

Variation in the Density of Surface Lithic finds in Deeside.

Introduction

The search for traces of Mesolithic Age occupation of the valley of the River Dee in Aberdeenshire has been going on since at least 1906 (Paton & Lacaille, 1936). Although some limited areas of excavation have been undertaken, notably by James Kenworthy in 1978-81 (Wickham Jones et al, 2016), the principal method employed has been field walking in search of lithics lying on the surface of recently ploughed fields.

Published data has been accumulating over the last 50 years or so beginning with Dr J C Grieve in 1972-75 (Daly 2001), followed by Dr Jane Kenney during 1990-93 (Kenney 1993), Paul Gibson in 1998-1999, Dr Tim Phillips in 2000 (Bradley 2005), The Over Fifties Archaeological Research Society during 2008-2012 (<http://www.stoneagecrathes.com/index.htm>), Sheila Duthie during 2000-17, and the Mesolithic Deeside project from 2017 up to the present. A total of 151 fields have been surveyed to date and the total area covered is 897.45 ha (2217 acres).

This short note is intended to draw together all the information from the above sources in order to compare the densities of the various lithic scatters that have been surveyed and to see how they may relate to the landscape of the valley of the River Dee.

Data

Table 1 lists the areas, numbers of finds and numbers of finds per hectare for all fields for which data is available. The figures are for all finds of lithics regardless of period or type. Some of the fields listed in Table 1 have been surveyed and had the surface lithics collected on more than one occasion. The total number collected in these fields will therefore be much higher than in comparable fields which have been walked only once. For the sake of making a relevant comparison of the surface densities the data shown in the Finds and Finds/ha column are taken from only the most recent survey of each site.

It should be noted that the figure for finds per hectare is a fairly crude statistic. The division of the landscape into individual areas is derived from current field boundaries which probably do not relate to the landscape features of the prehistoric periods. Some sections of any given field will have a higher or lower density than the mean figure. The mean figure does not give an indication of the local pattern of distribution. Some fields may have a relatively even scatter of lithics over the whole area while another may have a dense cluster in one corner and a very low density over the remainder of the field, yet both may have the same mean density.

The fields surveyed by the majority of the authors listed above were walked at close spacing to achieve total coverage of the ploughed area. However the fields around Tarland walked by T Phillips and his team in 2000 were walked at 20m spacing. Assuming each walker covered a 2m wide strip, this amounts to a 10% sample. The total number of finds for each field in this survey has been multiplied by 10 in order to give a fair comparison with fields walked at 100% coverage. It should also be noted that the majority of the finds from around Tarland were classified as from the Neolithic period and only 5% of the finds were classified as Mesolithic (Bradley 2005, 89)

It should also be noted that Paul Gibson amalgamated his collections from two fields, Laird's Cast 1 and Laird's Cast 2 and later estimated that some 85% of the assemblage had come from Laird's Cast 1. His estimated figures are used in Table 1.

