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COALMINING, POPULATION AND ENCLOSURE IN THE SEASALE COLLIERY DISTRICTS OF DURHAM (NORTHERN DURHAM), 1551-1810: A STUDY IN HISTORICAL GEOGRAPHY

A thesis in two volumes, submitted for the Degree of Doctor of Philosophy in the University of Durham, 1989

by

ROBERT IAN HODGSON

(Lecturer in Geography, University of Manchester,
and research student in the Department of Geography,
University of Durham)

VOLUME TWO

- 3 APR 1990

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F I G U R E S

Figure 1.1

The mapping of Northumberland and Durham collieries in 1768-9 and 1787

Sources: Andrew Armstrong (surveyor), [A map of] The County Palatine of Durham ... 1768; Andrew Armstrong, A map of the County of Northumberland ...1769; John Gibson, Plan of the collieries on the rivers Tyne and Wear ... 1787; and see also, Laxton 1976, 50.

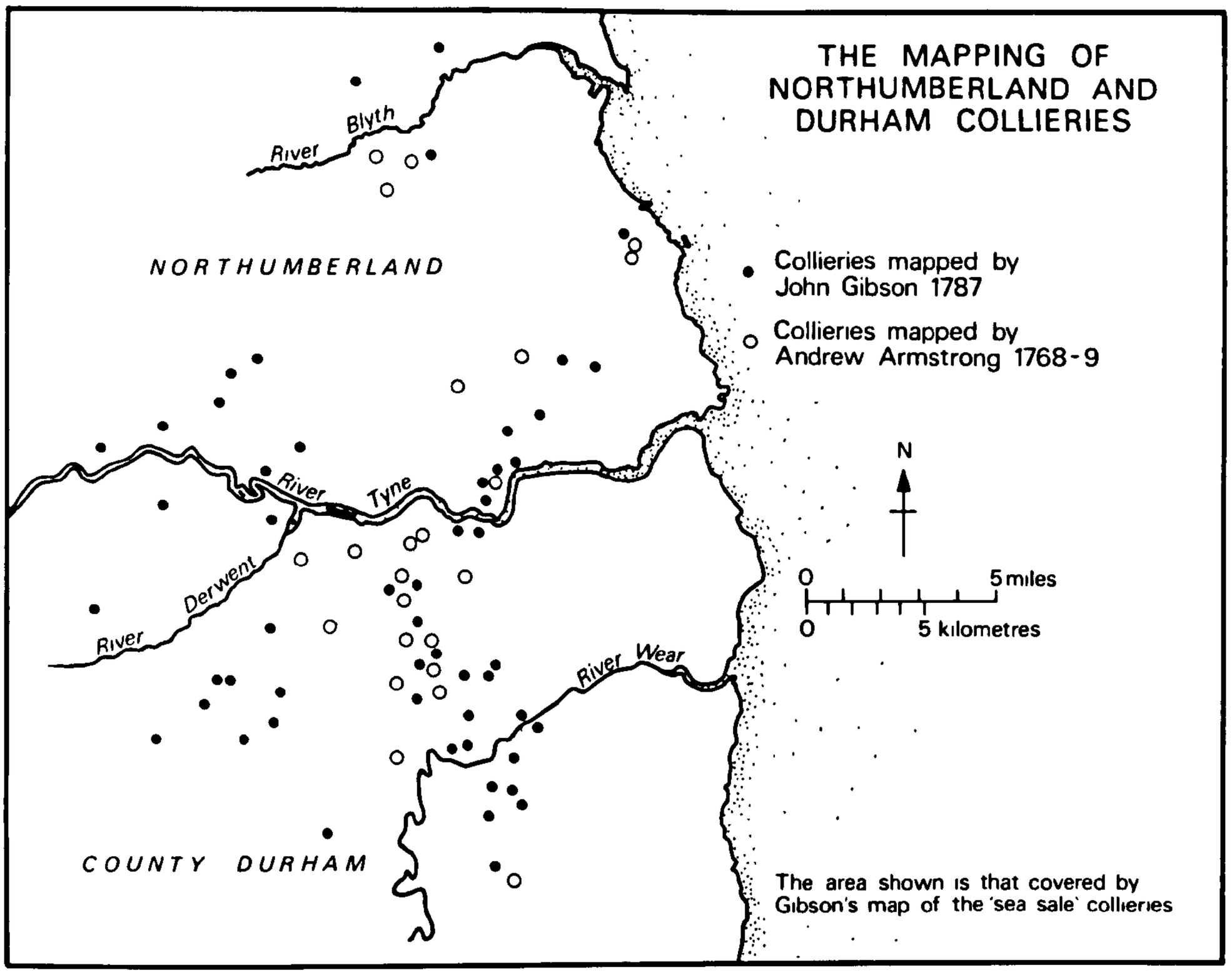
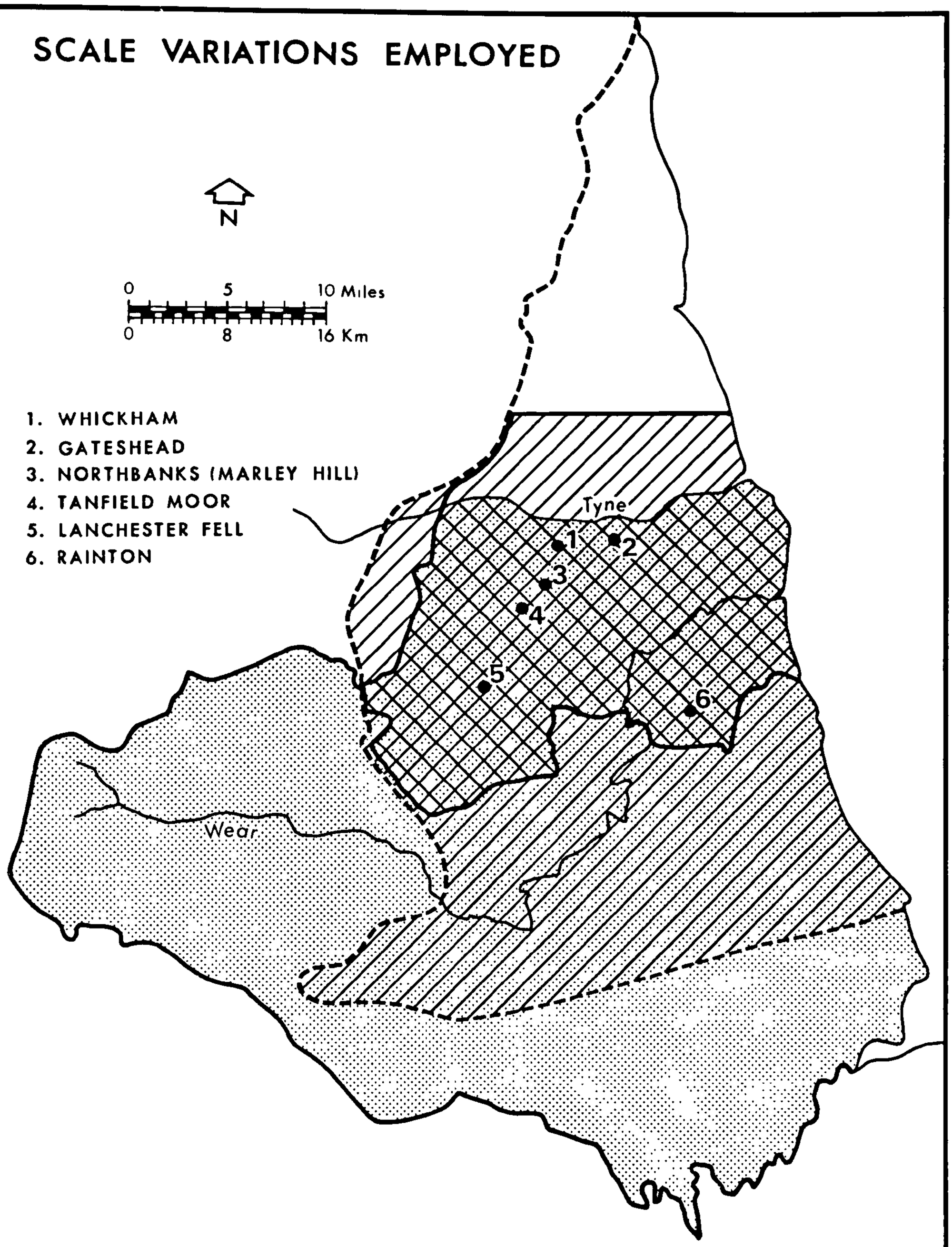

THE MAPPING OF NORTHUMBERLAND AND DURHAM COLLIERIES
River Blyth
NORTHUMBERLAND
Collieries mapped by John Gibson 1787
Collieries mapped by Andrew Armstrong 1768-9
River Tyne
River Derwent
River Wear
N
0
5 miles
0
5 kilometres
COUNTY DURHAM
The area shown is that covered by Gibson's map of the 'sea sale' collieries

Figure 1.2

Scale variations employed

SCALE VARIATIONS EMPLOYED

1. WHICKHAM
2. GATESHEAD
3. NORTHBANKS (MARLEY HILL)
4. TANFIELD MOOR
5. LANCHESTER FELL
6. RAINTON



Extent of Northumberland and Durham (the Great Northern) coalfield

Extent of Seasale and Landsale Colliery Districts – unit for basic pattern maps in Part I

Extent of traditional County Durham – unit for basic pattern maps in Parts II and III

Extent of Seasale Colliery Districts of Durham (Northern Durham) – major areal focus of study

• Foci of MAIN case study areal units (for landscape reconstruction) in Northern Durham

Figure 1.3

Northern Durham: parishes and parochial districts

Sources: Adapted from Durham: parish and chapelry boundaries, c.1800 (Durham County Council, 1983) with additional information from nineteenth-century tithe maps in DUPD; enclosure maps and plans (cited in appendix 18); Bell's maps of the coalfield (as cited with figure 3.12); 1801 census returns; parish records in DRO and DUPD (including estate maps).

Note: The physiographic units depicted in figure 1.3 are those discussed more fully in volume one, chapter 6, esp. pp. 218-9, and have only a passing interest at this stage.

COUNTY DURHAM
Parishes and Parochial Districts
c1800

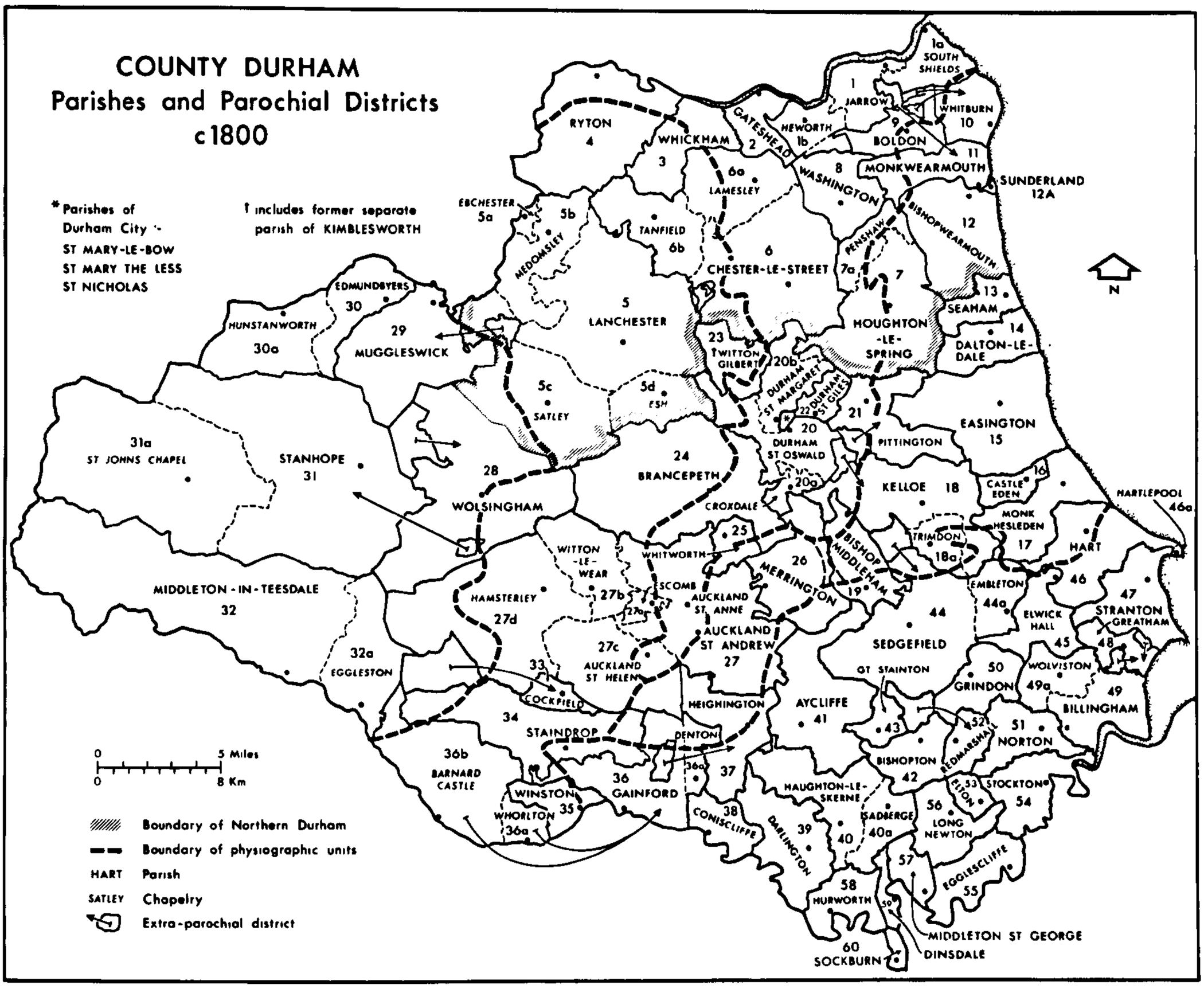


Figure 1.4

Time-space transformation: Northern Durham c.1785 and Great Britain 1985

Note: For purposes of constructing the figure, comparison is made between the quickest means of overland travel between London and Edinburgh in c.1785 (96 hours by coach) and in 1985 (5 hours by high-speed train). Throughout the period 1551 to 1785, Newcastle was regarded as at least three days journey from London. Welford 1884-7, III, 328.

TIME-SPACE TRANSFORMATION ;
NORTHERN DURHAM c1785 AND GREAT BRITAIN 1985

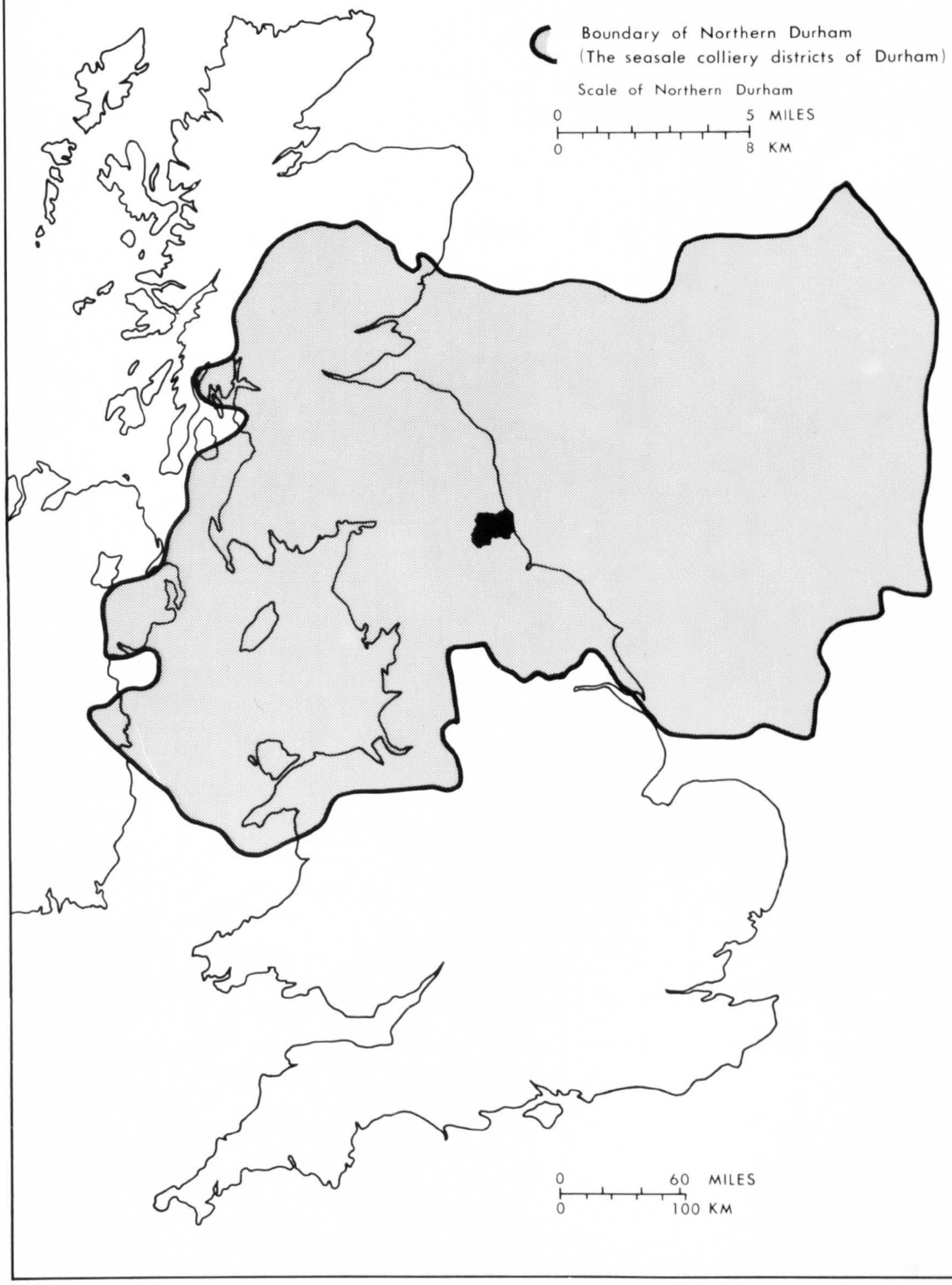


Figure 2.1

Coal working, c1300 - 1550

Sources: As cited in chapter 2, note 7.

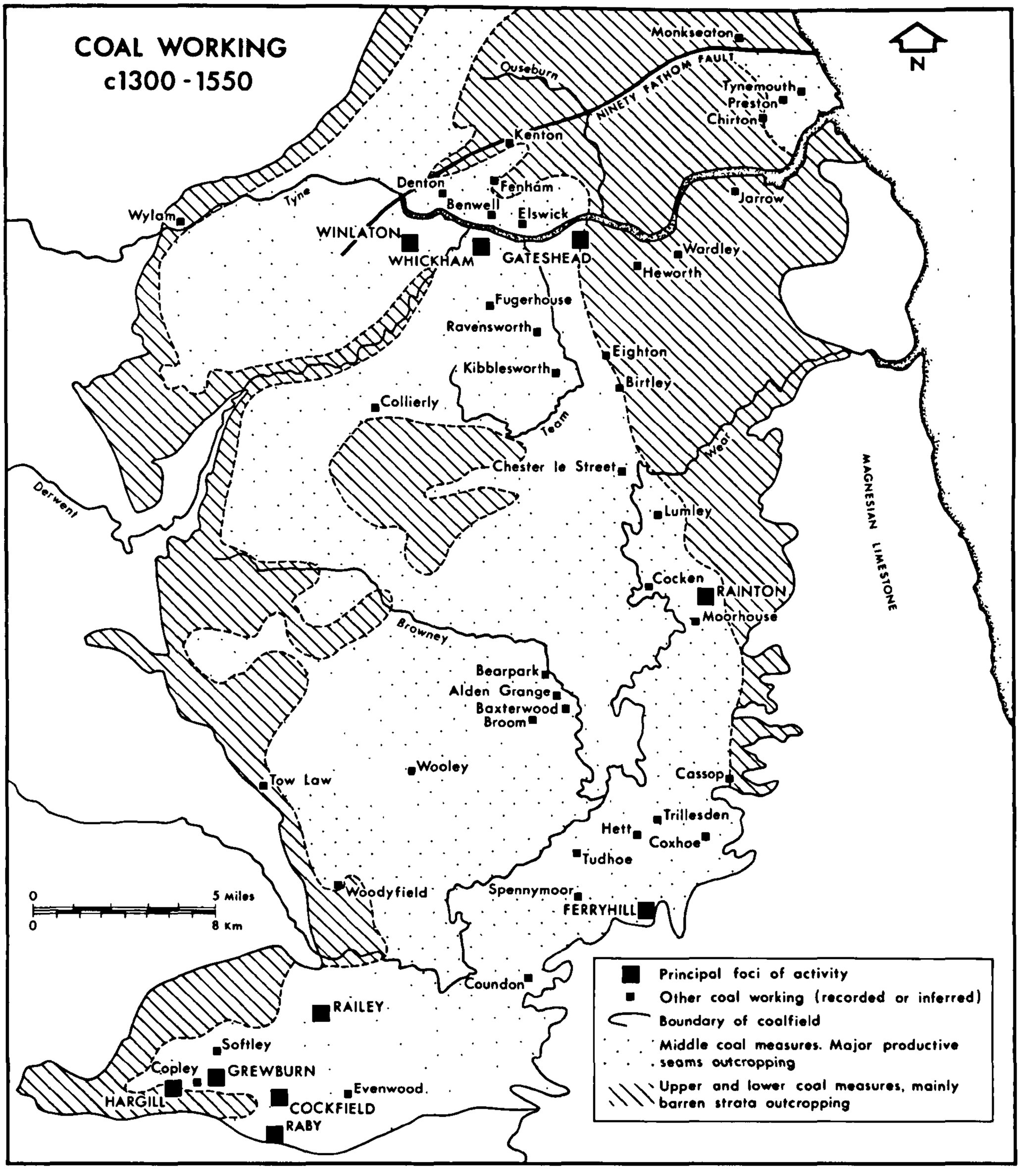
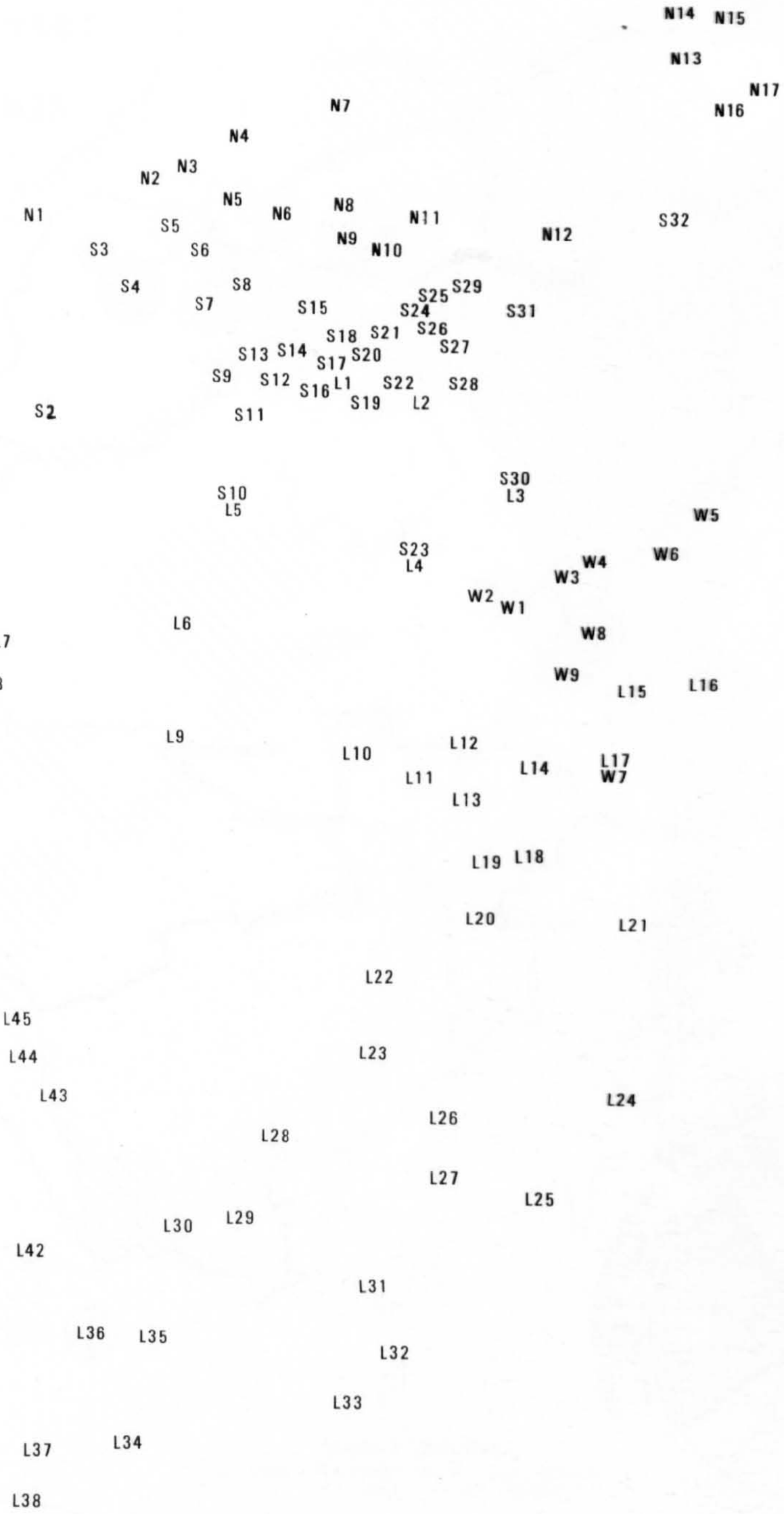

COAL WORKING
c1300 - 1550
N
Monkseaton
Ouseburn
NINETY FATHOM FAULT
Tynemouth
Preston
Chirton
Kenton
Denton
Fenham
Benwell
Elswick
Jarrow
Wylam
Tyne
WINLATON
WHICKHAM
GATESHEAD
Wardley
Heworth
Fugerhouse
Ravensworth
Eighton
Kibblesworth
Birtley
Collierly
Team
Wear
Chester le Street
MAGNESIAN LIMESTONE
Derwent
Lumley
Cocken
RAINTON
Moorhouse
Browney
Bearpark
Alden Grange
Baxterwood
Broom
Wooley
Tow Law
Cassop
Trillesden
Hett
Coxhoe
Tudhoe
Woodyfield
Spennymoor
FERRYHILL
0
5 Miles
0
8 Km
Coundon
RAILEY
Softley
Copley
GREWBURN
HARGILL
Evenwood
COCKFIELD
RABY
Principal foci of activity
Other coal working (recorded or inferred)
Boundary of coalfield
Middle coal measures. Major productive seams outcropping
Upper and lower coal measures, mainly barren strata outcropping

