



UNIVERSITY OF
STIRLING

Commissioned report by

School of Education,
University of Stirling

for the

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS

Teachers' and Pupils' Views on the Proposed Redevelopment of Lochwinnoch RSPB Centre & Reserve



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

Citation: Mannion, G., Fenwick, A., & Minty, S. (2011) *Teachers' and Pupils' Views on the Proposed Redevelopment of Lochwinnoch RSPB Centre & Reserve*. Stirling: University of Stirling.

Contact: Dr Greg Mannion, The Stirling Institute of Education, University of Stirling, Scotland, FK9 4LA, UK.

E-mail: greg.mannion@stir.ac.uk



UNIVERSITY OF
STIRLING

Commissioned Report
Contractor: University of Stirling
Year of Publication: 2011

CONTENTS

Section 1 Background	p 4
Section 2 Research Aim, Questions, & Design	p 5
Section 3 Findings	
A. Pupils' Experiences and Views on their Excursion	p 8
B. Pupils' Comments about the Reserve and its Enhancement	p 10
C. Teachers' Views	p 23
Section 4 Conclusion	p 29

SECTION 1

BACKGROUND

The RSPB (2007) aims to sustain and expand its work for wildlife conservation, make a moral and cultural case for this, promote the value of healthy ecosystems, and encourage political support from local people for conservation at a time when threats to biodiversity and climate change pose considerable challenges. The RSPB aims to enhance the firsthand experiences of wildlife for young people, encourage growth in young people's membership, and build its contacts and work with schools (RSPB, 2007). In order to achieve its goals, the RSPB is cognisant of the role of nature reserves and the need to ensure that educational provisions support this work. RSPB's work with young people is sometimes seen as an exemplary case worldwide.

Our reserves will continue to bring people closer to wildlife and the RSPB by inspiring them, giving them opportunities to volunteer and by informing them of our work. (RSPB, 2007, p 21)

The RSPB Lochwinnoch Reserve is a nature reserve and visitor centre located in Renfrewshire close to Glasgow, attracting about 35 thousand visitors per year. Approximately 10% of these visitors are school pupils on educational excursions with the vast majority of these pupils coming from primary schools. A programme of half-day and full-day sessions is available for class groups covering a wide range of topics targeted at P1-3 and P4-S2. Facilities available for educational use include the visitor centre with classroom space, observation tower, nature trails and hides, shop, toilets, and an outdoor picnic area.

Currently, the centre buildings are in need of substantial refurbishment. Before any redevelopment plans are finalised, this research, among other submissions, has been commissioned to determine what current and prospective use requirements might be, and how best to encourage better and greater educational use of the centre and reserve. The need has already been identified for the site to be redeveloped as a more modern place for encountering nature in ways that balance the needs of more mainstream visitor centres with the need for the site to be a functioning nature reserve. This research focuses on the opinions and requirements of *educational* users, namely pupils and their teachers from both primary and secondary schools.¹² After consulting with staff at the centre, some key challenges were apparent alongside the possible physical redevelopment of the reserve and buildings which help frame this research. These included the need to consider ...

- broadening the *type* of educational services provided while yet focusing on what opportunities the place distinctively offers and what teachers and pupils want / need
- broadening the *educational visitor profile* to include local schools who currently do not currently use the site, and to include under-represented groups (for example, city-based school groups, schools from disadvantaged areas, ethnic minority groups, special needs)
- increasing *the physical areas for education* both indoors (with dedicated teaching and learning areas) and outdoors (for example gaining access right into the marsh / water)
- investigating the potential use of *additional sites* (for example, Garthland Wood) for educational experiences and increasing the access around the site (for example, with better reception building, paths and signage)
- enhancing and developing *indoor and outdoor services* with a view to enabling the centre to handle larger groups and increased numbers
- deciding on what are the *key educational foci, objectives and purposes* for RSPB in this location for different educational sectors
- assessing the possibility of *doing more work on teacher development and education*
- considering how best to *staff any enhanced or changed educational provisions sustainably*
- *networking with other local groups* and community planning partnerships to ensure more cohesive decision making and planning.

¹ The scope of the work here means we do not set out to understand the specific needs of pre-school users or special school groups whose requirements will likely differ.

² This research thus compliments the work of *Progressive*, market research consultants.

SECTION 2

RESEARCH AIM, QUESTIONS & DESIGN

Aims

1. To work with pupils and teachers from local primary and secondary schools to find out about how educational experiences could be enhanced through a redevelopment of the current centre and nature reserve.
2. To design a method for understanding what sorts of educational experience respondents would value in any redeveloped centre and reserve.

Research Questions

- Q1. What do local teachers and pupils currently know and value about the place as a site for educational outdoor experience provision?
- Q2. What do they construe as desired and worthwhile educational experiences in a redeveloped site at primary and secondary levels?
- Q3. What key places, services and aspects would they wish to be changed, enhanced, or retained? What new kinds of places for learning would they like to see instated?

Methods and Methodology

We used the following approaches to data collection.

1. We met with the RSPB and Starling teams to discuss their ideas. This work informed the way we focused the interviews and how we generated the two photosets for use as prompts in interviews. (See below).
2. We invited a local primary school class group (n=23) on an educational excursion to the reserve. We made fieldnotes on our observations of the group's use of the site.
3. After the excursion we conducted two 'child-led tours' of the reserve involving 'walking interviews' with staff and pupils.
4. We used a semi-structured photo-focus group with the primary school group both on site at the reserve and two days later back in their class.
5. We used a similar semi-structured photo-focus group to collect the data with a secondary pupil group. (This group did not attend an excursion in advance).
6. We interviewed two groups of teachers, one in a local primary school, one in a local secondary school.

Part of each focus group employed photo-elicitation techniques. These photo-interviews or photo-focus groups are like other interviews (in that researchers ask questions) but are enacted through a conversation between interviewer and interviewee about the content of images (sometimes photos taken by researchers, sometimes by respondents, sometimes, 'found' photographs). These interviews are usually semi-structured because on the one hand they involve questions that are pre-arranged and, on the other, the need to explore incidental additional data that arises through the interviewee's viewing of the image which prompts them to think about experiences (past or imagined).

We constructed two photosets to support these photo-interviews. They were used for different purposes. Photoset 1 contained images of the existing site (see appendix 1); these were selected

to help respondents remember events that happened there.³ We constructed this set with the help of RSPB staff and through making a site visit. Questions for the first photoset tended to be simple and open-ended: eg “Pick a photo that reminds you of part of the visit you made that reminds you of an activity or place that was important”.

We constructed a second photoset (see pages 11 to 22) which was used with pupils to extend their thinking about what aspects of the place they valued and how they might be enhanced. This was a more extensive photoset that contained both images of the existing site alongside photographs of similar sites and or different kinds of outdoor educational experiences in nature. These images were placed on A3 themed sheets alongside key questions for pupils. The themes included topics such as signage, pathways, encounters with birdlife, hides, buildings, use of the senses and so on. These themes were derived from initial discussions with RSPB staff, Starling staff and literature sources. Using these images as catalysts for discussion, we asked questions to explore current valuations of the place, remembered place-use and desired place / place-use.

These photo-interviews (sometimes called photo-elicitation interviews, Epstein, 2006) have been used to good effect in the past to explore how learning outdoors in nature was valued (Mannion et al, 2007). We have evidence from this previous project upon which to build our understandings. There are advantages of photo-interviews over traditional oral interviews (Meo, 2010): (a) they elicit longer and more enjoyable interviews; (b) they enhance the participation and control of interviewees; (c) they gather richer data; (d) they reinforce what can be stated in a ‘traditional’ interview; (e) they offer a closer look at what and whom participants consider important; (f) they allow the emergence of unexpected topics; and (g) they enable making sense of some data, which otherwise would have been difficult to interpret. Interview questions can be used flexibly and ‘leveled’ to deal with different age groups and teacher contexts (subject areas, levels). Importantly, it is not always what is contained in an image that is of note to respondents but experiences they remember or construe that are ‘indexed’ (rather than physically represented) by the images.

Respondents and Approach

Local teachers and pupils were approached to participate. It was felt that these groups would be useful indicator groups for the many local schools and others that have access to the reserve via public transport. Some participants (but not all) in both pupil and teacher groups had previous experience of the reserve. The class group of primary school pupils who did experience a visit to the reserve as part of the research were interviewed while on the reserve and afterwards back in class two days later. During these interviews they were asked to write down: 1) key words which summed up their visit; 2) what they had expected before the visit and how it compared to their expectations; 3) what they learned; and 4) some of their ideas for improvement having looked at photoset 1 (see appendix 1). Photoset 1 was used with this group to help them remember where they had been and what they had done there (eg visiting the hides, doing pond dipping etc). Photoset 2 (see Section 3) was then used with this group as part of their review of the visit and their consideration of the proposed elements in any redevelopment. In addition, we conducted one photo-focus group with pupils in a local secondary school (n=6) using both photosets. Care was taken not to raise expectations about the timescale and extent of any redevelopment; pupils were invited to comment and provide direction to the RSPB as stakeholders and users of the reserve. Further explanation of the research approach is provided in the relevant sections of findings below.

