

AGRICULTURAL RESEARCH COUNCIL

Soil Survey of England and Wales

The 1:25,000 mapping programme - 1969

by

D.C. Findlay

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Westbury-on-Trym,
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SUMMARY

In 1967 a programme was prepared for the production of 1:25,000 soil maps in selected areas of the counties of England and Wales. The areas were chosen for their representative geomorphological and pedological characteristics within each county, as well as for their current interest to the agricultural industry. When surveyed and considered with work already done, they will form the basis for the construction of county, regional and national soil maps.

During discussion of the programme later in 1967 it was felt that the proportion of the country to be covered by detailed mapping was high for a sampling technique. It has therefore been reviewed by Regional Survey Officers and a reduction made in the numbers of sheets to be mapped. The inclusion of any sheet can only be finally decided when the area is reached, however.

The fundamental scientific basis for the programme remains as it was in 1967. In assessing priorities, however, user organizations have been consulted to take account of possible shifts in the emphasis of interest in the agricultural industry.

INTRODUCTION

In 1966, the Soil Survey Research Board agreed that to map the soils of England and Wales, selected 38 sq. mile areas in each county will be surveyed, and maps published at a scale of 1:25,000. The areas correspond to the Ordnance Survey 10 km x 10 km. Outline Edition 1:25,000 map series, and are selected to aid the production of county, regional and national maps, and for their agricultural interest.

During discussion of the programme in 1967 the proportion of the country that it was proposed to cover by detailed mapping was felt to be high for a sampling technique, and Regional Survey Officers have now reviewed, and reduced the numbers of, the sheets to be mapped.

This paper describes the priorities now being given to counties and lists for each the 1:25,000 O.S. map sheet areas selected for survey in the future. The interest shown by user organizations in many sheets is indicated.

AIM OF THE PROGRAMME

Much information is already available in several counties at a scale of 1:25,000, obtained during the 3rd Edition 1:63,000 programme. The aim of the present programme is to supplement what has already been done with detailed surveys of soils in selected areas of each county of England and Wales. The final objective is that the old work and the new, taken together, will be representative of the soils of each county as a whole, and of the country.

REGIONAL AND COUNTY DISTRIBUTION OF MAPPING

Tables 1(a) to 1(g) show for each county, arranged regionally the area that has already been surveyed in terms of "equivalent 1:25,000 sheets". These may be either an area corresponding exactly to an O.S. 1:25,000 sheet, or made up from parcels of land surveyed in several sheet areas of the county. The next column shows the number of additional 1:25,000 sheet areas needed to sample the land area adequately, and the third column gives the percentage of the total land area of each county that will have been covered by detailed mapping when the programme is complete. The average for the whole country will be 25 per cent.

Table 1(h)

Regional balances of past and future mapping.

Region	1:25,000 sheets surveyed	1:25,000 sheets proposed	Average coverage by Regions per cent.
South-West	32	23	23
South-East	27	30	22
East Anglia	14	21	30
East Midlands	8	29	20
West Midlands	24	18	32
Wales	52	30	40
Northern	39	34	19

Table 1(h) shows the balance, in each region, between mapping done and to be done and indicates the average mapping coverage for each region.

SELECTION OF SHEETS

All the 1:25,000 sheet areas to be covered in the revised programme have been chosen for their value in understanding the geomorphology and pedology of the soils in a county. User organisations have again been consulted, formally or informally, to find their actual or potential interest in each sheet. Four of the columns to the right in Tables 1(a) to 1(g) show the number of sheets that are also of immediate practical interest, mainly in agriculture. The final column in this group gives the total number of sheets selected in each county that are of interest industrially and administratively as well as scientifically. This figure will be useful in the future assessment of the priority to be given to a particular county within a region.

The priority now being given to each county within a region is shown on a 1, 2, 3 scale in the last column of the Tables. This is mainly a reflection of the staff position at present and in the immediate future, which is in turn much influenced by agricultural needs over the last 5 - 10 years.

Key letters and numbers for the sheets chosen are listed, by regions and counties, in Tables 2(a) - (g), with the interested user organizations.

REVIEW OF THE PROGRAMME

While the geomorphological and pedological basis of the programme is likely to need only minor infrequent changes in the light of advances in knowledge, it seems probable that emphasis in the agricultural industrial and other interests will change both inside and between counties. A continuing review of the sheets of interest to user organizations will therefore be needed. Present plans are for such reviews to be made every two years.