Figure 2.2

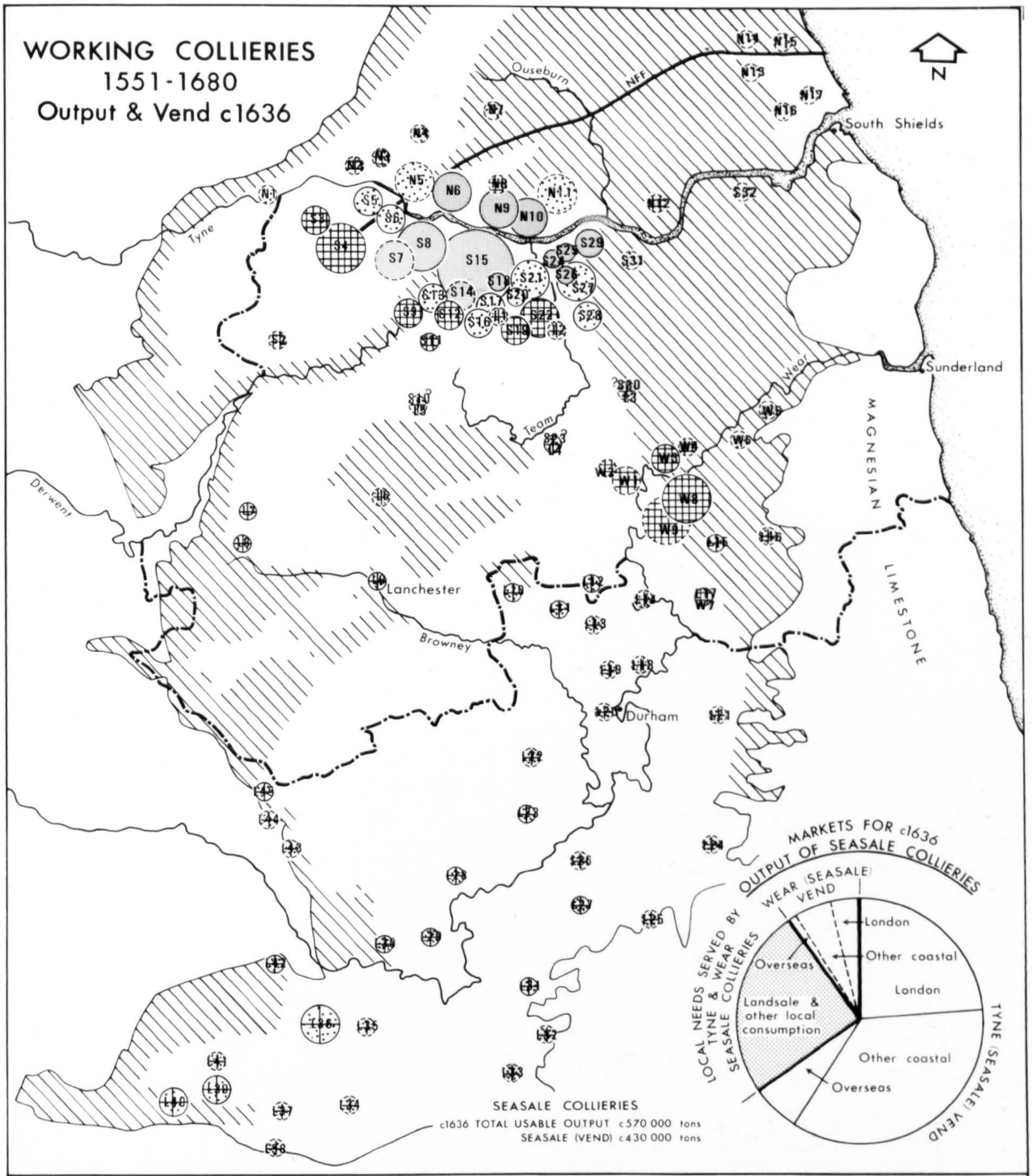
Working collieries, 1551-1680. Output and vend, c.1636 (with colliery identification overlay)

Sources: As cited in appendices 2, 4, 5, 6 and 9.

Note: For colliery names to which the code numbers relate, see below, appendix 2, pp. 156-70.


N14
N15
N13
N17
N7
N16
N4
N3
N2
N5
N1
N6
N8
N11
S32
S5
N12
N9
S3
S6
N10
S4
S8
S25
S29
S7
S15
S24
S31
S18
S21
S26
S13
S14
S20
S27
S17
S9
S12
L1
S22
S28
S16
S19
L2
S2
S11
S30
L3
S10
L5
W5
S23
L4
W4
W6
W3
W2
W1
L6
W8
L7
W9
L15
L16
L8
L9
L12
L10
L17
L14
W7
L11
L13
L19
L18
L20
L21
L22
L45
L23
L44
L24
L43
L26
L28
L27
L25
L29
L30
L42
L31
L36
L35
L32
L41
L33
L39
L40
L37
L34
L38

WORKING COLLIERIES
1551-1680
Output & Vend c1636



ESTIMATE OF ACHIEVABLE ANNUAL VEND (SEASALE COLLIERIES ONLY)
OR TOTAL USABLE OUTPUT (ALL COLLIERIES) 1636 ± 20 YEARS

(Thousands of tons)

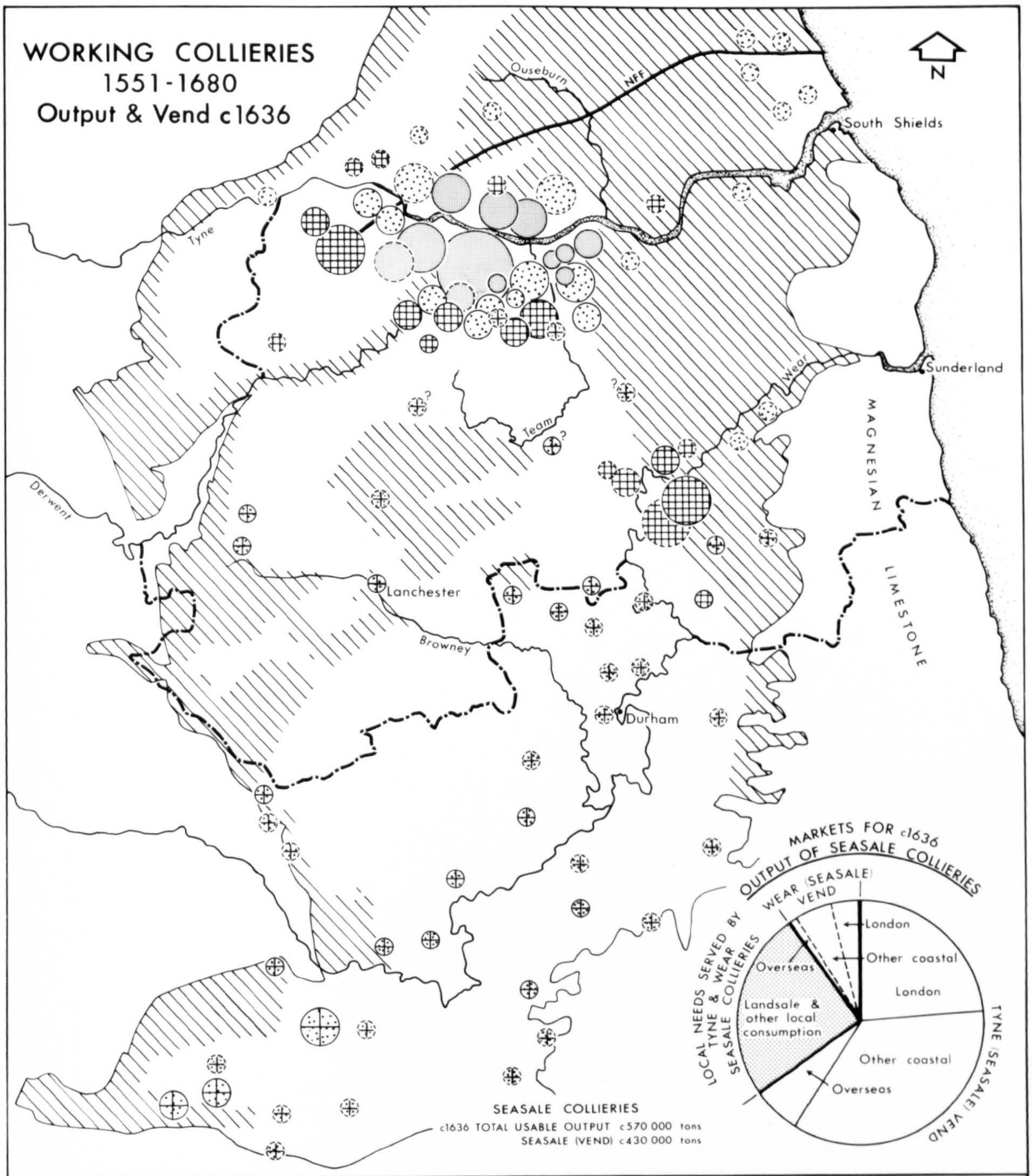
OUTPUT	<6	6-15	16-25	26-50	51-75	76-100
VEND	<4	4-11	12-18	19-36	37-55	56-75

Broken circles represent more tentative estimate

0 5 Miles
0 8 Km

- Colliery achieving maximum average annual output or vend before or by c1636
- Colliery working before c1636 but achieving maximum annual output or vend after
- Period of maximum output or vend uncertain
- Landsale colliery and (?) possibly seasale too
- Boundary of Northern Durham
- Boundary of coalfield
- Upper and lower coal measures Mainly barren strata outcropping

WORKING COLLIERIES
1551-1680
Output & Vend c1636



ESTIMATE OF ACHIEVABLE ANNUAL VEND (SEASALE COLLIERIES ONLY)
OR TOTAL USABLE OUTPUT (ALL COLLIERIES) 1636 ± 20 YEARS

(Thousands of tons)

OUTPUT	<6	6-15	16-25	26-50	51-75	76-100
VEND	<4	4-11	12-18	19-36	37-55	56-75

Broken circles represent more tentative estimate

0 5 Miles
0 8 Km

- Colliery achieving maximum average annual output or vend before or by c1636
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- ⊕ Landsale colliery and (?) possibly seasale too
- Boundary of Northern Durham
- Boundary of coalfield
- Upper and lower coal measures Mainly barren strata outcropping

Figure 2.3

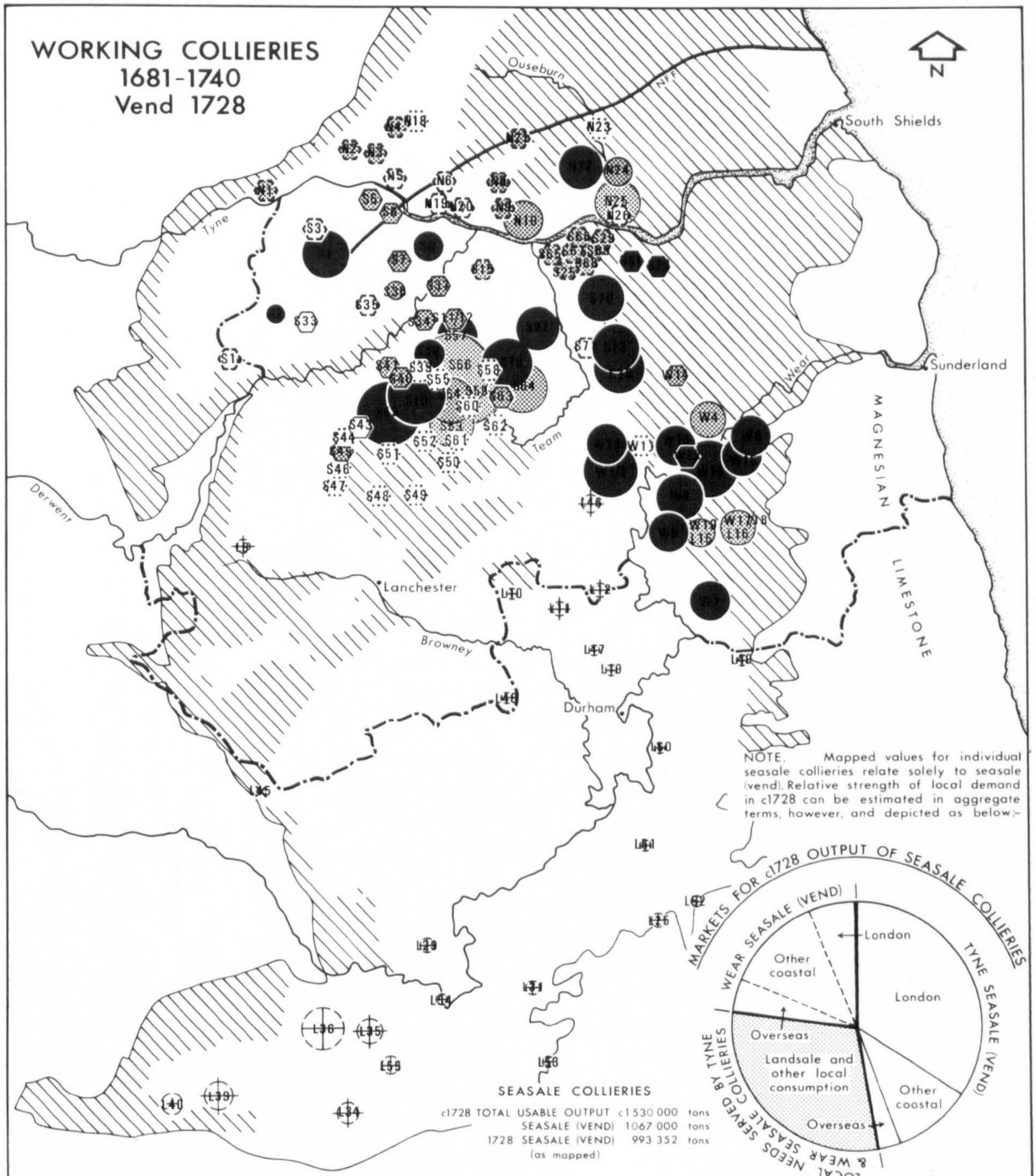
Working collieries, 1681-1740. Vend, 1728
(with colliery identification overlay)

Sources: As cited in appendices 2, 4, 5, 6 and 9.

Note: For colliery names to which the code numbers relate, see below, appendix 2, pp. 156-70.

N4 N18 N23
N21
N2 N3
N22 N24
N5 N6 N8
N1 N25
S5 N19 N20 N9 N26
S6 N10
S3 S66 S29
S8 S65 S67 S69 S31 S73
S4 S7 S68
S15 S25
S37
S36 S70
S35
S2 S33 S34 S11/12 S22
S57 S71 S72
S38
S1n S41 S39 S56 S58 S19 S30 W14
S40 S55
S64
S10 S54 S59 S63
S60
W4
S42
S43 S53 S62 W6
W10 W11 W13
S44 S52 S61 W12 W15
S45 S51 W1/2 W16
S50
S46
S47 W8
S48 S49 L46
W19 W17/18
W9 L15 L16
L8
L12
L10 W7
L11
L47 L49
L19
L48
L50
L45
L51
L52
L25
L29
L31
L54
L36 L35
L53
L55
L39
L40 L34

WORKING COLLIERIES 1681-1740 Vend 1728



SEASALE COLLIERIES VEND 1728
(Landsale collieries total usable output c1728)

tons
100 000
50 000
10 000
≤3 000

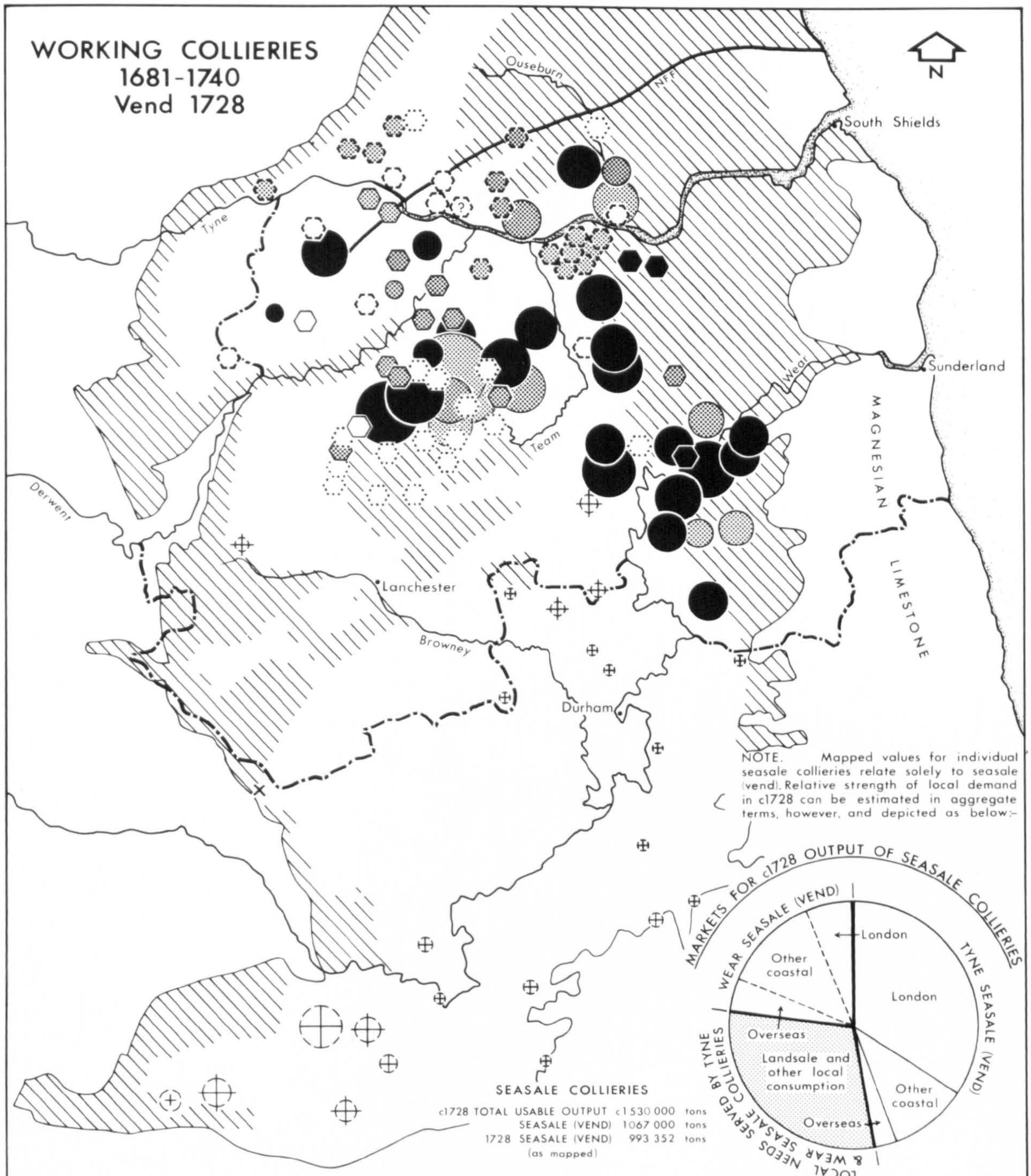
0 5 Miles
0 8 Km

- Colliery closed in 1728 but working for seasale at various times between 1681 and 1740
- Colliery closed by c1710 or achieving very low vend thereafter
- Colliery opened after 1728
- Colliery working in one decade only for seasale
- Colliery working in 2 or 3 decades for seasale
- Colliery working in 4 or more decades for seasale

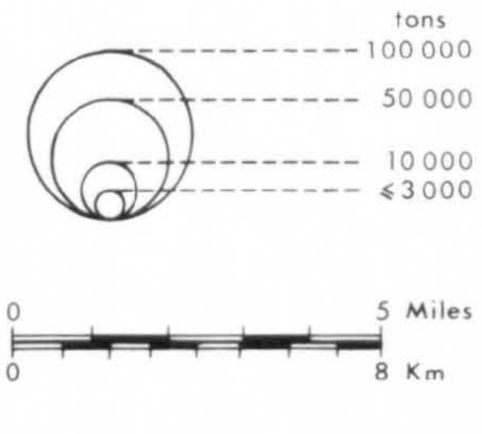
Durham landsale collieries worked at various times between 1681 and 1740. Output c1728 tentatively estimated

- Average annual output about same before and after c1710
- Average annual output increasing after c1710
- Average annual output decreasing after c1710
- Boundary of Northern Durham
- Boundary of coalfield
- Upper and lower coal measures Mainly barren strata outcropping

WORKING COLLIERIES 1681-1740 Vend 1728



SEASALE COLLIERIES VEND 1728
(Landsale collieries total usable output c1728)



- Colliery closed in 1728 but working for seasale at various times between 1681 and 1740
- Colliery closed by c1710 or achieving very low vend thereafter
- Colliery opened after 1728
- Colliery working in one decade only for seasale
- Colliery working in 2 or 3 decades for seasale
- Colliery working in 4 or more decades for seasale

Durham landsale collieries worked at various times between 1681 and 1740. Output c1728 tentatively estimated

- Average annual output about same before and after c1710
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Figure 2.4

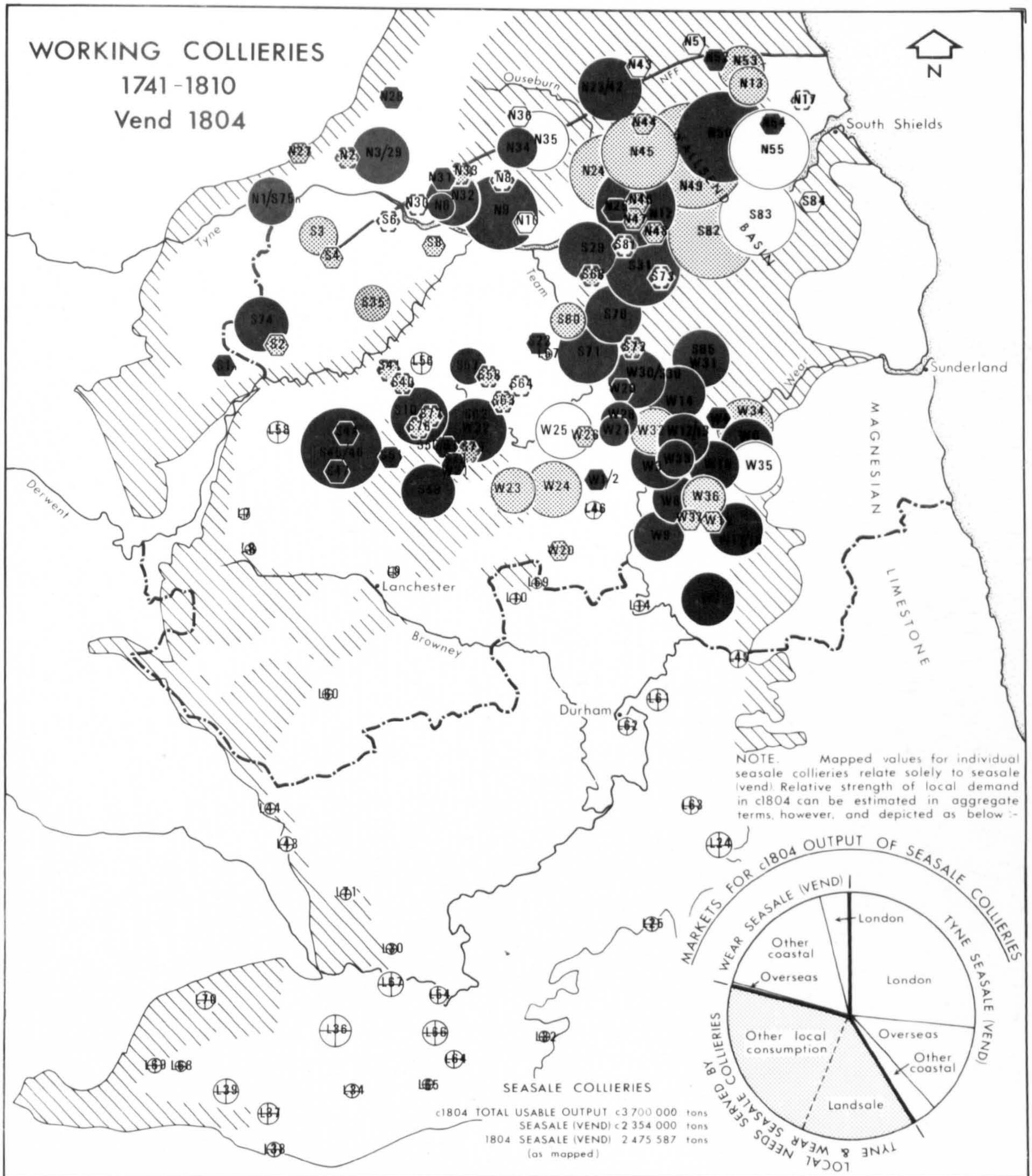
Working collieries, 1741-1810. Vend, 1804
(with colliery identification overlay)

Sources: As cited in appendices 2, 4, 5, 6 and 9.

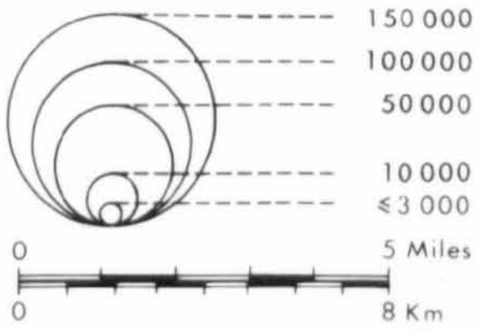
Note: For colliery names to which the code numbers relate, see below, appendix 2, pp. 156-70.


