



**At Birkhill House CIC**

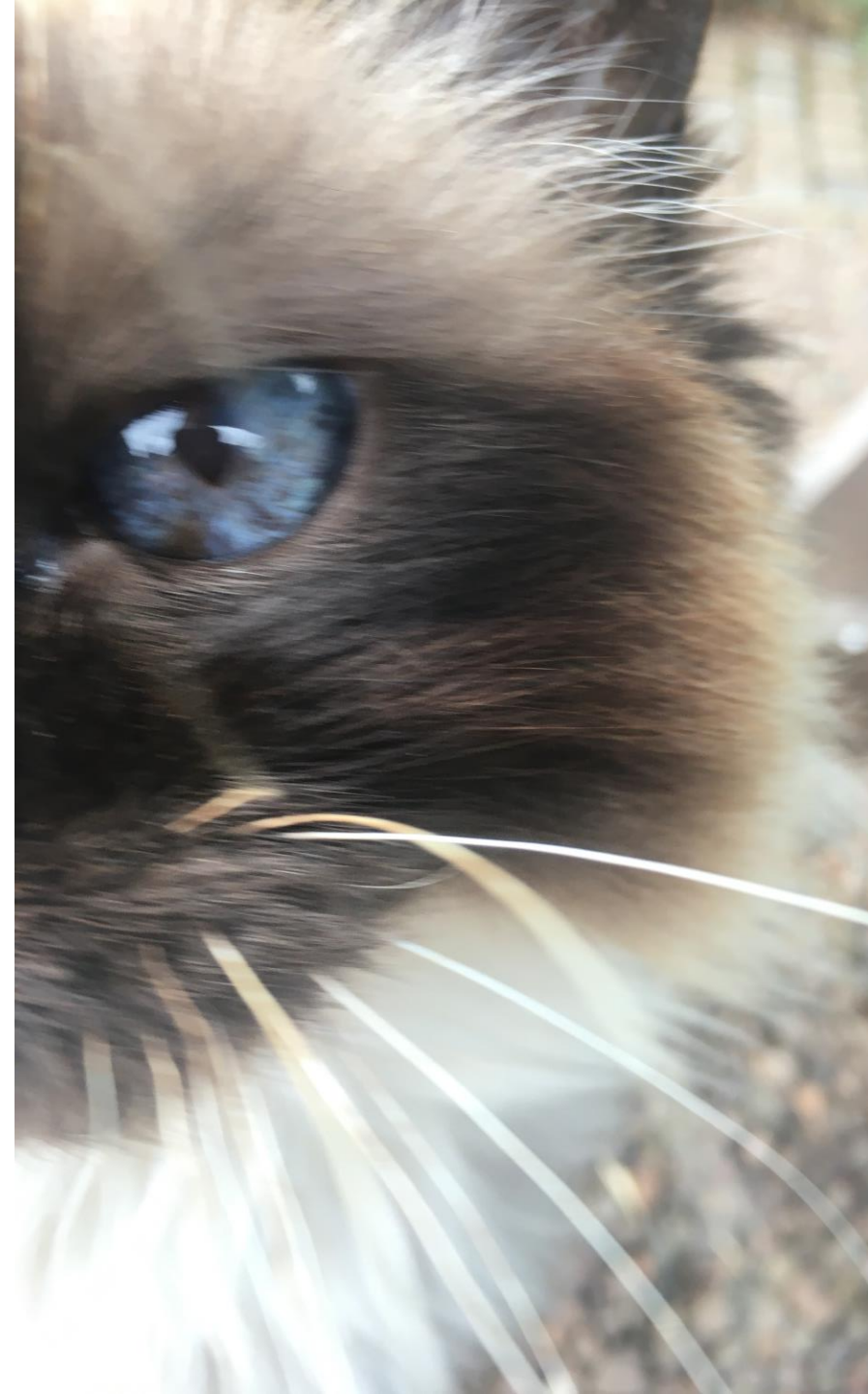
**Fleece & Fibre Internship 2022**

**Report by Robin Smith**

I was one of two interns At Birkhill House this year, and I:

- researched design theories relevant to At Birkhill House
- participated in two shearing days (alpaca and Castlemilk Moorit sheep)
- attended three days of classes during fibre week, which covered fleece preparation, colour blending, and spinning
- washed, carded and spun alpaca fibre and Castlemilk Moorit fleece
- researched the history of Shepherd's Check tweed, including desk, library and archival research. I visited the Heriot Watt textile archive to view original 19th century shepherd's plaids and textile sample books
- designed an estate tweed based on my experiences

I have written up my research and my project in a design sketchbook. The end of this report includes photographs of this project log.





The benefits of this internship for me have been

- new knowledge and skills about hand processing fibre
- a better understanding of the factors which determine fibre quality
- motivation to improve my spinning skills
- an opportunity to research design theory and archival textile collections

I would have liked to have spent more time working at Birkhill, but some caring responsibilities over the summer prevented me going in as much as I would have liked. I valued working at home with the fibre given to me as part of the internship.