CONCLUSIONS

A revised programme for the production of 1:25,000 soil maps in selected areas of England and Wales is presented. The areas are chosen for their geomorphological and pedological characteristics and their current interest to the agricultural industry and in planning. When surveyed, they will form the basis for the construction of county, regional and national soil maps.

RECOMMENDATIONS

The paper is offered to the Board for information.

REFERENCE

CLARE, K.E. The 1:25,000 mapping programme. A.R.C., Soil Survey of England and Wales, Board Paper No. BP/11. Rothamsted Experimental Station, October, 1967. (The Survey).

Table 2.

Representative 1:25,000 map sheets for Counties
(a) South West Region

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A. L. S.	L. D. D.	C. P.O.
Gloucester	<u>SP.12</u>	x			
	<u>SO.82</u>	x	x	x	
Wiltshire	SU.05	x			
	ST.12				
Somerset	SS.93				
	ST.12	x			
	* ST.31/32	x			
Dorset	ST.40	x			
	ST.71	x			
	SY.69	x			
	* SY.97/98	x	x		x
Devon	ST.10	x	Completed		x
	<u>SX.65</u>	x			
	SX.47	x			
	SS.30	x		x	
	SS.61	x			
	SX.73 (part of Start)				
Cornwall	SW.53	x			
	SW.84	x			
	SW.96	x			
	SX.18	x			
	SX.26	x			
	* SW.71/2 (part of Lizard)				

Notes: (1) * Double numbers indicate coastal sheets or where parts of adjacent sheets give better coverage than a single sheet

(2) Underlined sheet numbers are those on which work is in progress or to be commenced in 1969

(b) South-East Region

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A. L. S.	L.D.D.	C.P.O.
Berkshire	-				
Buckinghamshire	SP.63 <u>SU.88</u> SU.98				
Oxfordshire	SP.30 SP.60	x x			
Hampshire	SU.30 SU.43 SU.73 SZ.48	x x x			x
Sussex	TQ.01 SU.92 TQ.40 TQ.42	x x x x	x		x x
Surrey	SU.94 SU.95 TQ.05 TQ.25	x x x	x x		
Kent	TR.04 <u>TQ.55</u> TQ.64 TQ.86 <u>TR.35</u>	Completed x x x x	x x x	x x x	x x x x
Essex	TQ.59 <u>TQ.99</u> TM.12 TL.80	Completed x x x	x	x x	x
Hertfordshire	TL.20 TL.22				
Bedfordshire	SP.93 TL.14				

(c) East Anglian Region

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.
Huntingdon	TF.10				x
	TL.28	x			x
	<u>TL.26</u>				
	<u>TL.38</u>				x
Cambridge	TF.41	x			x
	<u>TL.34</u>				x
	TL.54				x
Norfolk	TM.49	Completed			
	TF.60				x
	TF.82				
	<u>TG.13/14</u>				
	TG.00				
	<u>TG.31</u>				x(1)
	TM.28				
	TF.74				
	TF.61				x
TL.99					
Suffolk	TL.86				x
	TL.94				
	TM.26				
	TM.34/44				

Notes: (1) Also by Nature Conservancy

(d) East Midland Region

County	1:25,000 Map Sheet	Sheet needed by:				
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	
Derby	SK.08	Completed x				
	SK.17					
	SK.57 (see Notts)					
	<u>SK.32/4.2</u>					x
Leicester & Rutland	SK.40	x				
	SK.90	x				
	SK.69	x				
Lincoln Lindsey	TF.17	x		x		
	TF.45	x		x		
	TF.28	x		x		
	TF.39	x		x		
	SK.99	x		x		
	SE.80	x		x		
	TA.00	x		x		
	TA.11	x		x		
	Kesteven	SK.95	x		x	
		TF.04	x		x	
		TF.13	x		x	
		<u>TF.16</u>	x		x	
	Holland	TF.21	x		x	
		TF.34	x		x	
		TF.42	x		x	
	Northampton	SK.54	x	x		
SK.97		x	x			
TL.08		x	x			
Nottingham	SK.57	x				
	SK.66	Completed				
	SK.78	x				
	<u>SK.85</u>	x				