WALLSEND
BASIN
N51
N52
N53
N43
N23/42
N13
N17
N28
N38
N44
N54
N50
N35
N34
N45
N55
N27
N2
N3/29
N24
N31
N33
N8
N49
S84
N1/S75n
N30
N6
N32
N9
N46
N25
N12
S83
S6
N10
N47
S3
S82
N48
S8
S29
S81
S4
N31
S73
S68
S35
S80
S78
S74
S22
S71
S72
S85
S2
L57
W31
S41
L58
S57
S58
S64
W30/S38
S1n
S40
W29
W14
S63
S10
S77
S62
W28
W4
W34
S76
W22
W25
W26
W27
W32
W12/13
W6
L58
S44
S50/61
S79
W33
S45/46
S51
S78
W3
W18
W35
W21
S47
W1/2
S49
W23
W24
W8
W36
L46
L7
W37
W19
W9
W17/18
W20
L8
L9
L59
L10
W7
L14
L49
L60
L61
L62
L63
L44
L43
L24
L71
L25
L30
L67
L54
L70
L36
L66
L32
L64
L69
L68
L65
L39
L34
L37
L38

WORKING COLLIERIES
1741 - 1810
Vend 1804

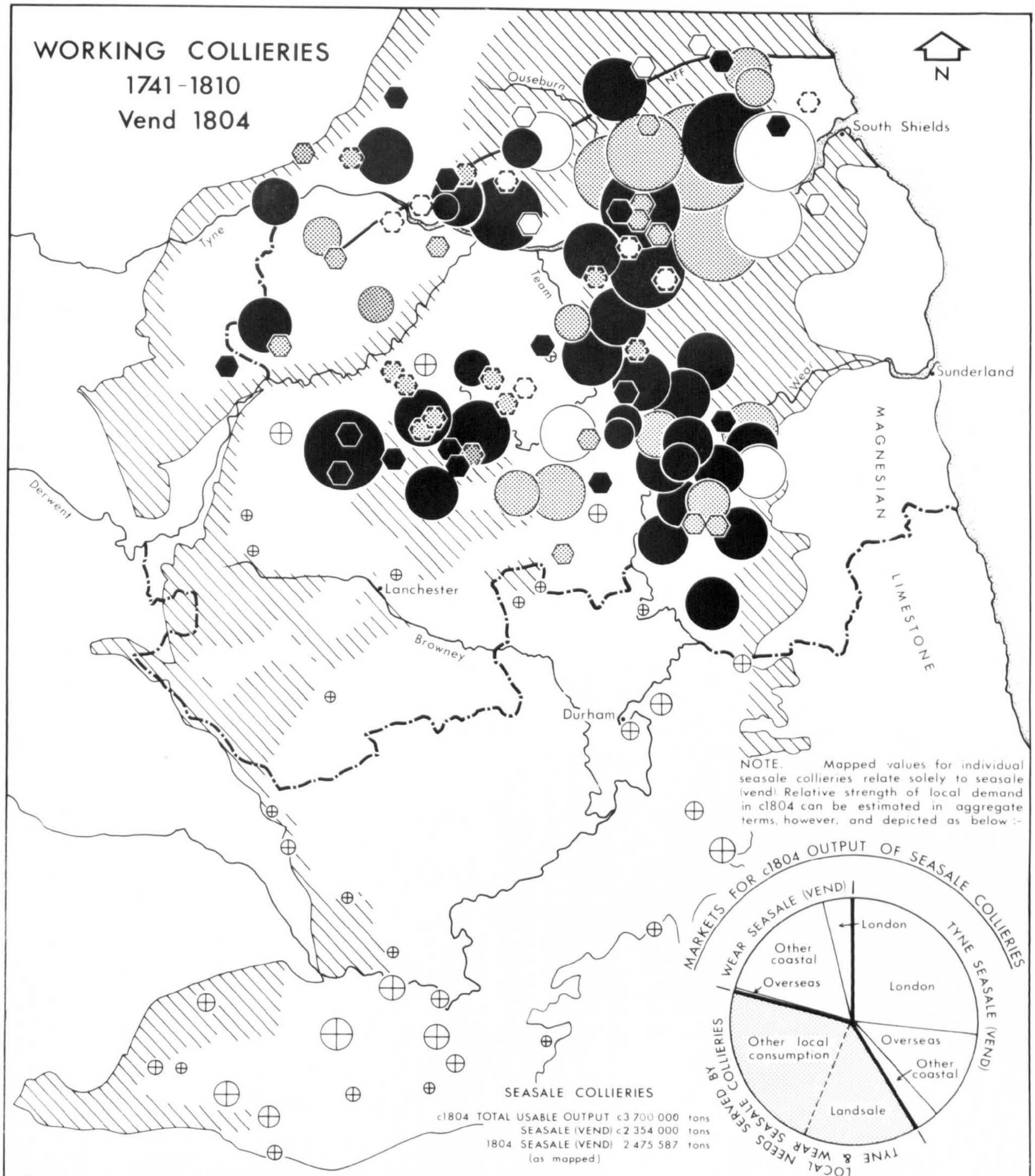


SEASALE COLLIERIES VEND 1804
(Landsale collieries total usable output c1804)

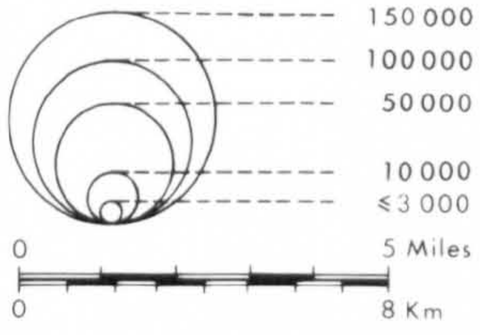


- Colliery closed in 1804 but working for seasale at various times between 1741 and 1810
- Colliery closed by 1780 or achieving very low vend thereafter
- Colliery working in one decade only for seasale
- Colliery working in 2 or 3 decades for seasale
- Colliery working in 4 or more decades for seasale
- Durham landsale colliery recorded working in decade 1801-1810 and probably working in 1804. Worked intermittently before 1801
- Boundary of Northern Durham
- Boundary of coalfield
- Upper and lower coal measures Mainly barren strata outcropping

WORKING COLLIERIES
1741 - 1810
Vend 1804



SEASALE COLLIERIES VEND 1804
(Landsale collieries total usable output c1804)



- Colliery closed in 1804 but working for seasale at various times between 1741 and 1810
- Colliery closed by 1780 or achieving very low vend thereafter
- Colliery working in one decade only for seasale
- Colliery working in 2 or 3 decades for seasale
- Colliery working in 4 or more decades for seasale
- Durham landsale colliery recorded working in decade 1801-1810 and probably working in 1804. Worked intermittently before 1801
- Boundary of Northern Durham
- Boundary of coalfield
- Upper and lower coal measures Mainly barren strata outcropping

Figure 2.5

Tyne and Wear coal vends, 1551-1810 (with contingencies)

Sources:

	Vend:	As cited in appendix 4.
Contingencies	- weather & disputes:	As cited in appendix 10.
	- wars & regulations:	See sources cited with figure 4.2.

TYNE AND WEAR COAL VENDS 1551-1810

CONTINGENCIES
- Wars
- Adverse Weather
- Mining Disputes
- Combinations / Vend Regulation of Coalowners

CIVIL; 1ST DUTCH; WITH SPAIN; 2ND DUTCH; 3RD DUTCH; LEAGUE OF AUGSBURG; SPANISH SUCCESSION; AUSTRIAN SUCCESSION; SEVEN YEARS WAR; AMERICAN INDEPENDENCE; NAPOLEONIC

TYNE
WEAR

Annual Vend in Thousands of Tons

3000
1000
300
100
30
10
3
1

1550 1570 1590 1610 1630 1650 1670 1690 1710 1730 1750 1770 1790 1810

- Newcastle and Sunderland coastal and overseas
- Newcastle coastal and overseas
- Newcastle coastal
- Newcastle overseas
- Sunderland coastal and overseas
- Sunderland coastal
- Sunderland overseas

Following pages

Figure 3.1

Destinations of Tyne and Wear coal shipments, 1551-1810

Sources: As cited in appendix 7(a-d).

Figures 3.2a-s

Markets for Tyne and Wear coal shipments for selected dates, 1562-1749/50

Sources: As for figure 3.1.

Note: Where, in some few instances, only the name of the country of destination is given or reference is made simply to 'The Sound ' (rather than to the name of the receiving port), values for shipment numbers have been 'boxed' and assigned accordingly.

DESTINATIONS OF TYNE AND WEAR COAL SHIPMENTS 1551 - 1810

LONDON — Major ports (receiving 50 or more shipments in one or more years for which data mapped)

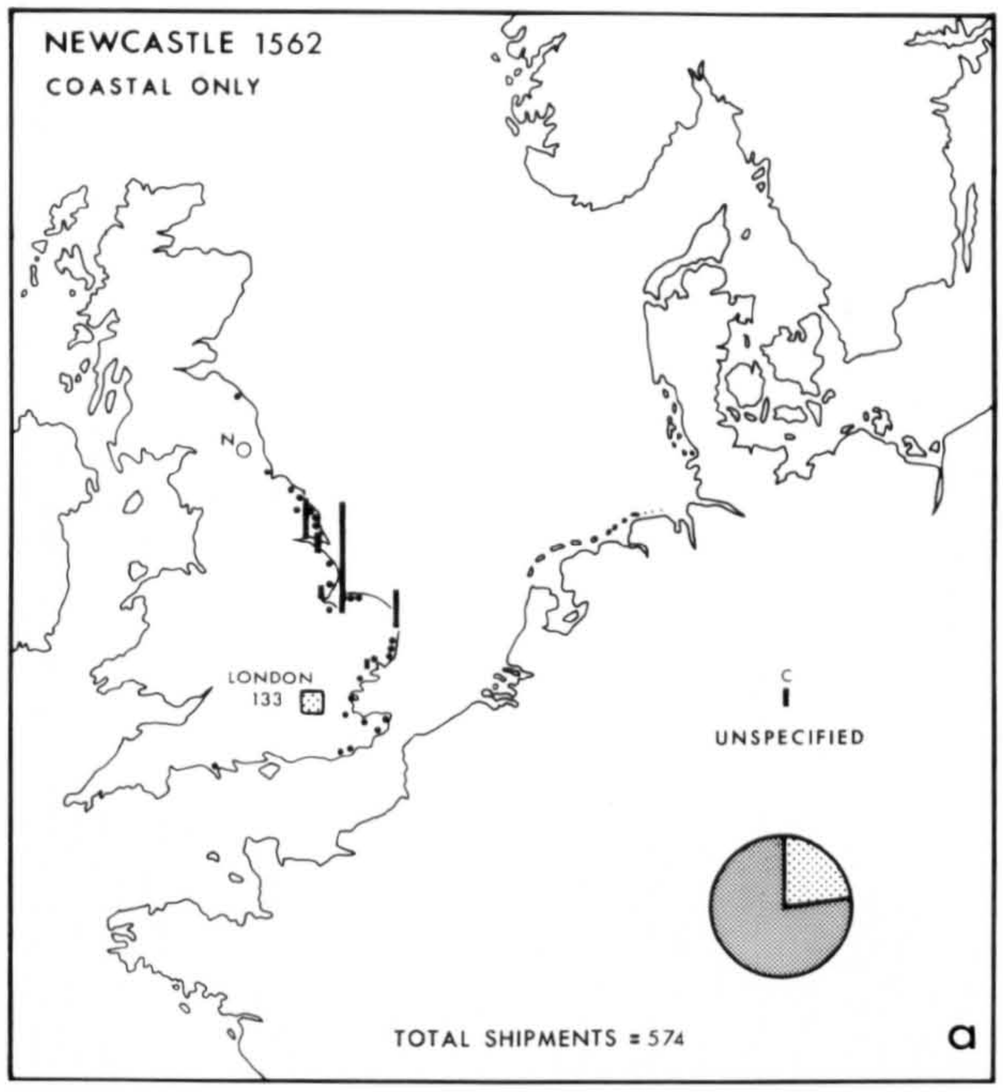
BOLOGNE — Minor ports (receiving less than 50 shipments)

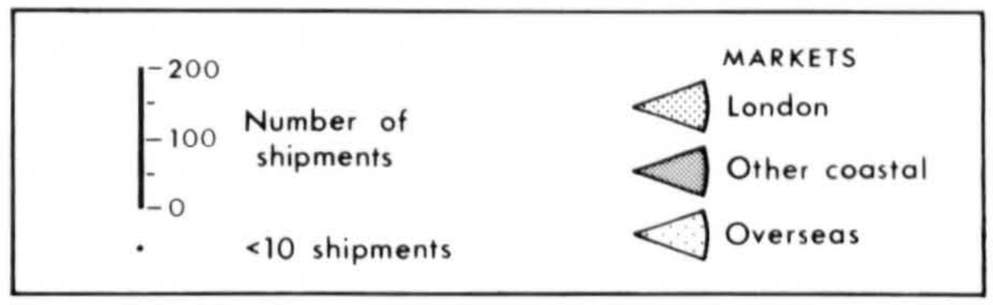
NOT MAPPED : Destinations in North America and West Indies

