizons of outdoor play” (Appendix 10) documents may be helpful tools in this process. Also consult with Learning and Teaching Scotland and HMle, if interested, and refer to the experience of New Economics Foundation and Forest Research with the evaluation of Forest Schools in the UK. This action must be decided at the outset.	FKO	Time rather than money	High
1.8. Organise a series of training sessions for interested pre-school establishments who are not part of the pilot project. The overwhelming response to the survey from staff keen to be involved as soon as possible is highly encouraging. This group has potential leaders and inspiration to contribute towards their local authority developments.	FKO	Time rather than cost, if canny!	Medium
1.9. In consultation with an Early Years Officer, adapt the <i>How Good is our School 3 Outdoor Learning</i> document to link to <i>The Child at the Centre</i> and the role of forest or nature kindergartens. This can then be used by pre-school establishments to audit their practice against the quality indicators. It may be prudent to wait until the Outdoor Learning Strategic Advisory Group have produced their final report in December 2009 and the planned Framework for Outdoor Learning. This will allow forest kindergartens to dovetail into a standardised national approach.	FKO	Time rather than cost	Medium – low
1.10. As part of the FK Officer’s Continuing Professional Development, Forest School Leader training would be beneficial in order to understand the approach advocated. Grounds for Learning offer school grounds Early Years Facilitator and Trainer training. This would enable the FK Officer to further understand the process of the development of the outdoor area and the link this makes between the woodland and indoor settings.	FKO	Time for studying and training Approx £1800	High
1.11 Raise awareness about FCS/GCVGNP activities and the contribution such partnerships can make to the establishment of forest or nature kindergartens at national level. For example, develop a national partnership and funding package to appoint a national Forest Schools and Kindergarten Officer.	FCS Officer	Time!	Medium

2. Recommendations for Forestry Commission Scotland at a national level

The publication of the *Early Years Framework* has put nature kindergartens on the national agenda. The Forestry Commission Scotland (FCS) has a key role to play in this medium term priority which would assist the FCS in meeting its own *Woods for Learning* strategy and health targets in the pre-school age group.

Recommendation	Lead partner	Cost implication	Priority
2.1. Use the methodology developed in this feasibility study to undertake similar groundwork in other part of Scotland. This feasibility study has developed useful tools for ascertaining perceptions of pre-school staff and site identification which can be rolled out elsewhere. The material can be easily adapted for establishing forest schools on a wider basis too.	TBA	Depends on method of roll out	On an "as needs" basis
2.2. Provide further information and guidance about forest kindergartens. The <i>Forest School Scotland Guide for Leaders</i> provides lots of good advice, which pre-school establishments can use. However, the results of the survey suggest that specific information about the pre-school sector is needed. For example, toileting (including nappy changing), guidance to ensure Care Commission expectations, greater detail about clothing and making pre-schools more nature friendly, indoors and out are just some of the additional subjects that pre-schools will need to consider. This may need to be a pack in its own right.	TBA	Depends on strategy, e.g. in-house or contracted out	Medium
2.3. A year round programme of play activities and ideas to provide initial support for pre-school staff has been identified as helpful by the survey results. This could be themed work, seasonal activities, or have a storyline approach. This resource could be developed by the FCS, to benefit pre-school children throughout Scotland. Appendix 8 raises this approach as being a very effective support mechanism for pre-school staff to explore their nearby woodland with children.	TBA	Depends on strategy, e.g. in-house or contracted out	Medium
2.4. The role of Forest Education Initiative (FEI) as a support mechanism should be further examined. The questionnaire demonstrates that FEI is not well-known amongst the pre-school sector. The FEI local networks may provide a valuable method of allowing liaison, training and shared activities between education, voluntary, private and the forestry sectors which benefit all parties. Effective ways to raise the profile of FEI within the pre-school sector are also required.	FEI Officer	Depends on method	Depends on overall FEI strategy