Analysis

Photo-interviews were captured using audio recorders. In all 280 minutes of recorded audio interview were transcribed in full while other interview time was listened to and selected extracts transcribed from these. Pupils’ written notes (sometimes constructed while answering questions) were also collected and analysed. We analysed the data by coding for pupil and teacher valuations and usage of places for learning, and the potential for the creation of new places for learning. We report herein these areas for teachers (primary and secondary) and pupils. Drawing these together we seek to help signpost what elements in the site are best kept, enhanced or changed through

³ We are grateful for the assistance of Natalie Morgan-Klien who supported the early work here.

the redevelopment in order to create new places for learning within the reserve; we have focused on the outdoor places in the main. Our report will not involve the provision of a specification for the redevelopment design, but rather some ideas for RSPB managers and site designers to consider in their deliberations.

Ethics

Given the nature of the work, we ensured respondents provide informed consent for the use of data and images (including any incorporating pupils). Anonymity, and degrees of non-traceability were offered and assured to practicable degrees. Special care was taken with visual data and its uses. Data, including full transcripts and any visual products remained at the University of Stirling and were stored in a passworded computer. Children and young were informed about the project so that they could give on-going consent appropriate to their age and experience. Participants had the freedom to withdraw from research activities at any time. Special care was taken to achieve older children's and parental consent in written form. This proposal was submitted to the Stirling Institute of Education's ethics committee for approval and this was awarded. Disclosure Scotland clearance was in place for all researchers involved in meeting with teachers, children and young people. The British Educational Research Association's ethical code was adhered to as a minimum requirement.

SECTION 3 – FINDINGS

A. Pupils' Experiences and Views on their Excursion

Interviewer: Do you think your school could use nature reserves more?

Primary Pupil: Yeah, lots more.

Primary Pupil: It would be better [to have] more trips cause you only get one and you have to wait [until the] end of the year.

Data Sources

The data on pupils' experiences and views were gathered through focus groups and interviews supported by the use of the two photosets (see methodology section, above). One primary class group visited the reserve and spent time experiencing some of the more commonly facilitated activities there. The pupils also brought the researchers on 'child-led tours' of the site. This group were interviewed both on site and later that week back in class using two photosets, one of the site itself and one including photographs of other sites and educational experiences in nature. Another focus group with secondary pupils was conducted.

The Pupils' Excursion

For the excursion, pupils were invited to participate in pond dipping, mini-beast collecting and identification, walking to the hides and viewing points, and interacting with the specialist guide. The teachers were not involved in leading any of these activities but were on hand to assist. During the excursion, time spent on the tasks was less than normal; this was because pupils needed time on site to review the activities with the university researchers. During the excursion, the class was divided up into two groups with 11 and 12 pupils in each. The entire site visit was designed to provide pupils with sampled experiences of what the reserve can offer and time for reflection. Including activities, walking tours, and interviews, the visit lasted four and a half hours.

Expectations versus Overall Experiences

In advance of this visit (and to some extent even after their visit), a good number of pupils had a very poorly conceived sense of what the reserve was for and what the work of the RSPB was. Locally, there is still a common use of the description 'bird sanctuary' for the reserve leading to a connotation of it being a kind of safe haven for wildlife. Perhaps building on this view, one pupil said it was like a refuge for 'homeless birds'. Another thought the reserve was owned by the 'Royal Society for the Prevention of Cruelty to Birds'. Some expected to be able to feed birds or to get close to them (as in a 'bird of prey centre' or pets' corner) and not being able to do so was a disappointment. Another suggested that in the proposed redevelopment there could be a sort of 'adoption centre' for sick birds and animals which would encourage children to keep pets and care for animals. Another thought there could be a pet shop added to the centre. These expectations and desires indicate that there was perhaps a desire to get closer to the wildlife though there was an implicit lack of understanding (both before and after visits for some) of the role of the RSPB and their reserves and, more fundamentally, where birds live, and how they might be protected.

Primary Pupil: At first I thought it was a certain rescue place. You know like the RSPCA. But then I realised it was just a nature reserve.

Primary Pupil: I thought it was just that they cared for birds. But I didn't think they would do all those activities.

Whatever their expectations were, overall, there was a sense among many pupils that the trip was better than they had expected. Some wrote that they thought it would be boring, and that they would be 'talked at', and that there would be a lot of facts to remember, but that this was not what happened.

Primary Pupil: Well I thought it would be not that fun. But it would have lots of facts to it. And we'd just do bird watching, looking out for the birds.

Primary Pupil (written notes): I expected that we were going to just walk about and tell them what we thought about the facilities. I was quite pleased with what we done. So the trip was better than I expected.

Primary Pupil (written notes): I expected to just sit inside and talk about birds but we went outside to do different things.

Primary Pupil (written notes): I expected to do lots of big long talks but we did outdoor stuff as well.

'Most Fun' and 'Learned Most From'

Afterwards, they were asked to comment upon which activity they had found to be 'most fun', and which they thought they had 'learned the most from'. We present their listings of 'most fun' and 'learned most from' below⁴ (Table 1). Across both groups, pond dipping was by far the most commonly chosen for being most fun. Overall, however, more learning was associated with activities related to bird watching. We infer that this is because the pond dipping involved a hands-on activity that meant pupils got close to many different kinds of living and moving animals. Activities related to bird watching took more time and were more challenging overall by comparison involving as it did the introduction to the use of binoculars, time spent visiting the hides, and observing, listening, and attending to the guide's explanations. Interestingly, these activities resulted in a variety of valued learning outcomes for pupils related to bird identification, their calls and songs, their habits and habitats and so on.

<i>Activity</i>	<i>(n=23 pupils)</i>	<i>(n=23 pupils)</i>
Pond dipping	16	4
Bird watching: Looking at birds / listening to birds / using the hides	4	13
Mini beast hunting	3	3
Listening to the guide		2
Noticing habitats		1

Table 1. Pupils' reported which activities they regarded as 'most fun' and 'learned most from'.

Key Elements of Experience, Key Outcomes

None of the pupils interviewed in the local primary or secondary schools had any clear memories of having previously been on a visit to the reserve with a their school. However, young people who had been to Lochwinnoch Reserve with their families had fond memories:

Secondary Pupil: You could go out and see lots of nature and stuff like that and find out quite a lot of new stuff. And just a nice little family day out [laughs].

Pupils were asked to use one or two words to describe their experiences of the reserve. The most commonly mentioned *key words used* 1 were 'fun', 'good' and 'interesting'. Only one pupil reported that they found the trip somewhat 'boring' and 'tiring' because they did 'not like wildlife'. Important for nearly all, however, was a sense that the day was fun as well as educationally significant: "That [pupils] had fun and learned something."

⁴ The children themselves came up with the activity categories (both groups were loosely similar) and we converge the data here (Table 1 below) under the seven headings.

Pupils identified a range of different things that they had learned from their visit. A number of pupils said that they had learned about the different types of birds and creatures. A couple also said they had learned to 'put insects back where you find them'. Others said:

Primary Pupil (written notes): Bird noises, pond animals, and how to catch an insect.

Primary Pupil (written notes): 1) I don't like wildlife; 2) the RSPB is like a homeless shelter for birds; 3) blue and grey tits are very common.

Primary Pupil (written notes): The most important thing I learned was that some creatures turn into different things through their lives, because the water tiger turns into a great diving beetle.

Primary Pupil: I learned [that] where you find an insect, you have to put it back there.

Primary Pupil: And the birds [that] were the female, how they choose the male.

When asked what key things learners *should* gain from the experience, pupils were keen to explain that the conservation message was important alongside the fun aspects: "people should learn how to protect the area." Another noted that the *place* was the important aspect in the learning: "Learn something from where you've been." Some noted the biodiversity dimension: "All different types of birds, and species".

Primary Pupil: The hide, cause you could see all the heron, and they were quite interesting. Just the way they looked, and all the facts about them.

Primary Pupil: Well I wrote that it was fun. It was exciting, interesting and educational.

Primary Pupil: I also learnt that you should always put them [living things found in the pond and wood] back where you found them.