(e) West Midlands Region

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.
Hereford	SO.52	Completed	x		
	<u>SO.33</u>				
	SO.74	x	x		
	<u>SO.53</u>	x	x		
Worcester	SO.85	x	x		
	<u>SO.87</u>	x			
	SP.05	x	x		
Shropshire	SJ.60	x			
Warwick	SP.29	x			
	<u>SP.36</u>	x	x		
	SP.47	x	x		
	SP.48	x	x		
Stafford	SK.00	x	x		
	SK.05	x			
	SK.10	x	x		
	SK.12	x	x		
	SJ.82	x	x		
	SO.89	x			

(f) Principality of Wales (South)

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.
Glamorgan (part sheets to form com- posite map of Gower Peninsula)	SS.48/49	x			
	SS.58/59	x			
Monmouth	-				
Brecon	-				
Cardigan	SN.24	x	x	x	x
	SN.45	x	x	x	x
Pembroke	<u>SM.90/91</u>	x	x		x
	<u>SN.03</u>	x			
	SN.11	x	x		x
Carmarthen	SN.33	x		x	
	<u>SN.41</u>	x		x	
	SN.50	x	x	x	x
	SN.52	x		x	
	SN.61		x	x	x
	SN.72	x		x	
	SN.74	x		x	

(f) Principality of Wales (North)

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.
Merioneth	SH.52	x		x	
	SH.62	x		x	
	SH.71	x		x	
	SH.74	x		x	
	SH.93	x		x	
Montgomery	SH.91	x		x	
	SJ.21	x		x	x
	<u>S0.09</u>	x		x	x
	S0.19	x		x	x
Radnor	S0.05	x		x	
	S0.14	x			
	S0.26	x			
Caernarvon	-				
Denbigh	SJ.12	x		x	
	SJ.24	x		x	
	SJ.35	x		x	x
Flint	SJ.17	x		x	x
Anglesey	-				

(g) Northern Region

County	1:25,000 Map Sheet	Sheet needed by:			
		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.
Lancashire	-				
Cheshire	<u>SJ.65</u> SJ.67 SJ.37				X X
Yorkshire (West Riding)	<u>SE.60</u> SE.36 <u>SD.85</u>	X			
Yorkshire (East Riding)	SE.76 <u>SE.74</u> SE.85 TA.14 SE.87 TA.05 TA.22	Completed X			X
Yorkshire (North Riding)	SE.65 SE.47 SE.28 NZ.40 SE.67 SE.88	Completed X			
Durham	NZ.33 NZ.21 NZ.24				X
Northumberland	NU.11/21 NU.13 NT.93 NY.89				
Westmorland	NY.62 <u>SD.58</u>				
Cumberland	NY.53 NY.25 NY.44 NY.02 NY.46	X			

Average Coverage for Region - 19 per cent.

TABLE 1. COUNTY PRIORITIES FOR MAPPING

(a) South West Region.

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969
	Name	Area -- (sq. m.) x 10 (3)	Surveyed(1)	Proposed		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	TOTAL	
1	Cornwall	1.4	-	6	16	5	-	-	-	5	3
2	Devon	2.6	9	6	22	5	-	1	1	5	1
3	Somerset	1.6	13	3	38	2	-	-	-	2	3
	Dorset	1.0	-	4	15	4	1	-	1	4	3
4	Gloucester	1.3	7	2	26	2	2	1	-	2	1
	Wiltshire	1.3	3	2	15	1	-	-	-	1	2

Notes: (1) These are "equivalent 1:25,000 sheets", possibly comprising several portions of a larger number of O.S. sheets.

(2) $100 \times (\text{mapped area} \div \text{total area})$

(3) N.A.A.S. = National Agricultural Advisory Service
 A.L.S. = Agricultural Land Service
 L.D.D. = Land Drainage Division
 C.P.O. = County Planning Office
 } M.A.F.F.

Table 1. County priorities for mapping
(b) South East Region

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969
	Name	Area (sq. m.) x 10 (3)	Surveyed(1)	Proposed		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	Total	
5	Berkshire	0.7	10	-	55	-	-	-	-	-	1
	Buckingham.	0.8	3	3	28	-	-	-	-	-	2
	Oxfordshire	0.8	3	2	24	2	-	-	-	2	1
6	Hampshire	1.5	1	4	13	3	-	-	1	3	3
7	Sussex	1.5	4	4	20	4	1	-	2	4	2
	Surrey	0.7	-	4	22	3	2	-	-	4	2
8	Kent	1.5	2	5	18	5	3	3	4	5	1
9	Essex	1.5	-	4	10	4	1	2	1	4	1
	Hertfordshire	0.6	3	2	32	-	-	-	-	-	3
	Bedfordshire	0.5	1	2	23	-	-	-	-	-	3