This internship complemented my studies at Heriot-Watt, where fibre processing is covered in a technical theory course. It has been incredibly useful to have hands-on experience. It has also been interesting to see the community engagement programme in action.

Attending the internship over the summer between first and second year has helped me to begin thinking about what I will do once my qualification is finished.



## First weave sample

This is my initial weave sample for a tweed design based on the colours and animals at Birkhill House. This design is an adaptation of the traditional border Shepherd's Check. It includes three shades of brown to represent the shades of alpaca coats.

The design also has a dyed blue yarn to represent the eyes of the Ragdoll cats. I included stripes of blue to convey how the outdoor cats crisscross the open areas of the smallholding.

I underestimated the time needed to hand-process fibre and the technical skill required to process alpaca fibre so that it is suitable for weaving. This was quite challenging for a beginner spinner.

My initial weave sample has been made from commercial yarn, but I intend to finish the carding and spinning of the fibre I have from the internship and will use it in future projects.

The following pages are a copy of the project sketchbook I compiled during the internship.

My thanks go to Lara and all of the people I met at Birkhill House.  
It is a very welcoming space, and I hope to be able to attend  
some activities there in the future.

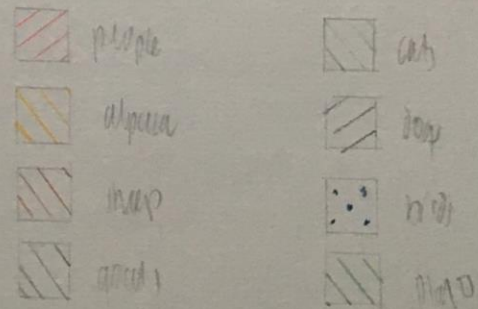
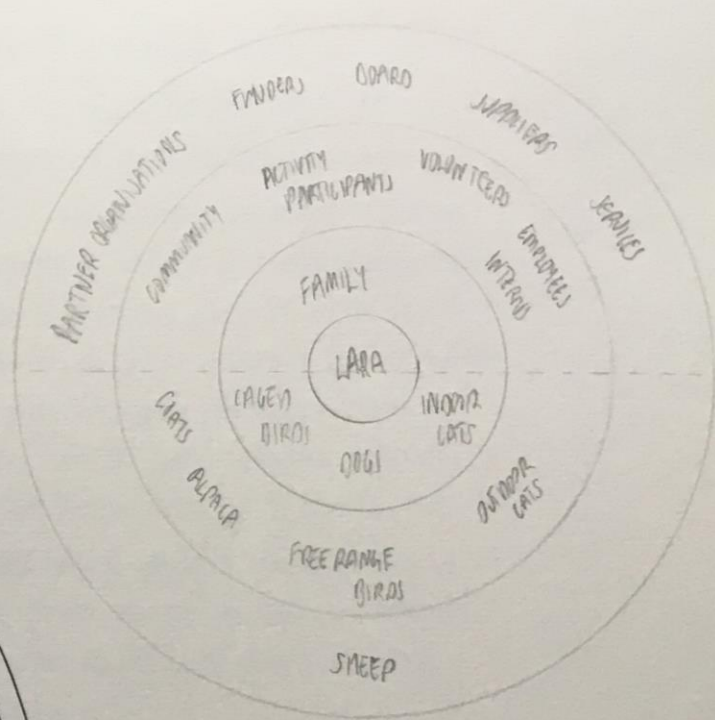
INDUCTION VISIT  
26 JUL 2022

An "ecosystem" is  
a set of complex  
relationships between living  
subjects and the environment.  
(Fletcher et al 2016 p. 63)

At first sight, the layout and elements  
of Mt Birnie House seem orderly and  
compartmentalised. There are defined  
areas for types of animal, plants and  
activities. It is all carefully planned out  
for efficiency, effective communication and  
care of subjects and participants.

However, there is considerable complexity which is  
not seen at first. The stakeholder map on the  
right of this page, for example, does not  
include weather, plants, wild animals or parasites.

Some relationships (sheep and worm, family and  
friends caring sheep) did not become apparent  
until later visits.



Reading on Design in the context of At Birnhill House

Burton (2015, p.156) stresses the importance of 'defensible space' and the need for a clear differentiation between public and private space for well-being. Birnhill does not easily fit into these traditional boundaries - it is a private space with a boundary perimeter but one which can be crossed. It could be classed in its entirety as a 'soft edge' or transition zone, being an area which helps people navigate to and from private to public, personal to commons.

There are a complex set of relationships between various categories of individuals and animals at Birnhill. Applying Ulrich's theory of convivial society to these relationships would be helpful in the design of activity programmes. The ethical design of technologies and activities cannot rely solely on a view of the individual (which ignores society as a whole), nor can it be purely holistic (which traditionally ignores many agents, especially non-human agents).

Conviviality is a theory linked to systemism, which aims to overcome issues with individualism and holism, and is linked to ethical design. Systemism acknowledges the dynamic nature of complex inter-relationships which can be mutually

shaped by participants. As Koshinen (2016, p.23) explains, conviviality relies on creating a sense of belonging, and creates 'new forms of community interaction that helps [sic] people cope with everyday life'. It works well if combined with molecular design, where the aims are not to shape a community or determine 'radical outcomes from the outset, but to work through small scale interventions 'to produce a social good' (p.27).