Primary Pupil: Learning to care for nature

B. Pupils' Comments About the Reserve and its Enhancement


In the following pages section we present the 12 themed photo-prompt sheets that comprised photoset 2 and the pupils' responses that related to these themes. The twelve themes were:

1. Main reception building,	2. Signage,	3 Indoor facilities, outdoor links,
4. Hides and Viewing Areas,	5. Designed Play Areas,	6. Natural Play,
7. Paths,	8. Seating,	9. Animals and Plants,
10. Multi-sensory experience,	11. Learning activities / experiences,	12. Conservation work.

There were decided upon after consulting with staff at the reserve and the arising issues and challenges any redevelopment of educational provision faces. Within each theme, 3-7 photographs were selected that were either (a) of the existing site, (b) of similar reserves (RSPB or other), or (c) of other outdoor places that were designed inclusively for children or all age access. Questions were posed that pupils of senior primary school or secondary school age would likely be able to address. Researchers were ready and supportive of this process. Pupil respondents were invited to view the sheets and address the associated questions and were encouraged to share their ideas afterwards with the other pairs/groups. One whole class group of primary school respondents were invited to review the sheets over a 1 hour period. They worked in pairs to select the themed sheets they wished to look at on the basis that they had more to say about these issues and generally managed to get to look at and comment on them all to some degree and to address 4-6 themes in more depth. Secondary school pupils worked as a single focus group as they group size was smaller.

1. Main Reception Building

Existing RSPB Lochwinnoch Reserve building (1st photo below)



Reception Building. Main buildings on nature reserves welcome people and provide services.

How does the reserve building (first photo) compare with these other buildings?
What features would you like to see in a new building?
What must it have inside (eg shop, places to eat, viewing, telescopes, expert advice, etc)?
How should it look from the outside?
What might a new re-designed building need to 'communicate' to visitors about what it is for?
What kind of impact needs to be created for visitors as they enter? How might it do this?
How do you think these buildings help connect the inside with nature outside?

Pupils generally thought that the other RSPB buildings 'look better' and that the current building could be improved a lot. The key main message was that there was not sufficient room indoors in this building and that the internal facilities were in need of updating and refurbishment. Some pupils were concerned that a renovated building would not look or feel too modern, however, while others did not want it to feel or look like a school or be too 'classroomy' indoors.

Primary Pupil: The other ones [buildings – see above] are much bigger and more exciting and the first one is quite old.

Secondary Pupil: [Current building] Looks old and worn. Should look bright and modern.

Primary Pupil: You could have a building that looks like a giant telescope or something...

Primary Pupil: Just make it a bit [better] presented and a bit bigger. Cause it's nice cause it's a nature reserve. And you don't want it to be too colourful.

The pupils were discerning as visitors. They noted that for the interviews they 'had to sit on tables' and that the indoor spaces were 'cramped and that some of the indoor spaces they were using were not fit for purpose: 'not really a classroom but was a sort of staffroom, office'. They noticed where there had been some graffiti, where interactive games had not been working (in the tower) and where some of the cameras were not providing live images. They wished for more 'telescopes in the tower' and better use of technology. (See also 'Indoor Facilities' and other themes)

Primary Pupil: The camera, there could be different cameras all over the place. And every time [unclear words] it could change.

Primary Pupil: And telescopes, ... because the first telescope that was up on the stand, no-one thought it worked. But it was actually pointed up at the sky and no-one thought you could move it because it was so stiff. And then the woman had to come and help me fix it.

2. Signage






Existing image boards (1st photo below) at Lochwinnoch

Existing building with sign at Lochwinnoch (below)

Signs. Signs can announce what a place is for, help us find our way, or learn about a place.

What sorts of signs are more useful in a nature reserve? What new kinds of sign might we want for pupils on a visit?

[Consider the size, materials, colours, artwork, locations of signs and information boards. What kind of information is needed?]



Pupils reported that signs could be very useful for their role in wayfinding and in informing visitors. Pupils felt that self-guided wayfinding would be made more possible with more informative and directive signage.

Primary Pupil: more maps for walks and places to find.

Primary Pupil: have a sign that says like "birds that way", pond dipping that way'.

Primary Pupil: Need things about directions and birds.

Primary Pupil: If they had signs to say pond dipping with a little arrow, and stuff like that.

Secondary Pupil: Signs referring to all the different areas; [signs] that look nice and stand out. Has to have variety in shape.

Pupils also noted that there could be site-specific information points along the way outdoors.


Primary Pupil: And...a sign that shows you all the birds that live there. And you could have posters up about different facts around the place.

Primary Pupil: If you were in the wood, you could have a few signs saying, you know there was the sign saying jack, what are they called? Jack what?


Interviewer: Jackdaws?

3. Indoor Facilities, Outdoor Links

Existing reserve reception and shop (1st photo below) and viewing window (2nd photo below)



Indoor Facilities
Indoors places on nature reserves are for a variety of purposes (for example, teaching, shopping or eating). They can also allow us to view the wildlife outside. Sometimes web cams or 'live cams' can be used to show the action outside. Indoor space can also be for different kinds of nature study, storytelling, or arts & crafts.



What kinds of indoor places do nature reserves need?
What new facilities would you like to see in a redesigned building in Lochwinnoch?
What kind of places for learning in which subject areas do we need indoors?
Does a new building need to have a gift shop, coffee shop, or restaurant?

Pupils commented that it is important to have a range of facilities indoors including an expanded gift shop, bigger viewing areas with larger windows, toilets, disabled facilities, an art room, play area and a coffee shop. The need for a coffee shop/cafe came through in most comments about this photoset:

Pupil: people might come by and stop off.

Pupil: would encourage more people to visit.

The idea that a dedicated classroom or learning space was important was commonly noted:

Primary Pupil: A room where kids can go. So kids can colour in sheets and it can go on the walls and a TV connected to the webcams.

Primary Pupil: Just a classroom which kids, toddlers, teenagers and adults [could use] with signs telling them all about the types of animals

Cameras are useful in winter. Can see animals hibernating maybe.

Primary Pupil: If they've had eggs, you could see chicks hatching.

Primary Pupil: You can see inside the nest and see it clearer without disturbing them.

The gift shop created interest for all but there were some concerns about what it stocked and the prices of the type of fare the saw as potential purchases.

Primary Pupil: we thought the shop was quite dear cause there was like a wee toy was like £7. £600 for a telescope. They should have more for kids.

Primary Pupil: Well the shop's quite dear. Cause if little kids were going in the shop...

Primary Pupil: ...yeah it's meant to be pocket money toys and that. That little train was £3.50 and it was quite small.

Primary Pupil: ... the little toys like torches and key rings and all that and rubbers and stuff like that, they could make a little bit cheaper. Because it's meant to be for kids.

4. Hides & Viewing Areas



The pupils had a lot to say about the possible re-design of the hides. The hides provided valued destinations for walks and explorations as well as a sense of enclosure and adventure. Pupils wanted more and bigger hides that had more attraction, excitement, and that included comfortable seating with more interesting window sizes and shapes. They particularly wanted better consideration of the seating and window heights for children. Many suggested that they would like to see the outside of hides more decorated on approach for visitors and camouflaged for the elevations facing the reserve. They wanted more information and images within the hides.

Primary Pupil (written notes): Big hides, bigger windows, more hides, more colourful, telescopes/binoculars, child-friendly/lower down window, shape windows, bigger screen, more windows on [the viewing] screen.

The viewing screens near feeding stations were very functional and effective for getting children close to wild birds creating memorable encounters with quite common birds for child visitors who had mostly not looked at these birds closely before. Pupils suggested that the openings in viewing screens could be made 'more interesting' (eg circular) and suggested having many more viewing holes for larger groups.

Primary Pupil: Maybe decorate it to make it look a bit more inviting.

Primary Pupil: Posters or keys to give you an idea of what to look for.

Secondary school pupil (written notes): Camouflaged with background. Natural materials.


Others provided many imaginative suggestions about hides and viewing areas. One suggested they could be like tree houses in the woods and thereby integrated into play areas.

Primary Pupil: You could have circular stairs going up and then make it like a tree going around.

Primary Pupil: Oh that would be cool and you could have loads of cushions and there wouldn't be a door there. There would be a circle you could crawl through.


Primary Pupil: A sun-roof you can look out and see all the birds flying over and solar panels for heating in winter.

5. Designed Play Areas



Designed Play Areas: Some outdoor areas are specially designed for children's play and exploration.

What kinds of designed play areas (if any) might be needed in a nature reserve?
How do these play areas compare with completely natural play areas? (See other sheet)
How might some designed play areas help us learn about nature?
[Consider, younger toddlers, children, teenagers, water play, hide and seek, climbing, planting, art / sculptures, seating near play areas, places for viewing the reserve.]