Recommendation	Lead partner	Cost implication	Priority
<p>2.5. Further pilot schemes beyond the proposed Forestry Commission Scotland model in Glasgow and the Clyde Valley should be considered. The questionnaire undertaken as part of this survey has revealed some interesting patterns and specific interest. For example:</p> <ul style="list-style-type: none"> • <i>Babes in the Woods</i>. In West Dunbartonshire, four Early Education Childcare Centres (EECC) have responded that they wish to be involved as soon as possible. EECC's have children in their care aged 6 weeks to 5 years. The 0-3yrs age group have unique issues and further studies need to be undertaken here. Consideration should also be given to other types of nature experiences for 0-3 year old age group and their parents and carers. • <i>Partner providers</i> have specific issues that are different to the local authority funded sector. For example the diversity of provision, the childcare for working parents, etc. East Dunbartonshire has had a number of positive responses from partner providers. This could form the basis of a pilot project that caters for this sector. • <i>Over the Fence</i>. Quite a number of establishments have woodland or natural habitats right beside their outdoor area. The use of this resource as an extension of the outdoor play area could be looked at through a pilot study. South Lanarkshire has had several positive responses from nurseries which have a wood beside their establishment. • <i>Bringing the Forest to the Children</i>. This could be useful for pre-schools that are a long way from a woodland area or greenspace. Pre-school centres pilot forest kindergarten approaches in their own grounds with support from Grounds for Learning, the Scottish school grounds charity. • <i>The Woodland Bus</i>. In Stockholm, one "Rain or Shine" pre-school is based on a bus which takes children to different natural habitats each day. A pilot study which investigates low cost transport solutions for pre-school centres in very urban settings would be helpful. • <i>Children with Additional Support Needs</i>. A pilot project which investigates the benefits of forest or nature kindergarten approach for this group of children would be helpful. 	TBA	Depends on method, but capital costs involved	Low

LOCAL AUTHORITIES

The development of forest kindergartens provides an ideal opportunity for local authorities to demonstrate effective joined up working between departments and with private, voluntary and other public bodies. Forest kindergartens are a useful way for local authorities to meet some of the targets within the Scottish Government's national performance framework. Forest kindergartens provide opportunities to meet national indicators across all outcomes.

The issues raised, and which have arisen through inspecting woodland sites and the results of the questionnaire will be helpful for local authority staff. They can support the provision of a cohesive strategy to develop nature or forest kindergartens, to meet the needs of the children within their area.

Local authorities may find the following recommendations of benefit when further developing forest or nature kindergarten models:

Recommendation	Lead partner	Cost implication	Priority
1. Surveying woodland areas and greenspace to ensure suitability for use by pre-school groups. The criteria for site selection in Appendix 6 may be helpful here. This will allow local authorities to ascertain the level of work required to make a site suitable, and access grants where appropriate.	LA staff	Revenue	High
2. Raising awareness about the benefits a forest kindergarten approach, its mention within the Early Years guidance, and the need for children to have regular, daily contact with nature, natural materials and to spend time playing freely in natural spaces.	LA staff with EY responsibilities	Time rather than money	High
3. Support for the 15% of establishments who are not getting the children outside daily to ensure this habit is established. Grounds for Learning, the Scottish school grounds charity are a source of advice. <i>Creating a Space to Grow</i> by Gail Ryder Richardson (2006) is a series of pre-school case studies of more challenging outdoor spaces that have been developed.	LA staff with EY responsibilities	Possible capital	Medium
4. Auditing the quantity, quality and type of outdoor play provision within establishments are part of their ongoing improvement processes. The results of the questionnaire in this study may be a useful starting point. This will enable useful evaluations to be carried out over the next few years.	LA staff with EY responsibilities	Time rather than money	High