ID	Area	No Finds	Finds/ha	Name
LCST1	2.74	1544	563.30	Laird's Cast 1
NM1	7.44	2956	397.31	Nether Mills 1
NM4	8.55	2805	328.07	Nether Mills 4
EP1	9.62	2983	310.08	East Park 1
NM3	8.69	2615	300.92	Nether Mills 3
HH2	2.21	239	108.14	Heugh Head 2
LCST2	3.15	272	86.35	Laird's Cast 2
MC	6.34	506	79.81	Milton Cottaage
BB1	4.89	346	70.76	Balbridie 1
EB1	7.3	440	60.27	East Balbridie 1
EB2	1.18	56	47.46	East Balbridie 2
NM2	8.1	362	44.69	Nether Mills 2
ESTT7	5.74	230	40.07	Easttown 7
RANNA4	6.22	230	36.98	Ranna 4
RANNA3	3.79	140	36.94	Ranna 3
MCB	10.86	364	33.52	Maryculter Bridge
ESTT5	6.6	210	31.83	Easttown 5
MHD2	22.71	680	29.94	Millhead 2
FD1	1.22	35	28.69	Findrack 1
RANNA2	4.39	120	27.33	Ranna 2
KON1	7.63	205	26.87	Kincardine O'Neil 1
ALAM2	4.04	100	24.75	Alamein 2
ESTT4	5.03	120	23.86	Easttown 4
RANNA1	6.12	140	22.88	Ranna 1
COULL3	3.51	80	22.79	Mains of Coull 3
UR1	7.79	150	19.26	Upper Ruthven 1
WTN1	4.58	88	19.21	Westerton 1
EB3	1.04	18	17.31	East Balbridie 3
PT1	5.25	90	17.14	Potarch 1
ESTT1	5.86	100	17.06	Easttown 1
COULL2	2.56	40	15.63	Mains of Coull 2
KON2	4.05	62	15.31	Kincardine O'Neil 2
WH1	0.7	10	14.29	Westholme 1
PS2	3.02	41	13.58	Parks Smiddy 2
ESTT2	4.46	60	13.45	Easttown 2
PS1	4.66	62	13.30	Parks Smiddy 1
NM7	3.1	41	13.23	Nether Mills 7
WDCH7	6.88	90	13.08	West Davoch 7
ESTT3	4.73	60	12.68	Easttown 3
COULL1	8.76	110	12.56	Mains of Coull 1
WDCH4	12.04	150	12.46	West Davoch 4
ALAM3	4.84	60	12.40	Alamein 3
RANNA5	2.54	30	11.81	Ranna 5

ID	Area	No Finds	Finds/ha	Name
WDCH10	9.65	110	11.40	West Davoch 10
KON3	2.51	28	11.16	Kincardine O'Neil 3
CRASK1	6.28	70	11.15	Craskins 1
MHD3	5.54	60	10.83	Millhead 3
CULSH3	5.64	60	10.64	Culsh 3
WD2	6.97	73	10.47	Wester Durris 2
RANNA9	9.02	90	9.98	Ranna 9
WD1	6.75	67	9.93	Wester Durris 1
MHD1	9.49	90	9.48	Millhead 1
GLHF	1.49	14	9.40	Glebe House house field
WH4	3.27	30	9.17	Westholme 4
MHD4	6.78	60	8.85	Millhead 4
CRASK4	6.8	60	8.82	Craskins 4
WDCH5	10.43	90	8.63	West Davoch 5
WH5	1.21	10	8.26	Westholme 5
CRASK2	6.09	50	8.21	Craskins 2
RANNA6	12.25	100	8.16	Ranna 6
WFD2	7.68	60	7.81	Wardfold 2
ALAM4	6.42	50	7.79	Alamein 4
WDCH3	9.24	70	7.58	West Davoch 3
CNB	9.82	71	7.23	Nether Balfour
ESTT6	5.56	40	7.19	Easttown 6
CH1	3.75	26	6.98	Candieshill 1
NM6	3.44	23	6.69	Nether Mills 6
CULSH2	7.89	50	6.34	Culsh 2
MWC2	4.73	30	6.34	Mill of Wester Coull 2
KGE3	6.4	40	6.25	Mains of Kincaigie 3
WDCH6	17.71	110	6.21	West Davoch 6
NM5	7.47	46	6.16	Nether Mills 5
TAB3	3.38	20	5.92	Titaboutie 3
BE1	6.52	38	5.83	Borrowstone 1
WD3	5.45	31	5.69	Wester Durris 3
NETN2	8.91	50	5.61	Netherton 2
ALAM1	5.36	30	5.60	Alamein 1
KNP1	5.84	32	5.48	Knappach 1
WH2	1.84	10	5.43	Westholme 2
WH3	1.9	10	5.26	Westholme 3
TAB2	5.8	30	5.17	Titaboutie 2
WOLD6	6.19	30	4.85	Woodfield 6
WDCH2	10.63	50	4.70	West Davoch 2
WDCH9	13.54	60	4.43	West Davoch 9
MTN1	3.41	14	4.11	Mill of Kirkton 1
WOLD8	5.11	20	3.91	Woodfield 8