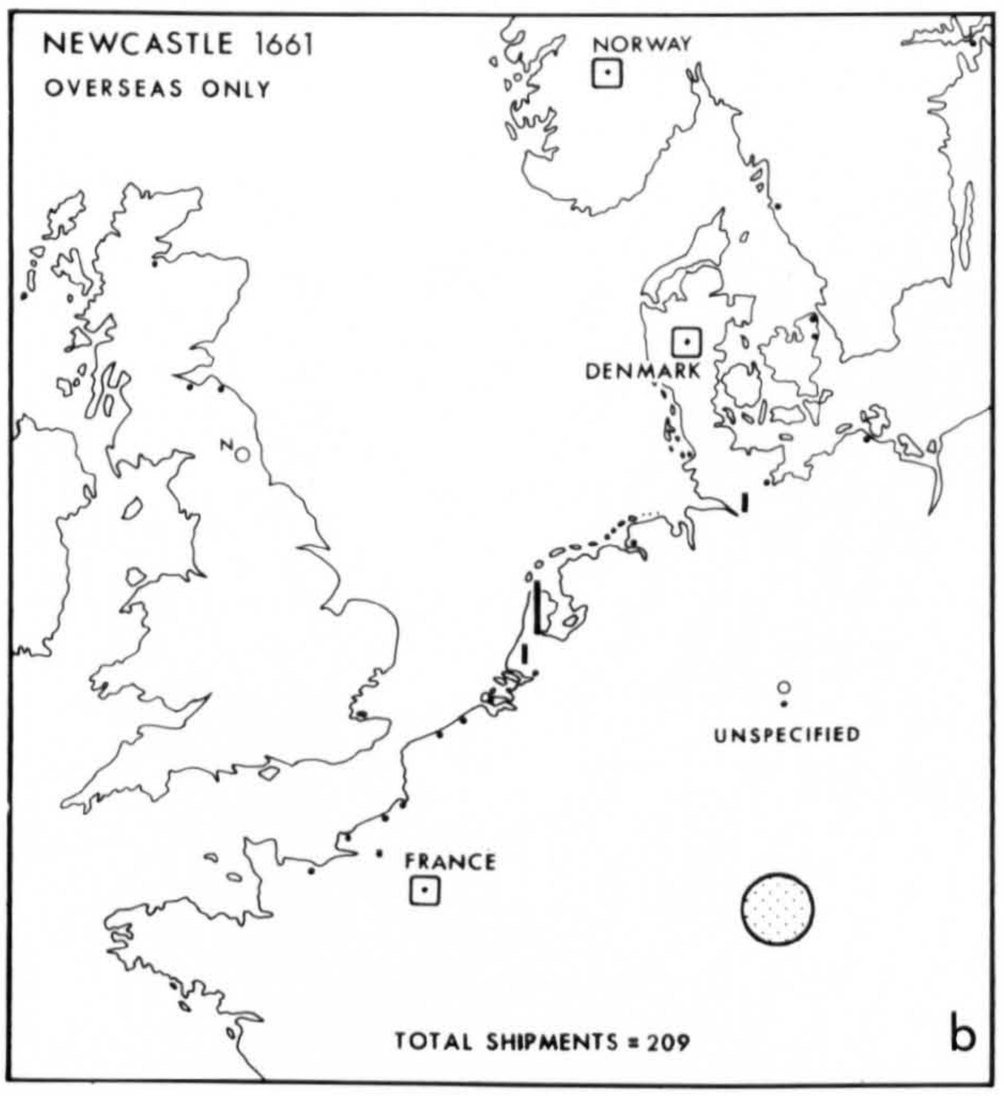
0 50 100 Miles
0 80 160 Km

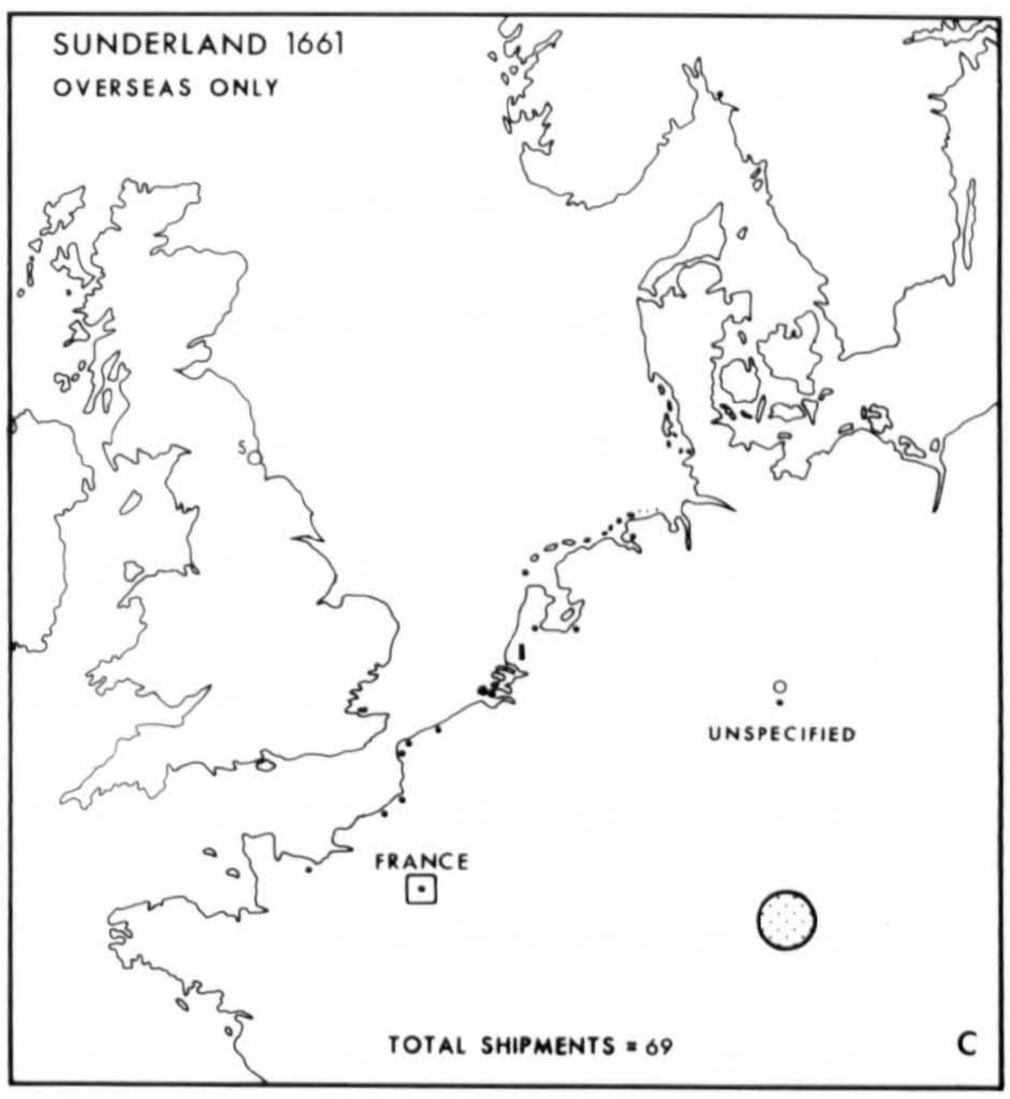
0 500 Miles
0 800 Km

MARKETS FOR TYNE AND WEAR COAL SHIPMENTS

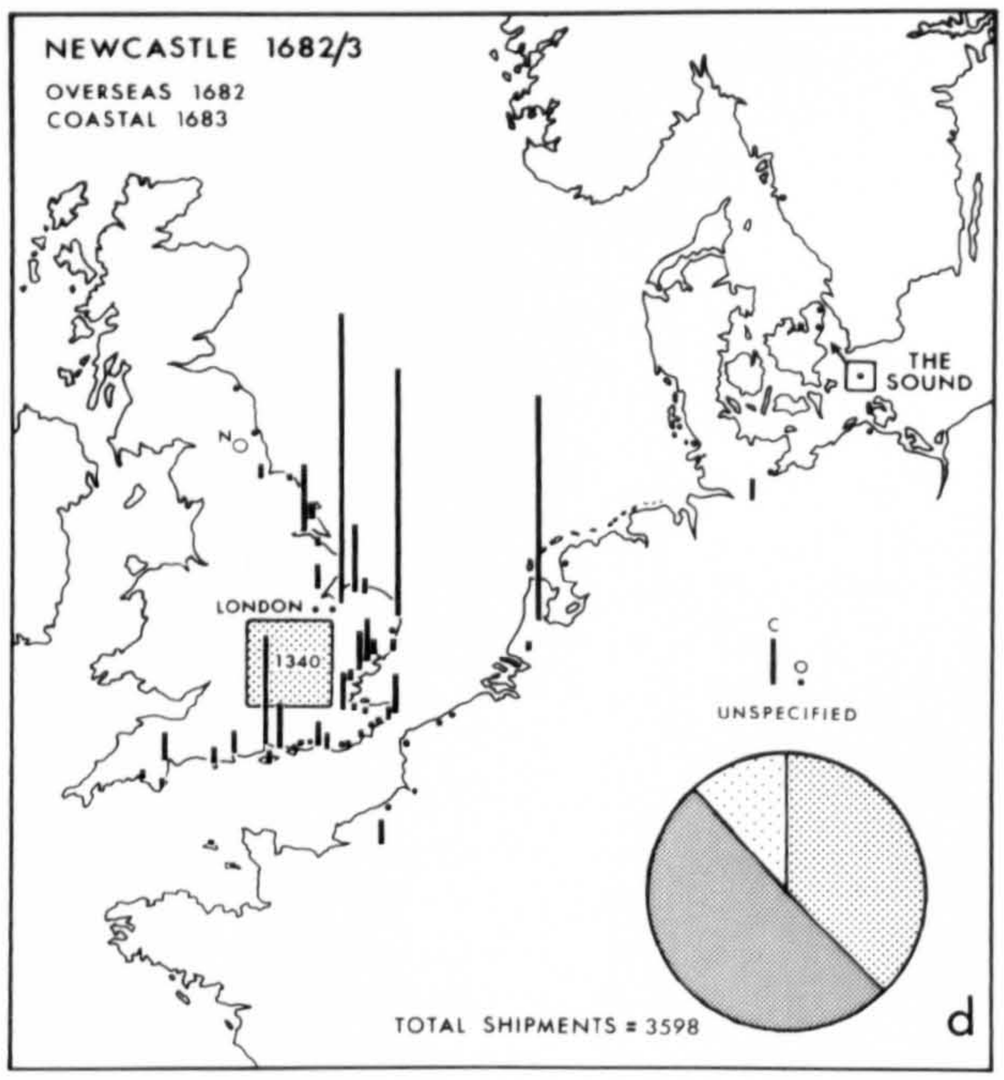


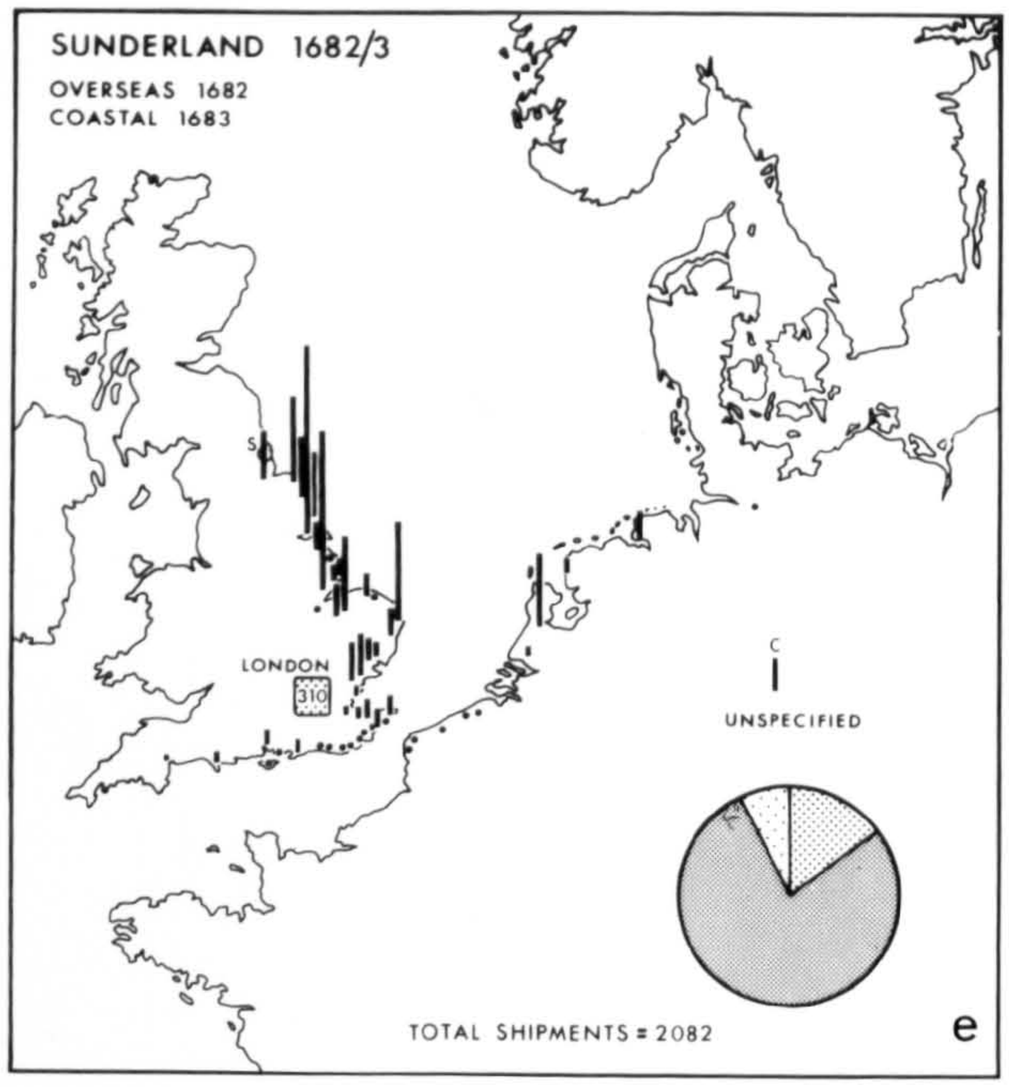


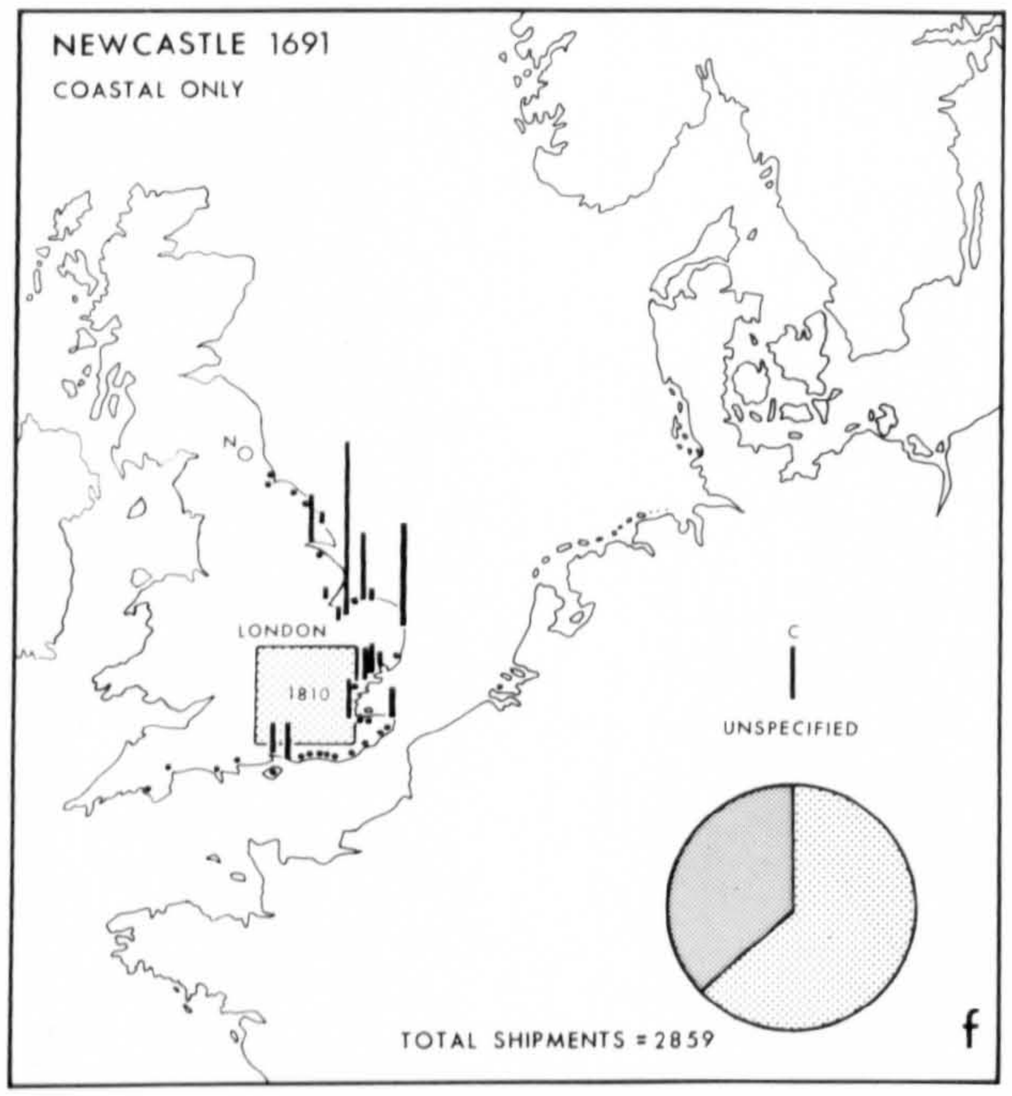


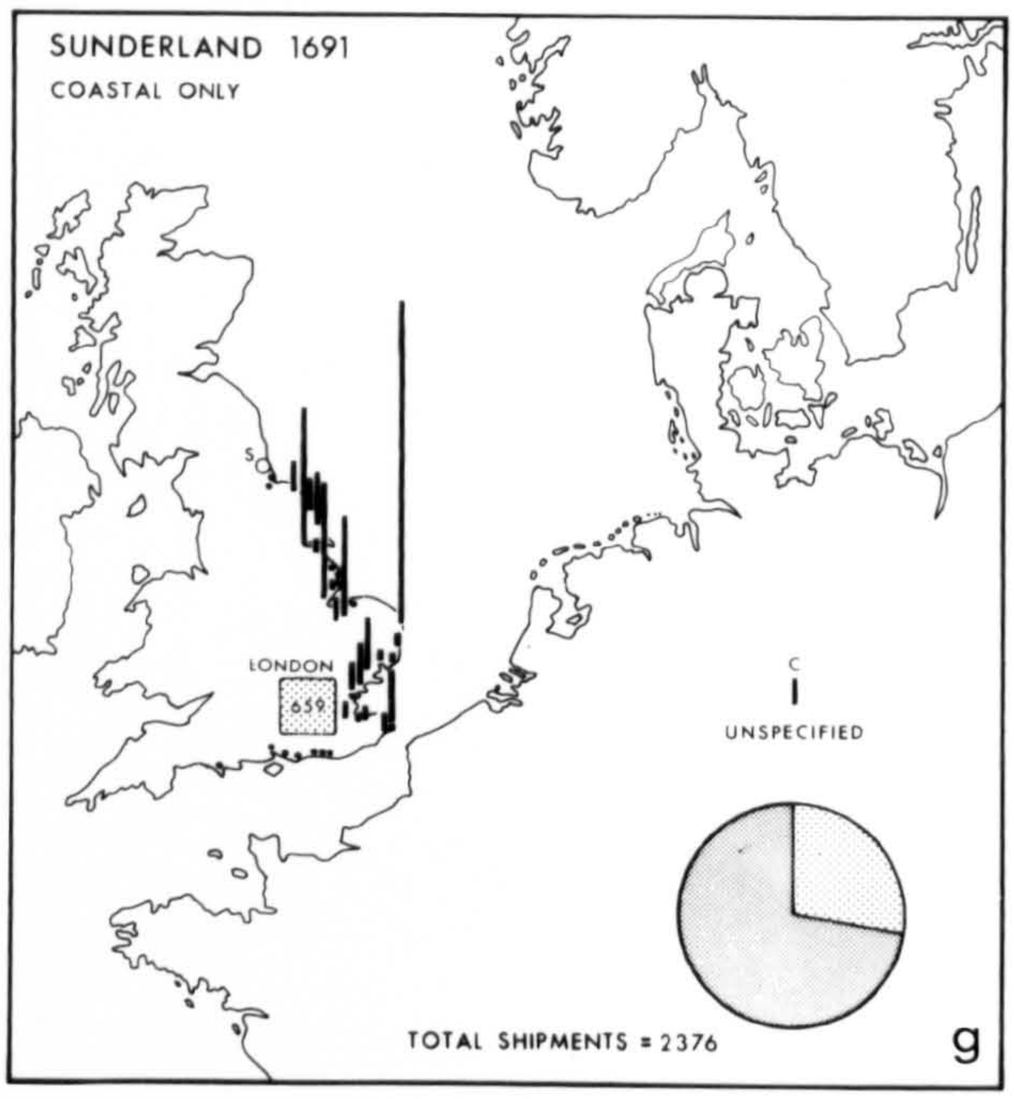


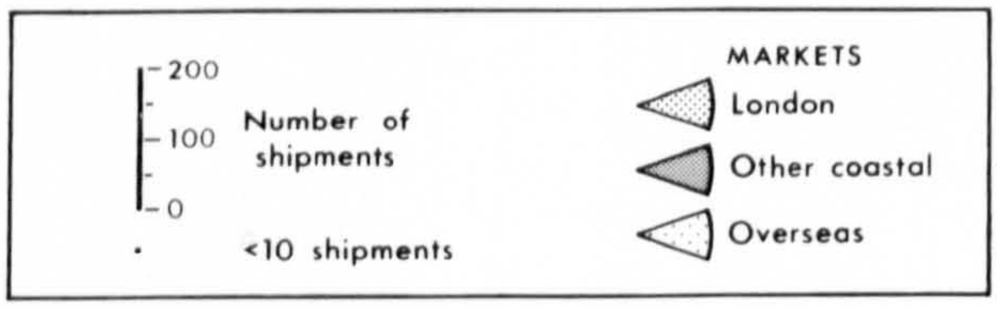
MARKETS FOR TYNE AND WEAR COAL SHIPMENTS