Voiron (2018) argues that social change affects the individual as well as society. Birnhill's outcomes of improved well-being for individuals depend on the well-being of all the agents - animal and human - involved. Ribó (2018) considers the concepts of conviviality in the context of Andean cultures (appropriately for Birnhill's, *Alpaca*) and highlights the importance of living well in a way that is good and generous and which benefits the whole social group, placing human responsibility with each other and with nature before material welfare.

The complex set of relationships between animals and humans at Birnhill would lend itself to more radical theories of ecological thinking. An example is the 'ecological animism'

proposed by Plumwood (Thomson, 2012, pp. 77-90). This 'encourages a dialogical ethics of sharing and negotiation of partnership between humans and animals' and sees humans and animals as 'mutually amenable for respectful use in conditions of equality'. Piny de la Bellanosa (2017) considers the ethics of care and sees care as embedded in the most mundane of actions required for maintenance and repair of daily life. This applies particularly to the caring animal activities carried out by volunteers, but could also be applied to the wider ecosystem at Birnhill, and the preservation and transfer of handwork and craft skills in the activity programmes.

Ribó, X. (2018) 'Uma Amapá de Living well together: a contribution to Biocultural Conversation' in Rozzi, R. et al. (eds.) From Biocultural Homogenization to Biocultural Cosmopolitanism (Springer)

Burton, L. (2015) 'Matters well-being and the influence of place' in Burton, L. (et al.) (eds.) The Routledge Handbook of Planning for Health and Well-being, (London: Routledge) pp. 150-161

Ulrich, J. D. (1973) Tools for Conviviality (London: Corgi and Boyes)

References (continued)

Koskinen, I. (2016) 'Agnostic, convivial and conceptual aesthetics in new social design', Design Issues 32(3), pp. 18-29.

Purwood, V. (2012) 'Animals and ecology: towards a better integration' in Shannon, L. (ed.) The Eye of the Goliath (Canberra: ANU Press), pp. 77-90.

Pliny de la Bellalosa, M. (2017) Matters of care: speculative ethics in more than human worlds (Minneapolis: University of Minnesota Press) [from review by Petterson]

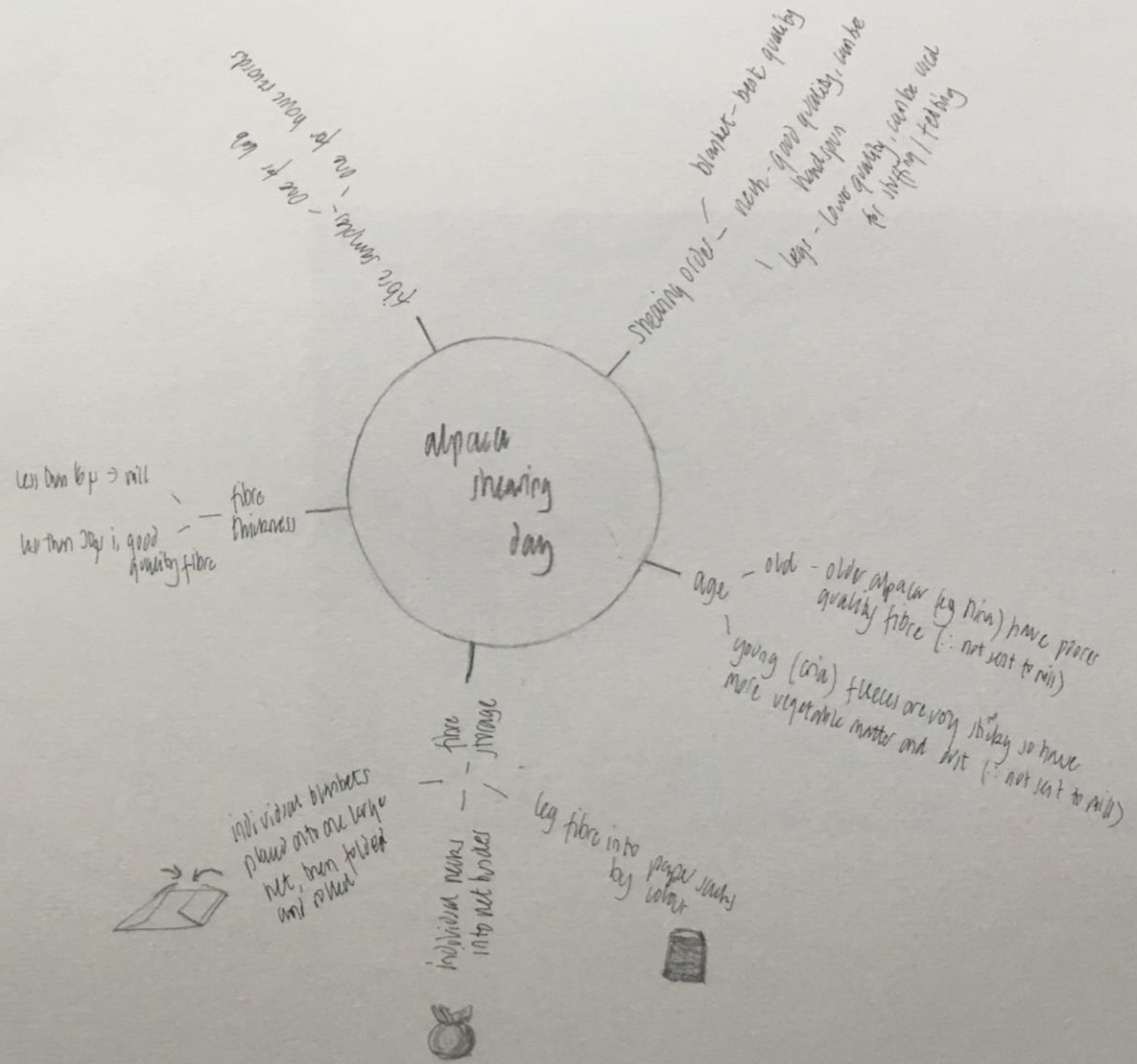
Voinea, C. (2018) 'Designing for conviviality', Technology in Society 52, pp. 70-78.