Pupils felt that more formally designed play areas had a place in a redeveloped reserve for a number of reasons. Older pupils considered the needs of parents and younger children for more bounded traditional play inclusive of swings and slides. But even when designed play areas were considered, pupils always noted that it could have a more 'outdoorsy', adventurous and natural feel allowing for extended time exploring and enjoying free movement in the outdoors. The emphasis on having a natural 'feel' to the play came through in comments about the kinds of materials that the thought might be used and how play equipment might be integrated into natural areas.

Primary Pupil: Tree swings about the woods, flying fox, wall climbing, tree house looking over loch, obstacle course, orienteering, park, climbing trees, rope swings and tree swings, slides, climbing frame on the trees made with ropes.

Primary Pupil: A rope so you could just have rope and a tyre.

Most of their ideas related to a combination of both natural and formal play areas. Many had a clear desire for it to be obviously made of wood with one suggesting they use the wood from the reserve.

Primary Pupil: It's made out of wood and it's outdoorsy.

Other pupils mentioned having orienteering, an obstacle course or a maze.

Secondary Pupil: The reserve only has fallen trees. It can be fun for children if they get to jump around them. [...] There should be a maze made of bushes with a play area of trees in the middle.

Primary Pupil: We also had [referring to their written sheets] wooden swings. Outdoorsy, treehouse.

Pupils wanted areas that were designed with play in mind. These older primary aged pupils (about 11 years) looked mainly for play that felt adventurous and looked less formal and less obviously manufactured. Pupils' comments implied that learning, play and outdoor experiences in nature could be easily combined when designed with this in mind. (See also next theme).

6. Natural Play

Two areas in the reserve where children sometimes play and explore (phot 1 and 2)



Play in Natural Areas. These are natural outdoor places that can be used for play and exploration. Children can learn about nature through these activities.

What places for this kind of play does the reserve have?
When and how do children get to use them?
In what way(s) do children value these kinds of places?
What might pupils learn from this kind of play and exploration?

[Consider too how play like this compares to play in designed play areas (see other sheet).]



It is widely acknowledged by researchers that children learn a lot through self-directed play. Outdoor play in natural areas particularly where there is a ready supply of 'loose objects' has been found to be particularly beneficial for play. Pupils saw a lot of value in play that used the natural area as a starting point.

Primary Pupil: And we decided to have more natural play areas. You would find some in the forest rather than building them.

Primary Pupil: An adventure course, picnic benches in the woods, natural play areas, camping site and woods. Then building with twigs and logs.

Primary Pupil: We're going to have tree swings about the woods.

Pupils were very open to integrating learning, nature interpretation, and play. By combining freedom to roam, play and explore, pupils felt they could get closer to wildlife and nature and through these experiences learn in a more self-directed, relaxed and fun way.

Primary Pupil: You could have a little hut ... and inside the hut, posters which have facts and that with the birds and stuff like that on it.

Primary Pupil: I really like how we all got to have a wee walk and a run around. I really liked that, how me and [girl's name] were racing each other and having a jog about.

Primary Pupil: When you were running you couldn't concentrate on just one thing, cause like there would be birds in the trees and you would hear it [...] you'll have a look around.

Primary Pupil: Cause it's nice seeing nature all around you when you're having a wee jog.

Primary Pupil: I think it's important that we get a bit of freedom. If there's something you want to do but you didn't get a chance, but if you've got the freedom you could go and get the chance to go and do it.

Primary Pupil: So you could go up [a tree house] and you could see above the trees. So you could see the birds properly.

7. Paths

Existing Path and Viewing Point (1st photo below)



Paths, Bridges, Access. We can get closer to nature with good pathways whilst still leaving some places just for nature too.



What kind of paths might be useful for getting close to nature on a reserve?
What makes a path inviting to use?
What new kinds of paths or access would you like to see on a redeveloped reserve?



[Consider the possibilities of having bridges, boardwalks over water, different surfaces, planting, viewing points, sense of 'journey' or adventure, wheelchair, buggy user access]

Pupils noted that path networks could be more accessible and inviting. In particular, pupils noted that the surfaces could at times be less wet, less rutted and more inviting for all users.

Primary Pupil: [Something] that made the path a bit cleaner cause it was a lot squelchy and it was just all over the place and everything. And if you were involved fixing it up and to make it a bit more inviting.

Primary Pupil: Inviting ... so it maybe put wood up the side and things. And maybe put bark down instead of mud.

Pupils wanted paths that indicated that there were places to explore, and that these places were in natural areas. When asked particularly about path surfaces, pupils had a clear preference for some use of boardwalks and bark chipped surfaces. Paths could usefully provide more access to wet or lochside areas. One pupil suggested that there could be a 'glass floor' in some places in order to allow you to see the life beneath the water. Bridges too were seen to bring adventure, exploration and excitement to journeying through the reserve, elicited by the ideas in the images on the photo-prompt sheet (above).

Primary Pupil: Have lots of bridges throughout the woods with animal models down the sides to attract people to it.

Secondary Pupil: Wider bridges with railings. Easier to get to animals across the water. Go off and explore.

Pathways came up when pupils spoke about access within the woods. The idea of a spiral stairway up a tree to a tree house generated interest in one group while another considered a treetop walkway. Pathways such as these appeared to be about getting close to nature too. Pupils were keen to note that activities and developments generally should 'not disturb the habitat'.

One pupil thought that paths would give access to some toilet facilities en route in the woods.

8. Seating

Existing Seating Area in Reserve (1st photo below)



Outdoor Places to Eat, Sit, Gather and Shelter
The Lochwinnoch RSPB reserve has an area for picnicking / gathering outdoors (1st photo).

How might places for eating, gathering and sheltering be improved on the reserve?
[The photos contain just some ideas here to help you with this].
What else might class groups usefully do in places like these?
What new kind of places like these do you think would usefully be added in a redesign of the reserve for (a) eating / snacking (b) gathering for learning (c) sitting, relaxing or sheltering?
[Consider group size, seating, tables, shelter, materials, positioning / aspect, indoor / outdoor]



Pupils were very positive about the prospect of more seating and sheltered places to gather, orient themselves, learn and eat outdoors. This sort of space could be also for sheltering in the forest, for orienting groups into new tasks, and for spending time with a map to decide on the next route.

Primary Pupil: There's loads of good walks there but people might not know and they might not want to go in case it turns like into a horrible place or a dead end, and then they have to turn back.

Some form of shelter was considered important for getting out of the rain or the sun. Secondary pupils were a bit more vocal about the possibility of 'rubbish weather'. A sheltered outdoor classroom with seating was very popular.

Primary Pupil: Maybe like with that [shelter in photo] over it so that you don't get wet, but you can still go. Cause it doesn't really matter what the weather is like, it's still fun, like yesterday, Tuesday [the day of their excursion], it was a bit wet and dull but it was still really good fun.

Primary Pupil: More sheltering in the forest like if you're on a walk and it started to rain, you just went in a wee shelter until it stops.


Primary Pupil: You could go for a walk through the forest and then if it's sunny you could sit down again and learn and stuff.

Pupils were sensitive to where eating and seating areas might be located. Pupils felt there could be more places to sit and eat so that parents could watch while their children played nearby. Others wanted these places to be located near the wildlife.

Primary Pupil: Maybe get more picnic benches because I don't think very many people would want to sit and eat their lunch at the front where all the cars are coming in and things ...


Primary Pupil: We could get some picnic benches and we could have them in the woods somewhere. And you could just sit and watch the birds fly by.

9. Animals and Plants



Animals and Plants. *Many young people say they enjoy and benefit from opportunities to get close to birds, plants and other animals.*

Would you like to have these opportunities this as part of your learning in school?
What opportunities do you currently have for this sort of experience?
What might we learn through these encounters with wildlife and plants?
What subject areas might benefit from excursions involving this sort of experience?
Do nature reserves offer opportunities to get close to nature? How might this be improved?



Pupils said they wanted to be able to get closer to nature as time in the reserve is a 'great opportunity to learn about animals'. Secondary pupils felt there was scope for using excursions for addressing fieldwork outcomes in biology and geography.


Younger pupils were keen to get close to animals. The ways they suggested of doing this included:

- more feeding areas,
- handling areas,
- small aquarium inside,
- frog 'shelter',
- pet shop,
- chance to feed the birds
- petting zoo – like birds of prey
- more cameras – want to see more happening

While some of these ideas may be beyond the scope of what is possible in a nature reserve, this array of ideas indicates that children clearly would like to see and touch a greater variety of animals up close. One mentioned wanting to get close to small mammals like squirrels and mice. These ideas are indicative of the desire on pupils' part to see more wildlife. On the visit to the reserve it was clear that the pupils loved seeing the heron and finding the 'minibeasts' underneath the logs. Most of them held slugs, apart from one girl who wasn't keen. Some of the other girls thought it was 'so cute!' They loved seeing the eyes of the slug popping

Primary Pupil: The...pond dipping was fun because you got to see different creatures that were in the pond, like tadpoles and little pond snails. They were cute [laughs]!