Notes: (1) - (3) as before

Table 1. County priorities for mapping
(c) East Anglian Region

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969
	Name	Area (sq. m.) x 10 (3)	Surveyed(1)	Proposed		W.A.A.S.	A.L.S.	L.D.D.	C.P.O.	Total	
10	Norfolk	2.1	2	10	22	1	-	-	3	4	1
	Suffolk	1.1	1	4	17	-	-	-	1	1	3
11	Huntingdon	0.4	-	4	38	1	-	-	3	3	1
	Cambridge	0.9	11	3	60	1	-	-	3	3	1

Notes: (1) - (3) as before

Table 1. County priorities for mapping
(d) East Midlands Region

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density (2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969
	Name	Area (sq. m.) x 10 (3)	Surveyed (1)	Proposed		M.A.A.S.	A.L.S.	L.D.D.	J.P.O.	Total	
12	Lincoln(4)	2.6	-	15	22	15	-	15	-	15	1
13	Leicester and Rutland	1.4 0.2	2	3	12	3	-	-	-	3	2
	Northampton	0.9	-	3	13	3	3	-	-	3	3
14	Derby	1.0	4	4	30	2	1	-	-	2	2
	Nottingham	0.8	2	4	29	4	-	-	-	4	1

Notes: (1) - (3) as before
(4) Kesteven, Holland and Lindsey.

Table 1. County priorities for mapping
(e) West Midlands Region

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations(3)					County priority in 1969
	Name	Area (sq. m.) x 10(3)	Surveyed(1)	Proposed		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	Total	
15	Warwick	1.0	1	4	20	4	3	-	-	4	3
	Stafford	1.2	-	6	20	6	4	-	-	6	3
16	Hereford	0.8	4	4	39	3	3	-	-	3	1
	Worcester	0.7	4	3	39	3	2	-	-	3	2
	Shropshire	1.3	15	1	48	1	-	-	-	1	2

Notes: (1) - (3) as before

Table 1. County priorities for mapping
(f) Wales

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969.
	Name	Area (sq. m.) x 10 (3)	Surveyed(1)	Proposed		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	Total	
17	Caernarvon	0.6	10	-	63	-- Survey practically complete					-
	Denbigh	0.4	7	3	95	3	-	3	1	3	1
	Flint	0.3	1	1	25	1	-	1	-	1	2
	Anglesey	0.3	7	-	100	----- Survey complete -----					
18	Merioneth	0.7	-	5	27	5	-	5	-	5	2
	Montgomery	0.8	2	4	28	4	-	4	3	4	1
	Radnor	0.5	1	3	30	3	-	1	-	3(4)	2
19	Cardigan	0.7	10	2	68	2	2	2	2	2	1
	Pembroke	0.6	-	3	19	3	2	-	2	3(4)	1
	Carmarthen	0.9	-	7	30	6	2	7	2	7(4)	2
20	Glamorgan	0.8	14	2	76	2	-	-	-	2(4)	2
	Monmouth	0.5	-	-	-	-	-	-	-	-	3
	Brecon	0.7	-	-	-	-	-	-	-	-	3

Notes (1) - (3) as before

(4) Includes some sheets of interest to Forestry Commission or other bodies

Table 1. County priorities for mapping
(g) Northern Region

Standard 1:250,000 map sheet numbers	County		1:25,000 map sheets		Final map density(2) (%)	1:25,000 map sheets needed by these organizations (3)					County priority in 1969
	Name	Area (sq. m.) x 10 (3)	Surveyed (1)	Proposed		N.A.A.S.	A.L.S.	L.D.D.	C.P.O.	Total	
21	Lancashire	1.9	12	-	23	-----Survey complete-----					-
	Cheshire	1.0	-	3	11	-	-	-	2	2	1
22	Yorks.(W.R.)	2.8	7	3	14	1	-	-	-	1	1
23	Yorks.(E.R.)	1.2	8	7	47	1	-	-	1	2	1
24	Yorks.(N.R.)	2.1	3	6	16	1	-	-	-	1	2 (4)
25	Durham	1.0	1	3	15	-	-	-	1	1	2
	N'umberland	2.0	6	5	21	-	-	-	-	-	1
26	W'morland	0.8	2	2	19	-	-	-	-	-	1
	C'berland	1.5	-	5	13	1	-	-	-	1	2

Notes: (1) - (3) as before
(4) Includes a sheet of interest to Forestry Commission.