10th alpaca shearing day



Alpaca do not enjoy being sheared

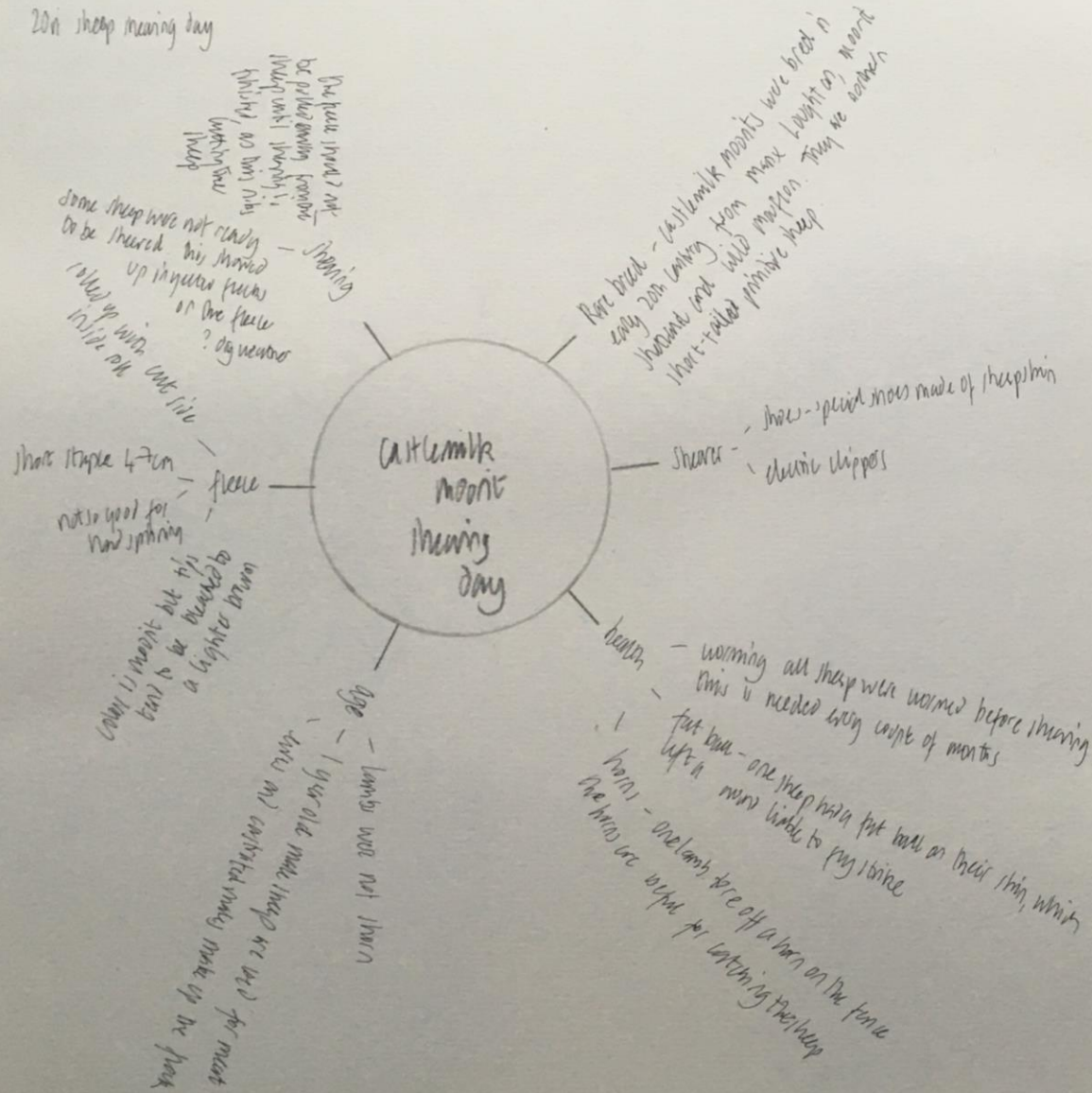


PROCESS

move alpaca into individual pens | put harness on | lead to shed | strap down | shear : blanket, neck, legs & take fibre sample from middle of blanket | clip toes | microchip | release alpaca | clean up and sweep floor | roll blankets into net | break neck fibre into nets : white net = mill, blue net = handle | basic processing | keep into paper sacks by colour | move fibre into barn for storage |

This was a simple process, but it needed to be done quickly and efficiently to minimise stress for the animals.