10. Multi-sensory Experiences



Using all your senses. We can find out about places by looking, listening, touching, smelling and tasting things.

Can you say how pupils might best use all of their senses to experience and learn from a visit to a nature reserve?
How might a nature reserve be improved so that pupils could use all of their senses to learn?

[Consider new kinds of access, technology, different ages].

Pupils had a number of ideas about how the sense might be used more through activities in the reserve. Pupils suggested the use of 'feely boxes' and games involving smell as ways of involving the senses more in learning.

Primary Pupil: boxes with different things inside to feel and guess what's inside, have a test whereby you smell something and have to guess what it is.

Primary Pupil: You could also have a smell thing where you'd be blindfolded and you'd be given something to smell and you'd have to guess what it was.

There were many mentions of water. This reminds us of the strong attraction of the water for the young. The vast majority said they would like to get closer to the water or get in it 'for a swim' or on it 'in a dingy'. The idea of going across the water to a hide on or near water was mooted. Others recalled the underwater tunnels they experienced in sea life centres.

Primary Pupil: I'd want to go in the water. Go into all the marsh cause it's really fun when you're in the marsh.

Pupils also came up with ideas that suggested they were also looking for more dramatic and imaginative experiences that could help them "understand what it's like to be an animal or a bird".

Primary Pupil: Oh you could have the hide that looks like a birds nest. When you go in you could have big speakers or something like that so it's a bit like a game. And then you can pretend a woodpecker's pecking it and it would be like big bangs.

Interviewer: So the idea of sounds?

Primary Pupil: Then you would know what a bird felt like. And then you could maybe have water guns or something.

Primary Pupil: Squirting it at you [laughs].

11. Some Key Learning Strategies & Activities



Learning Outdoors. We can learn about nature in many ways while outdoors. We can, for example, explore, do fieldwork, use worksheets, observe with others, draw, work on conservation projects, listen to experts, or simply relax or play in wild areas.

What kinds of learning activities do you think work best for learning about nature? Why?
What activities are good for learning to care for nature?
What kinds of activities and new places for learning do you think would be important to have in a nature reserve for visiting pupils?
What are the more important things pupils should learn about in which subject areas?



Pupils felt that there were many ways of learning so that the key outcome of 'learning to care for nature' could be achieved. Some pupils mentioned the possible role of conservation work (see below), identification games, and competitions with prizes. Others mentioned the opportunity for pupils "to lead you where we wanted" as being valuable for learning.

As noted earlier, pond dipping was a real favourite with pupils. Pupils thought that improvements could be made to the pond dipping area by extra tray stands to put the trays in and found that some of the current stands were not secure. Pond dipping was enjoyed because it allowed pupils to experience being close to water, to handle animals, to realise how the pond as a habitat supported so much life. It was also found to be fun and relaxing.

Primary Pupil: I just like seeing all the water insects.

Primary Pupil: I think pond dipping is really fun, cause you do get to see the experience of having all these different things that live in the water and you get to see what they all do, and things that you might not have ever seen before, that you would find out about.

Primary Pupil: See the pond, it makes a weird noise, and I don't know when it's raining, it makes this weird noise

Primary Pupil: It's very relaxing.

Primary Pupil: Thinking about all the things that live in the pond.

Others thought that the inclusion of CD Rom games and activities for use before and after visits in the class would enhance learning. These comments highlight the possible role of technology in creating a context for learning before and after visits.

Primary Pupil: You could make a website so that if you were in a class you'd just go online and it would tell you all about it. And then they could watch a few videos. You could have a video, make it up so that you see what's there. A video of people doing stuff.

Primary Pupil: Maybe learn about the birds, all the different types of birds and what they sound like. And then maybe we'd know a bit more when we got there.

12. Conservation Work



Getting Active. Helping with Conservation
Pupils can learn by doing work that helps preserve, improve places for birds, other animals, and plants.



Would you like to get involved in this kind of work on a school visit to the reserve? Why?
Would you like to be involved in work like this outside of school hours?
What kinds of conservation work would you like to do?
What might people learn through this work?
How else might schools help with this work?

Pupils liked the idea of assisting in some way with conservation work but were a little unsure of what they might do and how this would work through schooling. Pupils said that they did little conservation work at school, apart from those on the eco committee in the primary school. Planting, path making, and clearing were mentioned.

Primary Pupil: children and teens helping with planting.

Primary Pupil: Cleaning up the place.

Primary Pupil: You could make the paths like not as muddy, like, as bark.

Primary Pupil: we could get children and teenagers to plant things.

A possible way of involving older and younger pupils was noted by this pupil.

Secondary Pupil: For the older ones can do all the technical work and the younger ones can brush in the leaves and stuff like that.

The idea that this sort of work is active learning and compliments indoor learning was apparent.

Secondary Pupil: Cause it's better than just getting told about it when you can actually go and see it and experience it. Cause some people's minds work like that one. They can go and understand it and stuff like that.

Primary Pupil: That helping and chopping and changing and clearing and stuff would be quite good. But only if you want to and not in the rain [both laugh]. But when it's nice cause you don't want to just sit there and get told stuff, cause you want to do something.

Primary Pupil: And you would relax a bit from all the hard work inside.

The particular benefits of this approach included raised self-esteem, improved understanding and raised academic achievement.

Primary Pupil: Yeah it would give you some experience. It would make you feel like you are doing something for them. It would make you feel good about yourself because...

Primary Pupil: If we got to do stuff like that, it would be better for second years and stuff. It would help them in their exams, so they've had a bit of experience and stuff like that.

B. Teachers' Views

Data Sources

The data on the teachers' views were gathered through focus groups with teachers. Two teacher focus groups were conducted, one in a primary school and one in a secondary school.

Current Provision

For the teachers who were aware of the venue, Lochwinnoch was seen as being a distinctive venue that offers important learning potential compared to other places. Mostly, teachers' impressions were that the place is clearly useful for understanding birds and the current provision such as minibeast hunting and pond dipping is enjoyed by pupils and valued by teachers who had experience of it. Teachers found the site to be very rich and inviting for learning. The location is also noted for having helpful staff, and for having a variety of habitats: a freshwater habitat with woodland margins. Lochwinnoch reserve is providing a distinctive outdoor learning environment in a key location close to large centres of population.

Time, Cost and Location

Secondary teachers interviewed did not report knowing much about the site but those teachers that had visited the site without pupils on a training event considered it to be a valuable local resource. Teachers in both primary and secondary schools had passed site everyday but either never been there or mentioned that they never thought about it as an educational visit.

The close proximity of the site was recognised positive because finding money for transport can be a "huge problem" (Teacher - primary). Primary teachers, many of whom had been there for half-day induction events, regarded the proximity of the train as key. All teachers thought that getting to an excursion location should not be too time consuming. This suggests that the schools located along the train line (and possibly also those connected to it) may be key target schools for a redeveloped reserve and educational centre.

The teachers considered that free entry for teachers and a reduced cost for pupils were important. The cost of entry and transport to Lochwinnoch reserve compares favourably with outdoor pursuits based days in outdoor centres (which could charge over £50 pounds a day per head and likely requires additional costs of buss services), yet these options were being taken up by schools locally who were not opting to visit Lochwinnoch (perhaps because of lack of awareness or because these experiences are quite differently focused).

As schools move into a period where they will be expected to make regular, repeat and local visits to outdoor locations for learning within the new curriculum, excursion destinations such as Lochwinnoch reserve will need to be sensitive to understanding what the site distinctively offers for educational purposes, how accessible it is to various school 'audiences' via transport links, and address how well known their venue is to school staffs.

Marketing, advertising and awareness of educational services

As teachers generally appear to not know much about local provisions, they noted that they would be better placed to make decisions about where to go, for what purposes, and for what curricular foci if the various providers (Rangers, SNH sites, RSPB etc) collaboratively provided some single information points about various sites and services in local areas including what transport links are available, what learning opportunities and services were on offer, and what they cost.

Current Barriers: Teachers' Accounts

All teachers wished to enhance the provision of outdoor learning in nature for all their pupils in a way that was time and cost affective and of a high degree of quality. They wished for quality, local expertly delivered provision that was local and sustained across their educational experience. However, as surveys of provision nationally show, provision time is currently somewhat limited to annual events and to particular times of the year, subject areas, year groups or particular types of

pupil. At the same time, because of this new formal curriculum, teachers are experiencing a time of pressured change:

Teacher (P): See to be honest we have so many demands on our time at the moment.

Teacher 2 (P): So many changes.