ID	Area	No Finds	Finds/ha	Name
WOLD7	5.14	20	3.89	Woodfield 7
RANNA7	5.53	20	3.62	Ranna 7
CRASK3	2.82	10	3.55	Craskins 3
KGE2	2.91	10	3.44	Mains of Kincaigie 2
TAB6	5.85	20	3.42	Titaboutie 6
WOLD5	2.94	10	3.40	Woodfield 5
WOLD2	11.86	40	3.37	Woodfield 2
NETN4	3.06	10	3.27	Netherton 4
KGE1	15.51	50	3.22	Mains of Kincaigie 1
KGE4	3.12	10	3.21	Mains of Kincaigie 4
RANNA8	6.26	20	3.19	Ranna 8
WFD1	6.37	20	3.14	Wardfold 1
IR	4.67	14	3.00	Invergelder
MK1	2.74	8	2.92	Mains of Kinmundy 1
WFD4	3.46	10	2.89	Wardfold 4
TAB4	3.58	10	2.79	Titaboutie 4
CULSH1	7.39	20	2.71	Culsh 1
EC	3.06	8	2.61	Ettrick Croft
WOLD1	3.83	10	2.61	Woodfield 1
WDCH11	11.93	30	2.51	West Davoch 11
WFD3	15.98	40	2.50	Wardfold 3
UBDP	7.28	18	2.47	Upper Balfour Dam Park
WOLD9	4.1	10	2.44	Woodfield 9
KINC1	8.43	20	2.37	Kinclunie 1
NETN5	4.37	10	2.29	Netherton 5
UM2	6.56	15	2.29	Upper Mills 2
COULL4	4.44	10	2.25	Mains of Coull 4
CC1	12.5	28	2.24	Crathes Castle 1
UM1	2.29	5	2.18	Upper Mills 1
TAB5	4.74	10	2.11	Titaboutie 5
TAB1	4.98	10	2.01	Titaboutie 1
WDCH8	10.19	20	1.96	West Davoch 8
MWC5	5.15	10	1.94	Mill of Wester Coull 5
BTN1	1.58	3	1.90	Brigton Farm 1
MS1	3.89	7	1.80	Mossie 1
UBS	4.82	8	1.66	Upper Balfour Steading
NETN1	6.47	10	1.55	Netherton 1
NB1	8.06	12	1.49	Nether Balfour 1
UB22	9.46	14	1.48	Upper Balfour 22 Acre
BW1	2.15	3	1.40	Brigton West 1
WDCH1	8.34	10	1.20	West Davoch 1
UBW	7.23	8	1.11	Upper Balfour Woods
BH1	4.21	4	0.95	Balnacraig 1

ID	Area	No Finds	Finds/ha	Name
BH2	1.11	1	0.90	Balnacraig 2
HH1	2.3	2	0.87	Heigh Head 1
WD6	1.27	1	0.79	Wester Durris 6
WDE	2.83	2	0.71	Wester Durris East
MTN2	1.61	1	0.62	Mill of Kirkton 2
KOD2	5.18	3	0.58	Kirkton of Durris 2
GLCh	4.2	2	0.48	Glebe House church field
KOD1	3.3	1	0.30	Kirkton of Durris 1
WD11	5.64	1	0.18	Wester Durris 11
UB30	5.98	1	0.17	Upper Balfour 30 Acre
NM9	11.32	1	0.09	Nether Mills 9
BE2	12.33	1	0.08	Borrowstone 2
COULL5	2.62	0	0.00	Mains of Coull 5
CRD1	10.22	0	0.00	Crossfold 1
CRD3	4.59	0	0.00	Crossfold 3
CRD4	3.73	0	0.00	Crossfold 4
GH1	3.27	0	0.00	Greenhaugh 1
MWC1	4.41	0	0.00	Mill of Wester Coull 1
MWC3	5.09	0	0.00	Mill of Wester Coull 3
NETN3	3.91	0	0.00	Netherton 3
WOLD3	10.36	0	0.00	Woodfield 3
WOLD4	3.84	0	0.00	Woodfield 4

Table 1. The Density of Surface Lithic Finds

It is evident from the data in Table 1 that there are five fields which have a distinctly higher mean density than all the others surveyed to date. These are Invercannie 1, Nether Mills 1, 3 and 4 and East Park 1. Their mean densities range from just over 300/ha to 560/ha. After that there is a sudden drop in mean density to Heugh-head 1 at 108/ha then another 31 fields ranging from 31.9/ha to 79.8/ha. A further 32 fields range from 10/ha to 29.9/ha. Below that there are a further 79 fields ranging from 10/ha down to 1/ha and 23 fields with less than 1 lithic per ha.