Recommendation	Lead partner	Cost implication	Priority
5. School travel coordinators, active schools coordinators and road safety officers can be involved to provide support and encouragement to pre-school establishments in order to increase the frequency of local walks and visits into the local area	LA staff	Time rather than money	Medium
6. Outdoor areas for pre-school children need to include greenspace and natural play features, as research shows this has a positive cognitive, social and health benefits for children. Landscape and/or planning officers can have school grounds training in order to ensure that outdoor areas are created or changed to best suit the learning needs of children.	LA staff	Capital and revenue	Low
<p>7. To enable effective integration of forest kindergarten approaches into pre-school routines, the ethos and philosophy must be understood by those working at a strategic level. For example an Early Years Officer, environmental professional and another officer, e.g. from the planning department, an active schools manager or outdoor education officer within a local authority could undertake their Forest School Level 3 Practitioner training. Benefits include:</p> <ul style="list-style-type: none"> • Having a core of strategic staff who can consider how best to implement forest or nature kindergartens within their local authority. • Joined up thinking, sharing of skills and expertise needed to make natural spaces suitable for access by pre-school children. • Meeting national indicators and strategic outcomes in a cost effective way. • Delivery of support, advice and training to pre-schools in a way which meets local needs. Level 3 practitioners can deliver Level 1 and 2 training courses or create their own. • Different departments providing mutual support for the benefit of children. 	LA	Capital and revenue	Medium

PRE-SCHOOL ESTABLISHMENTS

There are many steps that early years staff can take, which can begin the process of incorporating a forest kindergarten philosophy into their routines and practice. A Curriculum for Excellence provides an ideal opportunity to venture beyond the designated outdoor area and engage the children in real world learning activities. The recommendations below are for all interested pre-schools who wish to improve their current practice.

This advice is adapted from the Children and Young People - Outdoor Learning and Playing Helpful tips section on the Centre for Confidence and Wellbeing website

<http://www.centreforconfidence.co.uk/flourishing-lives.php?&p=cGkPTE3Mw>

1. Find out more about forest and nature kindergartens.
 - See **Appendix 9** which is a case study about the Secret Garden in Fife.
 - The Forest Education Initiative can provide resources and training.
<http://www.foresteducation.org/country.php?ctry=s>
 - Visit the Mindstretchers' Nature Kindergartens in Perthshire through attending one of their courses www.mindstretchers.co.uk
 - Download international case studies from:
<http://www.creativestarning.co.uk/index.asp?refID=67&pageType=C&openFolder=s=undefined>
 - Read some of the books available about forest schools and approaches to getting children outside (see references section).
2. Conduct a baseline audit of the quantity, quality and type of outdoor play provision within their establishment prior to undertaking developments. This will allow staff to see the impact of their improvements. Use **Appendix 10** as a guide.
3. Plan activities and lessons that appeal to the naturalist intelligence within your children, e.g.
 - Multi-sensory activities
 - Categorising, classifying and sorting natural materials, plants and animals
 - Gardening and caring for plants
 - Nature walks
 - Field trips
 - Examining patterns in the local environment such as similarities, differences, anomalies, repetitions
 - Looking after animals: minibeasts, hamsters, hens, etc.
 - Developing scrapbooks, logbooks, journals about natural objects and nature
 - Have field guides, fiction and non-fiction books about nature and the natural world
 - Environmental and nature based projects
4. Get to know the local neighbourhood around your pre-school. Find out where the nearest greenspace is. If necessary, ask the nearest ranger service, greenspace officer or other environmental organisation for advice. The majority of Scottish schools are within 1km of woodland. Have a look at the case study from the Nature Pre-school in Seattle about developing routines on going for walks.

<http://www.creativestarlearning.co.uk/index.asp?refID=67&pageType=C&openFolders=undefined>

5. Get children outside daily all year round. Outdoor learning is truly inclusive. Every experience and outcome within a Curriculum for Excellence can be taught outdoors, at least some of the time. It does take a couple of months for teachers and pupils to acclimatise to learning outdoors, but the effort reaps rewards. Use local greenspace as well as the designated outdoor area.

6. Ensure children have outdoor clothing. This may involve fundraising, if parents are unable to supply. Remember that teachers need to be suitably dressed too! Build up a box of spare outdoor clothes. Consider purchasing small backpacks so children learn to carry their own snack, seat, etc.