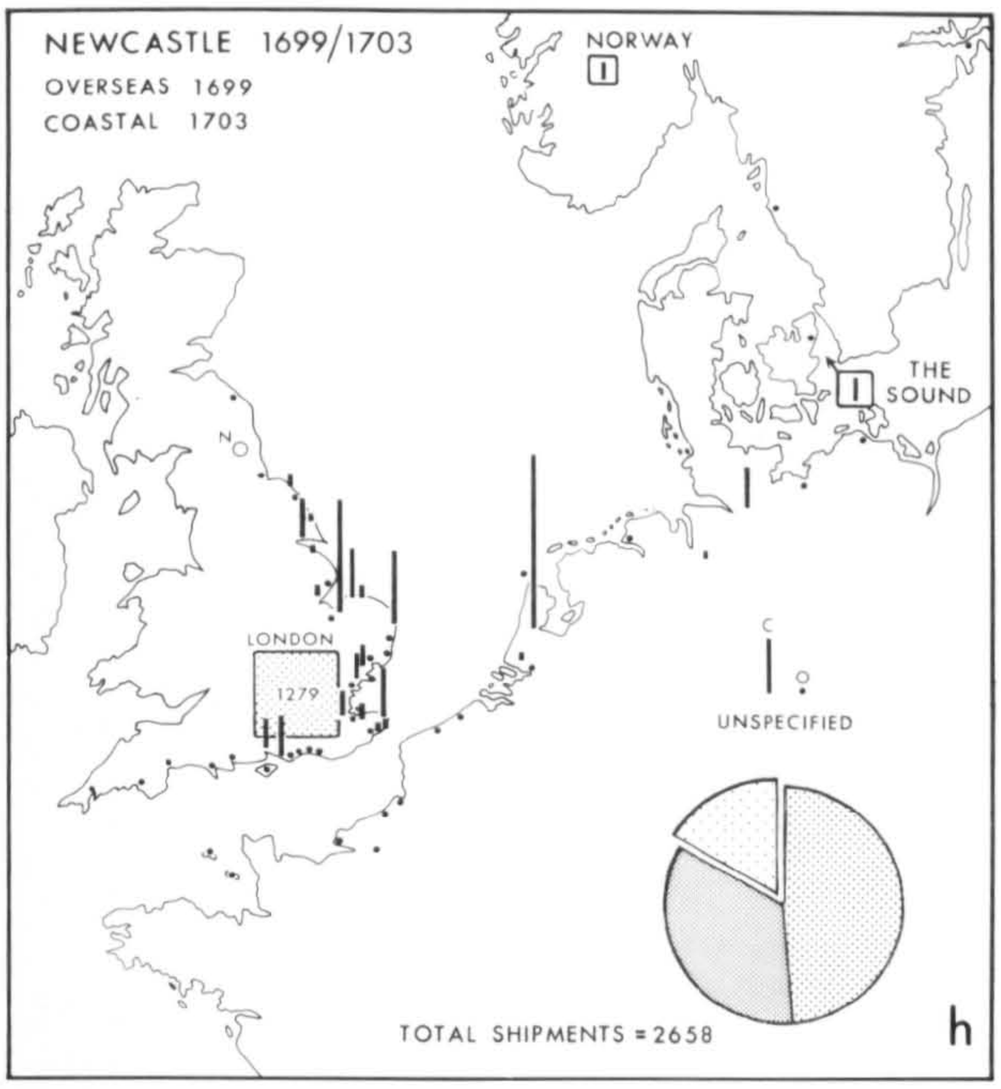


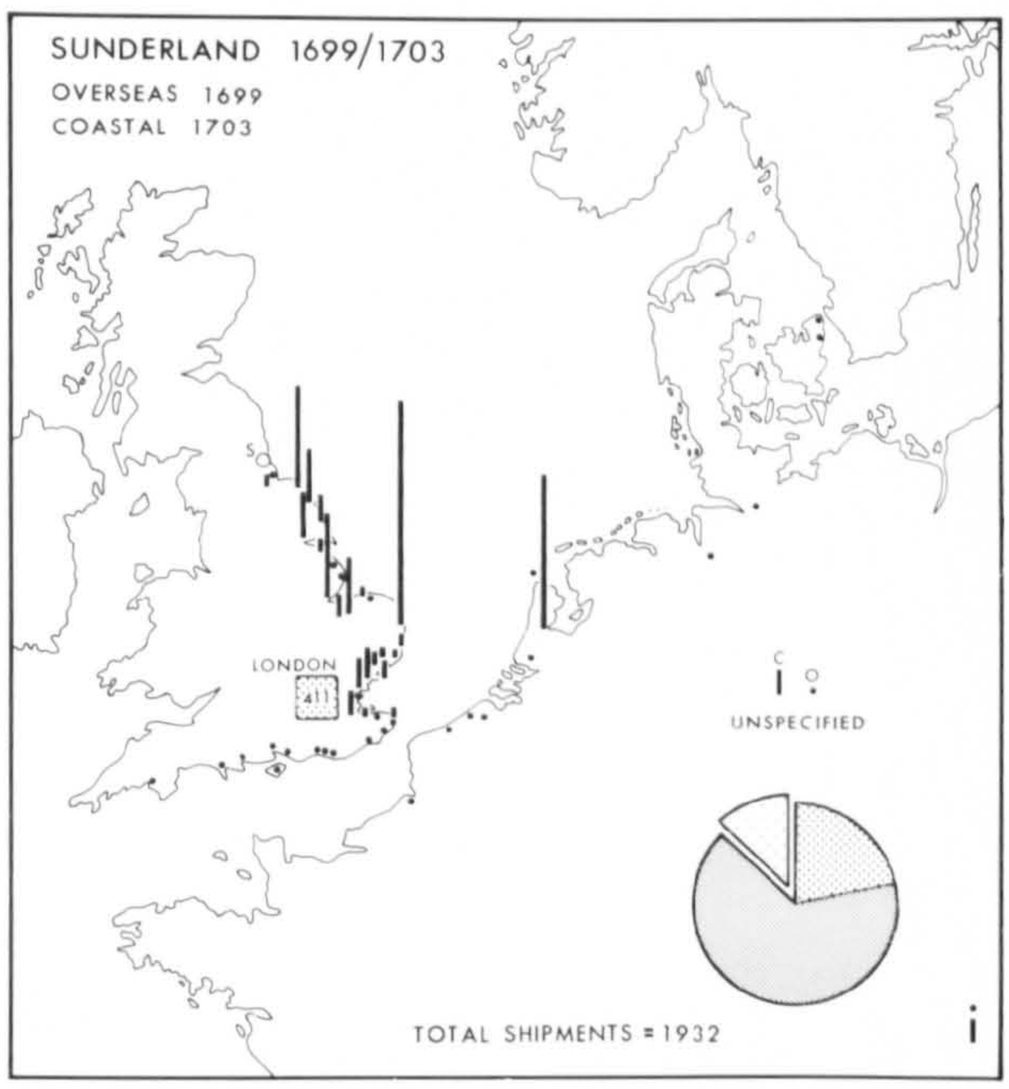


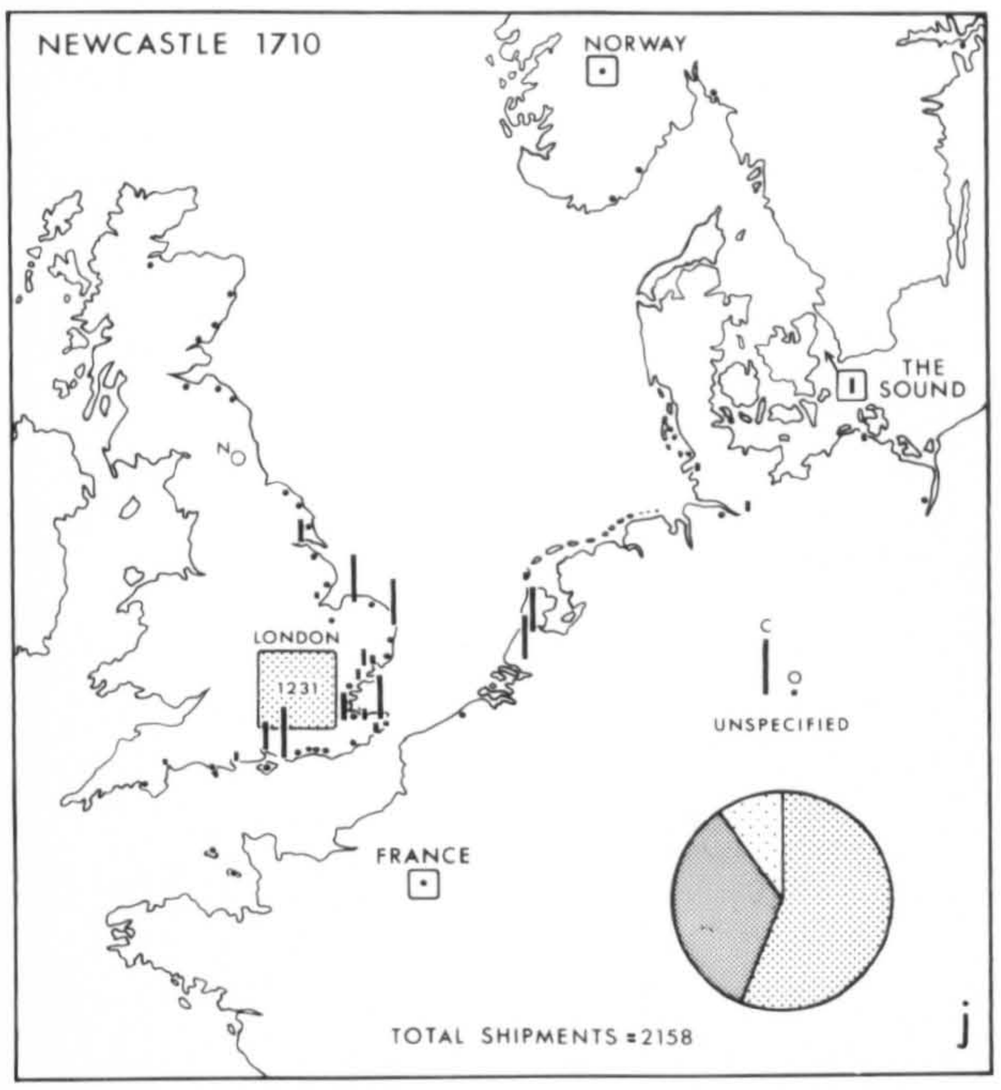


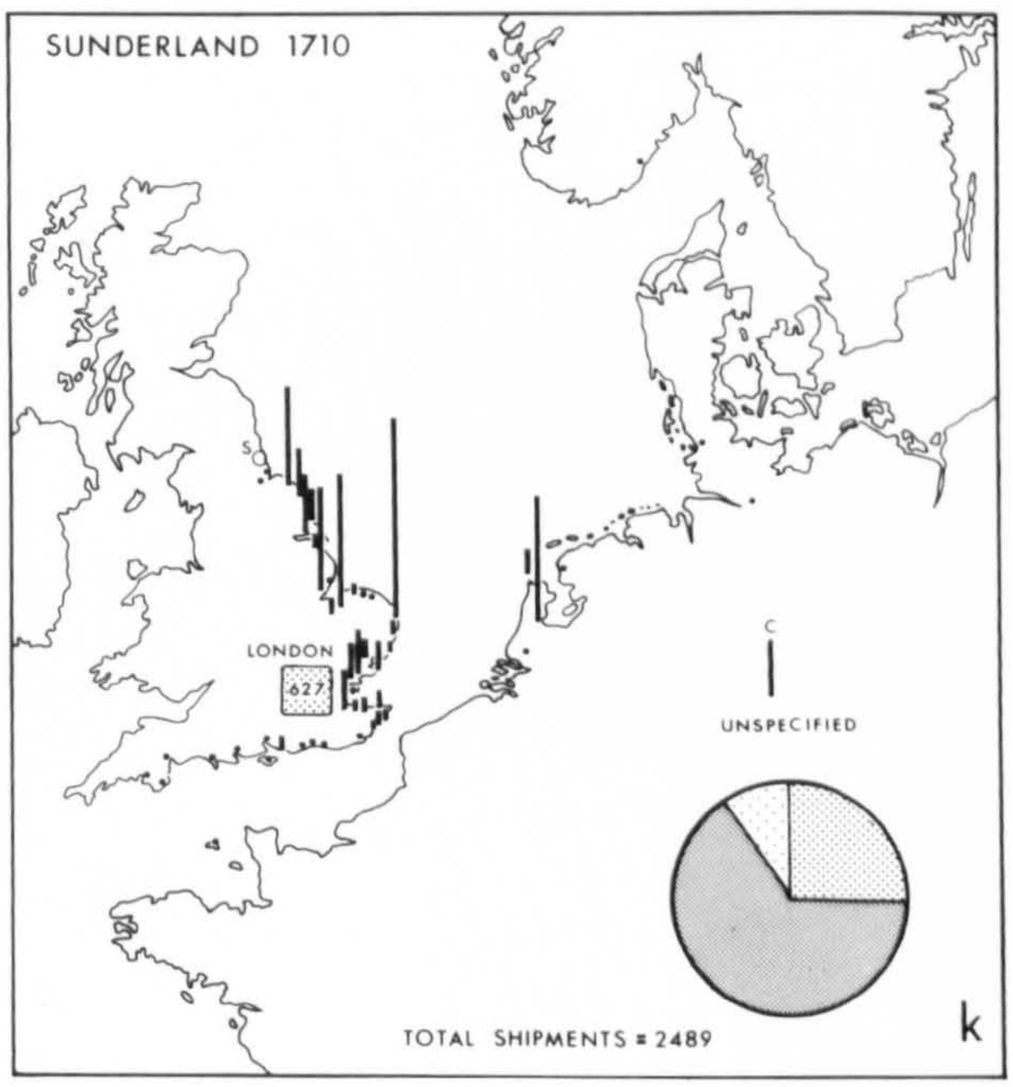




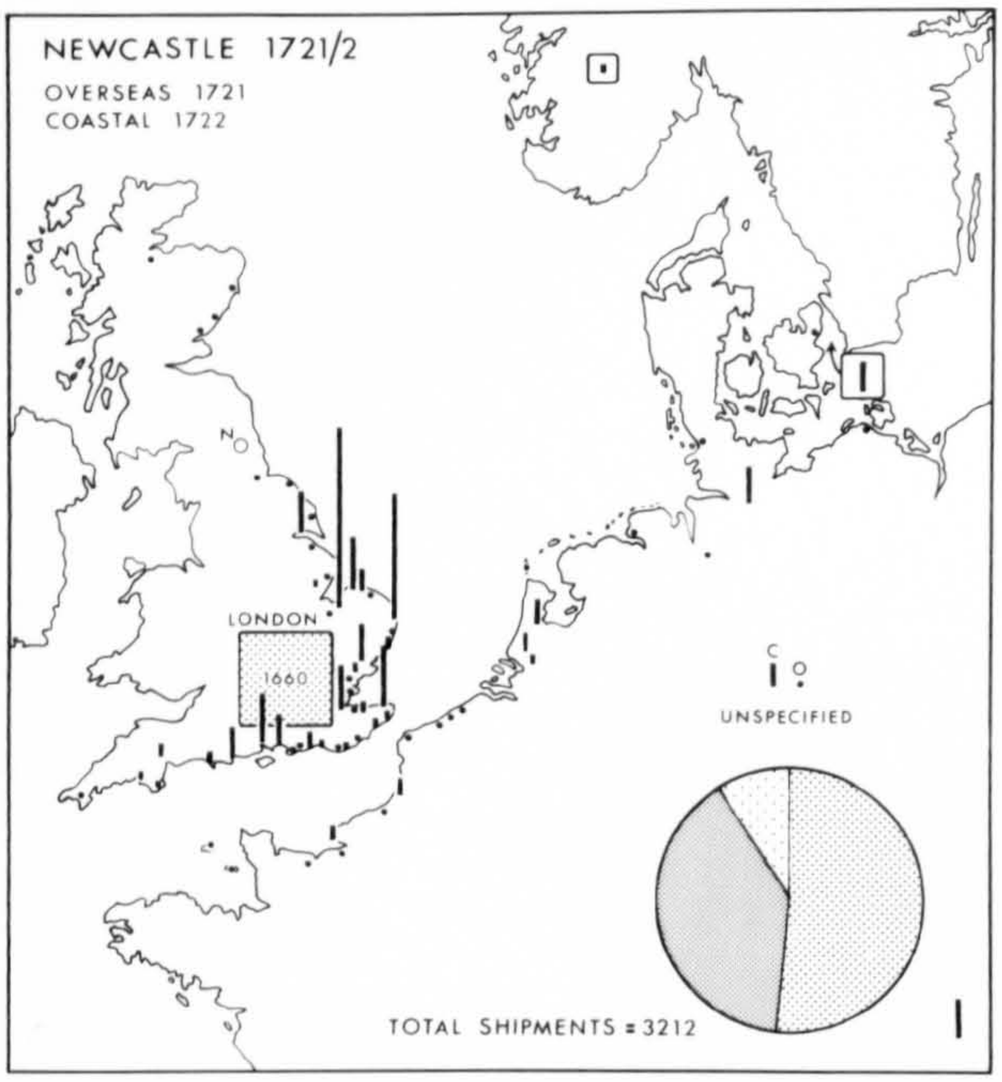

NEWCASTLE 1699/1703
OVERSEAS 1699
COASTAL 1703
NORWAY
THE SOUND
LONDON
1279
UNSPECIFIED
TOTAL SHIPMENTS = 2658
h

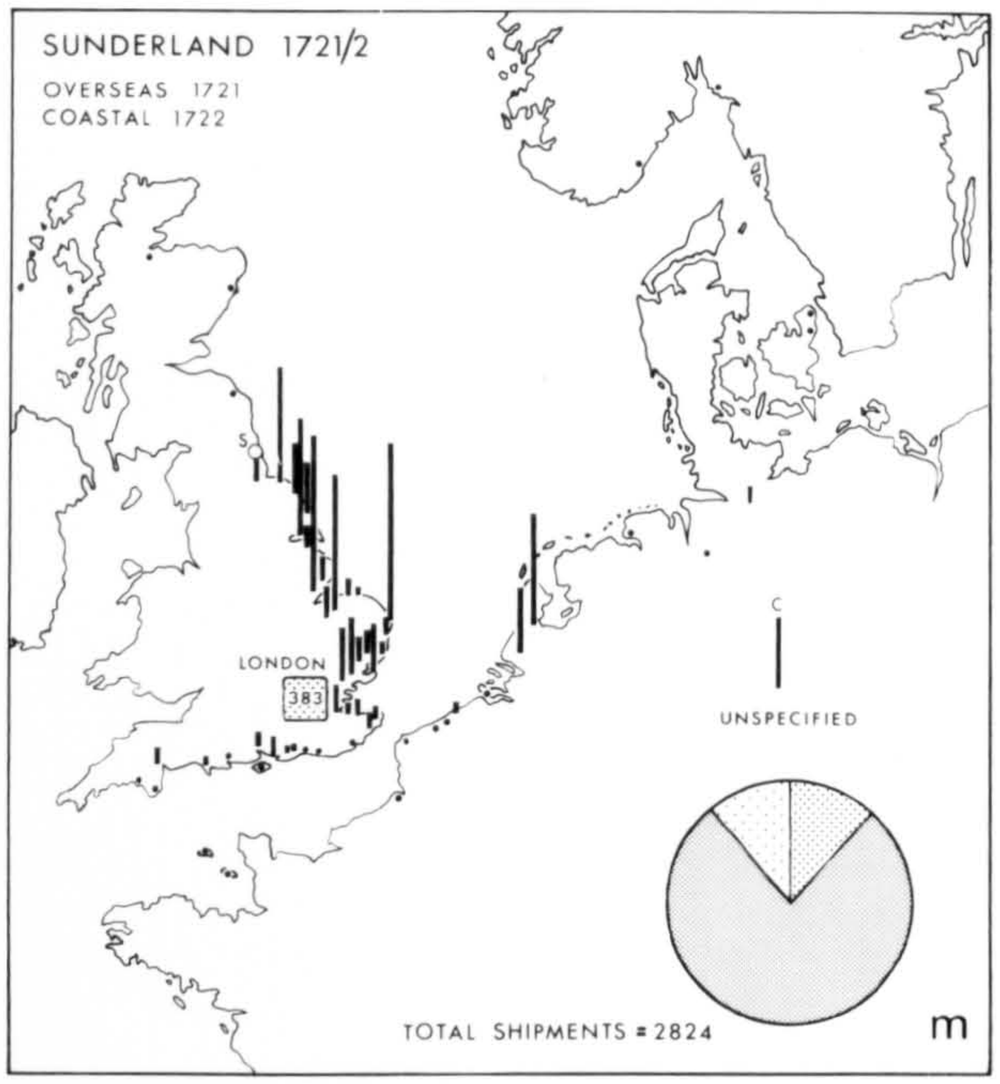

SUNDERLAND 1699/1703
OVERSEAS 1699
COASTAL 1703
LONDON
411
UNSPECIFIED
TOTAL SHIPMENTS = 1932
i

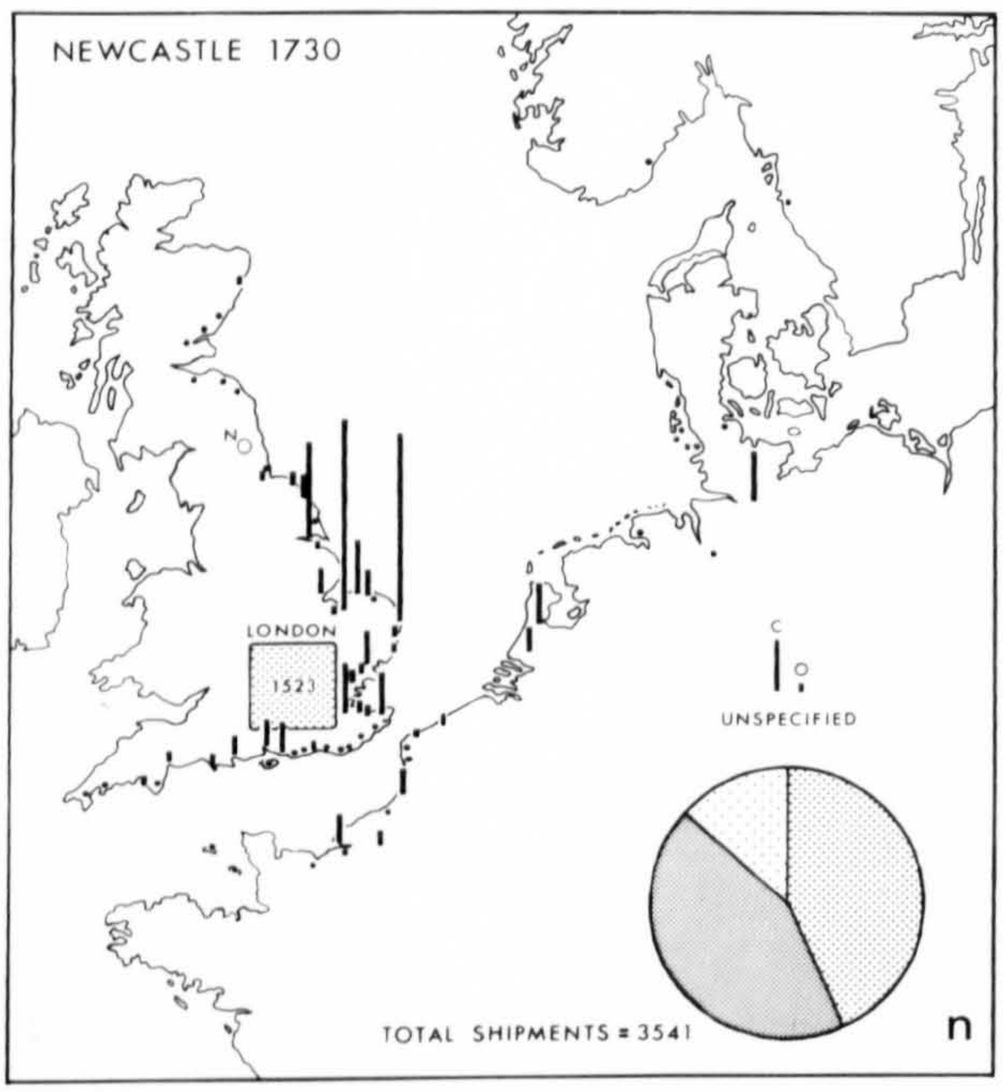

NEWCASTLE 1710
NORWAY
THE SOUND
LONDON
1231
FRANCE
UNSPECIFIED
TOTAL SHIPMENTS = 2158
j

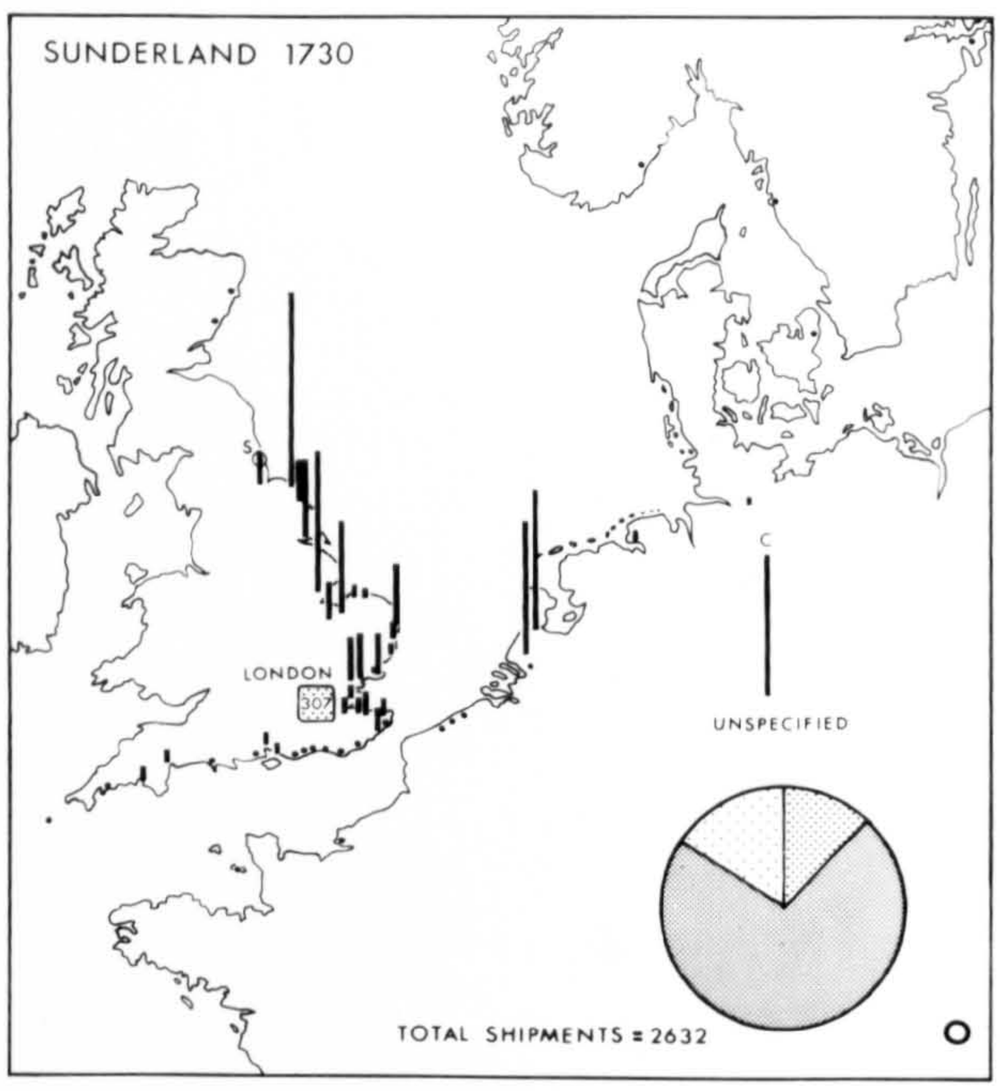

SUNDERLAND 1710
LONDON
627
UNSPECIFIED
TOTAL SHIPMENTS = 2489
k

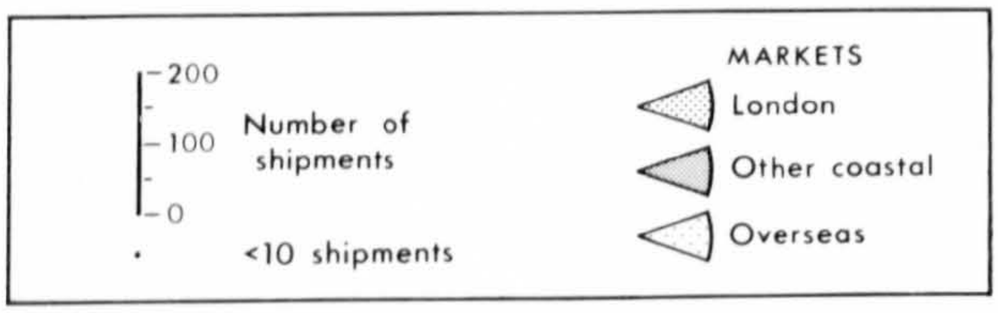
MARKETS FOR TYNE AND WEAR COAL SHIPMENTS

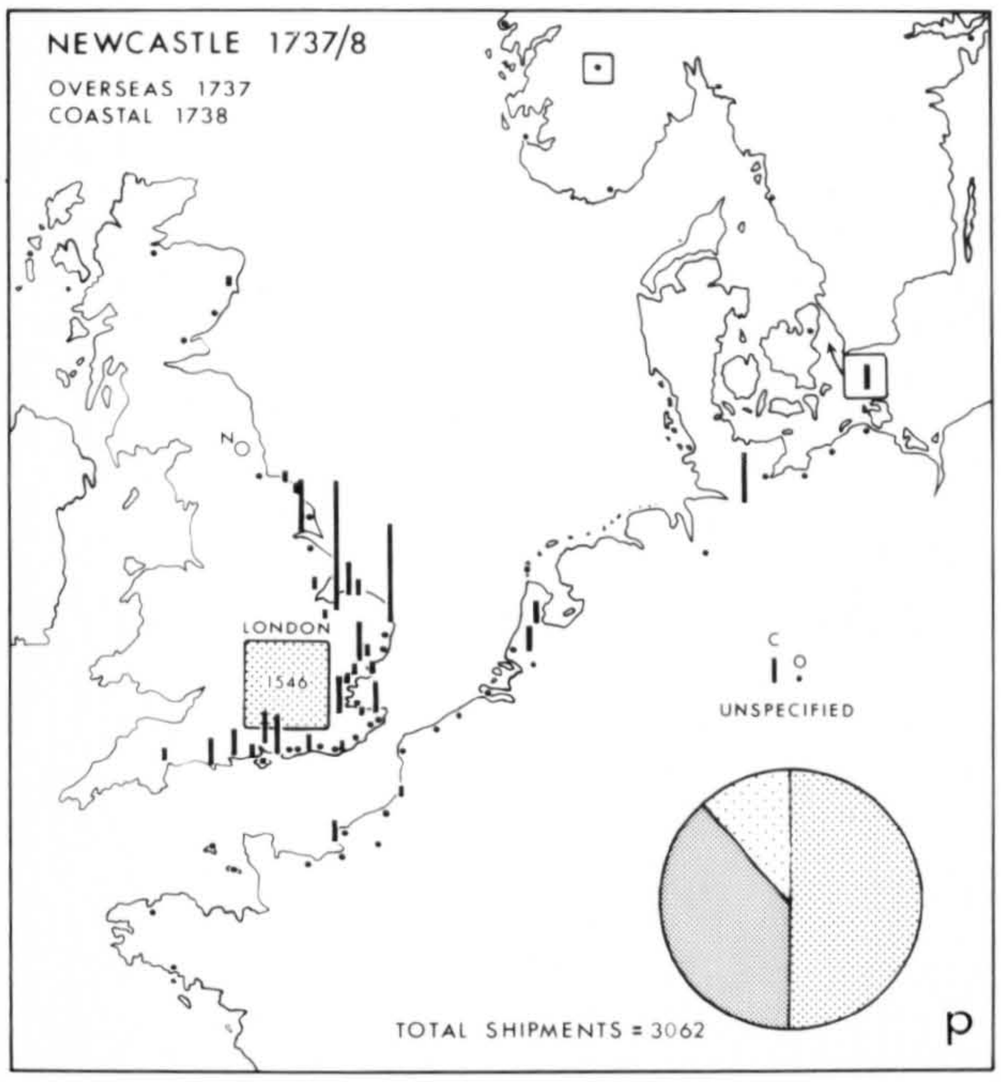


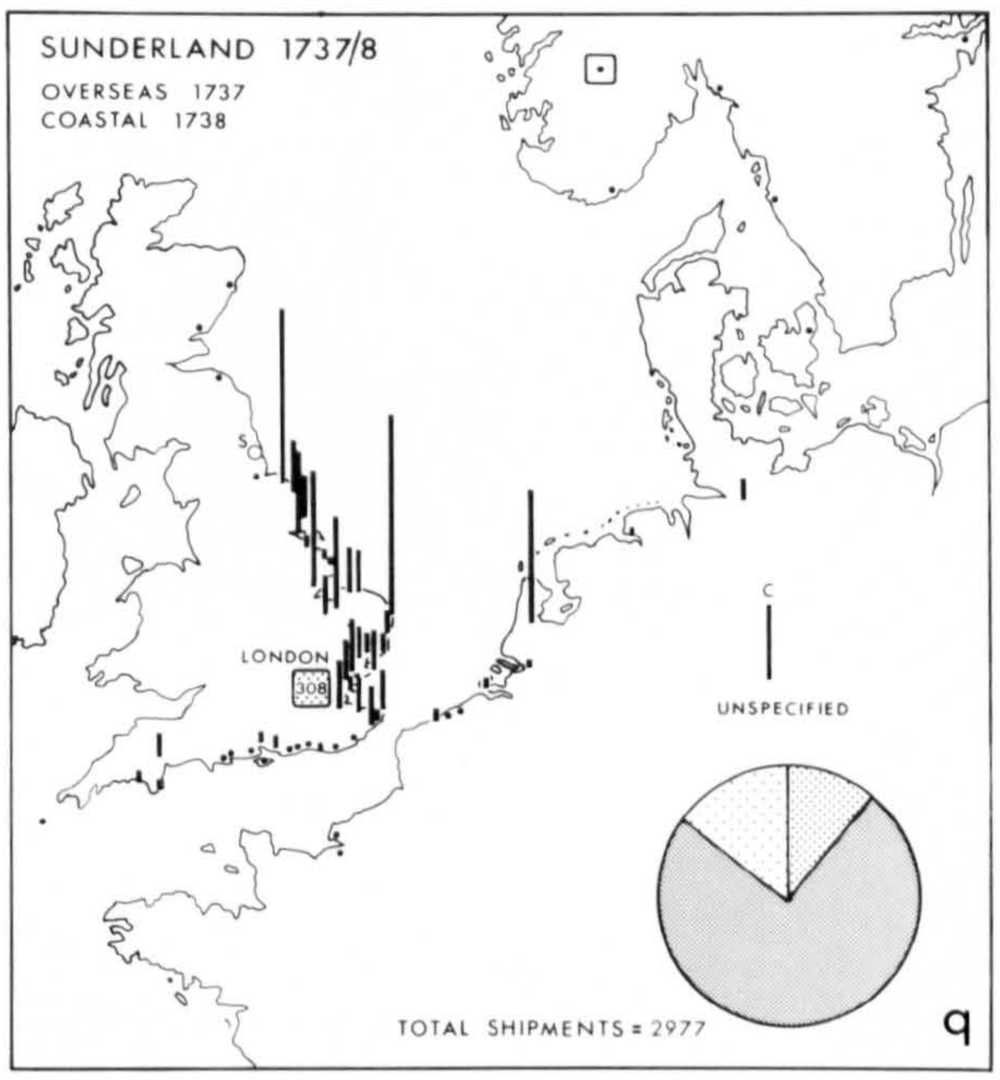


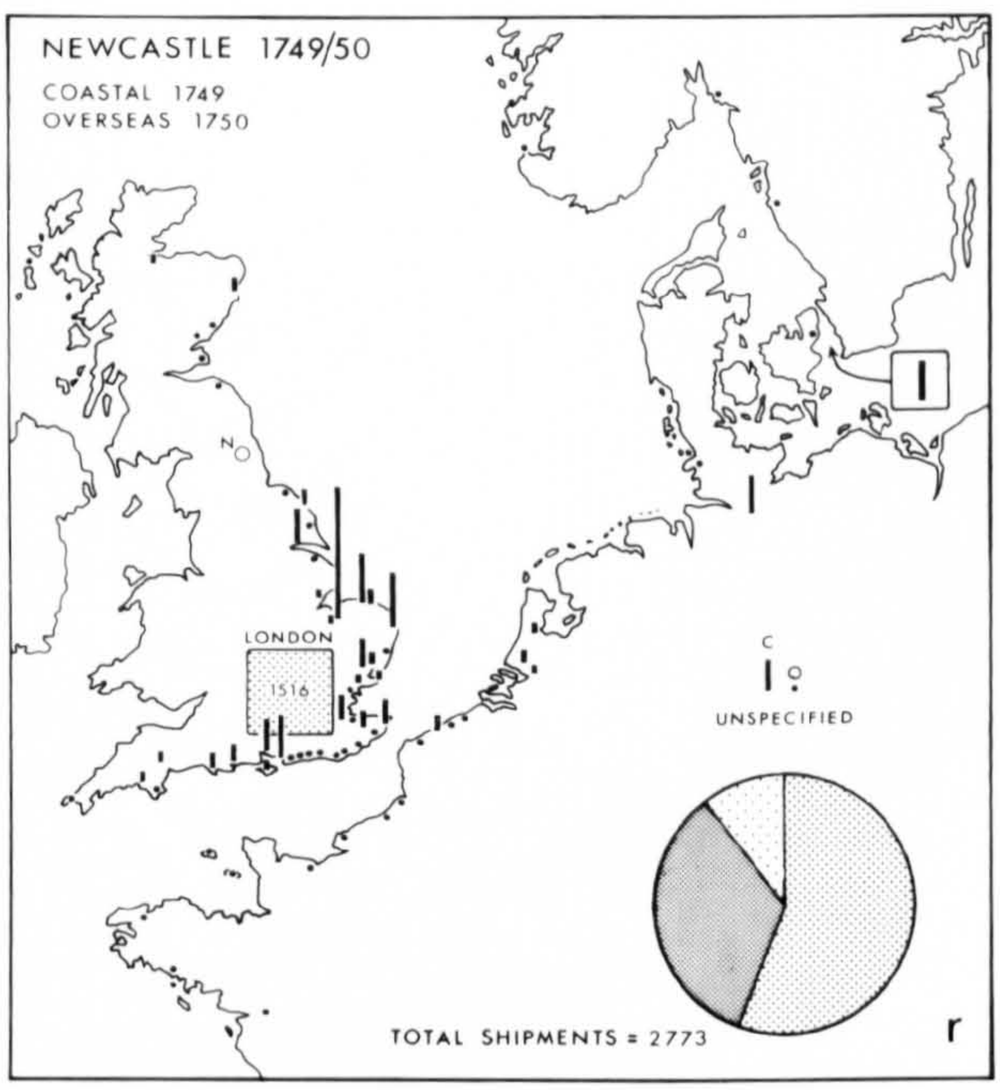







NEWCASTLE 1737/8
OVERSEAS 1737
COASTAL 1738
N
LONDON
1546
C
I
O
UNSPECIFIED
TOTAL SHIPMENTS = 3062
p


SUNDERLAND 1737/8
OVERSEAS 1737
COASTAL 1738
S
LONDON
308
C
UNSPECIFIED
TOTAL SHIPMENTS = 2977
q


NEWCASTLE 1749/50
COASTAL 1749
OVERSEAS 1750
N
LONDON
1516
C
I
O
UNSPECIFIED
TOTAL SHIPMENTS = 2773
r

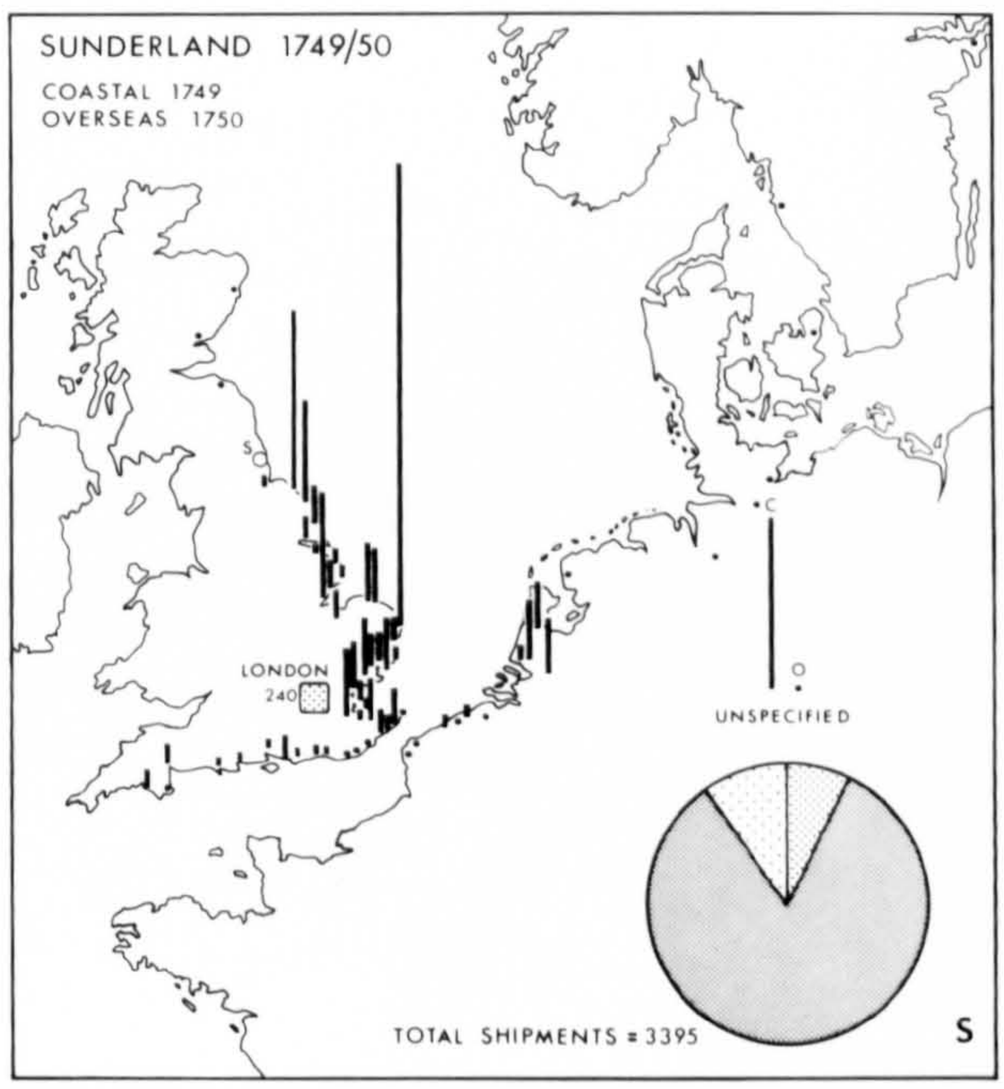
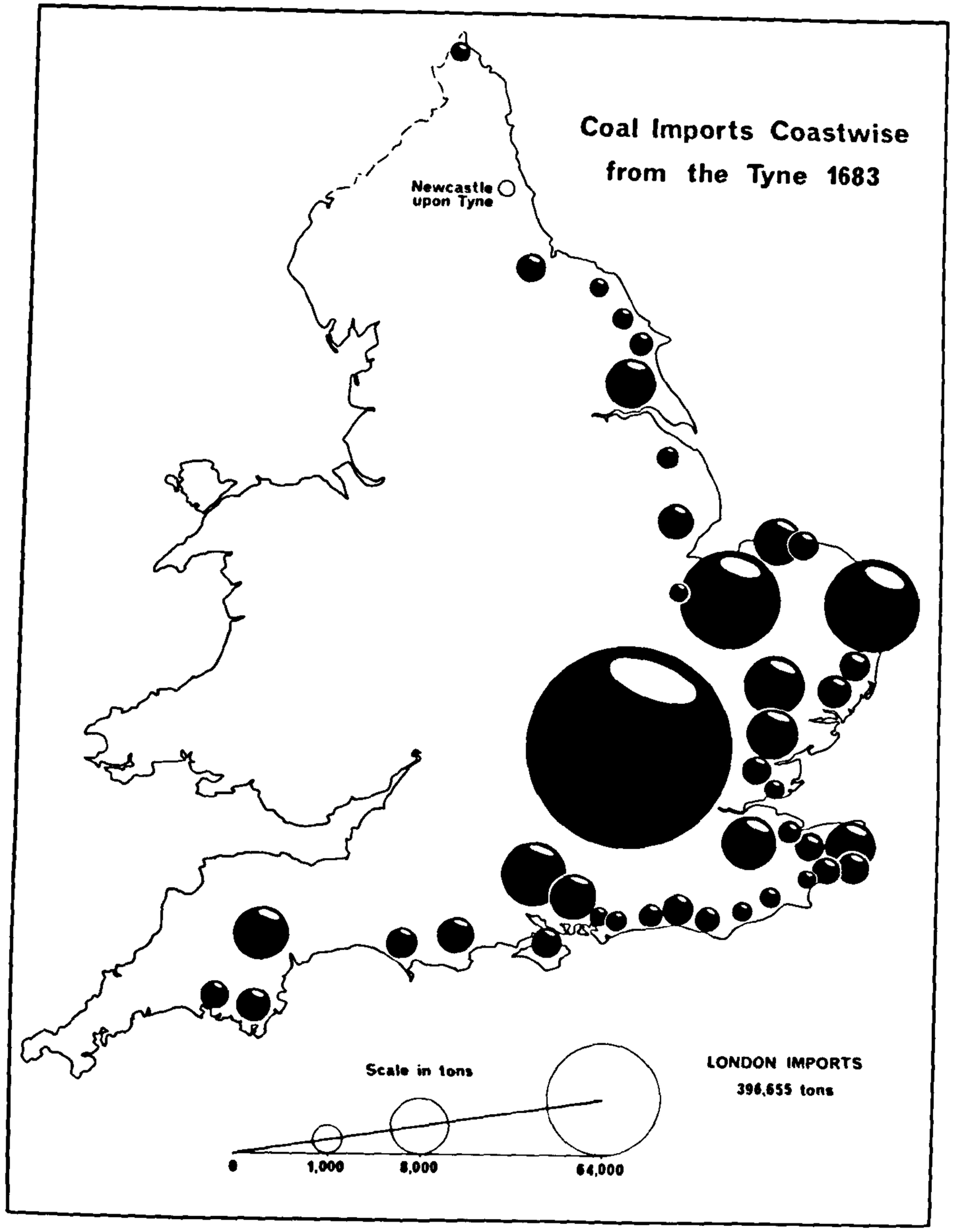

SUNDERLAND 1749/50
COASTAL 1749
OVERSEAS 1750
S
LONDON
240
C
O
UNSPECIFIED
TOTAL SHIPMENTS = 3395
s

Figure 3.3

Coal imports coastwise from the Tyne, 1683 and 1731

Sources: Based upon PRO E190/200/15 and 236/7 (cited by Willan 1938, 210-11.