Density Category	No in category	Area (ha)	% of Total Area
300-560/ha	5	37.04	4.1
30-110/ha	12	66.38	7.4
10-29/ha	32	178.1	19.8
1-9/ha	79	502.61	56.1
<1/ha	23	113.32	12.6
Totals	151	897.45	100

Table 2 . Density Categories by Area

Table 2 shows that the highest two categories occupy only 11.5% of the total area surveyed and that around 69% of the area surveyed has less than 10 lithics per hectare. Fields with no finds account for 5.8% of the total area and most of these are in low lying areas which may have been wetland or shallow lochs in earlier eras.

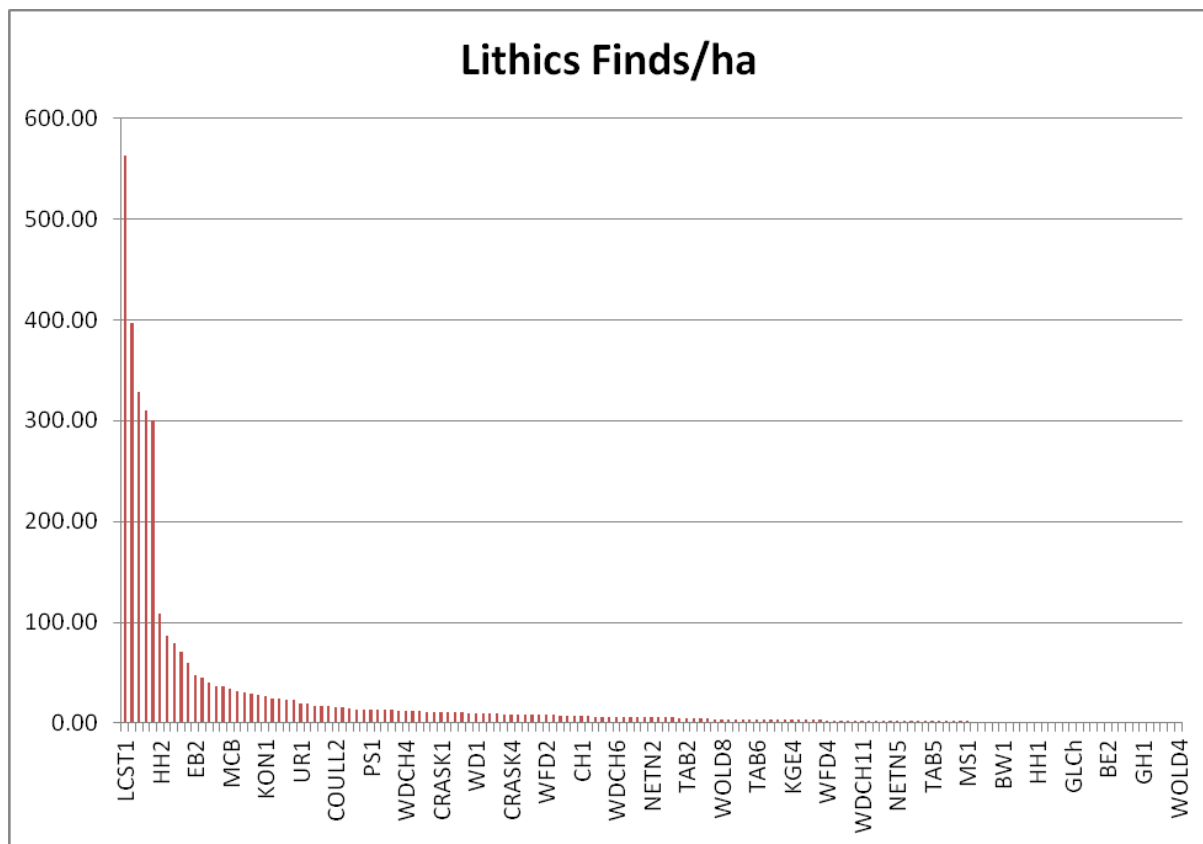


Figure 1. The distribution of lithics finds density.