Interviewer: It's a pressure point?

Teacher 1 (P): Everything's changing. And we are being asked to cram more and more into our working day.

The main perceived barriers (not in any ranked order) we noted through our interpretation of teachers' accounts of what affects the likelihood of a teacher and class group going on excursions into nature at sites like Lochwinnoch reserve were:

- (a) lack of knowledge about the site and what it could afford for learning and how this would relate to the formal curriculum
- (b) lack of expertise for leading a visit themselves (this varied)
- (c) lack of access to (or knowledge of how to access) support staff for outdoor learning in nature generally
- (d) cost, (travel and entry, services when there)
- (e) availability of equipment and clothing (eg wellies and waterproof coats) and lack of awareness of what resources might be available when on an trip (eg binoculars)
- (f) paperwork (eg consent forms, planning documents, assessments)
- (g) competing demands and overall pressure on their professional time and teaching time at a time of considerable change
- (h) senior management support (noted as a general potential issue).

Addressing these barriers would be important if some teachers were to consider going on an excursion and follow through with a trip. While some of these are issues that are more challenging to solve, some are more easily addressed by RSPB. For example, teachers wished for an informative website which would support their planning and allow them to understand what to expect. We look below too at the teachers' comments about staffing and consider what strategies might be possible in response to teachers' situated contexts. We explore other responses in the conclusion.

Timing – visit windows

Teachers discussed the possible windows of opportunity they had for visits. The summer term was identified as a possible time for outdoor activities in secondary school, though this is also a busy time with changing timetables and provides teachers with a small window for programme development work and planning. Primary teachers noted that 'golden time' was a possible element in the weekly curriculum too.

Repeat Visits

Teachers also appear to make decisions to go back annually to the same site so getting teachers to consider changing from one location to another would require careful communication for teachers to change routines. We did not encounter any teachers who bring their pupils annually or more regularly to the reserve yet they all noted this was possible and had attractions. Considering the perceived barriers insofar as this is possible will likely be important in influencing teachers' practice or getting them to switch venue for educational excursions. That said, there is considerable support from this research for that view that once the first visit was made, that teachers would make repeat visits annually (possibly with the same class for different activities) once the visit met with their requirements (see below) and provided progression.

Teacher (P)⁵: maybe the first time I'd come, I'd come with a guide. And then maybe subsequent visits I would have a go myself.

⁵ "Teacher (P)" denotes primary school teachers while "Teacher (S)" denotes secondary.

Teacher (P): If we had set activities. 'When you come down the next time...' [...] Set activities so that when we come down we have something definite to do rather than just a ramble through the woods.

Repeat visits by pupils was also seen as a way of making more meaningful connections between learners and natural places perhaps through conservation work:

Teacher (P): But if they had a hand in conserving the facilities here and things like that then they would get more out of it to be honest. Rather than just being visitors they would feel ownership.

Q 2: What do they construe as desired and worthwhile educational experiences in a redeveloped site at primary and secondary (for sampled subject areas) levels? What do teachers name as some of the possible purposes, and outcomes of such experiences?

Curriculum Links

The main message from secondary and primary teachers was that they considered worthwhile educational experiences to be those that were more directly connected to the formal curricula they had to teach. The new Curriculum for Excellence (CfE) was seen to create a new impetus for teaching outdoors but this was seen as a relatively new initiative. This new policy environment means there are considerable opportunities for locations such as Lochwinnoch reserve to develop practice and connect outdoor experiences to a range of areas of the curriculum.

For primary teachers the school's approach to the choices of topics at each level is a critical aspect for many teachers considering how a visit to a site like Lochwinnoch connects to their class and school-based curriculum planning. However, lack of awareness or connected forward planning between what is locally available and what is expected in the new curricular structures means that there is the possibility of missed opportunities for the use of Lochwinnoch as a site for educational excursion. One primary teacher noted that she had just recently completed a topic on the rainforest; her classroom had been transformed into what looked and felt like a rainforest indoors.

Teacher (P): We did the rain forest which would have lent itself beautifully to this to be honest. [...] I must have spent about £70 of my own money on resources and things like that for printing photographs and all these things for evidence. Everything's evidence now. And I spent a fortune of my own money buying resources for the children to make displays and things like that.

These teachers' comments (below) reinforce the importance of school-linked curricular planning for educational provision in the reserve and imply that a 'one size fits all' approach is less likely to be successful than an approach that plans well in advance, takes teachers' experience into account and is responsive to individual schools' planning regimes.

Teacher (P): Everything has to be linked back. It's not just a case of you can say 'oh let's go for an afternoon down to the RSPB' because that just doesn't happen. Everything has to be justified and linked back.

Teacher (P): You could use [the location] for [learning] how the weather influences habitat and things like that. Diane was talking about the babies that perished and things. And we're actually looking at natural disasters at the moment. So the whole influence of weather and how the weather influences the habitat of the animals

Teacher (P): Everything is supposed to knit in with one thing or another. If you were doing some sort of environmental topic then obviously come down and habitats and all these types of things. [...] You are accountable for everything you teach now. It's not a case of 'let's just go for a jolly and come down and do this'. It has to be part of what you're doing. [...] If we're tying everything in. And it's all [about] cross-curricular links

The secondary subject focused teachers were positive about the potential it may offer for discrete biology and geography as well as other subjects and interdisciplinary work. Many subject areas are now requiring more time to be spent outdoors or encourage this in the curriculum. Within the subject area of geography, teachers noted the increased endorsement of fieldwork and outdoor learning in the curriculum.

Teacher (S): [in Geography] they want fieldwork to be done. Whereas in the past it's said it's been optional and a lot of schools I've been to, because they [said] it's optional you [didn't] get out to do it.

Examples of curricular links in relation to biodiversity and ecology were identified. RSPB charge for entry and this was compared to country park facilities where ranger services are free. Decisions about where to go are very cost sensitive, with teachers weighing up the travel time and cost, entry costs, facilities and experience very carefully. Schools local to the reserve are likely to be attracted to it therefore since these travel costs are lower. The local secondary school teachers felt they could explore possibly creating a focus on woodland ecology and freshwater ecology at Lochwinnoch replacing their current focus on the coast as a topic (addressed in part by a visit to Culzean country park). Teachers discussed a wide range of curricular related tasks that could be conducted outdoors in places like Lochwinnoch; they expressed the value of looking at habitats and ecosystems, biotic, abiotic factors, food chains, food webs, completing a line transect, and taking quadrat sampling, and moisture meter reading tasks. Having considered what the site might afford, possible areas for development were identified that could be relevant to a visit to Lochwinnoch included predator-prey relations in S1/2, and food webs at intermediate level.

Primary, and secondary teachers also noted the potential to develop link links with other areas such as personal and social development (PSD), health and wellbeing, global citizenship, sustainability and environmental issues aspects of the curriculum. In particular, there is currently a lack of clarity about how Lochwinnoch and other local provisions might link the learning tasks, strategies and educative focus to these cross-curricular environmental, economic and social issues. Within sustainability, for example, there could be links to topics such as climate change, water quality, poverty, consumerism and trade, disease and toxins, environmental monitoring both in Scotland and internationally. One teacher commented that the way a redeveloped site might be managed and designed would be relevant here: the way products are sourced for the shop, how energy is conserved and how waste water is handled could all be relevant areas of concern and topics of educational interest for visiting pupils if these were made an explicit part of the learning experience:

Teacher (S): Even just how the place is run as well rather than just the ecology and the planet. How do you run a place like this? What decisions do you have to make. They could bring that in to some of the management side.

Approaches to Learning

Teachers considered many possible tasks they would like to do with support in a redeveloped reserve. Both primary and secondary teachers looked for enhancements that involved more active approaches to learning:

Teacher (S): Hands on, it's got to be lots of hands on stuff for the kids to do. They won't just want to go somewhere and sit in a classroom. They'll want to be outside. They'll want to be feeding the ducks, [...] mini beasts, rock pools.

Teacher (S): But lots of active learning stuff and the kids actually to do and see, even on a wet day.

Teacher (S): Whereas if you go somewhere you want the classroom not to be a classroom.

Teachers were keen on the possibilities of learning experiences involving physically active engagement by pupils. As one teacher put it, "our children are very keen on 'doing'". Outdoor tasks

involving practical active tasks were in part seen as being educative and valuable because they would be memorable:

Teacher (S): if you see it you remember it. Whenever people leave school they don't talk about sitting in the classroom, what they liked about sitting in the classroom. It's all [...] 'do you remember going up that hill walk?'