Coal Imports Coastwise
from the Tyne 1683
Newcastle
upon Tyne
Scale in tons
0
1,000
8,000
64,000
LONDON IMPORTS
396,655 tons

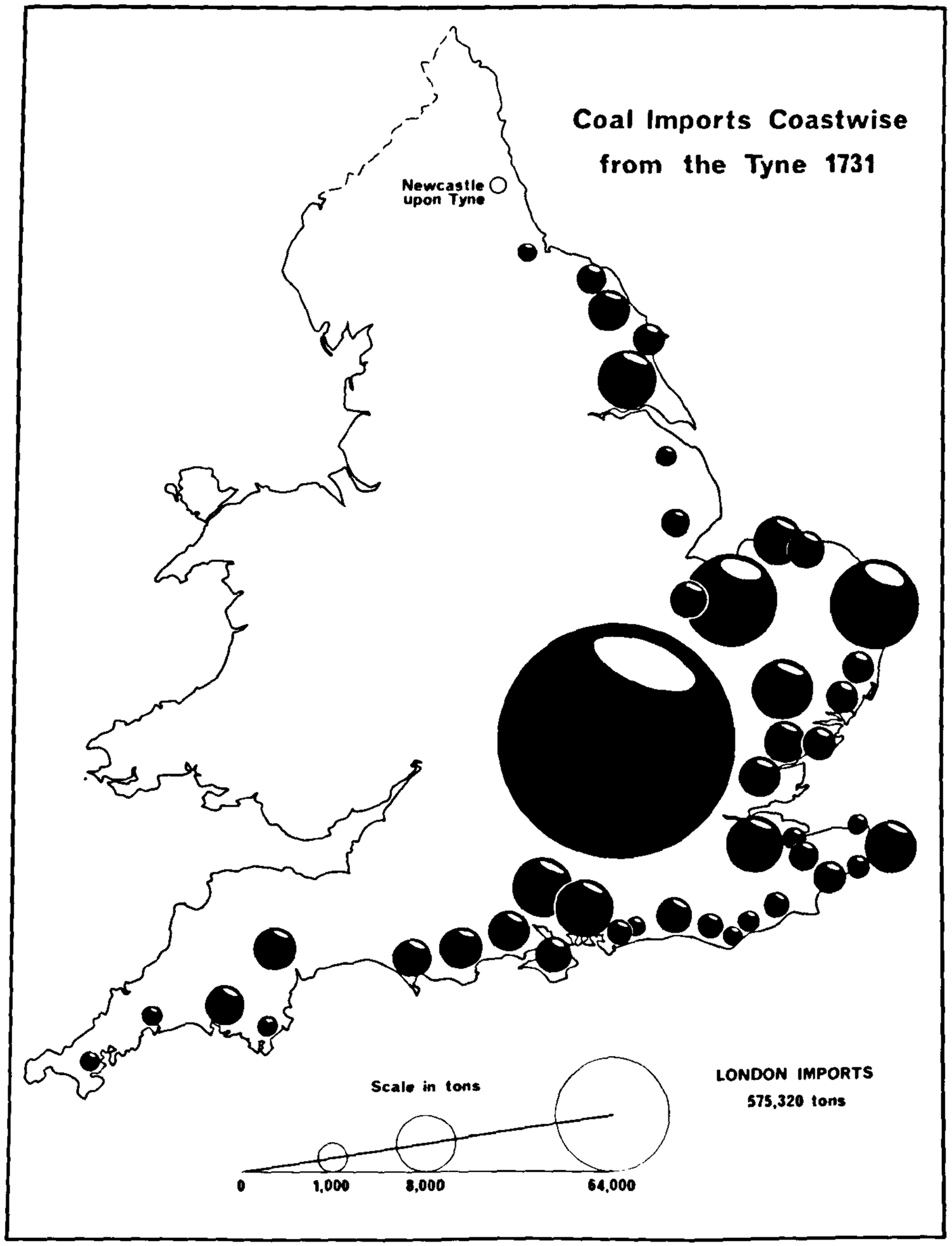

Coal Imports Coastwise
from the Tyne 1731
Newcastle
upon Tyne
Scale in tons
0
1,000
8,000
64,000
LONDON IMPORTS
575,320 tons

Figure 3.4

Main local coal consumers and other industrial sites by 1810

Sources: Smailes 1960, 132; and sources cited in volume one, chapter 3, notes 21-50.

MAIN LOCAL COAL CONSUMERS AND OTHER INDUSTRIAL SITES BY 1810

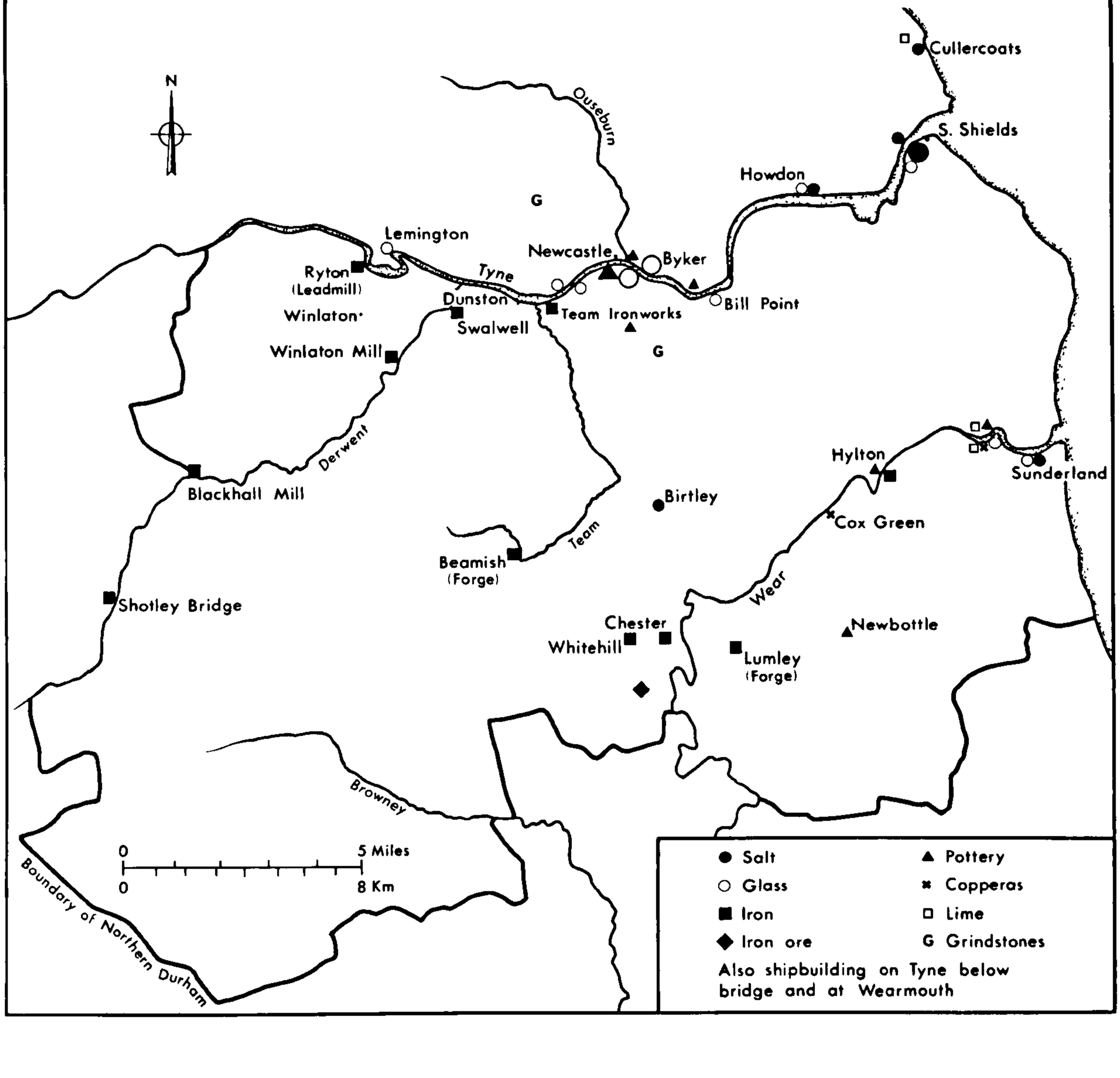
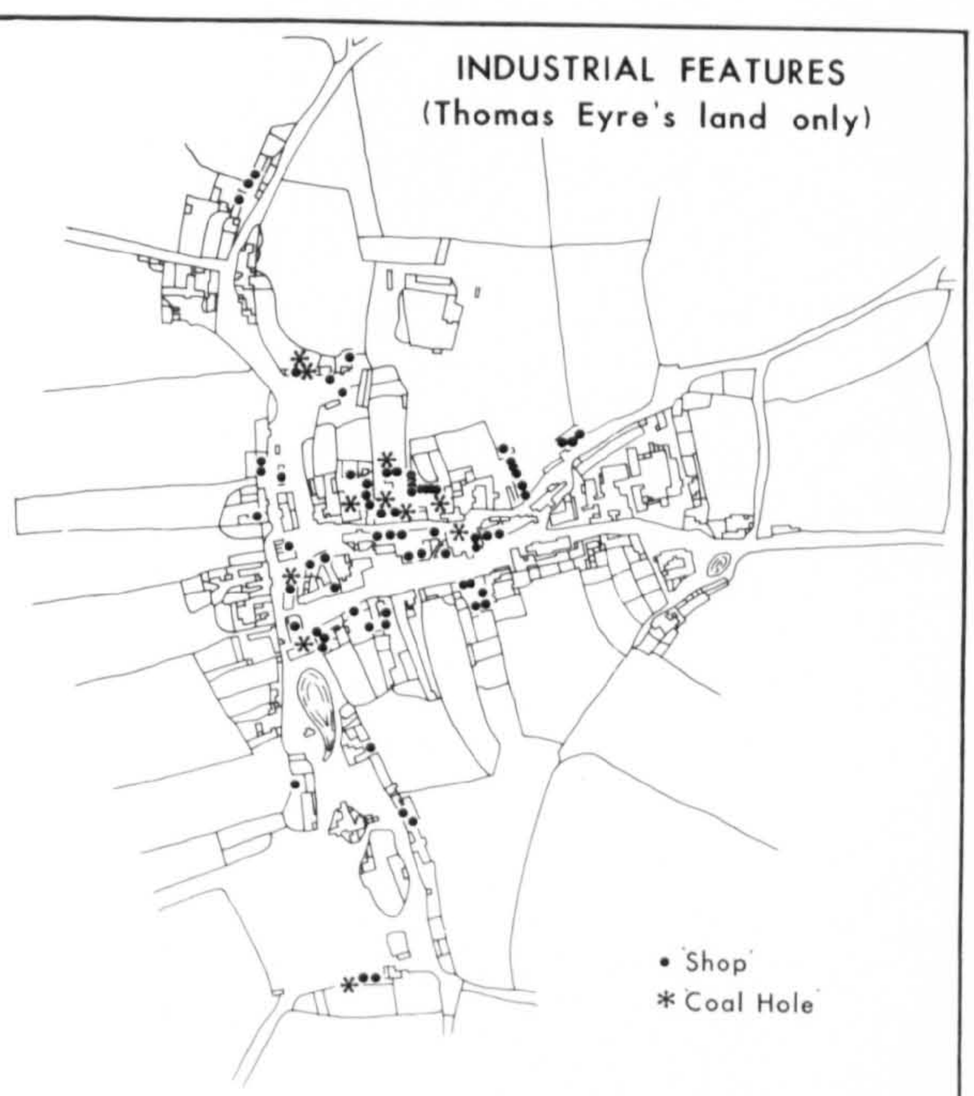


Figure 3.5

Winlaton village, 1782: morphology, industrial features and landownership

Source: Based upon DRO NCB/P/44/Bell's plan of the town of Winlaton showing the property of Thomas Eyre, 1782.







WINLATON 1782



0 5 10 20 Chains

Thomas Eyre

Sir Thomas Blackett

John Simpson

Simpson and Silvertop

Shared land belonging to Lords of Winlaton

Figure 3.6

Northumberland and Durham coalfield: main geological features

Sources: As cited in volume one, chapter 3, note 51.

Northumberland and Durham Coalfield
Main Geological Features

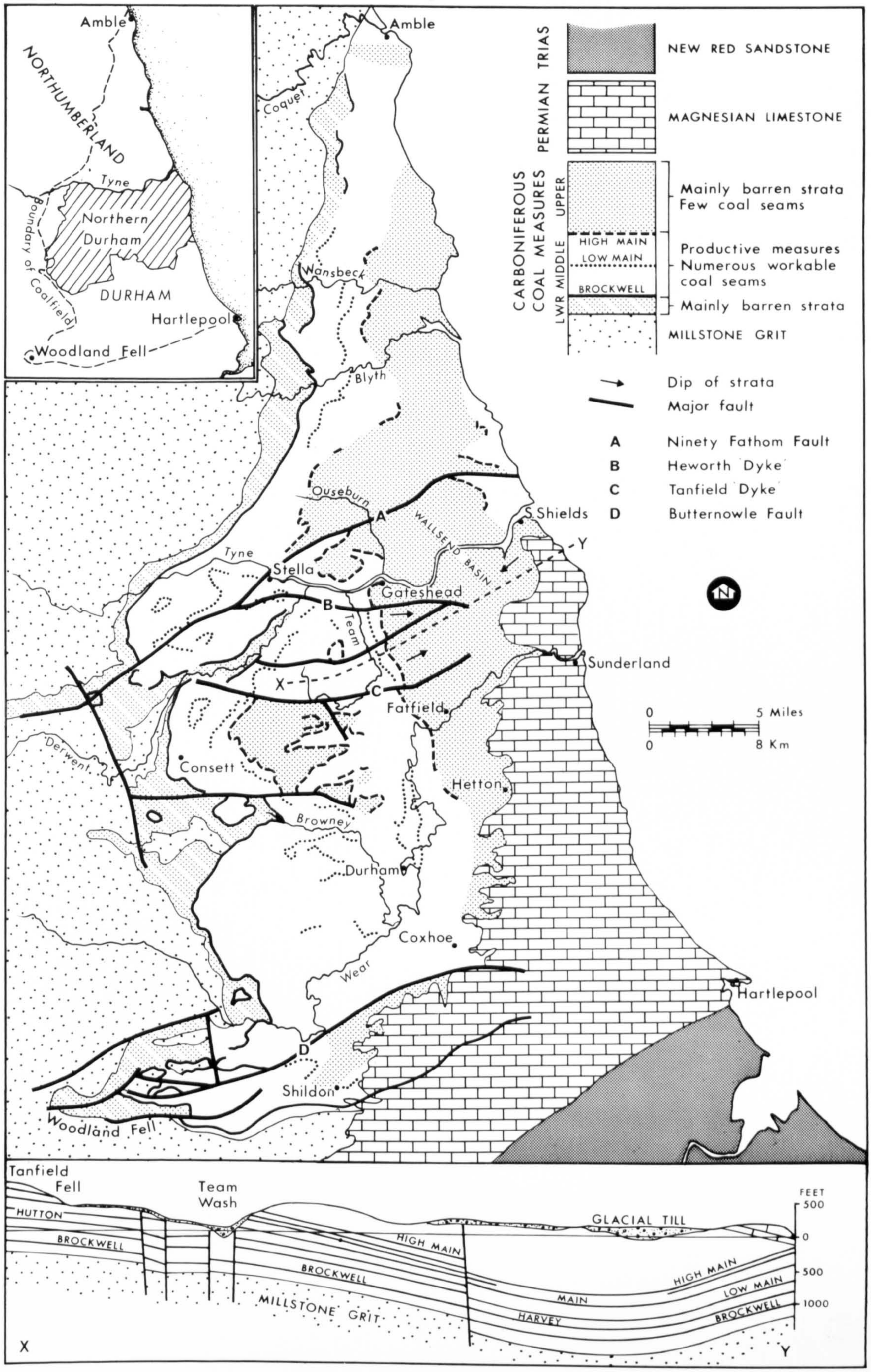


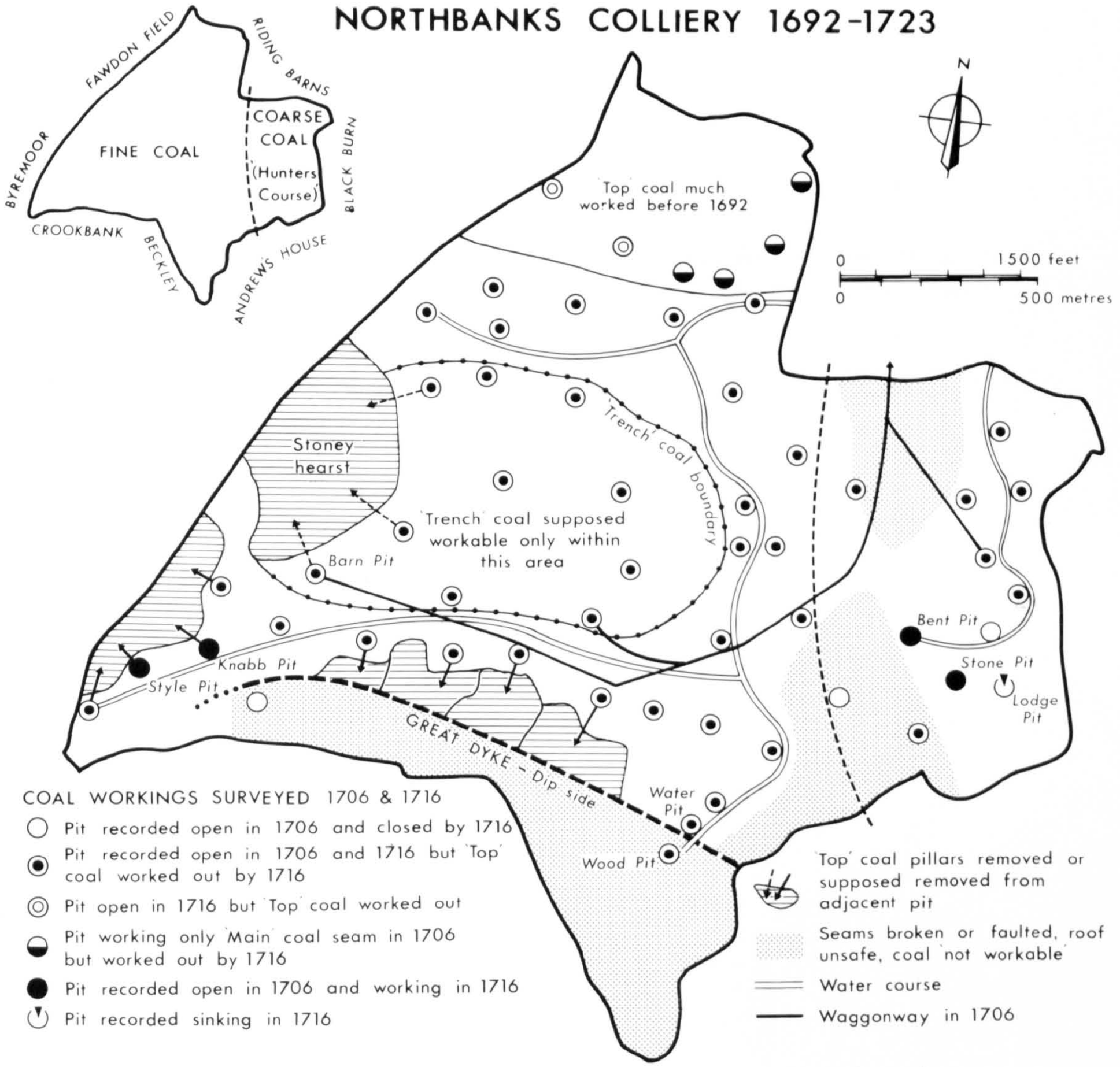
Figure 3.7

Northbanks colliery, 1692-1723

Sources: DRO D/St/72; St/128; St/v36; and St/X44.

Note: Before the 'laying of the waggonway', a certain annual rent of £490 was charged for 700 tens to be 'gotten one year with another (i.e., the deficiencies of one year could be made up in the next or subsequent years) and a tentale rent of 14s. (i.e. 14s. was charged for every ten above 700); thereafter, the certain rent rose to £630 for 900 tens 'one year with another' while the tentale remained at 14s. For further comment on the meaning of certain and tentale rents, see appendix 3. The 'trench coal' was that which had been drained by watercourses with a view to making it workable and 'merchantable'.

NORTHBANKS COLLIERY 1692-1723



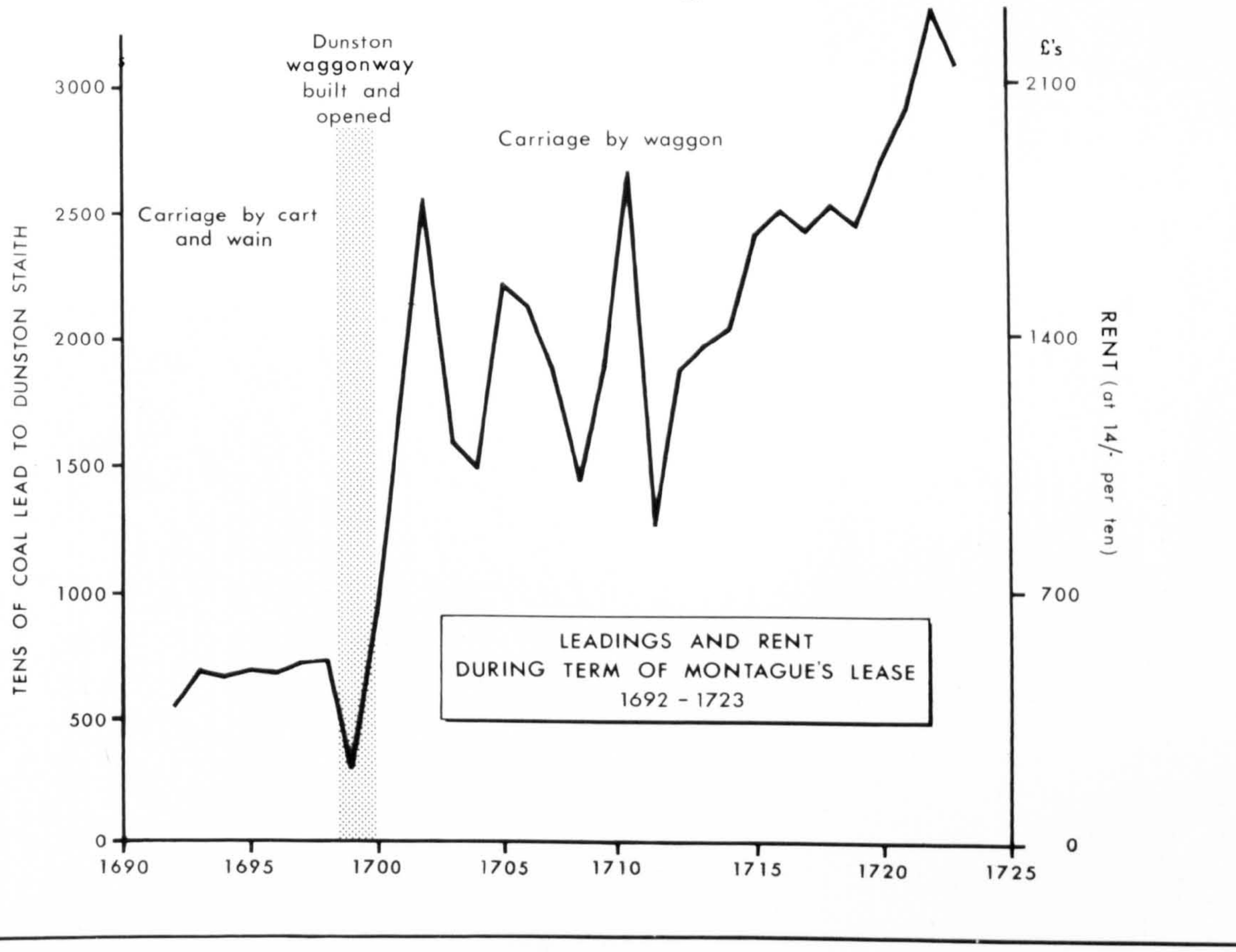


Figure 3.8

'A Survey of Tanfield Leigh Estate belonging to Gilbert Spearman Esqr... 1715'

Source: Re-drawn, in original style, from a plan in NEIM Watson (MP) 34/25.