20th sheep shearing day



**PROCESS**

round up sheep (took some time) into pen | catch one (horns are useful) | worm with correct dose (low for lambs) | shear (except lambs) | release | roll up fleeces

Fibre week:

18 vii fibre processing for spinning

21 vii art batts, drop spindle spinning and wheel spinning

22 vii drop spindle spinning and weaving for children



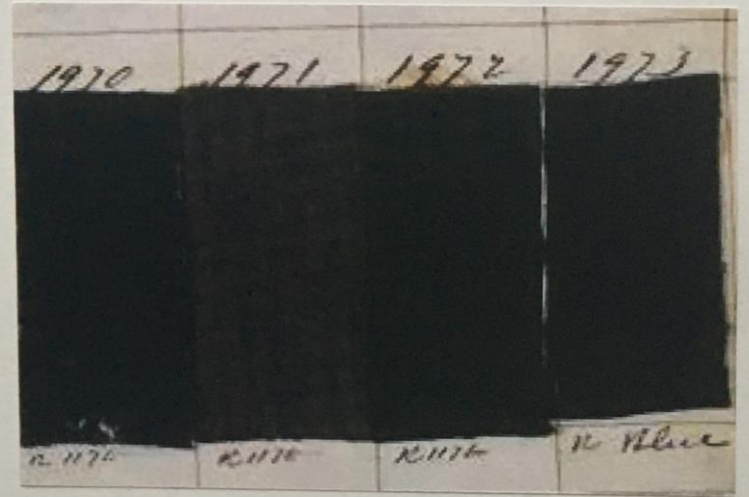
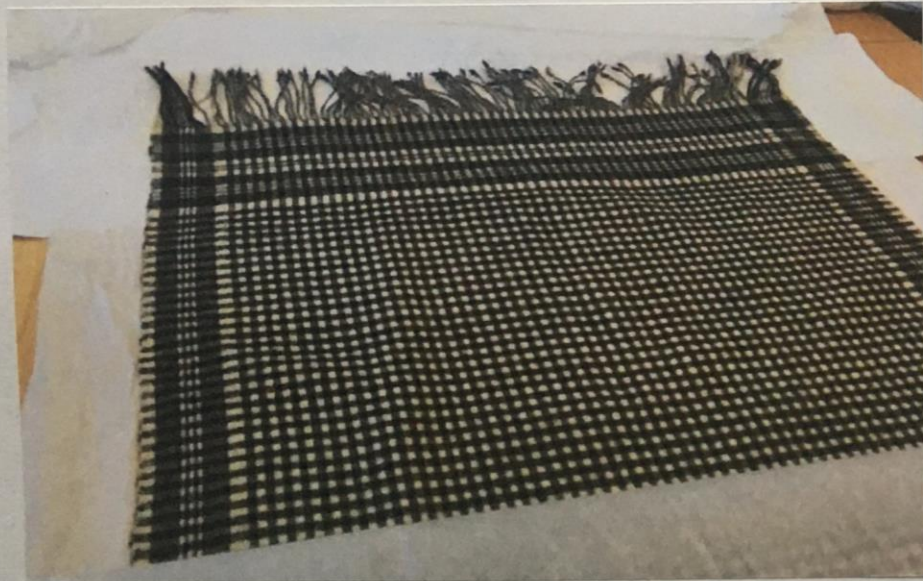
Three colours of merino carded together and spun on a drop spindle. The top sample is stripes, the bottom one is two ply.



Alpaca and cashmere, worsted carded and spun on a drop spindle.