Using outdoor local places to understand many ecological concepts and understanding how real natural places work as habitats through sensory interactive investigative tasks was another recurring strand of interest for teachers:

Teacher (S): And then linking it up to the food chains and food webs. The end of the birds of prey. And then we talk about the effects of pesticides and stuff like that. You know what they'd love, they'd love to look at pellets and stuff. You know how you can tell [unclear words 0:11:07] pellets, they just love stuff like that. And they go 'ewww'. So different pellets, your herbivore or your carnivore. And what else? Owl pellets and stuff cause you can actually see what they've been eating can't you.

Some of these tasks could involve repeat visits by pupils and teachers to the site involving sustained investigations and inquiries through different seasons. One idea proposed was the pupils' use of pitfall traps for example which would also be of interest to the younger pupils who were very keen to get close to live wild animals of all kinds.

Planning

Teachers in both primary and secondary schools noted the importance of advance planning at a school or subject level. Once school and departmental plans are in place they are sometimes more difficult to change and gaining flexibility of topic choice is not easy within many school structures. Curriculum topic planning often occurs well in advance.

Teacher (S): We were just designing our new second year CfE courses just now. Whereas obviously automatically we would be doing woodland ecology cause that's the only thing we've really got access too. But it could easily be a freshwater ecology.

CfE affords more teacher autonomy developing an elective based on the RSPB site was also discussed as a possibility.

Teacher (S): So if you had a teacher in any department who was interested in the RSPB then there could be an elective on it. And if the RSPB could provide us with some ideas on what to do. For is it about a twelve week course or whatever?

Teacher (P): So if I was doing it next year I would still come and do mini beasts for our next topic. We'll go down to the RSPB once a week and we'll learn all about it. But if you've already done your plan and you don't want to backtrack and talk to [the headteacher] and say 'can I change my topic' and things like that.

The possibilities related to vocational learning and conservation work was considered relevant for particular groups of pupils. Some teachers thought this sort of approach could be linked with the John Muir Award Scheme, Duke of Edinburgh voluntary work requirement, and with the COPE qualification (Certificate Of Personal Effectiveness).

Q3. What particular key places, services and aspects would they wish to be changed, enhanced, or retained? What new places, activities and approaches would teachers wish to see there?

Staff Services

Staffing and expert advice was core to what teachers wanted to see retained and enhanced. Some teachers felt that staffing provision had been reduced for schools in general and that this was as a result of cutbacks and this form of support was sorely missed. When planning and enacting

excursions, teachers were keen to work closely with reserve staff and to have these staff lead on educational strategies where their expertise warranted this.

Teacher (P): It's not that we are wanting to hand the children over. We want to work alongside because we are not the experts that they are.

“Working alongside” of course may take many forms and possibly be structured as face-to-face, delivered through materials and information, in various formats (CPD, paper, on-line) but it does imply that some form of communication between teacher and field studies facilitators is likely to be important and this would ideally need to be occurring before, during and after visits to the site for visits to be effective.

Teacher (S): ...the rangers take the group. And we are there to manage discipline and back up when the kids are doing small practical work. Obviously we can then do hands on with them as well. But they are the experts in that field.

Teacher (P): we don't have the expertise that these experts have. So putting the money more into the personnel, the people who are really knowledgeable that can lead the learning and we can facilitate.

Pre-excursion activities and post-excursion activities were regarded as important because this would extend the effect of the visit and enhance its benefits.

Teacher (P): We'd need to know how it was tied in with what we were doing. Because one of the big things that puts us off, with money being so tight now, it has to link in with our curriculum. If we go and it's got no value then we've wasted time and money.

Both primary and secondary schools considered it to be potentially beneficial if expert staff could make visits to schools themselves in order to assist with integrating learning and making it more locally meaningful, effective and relevant within the locally specified school curriculum. This was seen as beneficial because of the constraints around timetable and travel logistics and because they could help plan and integrate learning on and off the school site and assist with site-specific learning place development and use (such as ponds).

Teacher (P): We couldn't get people coming out and integrating their knowledge and working with the children.

This integration of planning for learning across a range of locations flags up a possible need for teachers to find assistance with how their school grounds, their local area (within walking distance from the school), and locations of providers of educational excursions in nature beyond can connect and relate to each other within a school-specific curriculum. Assisting schools with designing a curriculum around what is possible within the grounds, beyond the grounds locally on foot, and thereafter, in sites such as Lochwinnoch would make the all round outdoor educational experience more meaningful and potentially address the need for progression and depth in the new curriculum.

Other Comments: Places, Equipment and Resources

Teachers made specific reference to some particular resources they would find useful to be able to avail of that would encourage hands-on learning and purposeful investigative enquiry by pupils. One said microscopes for looking at pond life would be useful. Teachers thought that the ideas of an elevated walkway in the tree canopy was a good idea. Backing up the pupils' comments about play, one secondary school teacher said that an adventure playground made from natural materials would be welcome.

SECTION 4 – CONCLUSION

Interpreting Pupils' Views and Experiences

Pupils provided interesting evidence from their experiences of the reserve and their considerations of how the place might be improved for educational use. They were critical and insightful users of the centre and reserve. Overall, they wanted improvements so that they could have an experience in a more and modern and up to date building and in a well-designed and accessible outdoor space. But they also had considerably innovative and insightful comments to make about learning, the aims of provision, and how this might be facilitated.

Indoors

Pupils recognised straight away that the centre buildings needed to be refurbished. They were critical of the accommodation, its quality, space and facilities. Indoors, they suggested more extensive places for learning (to compliment outdoor learning spaces) and additional facilities for viewing and observing especially with the support of technology. They looked for spaces that felt less like a school or classroom but offered excitement and interesting learning and activities that would support their outdoor experiences while on visits, but also those that would support learning in advance of visits, and afterwards back in class. Part of the provision they looked for included the enhanced use of cameras, telescopes, binoculars in ways that met their needs, places for play and exploration indoors, and places for activities such as art and drama. There was support for the view that a café would be a very important addition. They were supportive of the continued important role of a shop but had critical comments to make about prices of child-friendly 'pocket-money' items.

Outdoors

Outdoors, pupils looked for better signs for finding one's way and for interpretation and education. They enjoyed and learned from pond dipping and minibeast hunting but also from a range of activities connected to bird watching. Pupils liked the various possible uses of hides but looked for new kinds of hides that were considerably different from the current ones. Overall, their views indicated that they wanted outdoor place designs (hides, buildings, viewing areas, seating and so on) that could be for learning *and* other activities. Importantly, they wished for places that were much more inclusive, child-friendly and child-functional. Pupils looked for a range of play, leisure, and picnicking facilities that were natural looking and in keeping with the site, but many were clear that wanted these to have an educational role too since the place has a distinctive purpose as a reserve. Some of the new kinds of places envisaged could be multi-functional. For example, places for eating and convening outdoors might also allow for sheltering and learning. Places for 'natural play' (without equipment) and places with designed play features in natural contexts (play areas and sculptures) could also be places for viewing birdlife and for gaining understanding. Pupils suggested hide designs that would make them more inviting, but could also communicate a message about the place, the RSPB as an organisation, the birdlife and ecosystem, and the more important conservation messages (for example, communicating about sustainability through having a solar panel in a hide). Interviews revealed that places to sit and play in the woods, treehouses, boardwalks, tree-top walkways, more formally designed, nature-sensitive play areas, outdoor shelters, outdoor classrooms and so on were all very welcome possible design solutions they would value.

Learning

In order to learn in a fun and interesting way, pupils wished for more contact with wildlife either vicariously through sensory indoor experiences (things to touch, cameras to watch), or, preferably, through getting close to nature outdoors (via viewing areas). Many pupils also wanted to be able to get really close to living wildlife outdoors, especially birds and animals, and they wanted more and freer access to the water and trees. Sensory experiences indoors or outside that helped pupils understand the lived experiences of wildlife were also mentioned as ways of learning about animals, their needs and their habitats. The use of sound (for example, recorded or live birdsong,

rain on the loch), touch (for example, feathers, natural materials, water), and the harnessing of other senses to create these embodied and imaginative experiences were mentioned and regarded as ways of integrating play, imagination and learning. Inter-age and intergenerational approaches to wildlife conservation work would also be welcomed by pupils. Older pupils wished for activities that linked more closely to their school-based demands across a range of subject areas (for example, fieldwork) and the timing of these excursions to meet their need for understanding ahead of examinations was deemed important.

We can interpret pupils' responses as evidence that they valued the educational aspect of the experience they had as part of the research. There was, as one would expect, some variance in the depth and degree to which all pupils gained knowledge, understanding and dispositions (and evaluating this was not the focus of the research). But we can infer that these were the three key learning foci pupils felt were important through their own and other pupils' excursions. These were:

- (a) knowledge, (about the loch, the woodland and other habitats, and the wildlife and biodiversity these areas support)
- (b) understanding (how animals live and relate to each other and their environments and why these ecosystems need to be conserved through the work of the RSPB and others)
- (c) dispositions (the development of an ethic of care for nature).