7. In consultation with staff, pupils and community begin to green up your school grounds. Seek advice from the Scottish school grounds charity, Grounds for Learning www.gflscotland.org.uk. Possibilities include:

- Planting native Scottish plants in tubs and planters.
- Creating a garden or raised beds and plant food which can be used for cooking and eating.
- Start a tree nursery and liaise with a local outdoor professional about planting the trees within and beyond the school grounds.
- Grow plants from seeds.
- Create wildlife corridors, enabling animals to safely use the grounds as a safe passage.
- Cover walls with climbing plants such as hops and jasmine.
- Consider natural surfacing such as sand, grass and bark rather than “wet pour” safety surfacing and asphalt surfaces.
- Seek advice about developing natural play features such as logs and stones rather than expensive play equipment.

8. Bring the forest to the school! If you have little suitable greenspace within walking distance, then start collections of natural materials for use in your school grounds. For example, collect dead leaves, cones, sticks, stones, shells, feathers, etc. Review the amount of natural materials used both indoors and out.

9. Develop a bank of resources for outdoor activities. Include:

- Lots of laminated pictures of animals and plants which live in your local area or Scotland and related songs and poems.
- Field guides and books about nature.
- Magnifying glasses, bug boxes, plastic mirrors and little boxes.
- Mats for sitting on outside. The cheapest solution is the foil insulation rolls from DIY shops which are used to insert between radiators and walls. They can be cut up to a suitable size. The most environmentally friendly solution is to make seats as a felting project.

10. Consider time in nature as part of a programme of support for individual children who additional support needs. The well-being of children and young people is at the heart of the *Getting it right for every child* approach. Frequent, regular access to greenspace may be effective in terms of meeting some children's needs.

11 Check the views from windows. If children cannot see trees and plants from their indoor room, another alternative is to have posters of natural places on inside walls.

12. Get your children involved in an outdoor award project. The John Muir Award <http://www.jmt.org/jmaward-home.asp> combines environmental action with time in greenspace and can be undertaken by a class or even an individual or group of children.

13. Work with parents and carers and make time to explain why you are taking the children outside more often. Invite parents to join you and be an extra pair of hands.

"I recently attended a course on Nature Kindergartens run by Claire Warden and found this approach fascinating. I visited Whistlebrae Nursery and loved exploring the site that the children had created." Respondent, Children's Hour Nursery

REFERENCES

- Ball D., Gill, T. and Spiegel, B. (2008) *Managing Risk in Play: Implementation Guide* Play England
- Bell, S., Hamilton, V., Montarzino, A., Rothnie, H., Travlou, P. and Alves, S. (2008) *Greenspace and Quality of Life: A Literature Review* Stirling Greenspace Scotland Research Report
- Borradaile, L. (2006) *Forest School Scotland: An Evaluation* Edinburgh: Forestry Commission Scotland
- Callaway, G. (2005) *Early Years Curriculum: a view from outdoors* David Fulton Publishers London ISBN 1-84312-345-2
- Chawla, L. (2006) *Learning to Love the Natural World Enough to Protect It* in Barn nr. 2 2006:57-58. Norsk senter for barneforskning. Barn is a quarterly published by the Norwegian Centre for Child Research at the Norwegian University of Science and Technology, Trondheim, Norway
- Faber Taylor, A. and Frances E. Kuo, F.E., (2009) *Children With Attention Deficits Concentrate Better After Walk in the Park* Journal of Attention Disorders, Mar 2009; vol. 12: pp. 402 - 409
- Forestry Commission and Central Scotland Forest Trust (2009) *Physical activity at Forest School* Forestry Commission Scotland
- Gardner, H., (2006) *Multiple Intelligences: New Horizons in Theory and Practice*, 2nd edition, Basic Books USA ISBN 978-0465047680 p18-20
- Grahn, P., Martensson, F., Lindblad, B., Nilsson, P., & Ekman, A. (1997) *Ute på Dagis* Stad and Land 145. Håssleholm, Sweden: Nora Skåne Offset
- Fjørtoft, I. & Sageie, J.(2001) *'The Natural Environment as a Playground for Children: The Impact of Outdoor Play Activities in Pre-Primary School Children'*, Early Childhood Education Journal 29(2): 111-117
- Lovasi, G. S., Quinn, J. W., Neckerman, K. M., Perzanowski, M. S., & Rundle, A. (2008) *Children living in areas with more street trees have lower prevalence of asthma* Journal of Epidemiology and Community Health, 62(7), 647-649
- Murray, M. and O'Brien, L. (2005) *Such enthusiasm – a joy to see: An evaluation of forest school in England* New Economics Foundation and Forestry Research
- Rose, K. A., Morgan, I.G., Smith, W., Burlutsky, G., Mitchell, P. And Saw, S. (2008) *Myopia, lifestyle and schooling in students of Chinese ethnicity in Singapore and Sydney* Arch Ophthalmol 2008 126 (4): 527-530. Accessed 22.309
<http://archophth.highwire.org/cgi/content/abstract/126/4/527>