A Survey of Tanfield Leigh Estate belonging to Gilbert Spearman Esqr taken in October 1715 by Wm Cuthbertson Surveyor

X - Cockrams House & Green 0-2-30
Y - The Hall, Orchard & Folds 1-3-38

The Intake 61-3-12

Low Whiteley An Upcast Dyke to the S W of 20 fathoms 105-3-12

Middle Whiteley 63-2-14

Hollywell field 30-2-15

An upcast Dyke to the NE 17-3-30

Hollywell Pasture

Leigh Hall

The Nursery 1-3-30

Plum Tree Close Arable 3-2-20

The Horse Close Pasture 8-0-0

The Hall Close Arable 4-3-20

The Broom Hill Pasture 50 fathoms 24-2-10

Broom Hill Intake 3-3-30

Jolly's Green 2-0-0

Low Close 13-7-17

Nichools Close Pasture 15-3-39

The Hogg Close Pasture 26-2-0

Jolly's Meadow 13-3-10

The Hogg Meadow 10-3-30

The Spring 13-3-20

The Meadow West Field 35-1-0

Intake 4-3-30

The Wheatfield Arable 19-3-11

The Wood Hill & Meadow 7-1-26

The Sister Wham Arable & Meadow 38-2-30

Bowden's House

Bubbladen

Red Rose

Leigh

Bourne

Harla Bourn belonging to Gilbert Spearman Esqr

Harperley

The Engine

Low Whitley Alias the Oxpasture Whitehall & Burnt Whinney Close 75-3-20

Wham

Sister

BOURN

To the East of this line lies Tanfield Leigh Freehold Estate of 329a-1r-19p and to the west lies Tanfield Leigh Copyhold Estate of 270a-3r-15p

A Scale of Poles 4 to a Chain
0 10 20 30 40 50 60 70 80 90

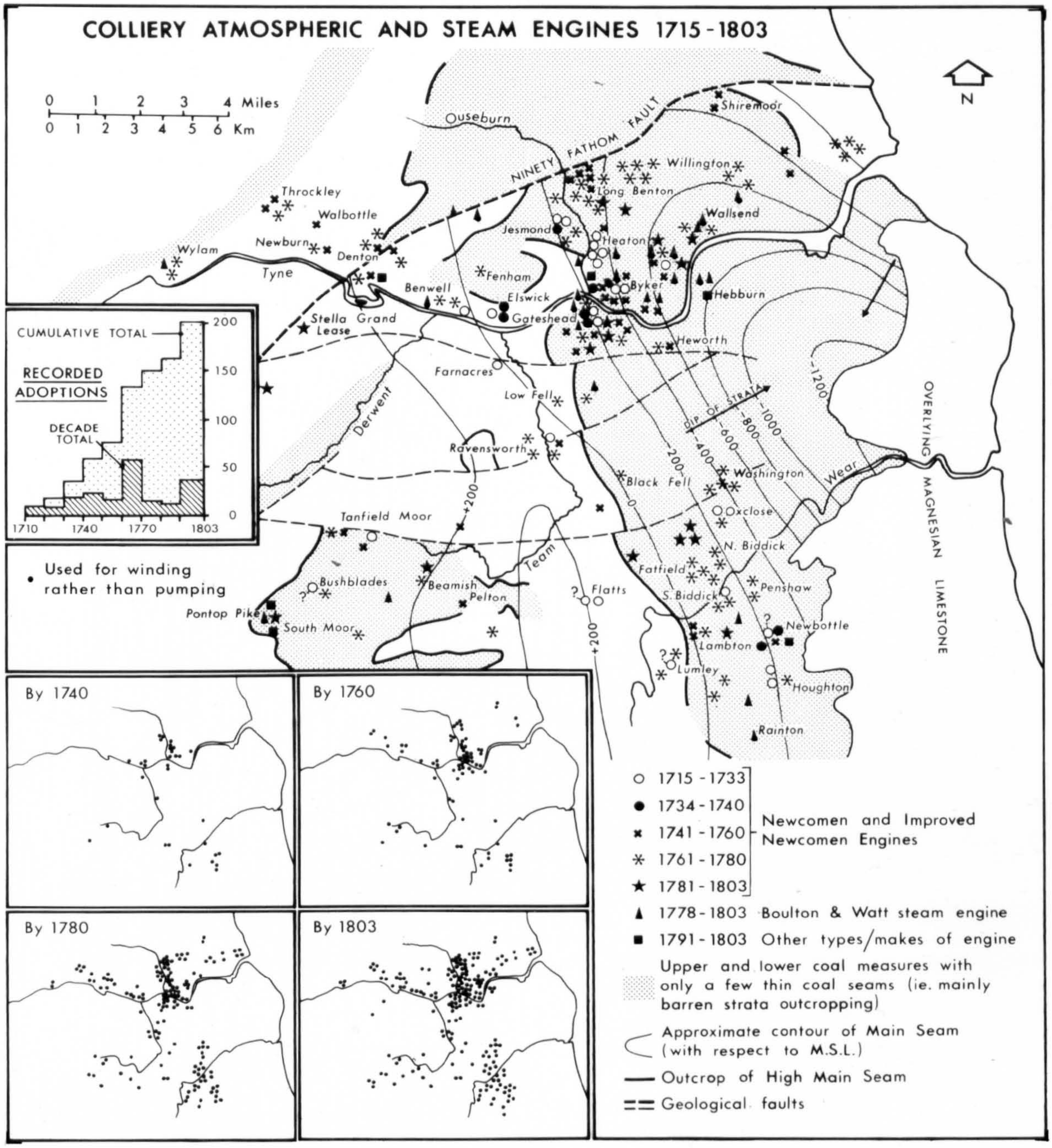
Figure 3.9

Colliery atmospheric and steam engines, 1715-1803

Sources: As cited in appendix IIa.

• Used for winding
rather than pumping

COLLIERY ATMOSPHERIC AND STEAM ENGINES 1715-1803



COLLIERY ATMOSPHERIC AND STEAM ENGINES 1715 - 1803

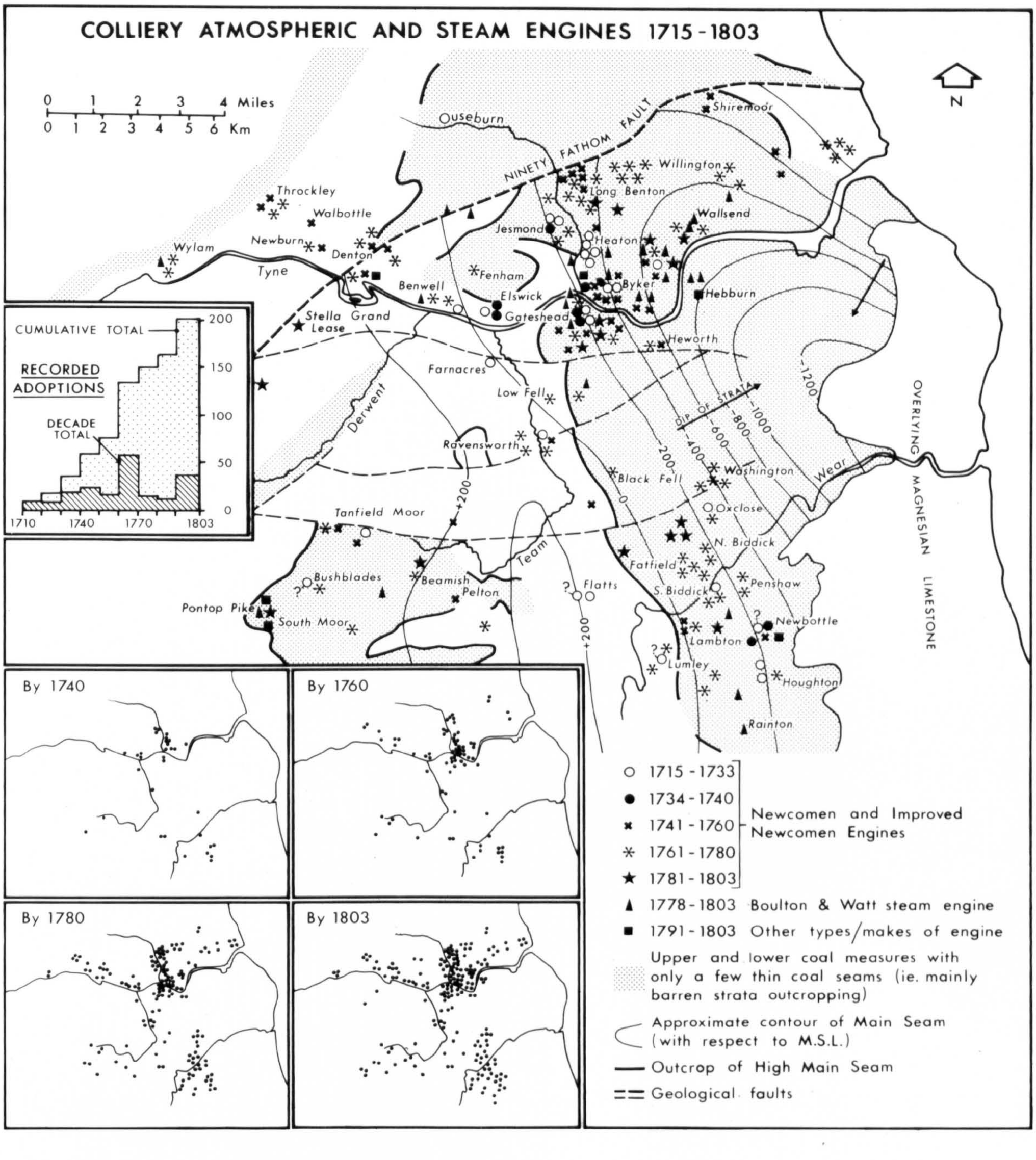


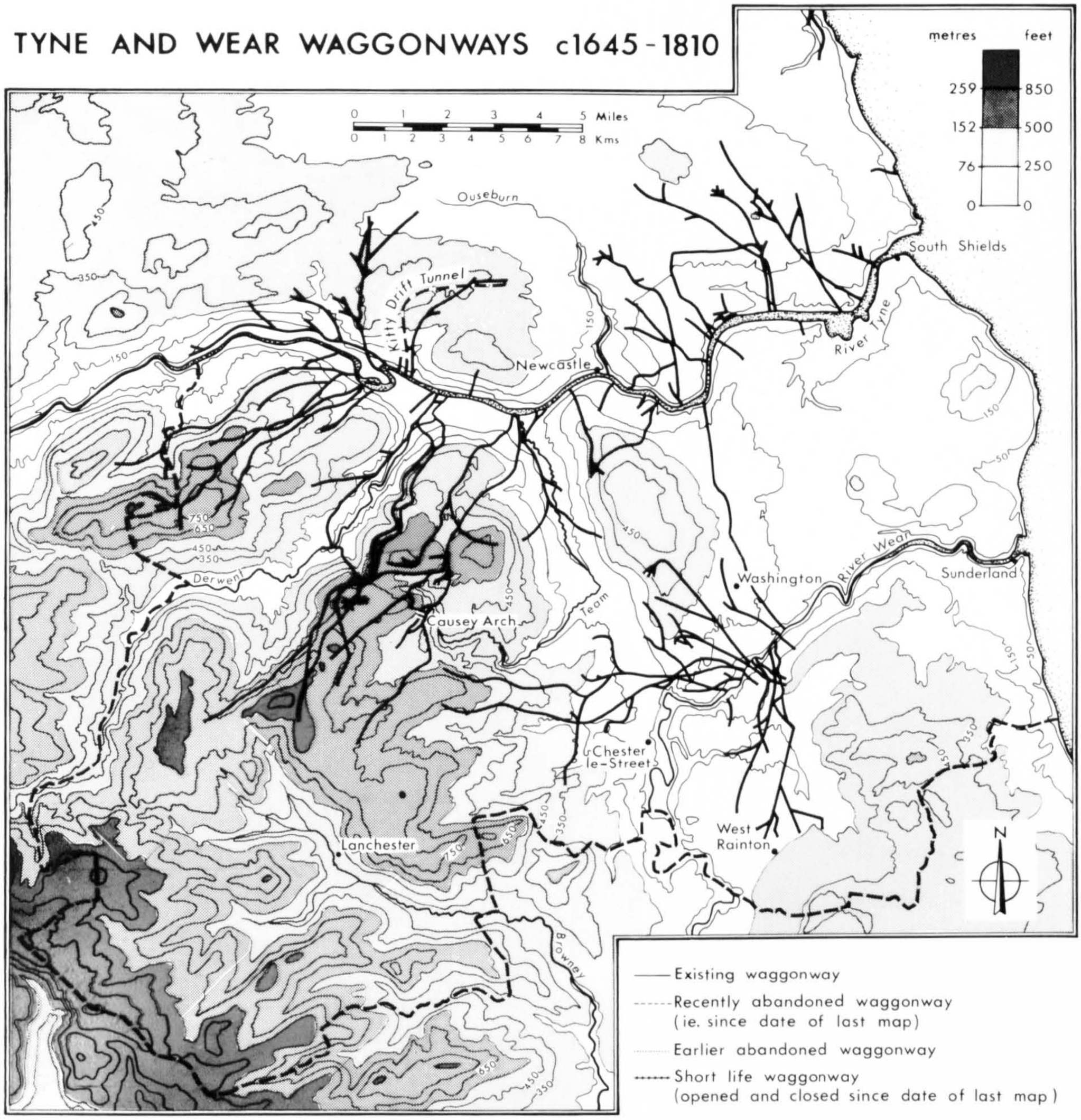
Figure 3.10

Tyne and Wear waggonways, c1645-1810

Sources: Lewis 1970, 110-25; but with corroborative, supplementary or corrective information from NRO ZCR 54/1/plan of the river Wear by Burleigh and Thompson, 1737; NRO 578/321/Map of East and West Rainton, 1777; DRO D/Lo/D/889/sketch map of Rainton mines, 1815; Whickham parish registers; Whickham enclosure award (see appendix 18 for details); GPL Cotesworth (OR) E/B1(2)/wayleave re. Gateshead Fell; NRO 309/M142/Chopwell plan, 1721; and M122/plan of river Tyne with different collieries and staiths, 1780/1); NEIM Bell 15/9/plan of the rivers Tyne and Wear by William Casson, 1801; NEIM Watson (MP) 24, 29-35, 38-43B, and Unthank (MP) 36; NRO ZAN /M17/197a-c/William Brown's colliery plans (eighteenth century). Contours are drawn by reference to the O.S. one-inch maps of Great Britain, sheets 77, 78, 84 and 85.

Note: The 'main way' was the track which was used for carrying coals to the staiths, as opposed to the 'bye ways' which were used for returning empties and the branch lines which acted as feeders. See text, volume one, p. 90.

TYNE AND WEAR WAGGONWAYS c1645 - 1810



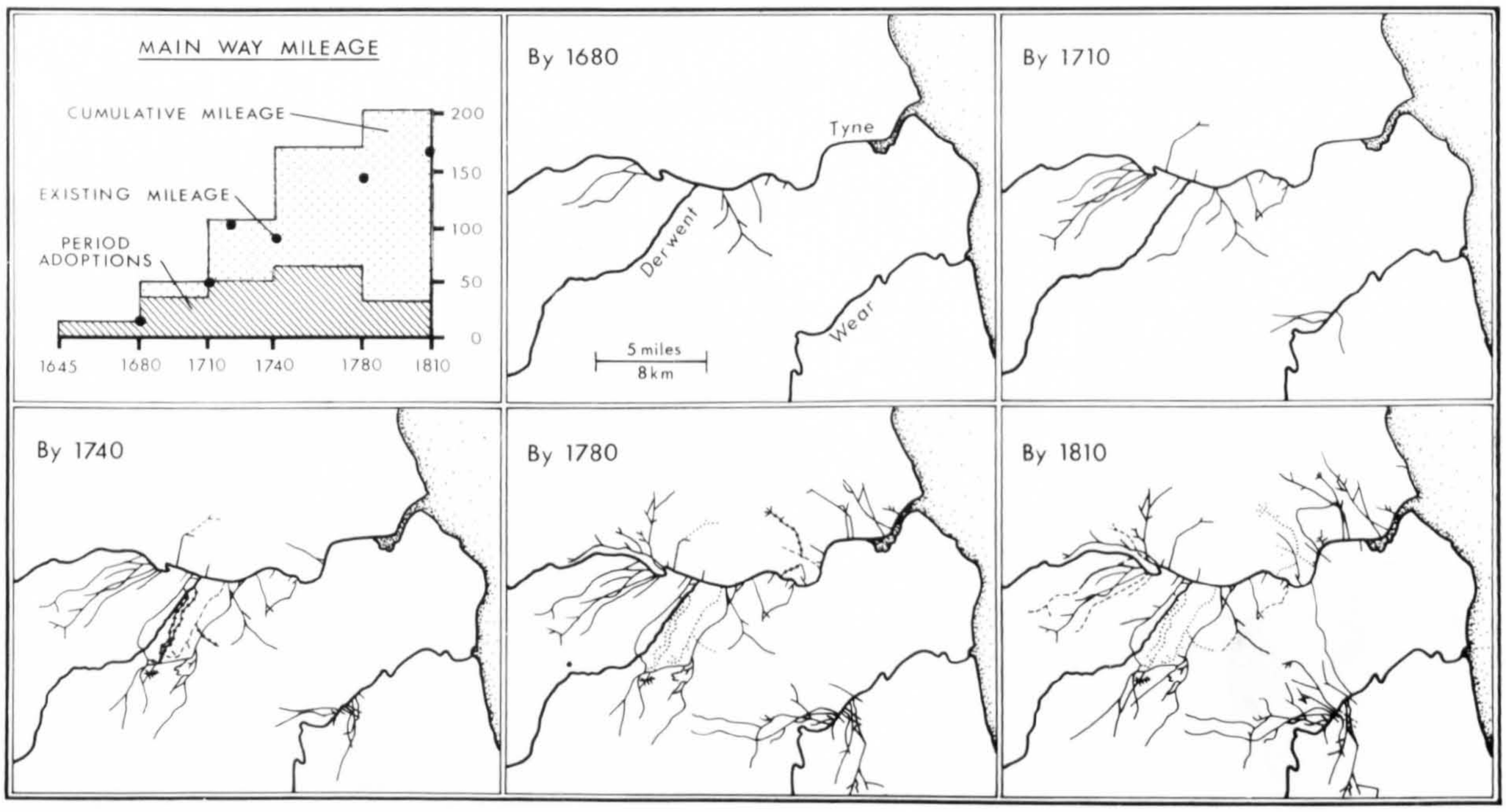


Figure 3.11

Extract plan of the river Wear (as surveyed by Burleigh and Thompson, 1737)

Source: Re-drawn, in original style, from a part of NRO ZCR 54/1/plan of the river Wear by Burleigh and Thompson, 1737.

EXTRACT PLAN

of the

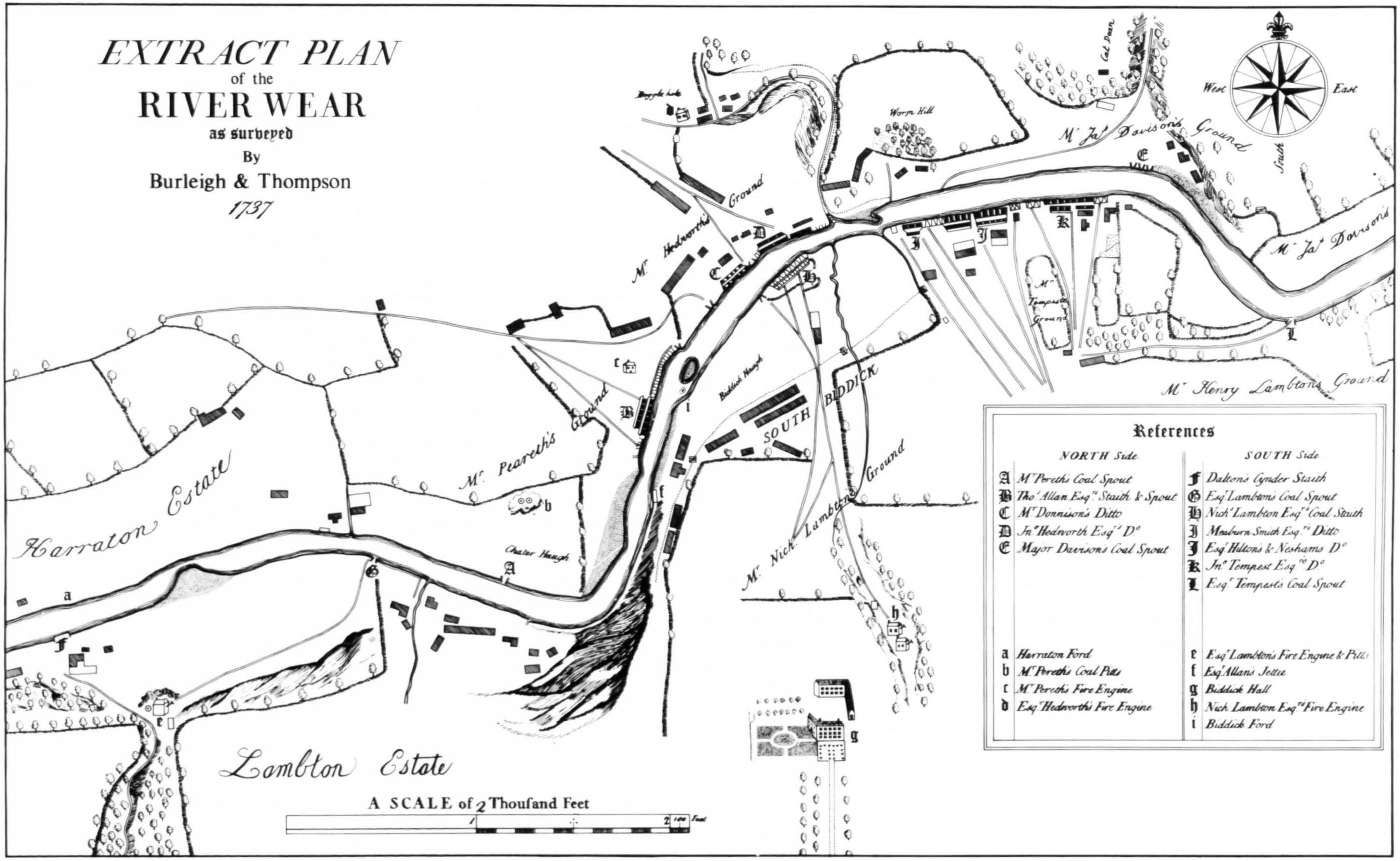
RIVER WEAR

as surveyed

By

Burleigh & Thompson

1737



References

NORTH Side		SOUTH Side	
A	M^r Pereths Coal Spout	F	Daltons Cynder Stauth
B	Tho^s Allan Esq^re Stauth & Spout	G	Esq^r Lambtons Coal Spout
C	M^r Donnisons Ditto	H	Nich^s Lambton Esq^re Coal Stauth
D	Jn^o Hedworth Esq^r D^o	I	Meadburn Smith Esq^re Ditto
E	Major Davisons Coal Spout	J	Esq^r Hiltons & Neshams D^o
		K	Jn^o Tempest Esq^re D^o
		L	Esq^r Tempests Coal Spout
a	Harraton Ford	e	Esq^r Lambtons Fire Engine & Pits
b	M^r Pereths Coal Pits	f	Esq^r Allans Jettie
c	M^r Pereths Fire Engine	g	Biddick Hall
d	Esq^r Hedworths Fire Engine	h	Nich. Lambton Esq^re Fire Engine
		i	Biddick Ford

Figure 3.12

Coal royalties and estates

Main sources: J.T.W. Bell's maps of the Great Northern Coalfield: Tyne and Wear district (1843), Hartlepool district (1843), Newcastle (south Northumberland) district (1847), Auckland coal district (1852), Western coal district (1861); NEIM Watson (MP) 24, 29-35, 38-43B, and Unthank (MP) 36 (eighteenth-century colliery plans); NRO ZAN/M17/197a-c/ William Brown's (eighteenth-century) colliery plans; NRO ZCO IX/ 4/sketch plan of Winlaton lordship; NRO Armstrong maps 121/Bell's maps of river Tyne; DRO NCB/P/91,92; DUPD CC/notitia books (1st and 2nd series) and HC/notitia books; DUPD/tithe maps; enclosure maps and plans (cited in appendix 18); County Durham, first edition six-inch O.S. maps.

Note: Thicker lines denote coincidence of main coal royalties and estates; thinner lines depict boundaries of freehold, copyhold and leasehold estates within the major estates/royalties.