Interpreting Teachers' Views

Note: Compared to the pupils, teachers were less focused on the material and place-related contexts of the reserve and its buildings, signage etc. In the case of the secondary school teachers' focus group, the interviewees did not have much time to spend on the photosets in part because the photosets were rendered less useful since the participant teachers had not all been to the reserve and in part because the focus of the interview was on access and formal planning. In the case of the primary school teachers' focus group, the interview happened over their lunch break and use of photosets in the staffroom was inappropriate given the timing and duration of the interview.

Teachers' Contexts

Evidence from teachers suggests that RSPB at Lochwinnoch will need to be sensitive to the professional contexts at a time of curricular change. Teachers' decision making processes and their levels of professional competence and expertise are also important elements to be aware of in any moves to enhance or alter provision to schools. We should also be aware that support from local authority areas varies and this affects how outdoor learning curriculum making occurs.⁶ We also know that a range of factors influence a teacher in their decision making about how, where and when they will use the outdoors for educational provision (see Mannion et al. 2011, forthcoming). School-based factors, teacher factors, and a range of influences that include cultural, topographical and pragmatic concerns come together to influence outdoor learning curriculum making. Within this frame, location and cost are also key factors affecting how accessible the reserve is but the venue benefits from low-cost very effective transport links. One key area of concern is how well known the reserve is as an educational venue for key target school audiences. Teachers considered that worthwhile educational experiences are those that were more directly connected to the formal curricula they had to teach within the new Curriculum for Excellence. The evidence from teachers shows us that this is a pressured time the education sector with changing curricular demands. However, this situation simultaneously predisposes teachers to trying out new approaches (particularly outdoors) (see Learning and Teaching Scotland, 2010). The new Curriculum for Excellence also demands that excursions are linked in a very embedded way to the outcomes through a planned approach to school curricular reform. This means that all excursions

⁶ In the past, about 60% of all the pupil visitors came through from one local authority area, Renfrewshire. This was in part because a scheme funded by this authority provided encouragement and assistance to schools to visit the reserve. Some of these services have been since withdrawn with appreciable downturn in numbers from this area.

need to be planned well in advance within class teachers' planning regimes and requires substantial linking to pre- and post-excursion class-based work.

Teacher Engagement and Development

Teachers' comments show us that they are not all aware of what is possible from an educational excursion to the site, and that those that are aware do not necessarily convert this awareness into action. There is considerable scope here, however, since teachers who are well-disposed may not need much additional persuasion. Teachers felt the need for a staged approach to gaining the training and experiences necessary before they would feel confident in leading a site visit themselves. Teachers who categorise themselves as an 'outdoor person' will likely require different levels of support from those that do not but we know from other studies that many who are well-disposed do not necessarily bring class groups outdoors for learning regularly.

Teachers' views suggest that they currently rely heavily on the in-house expertise of the staff services of Starling. Teachers regard their expertise as invaluable but teachers wish to enhance their own expertise so that connections with the school environment can be made and so that repeat visits to Lochwinnoch and other sites outdoors can be more possible within the new curriculum framework wherein outdoor learning is a key ingredient. We also know from other research that teachers can develop their expertise through actively planning, leading and reflecting on outdoor excursions and collaborating with others to do the same in a supportive environment (see also Mannion et al, 2011, forthcoming). Within this new climate, teachers' experiences and teacher education could be usefully seen as a core part of the reserve's business whether this is understood as being a part of all excursions by pupils and/or as a separate line of activity. Given its location (on the doorstep of Glasgow provides access to large number of teachers and local authority areas), the could potentially provide a role in teacher development and education, perhaps in collaboration with a higher education initial teacher education provider who accredit such learning at undergraduate and postgraduate (in-service and pre-service) levels.

Possible Directions

This is a small-scale study involving only a limited number of pupils and teachers but there is ample evidence here to make some suggestions for possible direction taking around educational provision. The ideas about place change desired by respondents emerging from this research will be best understood as important hints and signposts for the direction designers and planners may wish to take. These decisions will of course best be taken within a more extensive planning and design process involving a range of stakeholders and expertise from architects, landscape designers, interpretation specialists, and outdoor education consultants.

Overall, however, evidence indicates that a step-change in how RSPB Lochwinnoch works with pupils and teachers may be required if the aim of enhancing provision is to be met. Some of the possible new directions may include:

- (a) communicating what is on offer clearly to local schools and a wider range of schools through materials (including on-line and through materials that are pre-prepared for schools). These will best be used to inform teachers about what is possible and what is usefully conducted in pre- and post-visit activities for both primary and secondary school pupils. These could be devised for use across a range of subject areas and cross-curricular areas indicating the new curricular experiences and outcomes that relate. There is particular scope for the use of the site for secondary educational excursions tailored to a wider array of subject areas.
- (b) targeting some schools by local authority region, local authority or by nearness to train services. There is scope for looking again at partnership working with a wider range of local authorities perhaps.
- (c) taking in-service and pre-service teacher's growth as outdoor educators as a key goal through enhancing their skill bases (this could be through their professional development while on excursions, or at courses, or as a part of their probationary year, or while on teacher education programmes in collaboration with initial teacher education providers)

- (d) taking the whole-school planning regime context as a key factor and tailoring excursion activities, educational aims, and their focus to take account of this.
- (e) considering the possible role of 'outreach' approaches. Teachers wanted help with taking into account the local schools' environments for outdoor learning and how this might link to a possible excursion to the reserve.⁷
- (f) encouraging some schools to be part of a wider strategy (perhaps based on sustained project work, inquiry or conservation work) of making more sustained links with some schools⁸
- (g) providing a wider range of possibilities for educational activities indoors and outside that could be facilitator-led, facilitator-supported, or teacher-led employing a wider range of physical resources (for example clothing, technology)
- (h) taking account of children and young people as users of facilities in their redesign as an inclusive place for all ages
- (i) taking account of pupils' and teachers' views on what counts as valued outdoor educational experiences. In particular:
 - a. experiences that were sensitive to what the place distinctively offers (for example, making use of the materials and the habitats found there in various weathers, times of day and during different seasons)⁹
 - b. experiences that are focused on outcomes related to conservation, biodiversity, and developing an ethic of care for nature
 - c. experiences that are linked to pre-visit and post-visit learning and the formal curriculum
 - d. experiences that are hands-on, multi-sensory and purposeful activities that are also fun
 - e. experiences that allow for encounters with wildlife
 - f. experiences in nature-sensitive places for viewing, active and imaginative play, roaming, and exploration, that also allowed for learning

⁷ A field teacher visit to a school is a service that is available from *Starling*.

⁸ This could be possibly addressed through encouraging 'link' or 'hub' schools to make repeat visits with a more sustained project work or perhaps via inquiries throughout the seasons. Other possibilities include involving pupils more directly in the work of the centre, for example through the redevelopment of the site in collaboration with designers and architects.

⁹ Many of the available programmed services currently on offer do cover topics such as weather, the seasons, water, mapping, and environmental protection.

Appendix 1 – Photoset 1: images of the current buildings and reserve

Note: These images are provided in lowered resolution here to keep document file-size small.









REFERENCES

Epstein, I., Stevens, B., McKeever, P., & Baruchel, S. (2006). Photo elicitation interview (PEI): Using photos to elicit children's perspectives. *International Journal of Qualitative Methods*, 5(3), Article 1. Retrieved March 2011 from http://www.ualberta.ca/~iiqm/backissues/5_3/pdf/epstein.pdf

Learning and Teaching Scotland (2010). *Curriculum for Excellence through Outdoor Learning*. Glasgow: LTS.

Mannion, G., Doyle, L., Sankey, K., Mattu, L., Wilson, M. (2007). *Young People's Interaction with Natural Heritage through Outdoor Learning*. Report Contracted to University of Stirling, Commissioned by Scottish Natural Heritage. http://www.snh.org.uk/pdfs/publications/commissioned_reports/ReportNo225.pdf

Mannion, G., Fenwick, A., Nugent, C., and l'Anson, J. (2011) *Teaching in Nature*. Report Contracted to University of Stirling, Commissioned by Scottish Natural Heritage. Forthcoming 2011. See <http://teachinginnature.stir.ac.uk/index.html>

Meo, A (2010) Picturing Students' Habitus: The Advantages and Limitations of Photo-Elicitation Interviewing in a Qualitative Study in the City of Buenos Aires. *International Journal of Qualitative Methods*. Vol. 9, No. 2.

The Royal Society for the Protection of Birds (2007) *A Voice for Conservation: the RSPB's plans for 2007-2011*. Sandy, Bedfordshire.