Figure 1 illustrates the spread of surface densities over all the fields surveyed to date and emphasises the rarity of large dense surface scatters.

Maps 1 and 2 show the geographic distribution of the different density categories. The areas surveyed to date have been concentrated in lower and mid Deeside. Only two small fields west of Dinnet have been walked and both produced low numbers of finds. They are not shown on the maps.

Discussion

It is obvious that the highest density category is clustered around Inchmarlo, just west of Banchory, Nether Mills in the Crathes area and East Park near Drumoak, all on the north bank of the River Dee. The second highest density category is mainly clustered around two centres, one at Crathes and the other around Tarland, but with outliers at Maryculter Bridge and at Heugh-head, just west of Aboyne.

The Tarland cluster comprises almost exclusively Neolithic and Bronze Age lithics and represents settled occupation of the land by farming communities. The highest concentrations are in sheltered, south facing locations between the 150m and 300m contours. The lowest concentrations were on

lower, presumably boggy, ground adjacent to what had been a loch until it was drained in the 18th century.

The higher concentrations in lower Deeside comprise principally Mesolithic Age material and are therefore indicative of repeated visits to certain sites by nomadic people over a very long period of time. The five fields in the densest category are all located on the north bank of the River Dee. With the exception of Laird's Cast, these are all sites that were identified by Dr J C Grieve in the nineteen seventies and have been revisited several times in more recent years. The available evidence indicates that average lithic density decreases with distance from the River Dee and also with distance east or west of the Banchory/Crathes.

Most of the second-most dense category sites are either immediately adjacent to the higher category sites or are nearby on the south bank of the river. One site in this class lies further downstream at Maryculter Bridge. Crathes and Maryculter Bridges are both current crossing points of the River Dee and may have been significant in earlier eras. Travellers crossing the range of hills known as The Mounth, which separates Deeside from the Stonehaven area, would likely travel north following the River Cowie along the line of the present day Slug Road, the A957. This passes through the gap between Cairn-mon-earn and Craigbeg and descends into the valley of the Dee at Crathes. The alternative route, which was used by the Roman army, is to follow the Elsick Mounth drove road which descends into the Dee valley at Maryculter. The concentrations of lithics found at these crossing points indicates that the traditional routes over The Mounth may have been important pathways in the Mesolithic Age. There is another traditional fording point at Kincardine O'Neil but the lithic density there is in the 10-29/ha range which may indicate that this crossing was less well used during the Mesolithic period.

The other outlying field in the 30-110/ha category is some 25km upstream of Crathes at Heugh-head, some 2km west of Aboyne. This is not sited immediately on the bank of the river but is perched above a steep bank which leads down to level river-side fields. However the presence of an old channel at the foot of the bank indicates that the River Dee may well have flowed through this channel in the Mesolithic period and this site would have been very close to the river.

The obvious association between higher lithic density and proximity to the main stem of the River Dee indicates that Mesolithic people tended to follow close to the river in their wanderings up and down the valley. It is also possible that they used boats on, at least, the lower stretches of the river. However this has to remain as conjecture as it is extremely unlikely that any evidence for this form of transport will be found today.

From the data gathered to date it appears the future surveys will have a higher chance of discovering dense scatters if searches are concentrated close to the banks of the main river. The valley upstream of Dinnet has seen almost no survey effort to date and may reward further exploration. In addition, there may be more discoveries to be made in the valleys of the larger tributaries such as the Water of Feugh.