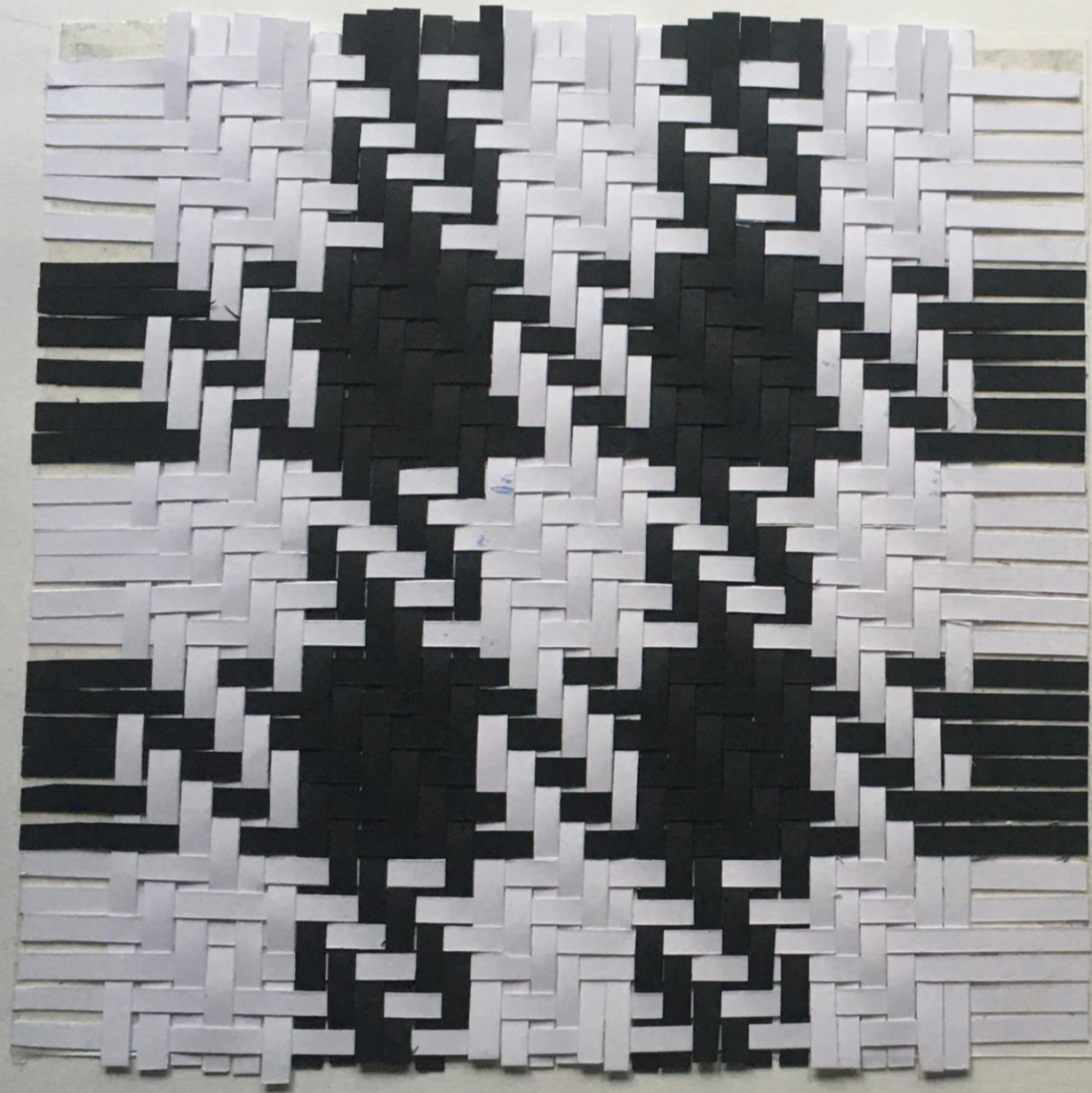


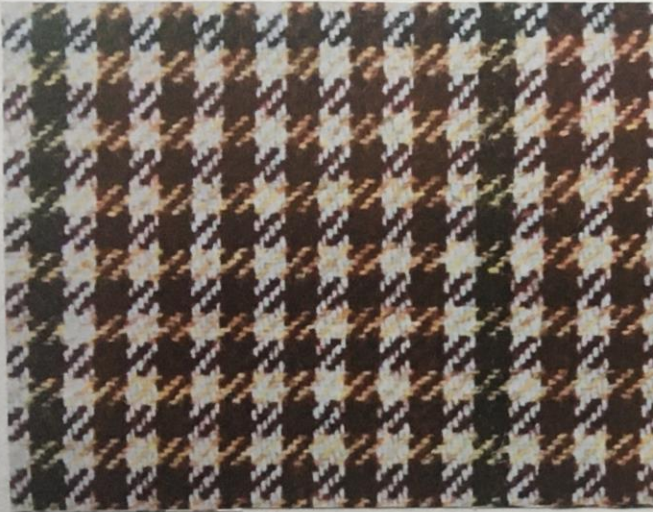
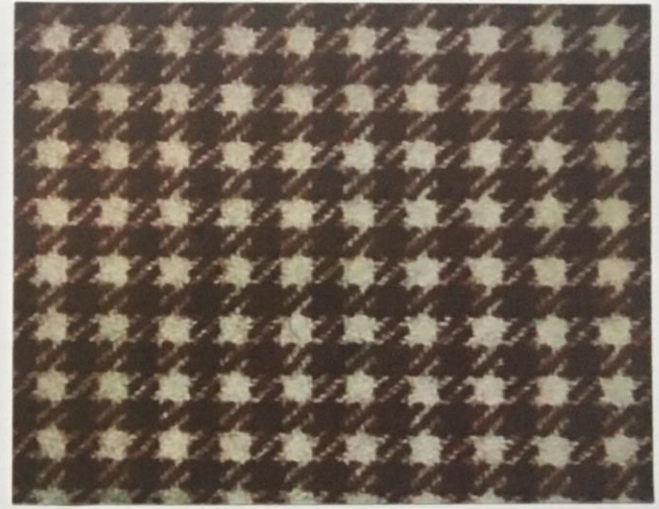
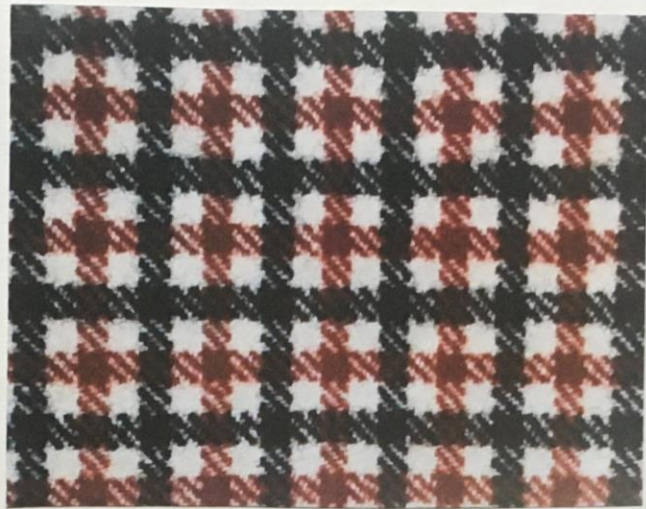
Three wools of merino (green, grey and red) carded and spun on a drop spindle. The stripes has a strong side-by-side merging - the two ply sample is more stable.