Scottish Executive (2007) *Building the Curriculum 2: Active Learning in the Early Years*

Scottish Executive (2007) *The Journey to Excellence Part 3: The Child at the Centre Self Evaluation in the Early Years*

The Scottish Government (2008) *The Early Years Framework*

Taylor, A. F.; Kuo, F.E.and Sullivan, W. C. (2001) *Coping with ADD: The Surprising Connection to Green Play Settings* Environment and Behavior, Vol. 33, No. 1, January 2001

Ward Thompson, C., Aspinall, P., & Montarzino, A. (2008) *The childhood factor - Adult visits to green places and the significance of childhood experience* Environment and Behaviour, 40(1), 111-143

Wells, N.M. (2000) *At Home with Nature: Effects of 'Greenness' on Children's Cognitive Functioning* Environment and Behavior. Vol. 32, No. 6, 775-795

Wells, N.M., and Evans, G.W.(2003) *Nearby Nature: A Buffer of Life Stress Among Rural Children* Environment and Behavior. Vol. 35:3, 311-330

Wells, N. M., & Lekies, K. S. (2006) *Nature and the life course: Pathways from childhood nature experiences to adult environmentalism* Children, Youth and Environments, 16(1)

Websites

Forest Education Initiative (2008) *FOREST SCHOOL SCOTLAND, Guide for Leaders: discover, develop, deliver.*

<http://www.foresteducation.org/country.php?page=src&ctry=s> Accessed 12/4/09

Forestry Commission Scotland (2006) *Woods for Learning Strategy 2006-09*

www.forestry.gov.uk/forestry/INFD-6CJDGL Accessed 13/4/09

Scottish Government *The Scottish Government's Purpose*

<http://www.scotland.gov.uk/About/purposestratobjs> Accessed 4/4/09 (National Strategic Objectives website)

"I think it would be wonderful if this could be made available." Respondent, Glendee Nursery School

Useful Early Years Forest School Related Books

Adventures in Nature by Children in Scotland (2008) ISBN 978-1-901589-78-8 This book describes the inspirational nursery project which took place in Verona. Using the local natural environment and the children's ideas and interests, they embarked upon a series of adventures, looking for castles in the woods, exploring caves and even rafting down a river.

The Early Years Curriculum: a view from outdoors by Gloria Callaway (2005) ISBN 1-84312 345-2 A friendly account of a forest kindergarten project in Cornwall and useful for early years' practitioners who want to take their children into natural habitats.

Forest Schools and outdoor learning in the early years by Sarah Knight (2009) Sage Publications Ltd ISBN 978-1847872777 A book for early years staff about the Forest School approach and the benefits it offers young children.

Healthy, Active and Outside! by Janice Flier (2008) ISBN 9780415436526 This book is helpful for settings who wish to develop their outdoor activities beyond their outdoor area. It is a good introduction to the benefits of a forest schools approach yet meeting the expectations of formal education in terms of planning and assessment.

Playing Outside - Rain or Shine by Rosaleen Joyce (2006) ISBN 978-1904904588 A short and sweet book about Rose's experience of integrating weekly trips to the nearby woods with her outdoor provision.

Nurture through Nature by Claire Warden (2007) ISBN 978-1-906116-01-9 Inspiring ideas for using natural materials in pre-school play in order to connect children to nature. This book gives thought to experiences for 0-3 year olds too.

"This sounds like an exciting opportunity for children." Respondent, Kelly Street Centre