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<http://www.stoneagecrathes.com/index.htm> Visited 24/06/2019

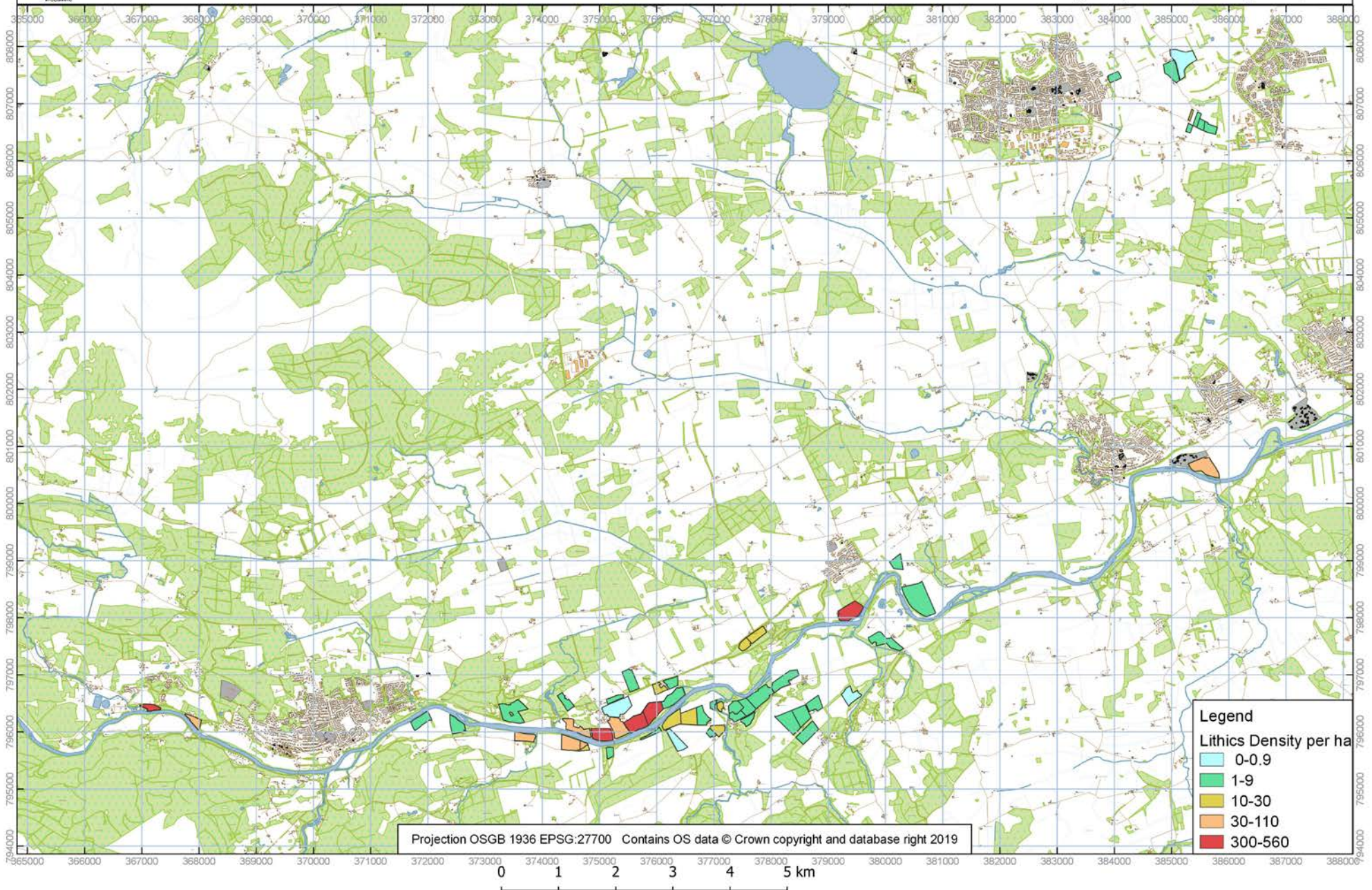


Lithics Densities Lower Deeside

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Data Sources
OFARS, H & D Sabnis, P Gibson
Mesolithic Deeside, T Phillips
S Duthie, J Kenney, J Grieve,





Lithics Densities Mid Deeside

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Data Sources
OFARS, H & D Sabnis, P Gibson
Mesolithic Deeside, T Phillips
S Duthie, J Kenney, J Grieve.