AP.1. early 19th century shepherd's plaid, Lee of Galabrids

Ghb/1/1/1 1836 pattern book, JxA Ogilvy





Interpretations of Shepherd's Check in estate tweeds:

Glentworth  
circa 1834-1841

Loiquah  
before 1846

Ing  
circa 1846

Balmindale  
before 1825

Protonish  
1905

Wenquich  
circa 1960



- 1821 Joseph Water drawing of Walter Scott
- 1823 William Bewick drawing of James Hogg
- 1824 William Allan painting of James Hogg
- 1825 fashion for shepherd check for wraps for gentlemen
- 1826-1829 Scottish market for greys, drabs and blues crashed because Northwiche produced these wools more cheaply
- 1827 shepherd check first appears on browsing
- 1830 Sir J Watson Gordon portrait of James Hogg
- 1830 enquiry from London for shepherd check for browsers
- 1834 red over check for Glenfeshie
- 1843 border appeared on browser seams
- 1846 large checks appeared
- 1849 high point of fashion for shepherd check
- 1850 'mixture' wools first appeared, leading to 'estate tweeds'



Campbell's of Beath

The shepherds of the borders had for long worn plaids of a black and white checked design and around 1825 gentlemen began to wear the so-called shepherd check check for wraps, a fashion which reached its high point around 1848. The idea of using the design for browserings is given locally to Sir Walter Scott and to his popularity of it in London, but there are other claimants, notably James Locke and Lord Brougham. The pattern as a browsering first appeared in 1827 but the real boom came when it was introduced to Oxford and Cambridge. The demand for it outran supply in these universities. Prohibitive being, a well known Edinburgh merchant in wools records how in 1830 he had an enquiry from London "for a coarse woollen black and white checked stuff made in Scotland and expected to be wanted for browserings" - cutting a small piece from the seam of a cloth, it was forwarded. An order for six pieces was received and this may have been the first Scotch tweed sent to London in bulk.

The early shepherd check browserings were made with home grown wools in well made medium texture (warm in winter, cool in summer) and were a delightful change from the milled wemmies (2/2 hair) previously worn. The feel was easy compared to non-elastic ducks, linen and Indian nankeen. The great impetus in travelling during the peaceful time after the French war found Scotch tweed adaptable to changing climatic conditions. The white of the cheviot wool was often so impure that the pieces came up very dull in

appearance and more difficult to market, but some ingenious thought by the manufacturers to overcome this defect. Two of the early methods concerned dipping the cloth in a brown dye liquor or in the hair dye vat giving a brown and black check or a light blue (lavender) and black check. When the checks ran their course, they were succeeded by the same colorings in twills and other patterns. It is claimed that the idea of twisting together two differently coloured threads, which is common everywhere today, began at Tullibrough.

JA Macdonald and TA Hallie 'The Rise and Growth of the Tweed Industry in Scotland' (n.p., n.d.) (28.2867701) pp 15-17

'The Border shepherd check was modified to provide the foundation for "District checks"..., and such multiplication was made easier by the fact that the Border plaid had been taken north by shepherds towards the end of the 18th century with the extension of sheep farming in the Highlands.'

Checks reflecting the influence of the shepherd check:  
 Glenfeshie, Ing, Ballindalloch of Strathpey,  
 Ardberish, Glenquhach, Coigach

The shepherd, Glenquhach and Coigach checks 'dominated the designing of the vast bulk of ordinary checked woollen cloths'

G. Galtin The Tweedmakers. A History of the Scottish Fine Woollen Industry 1600-1914 (Newton Abbott: David and Charles, 1971) pp. 71-75

1932	1933	1934	1935	1936	1937	1938
1939	1940	1941	1942	1943	1944	1945

A page from a sample book of the firm  
 J & A Ogilvy (G16/1/11).

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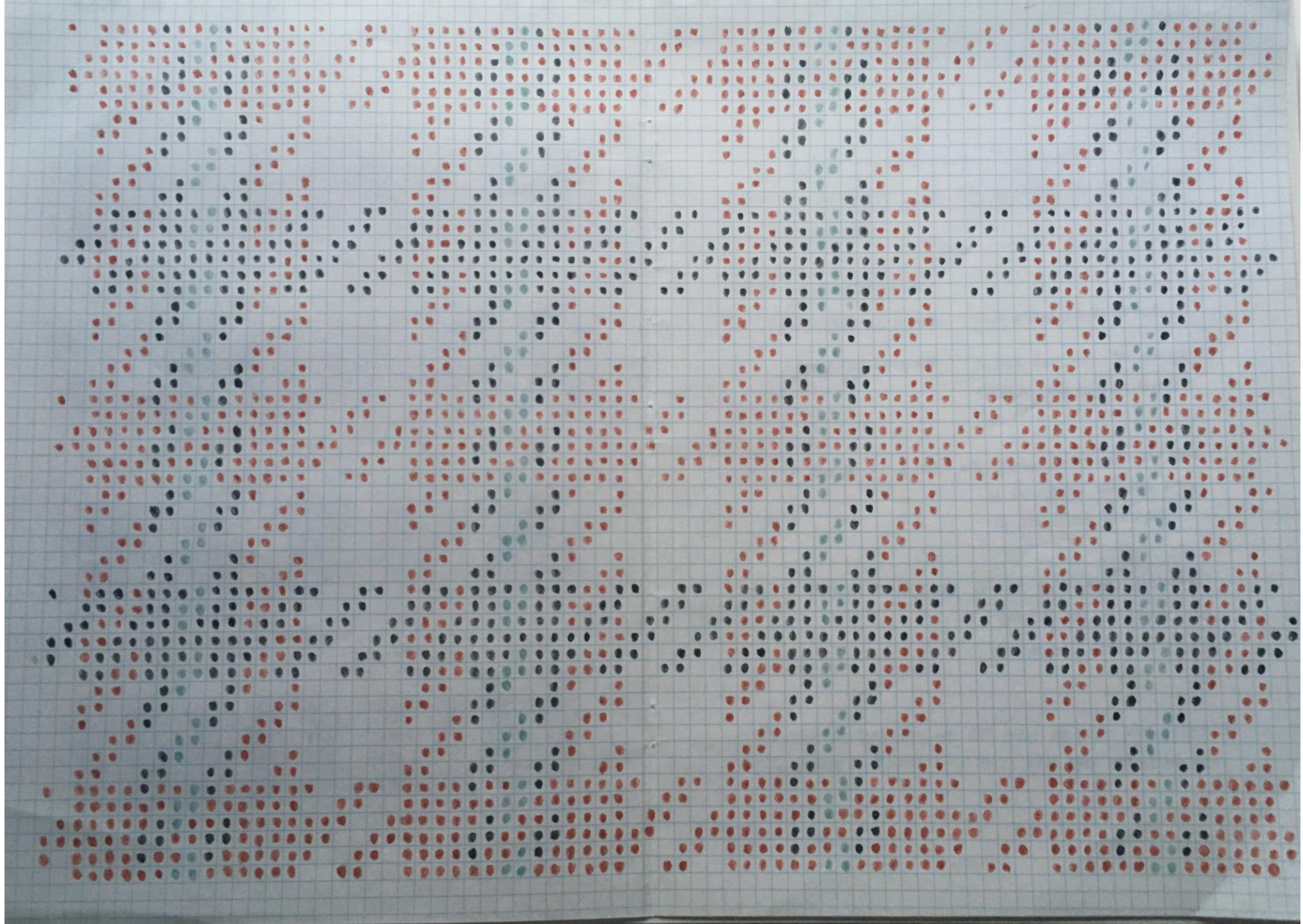


Yarn wraps made using commercial yarn to approximate to alpaca colours with the addition of pale blue to represent the eye colour of the Birkhill cats.

These wraps are based on:

- Glenelg and Riemore - shepherd check with an overcheck
- Snarped and Westquinn - shepherd check with two coloured overcheck (only one colour appears in the vertical yarn wrap)
- Fannich - a check with stronger checks - blue and black in the vertical, and strong black on very strong horizontal
- Mamore - alternating dark and light checks, with single yarns of blue to give a subtle overcheck

The wraps with three colours are more muted and quiet, which doesn't suit the character of Birkhill. Four colours gives better contrast and energy.





Washed alpaca fibre



Corded alpaca fibre





combed Castlemore moiré fleece - the staple length is short, and it was too difficult to card. Combing worked at aligning and separating the fibres



this thick, oily, malle wool has so far defied my attempts to spin it on my drop spindle.