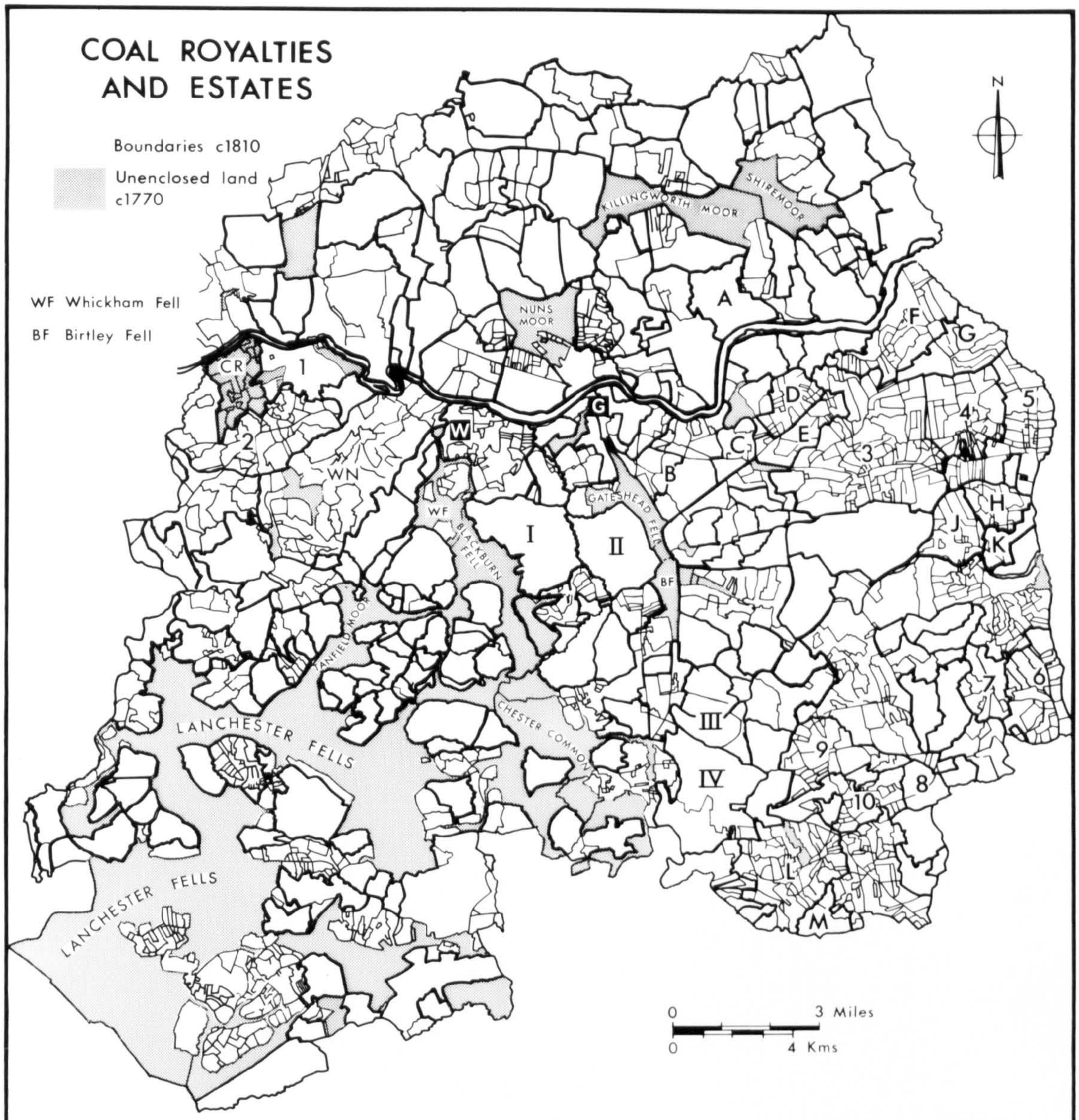
COAL ROYALTIES AND ESTATES

Boundaries c1810

Unenclosed land c1770

WF Whickham Fell

BF Birtley Fell



BISHOP OF DURHAM'S ESTATES

W Whickham Grand Lease (including substantial copyholds)

G Gateshead Grand Lease (without copyhold tenures)

MAINLY OR ENTIRELY COPYHOLDS

1 RYTON
2 RYTON WOODSIDE
3 BOLDON
4 CLEADON
5 WHITBURN

MAINLY LEASEHOLDS

6 RYHOPE
7 TUNSTALL

MIXED TENURES

8 WARDEN LAW
9 NEWBOTTLE
10 HOUGHTON LE SPRING

LAY PROPRIETORS' MAJOR FREEHOLD ESTATES

I RAVENSWORTH
II LAMESLEY
III LAMBTON
IV LUMLEY

WN Winlaton part divided, part undivided Royalty
CR Crawcrook Undivided Royalty

DEAN AND CHAPTER ESTATES

MAINLY OR ENTIRELY LEASEHOLDS

A WALLSEND
B HEWORTHS (JARROW ROYALTY)
C WARDLEY
D MONKTON
E HEDWORTH
F WESTOE
G HARTON
H FULWELL
J SOUTHWICK
K MONKWEARMOUTH
L RAINTONS
M MOORSLEY

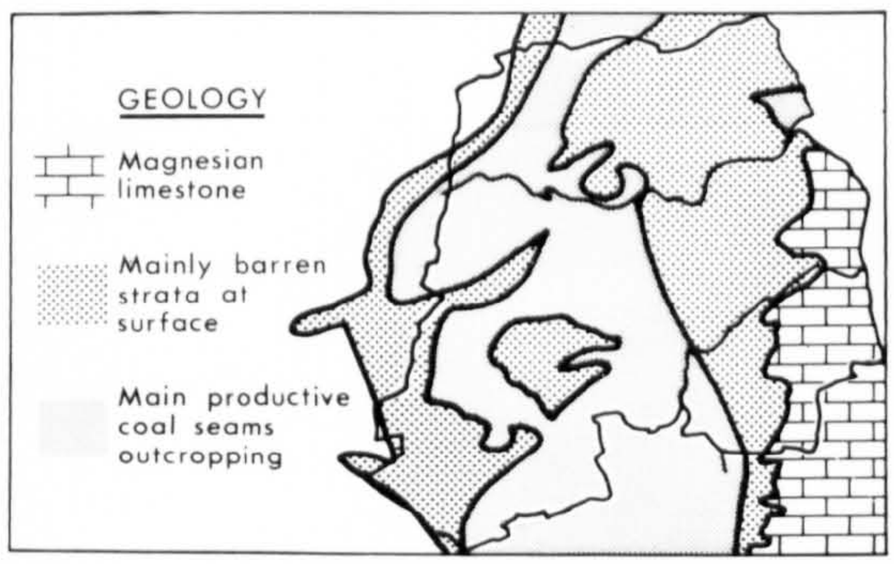


Figure 3.13

'A plan of Westerleigh alias Tanfield Moor Edge Copyhold land... 1750'

Sources: Re-drawn, in original style, from plans in NEIM Watson (MP) 31/13 & 14.

A Plan of Westerleigh alias Tanfield Moor Edge Copyhold land shewing the scituation of the Pitts & the Courses of the 20 fathom dyke therein also the scituation of the Pitts already sunk in Bushblades

Surveyed July 1750

J. Watson fecit

N

Tanfield Moor

Tanfield Moor

Tanfield Leigh Hall

Borehole

The Suppos'd Course of the great Dyke a Downcast to ye North East of 20 Fathoms

Dyke

Silverhill

Fortune

Duke

Bushblades Ground

A Barrier of Whole Coal 40 yards in thickness left next to Harperly Boundary & Bushblades

Hopewell Water

Wood

Harperly Ground

Success

Engine

Tanfield Leigh Ground

Tanfield Leigh

Hunters

	A - R - P
Whole Estate Contains	181 - 10 - 10
Out of which there is won by the present Engine on the S W or riverside of ye 20 fa dyke	64 - 2 - 29
Rem^r wch is on ye N E side of & below ye 20 fa dyke	116 - 1 - 21
Won by the Present Engine	64 - 2 - 29
Out of wch must be left for a barrier next Harperly & Bushblades if 40^yds thick	12 - 2 - 20
Remains to work	52 - 2 - 20

0 4 8 12

Scale of 4 Chains to an Inch

Figure 3.14

'A Plan of Jarrow Colliery [alias Heworth]... 1750'

Sources: Re-drawn, in original style, from plans in NEIM Watson (MP) 30/6 & 7.

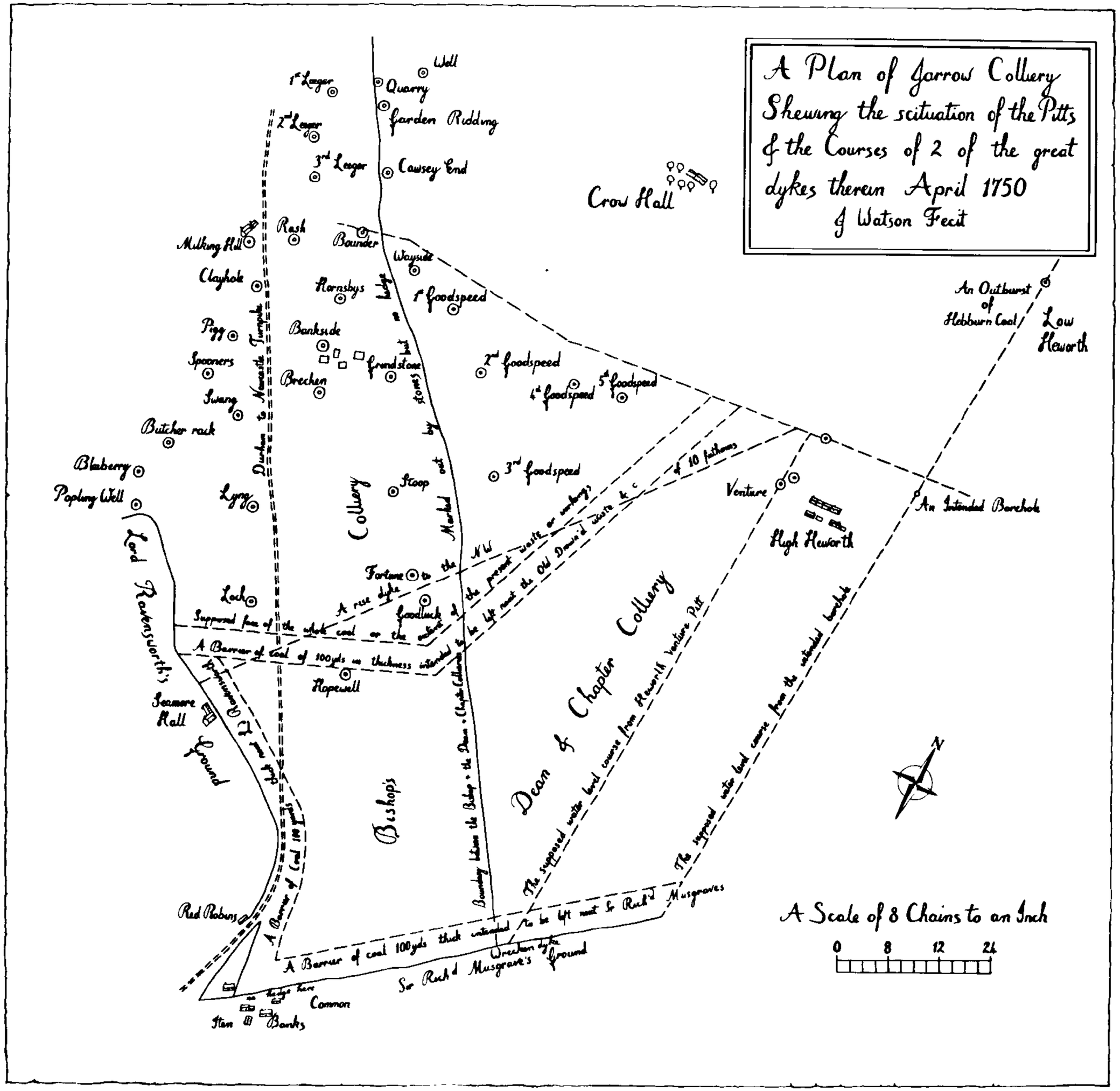

A Plan of Jarrow Colliery Shewing the scituation of the Pitts & the Courses of 2 of the great dykes therein April 1750
J Watson Fecit
Well
Quarry
Garden Ridding
Cawsey End
1st Leger
2nd Leger
3rd Leger
Crow Hall
Rash
Bounder
Wayside
Milking Hill
Clayhole
Hornsbys
1st Goodspeed
An Outburst of Hebburn Coal
Low Heworth
Pigg
Bankside
Spooners
Brecken
Swang
Butcher rack
Blaberry
Poplary Well
Lyzy
Stoop
3rd Goodspeed
4th Goodspeed
5th Goodspeed
2nd Goodspeed
Venture
An Intended Borehole
Hugh Heworth
Lord Ravensworth's
Seamere Hall
Ground
Loch
Fortune
Goodluck
Ropewell
Bishop's
Dean & Chapter Colliery
Red Robins
Common
Sir Rich.d Musgrave's
Ground
Stan
Banks
to Newcastle Turnpike
Durham
Boundary betwn the Bishop & the Dean & Chapter Collieries
A Barrour of Coal 100 yards thick intended to be left next Sir Rich.d Musgraves
A Barrour of Coal 100yds in thickness intended to be left next the Old Drain'd Waste &c
The supposed water level course from Heworth Venture Pit
The supposed water level course from the intended borehole
of 10 fathoms
A Scale of 8 Chains to an Inch
0 8 12 24
N

Figure 3.15a

Estates, coal royalties and the adoption of steam engines, 1714-1803

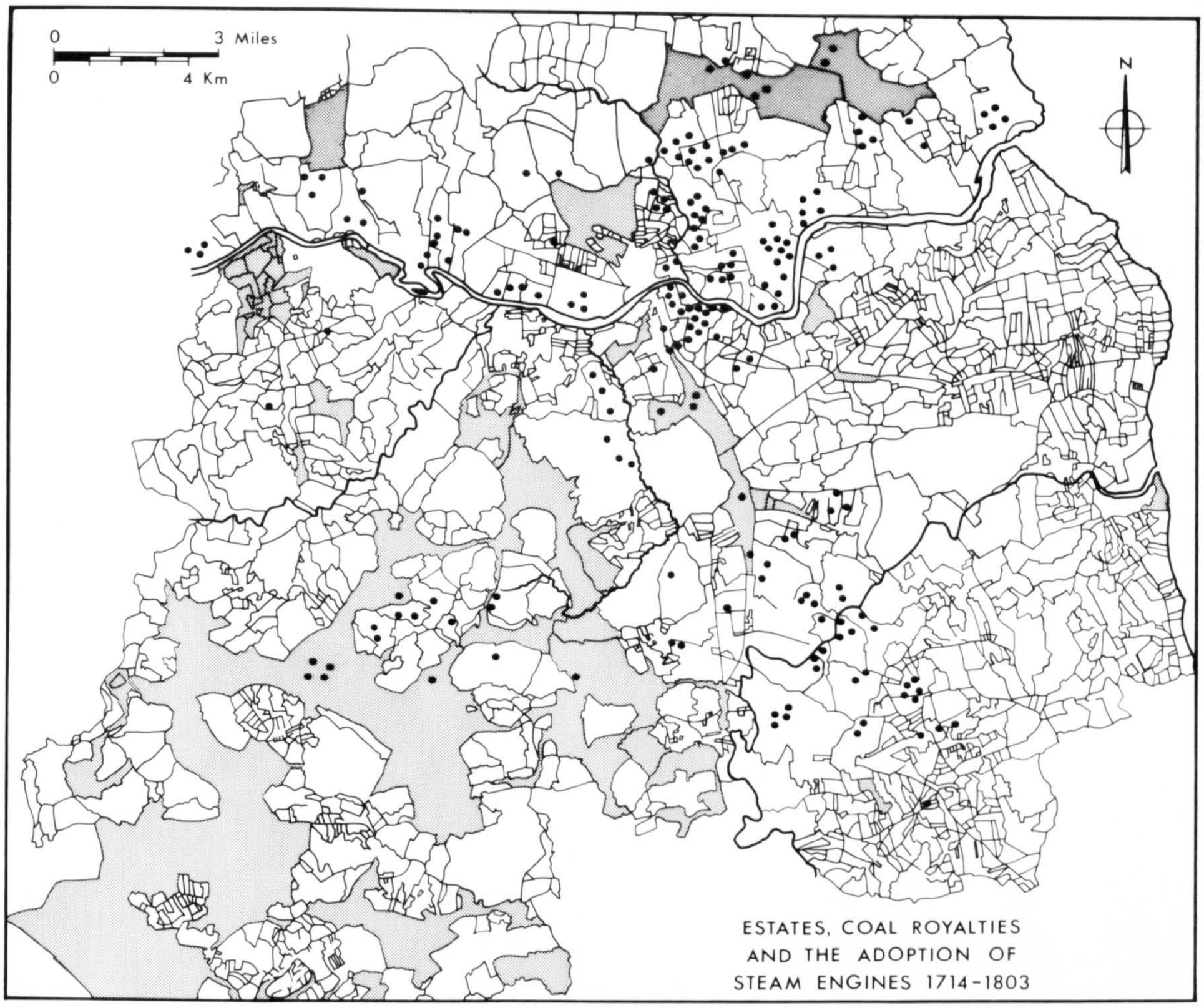
Sources: As for figures 3.9 amd 3.12.

Figure 3.15b

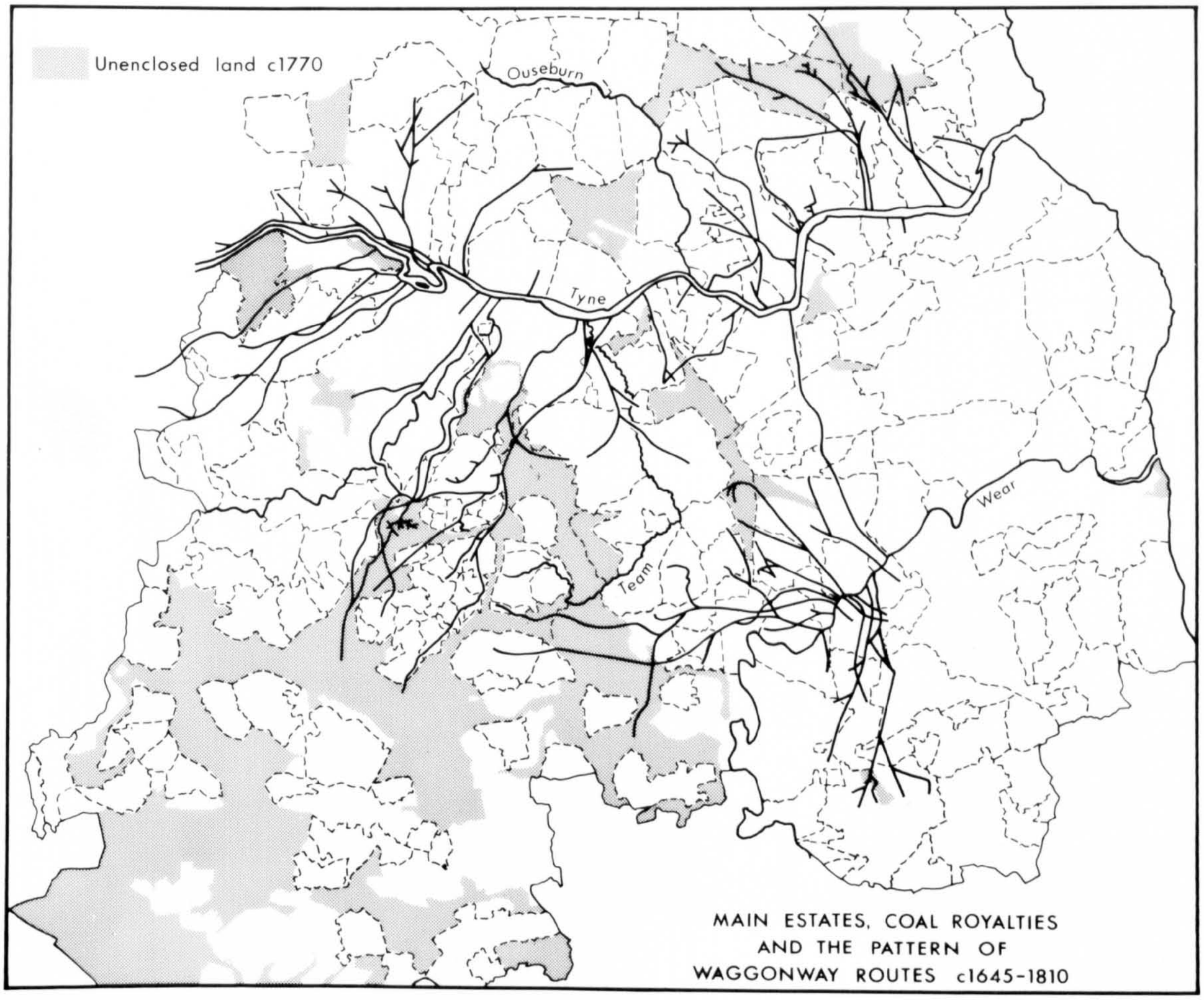
Main estates, coal royalties and the pattern of waggonway routes, c1645-1810

Sources: As for figures 3.10 and 3.12.

Note: In figure 3.15b, coal royalties and estates are one and the same; in figure 3.15a, additional estate boundaries are shown as for figure 3.12, which see.



ESTATES, COAL ROYALTIES
AND THE ADOPTION OF
STEAM ENGINES 1714-1803



MAIN ESTATES, COAL ROYALTIES
AND THE PATTERN OF
WAGGONWAY ROUTES c1645-1810

Figure 4.1

Outline structure of coal marketing system for London-bound supplies

Sources: Mainly, NEIM Watson 5/9 and 8/10; Smith 1961, *passim*; Nef 1932, II, 84-8; Westerfield 1915, *passim*; and Flinn 1984, 273-9.

OUTLINE STRUCTURE OF COAL MARKETING SYSTEM FOR LONDON-BOUND SUPPLIES

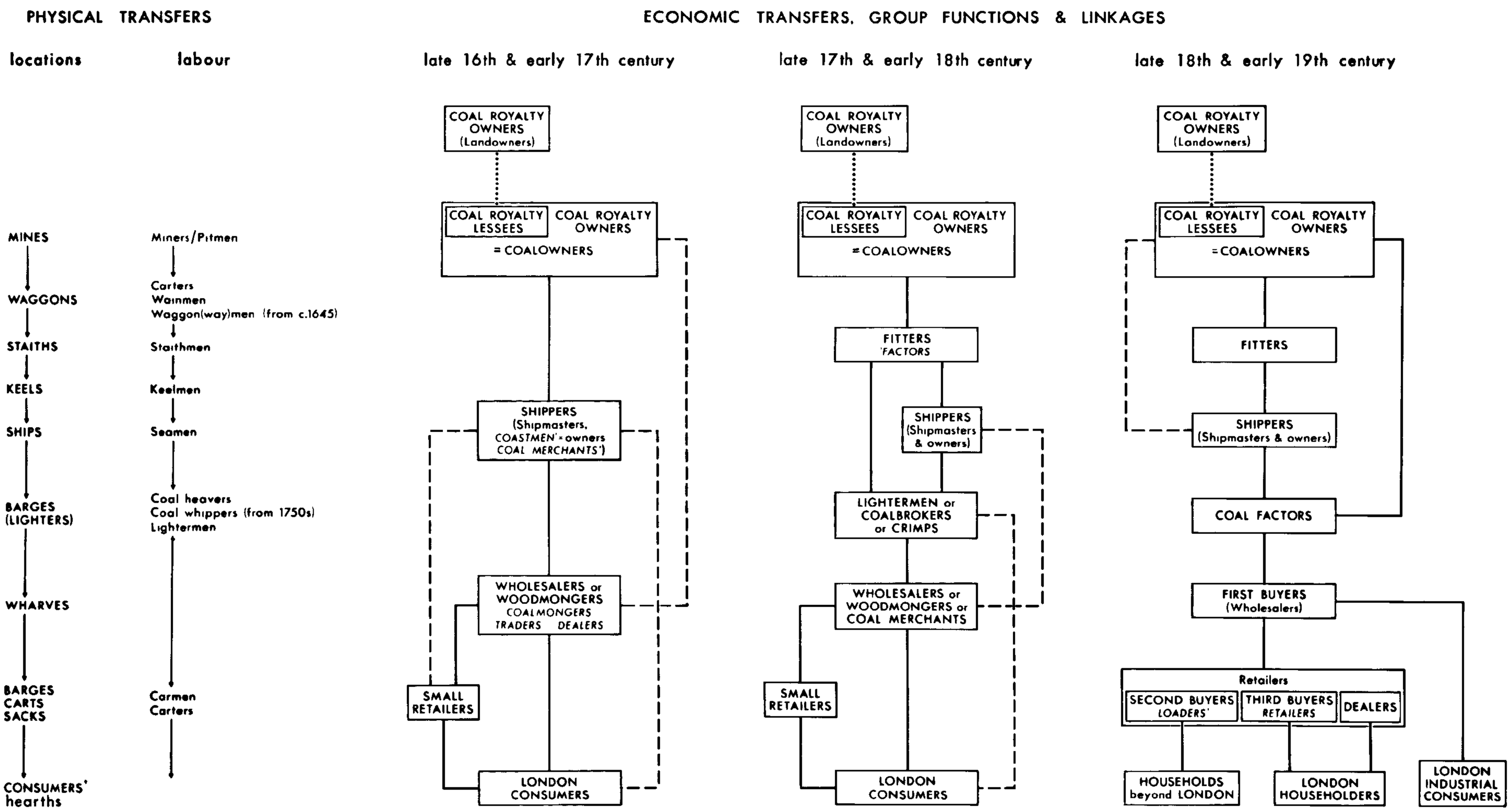


Figure 4.2

Coal prices, 1575-1810, and London imports, 1700-1810

Sources and note:

Coal imported into London	Appendix 4c
Westminster & Greenwich prices	Appendix 12a
King's College prices	Appendix 12a
Other London prices	Appendix 12b
Prices to shipmasters	Appendix 12c

Values given in the sources, which relate to chaldrons have been converted to tons according to the ratios cited in appendix 3.

Contingencies:	
Weather and disputes	Appendix 10
Wars and regulations	Appendix 10; and discussion in chapters 4, including notes.

COAL PRICES 1575-1810 AND LONDON IMPORTS 1700-1810

CIVIL
1st DUTCH WITH SPAIN
2nd DUTCH
3rd DUTCH
LEAGUE OF AUGSBURG
SPANISH SUCCESSION
AUSTRIAN SUCCESSION
SEVEN YEARS WAR
AMERICAN INDEPENDENCE
NAPOLEONIC

Contingencies

WARS
ADVERSE WEATHER
MINING DISPUTES
COMBINATIONS / VEND REGULATION OF COALOWNERS
TYNE
WEAR
? ?

COAL IMPORTED INTO LONDON
WESTMINSTER COAL PRICE
GREENWICH 'ORDINARY' COAL PRICE
GREENWICH 'BEST' COAL PRICE
KING'S COLLEGE, CAMBRIDGE COAL PRICE
PRICE TO SHIPMASTER AT NEWCASTLE
OTHER QUOTED LONDON PRICE

Shillings per ton

60
50
40
30
20
10
0

Thousands of tons

1500
1000
500
0

1570 1590 1610 1630 1650 1670 1690 1710 1730 1750 1770 1790 1810

Figure 4.3a

Coalowner's costs and profits, c1760/70

Sources: NEIM Watson 5/9/1, and 8/10/145-8/cost of getting, shipping and retailing Northumberland and Durham coal in London.

Notes: The term 'crimp' denotes a London dealer (often a former lighterman or his descendant). The sources suggest 1766 as the most likely date at which the costing was made.

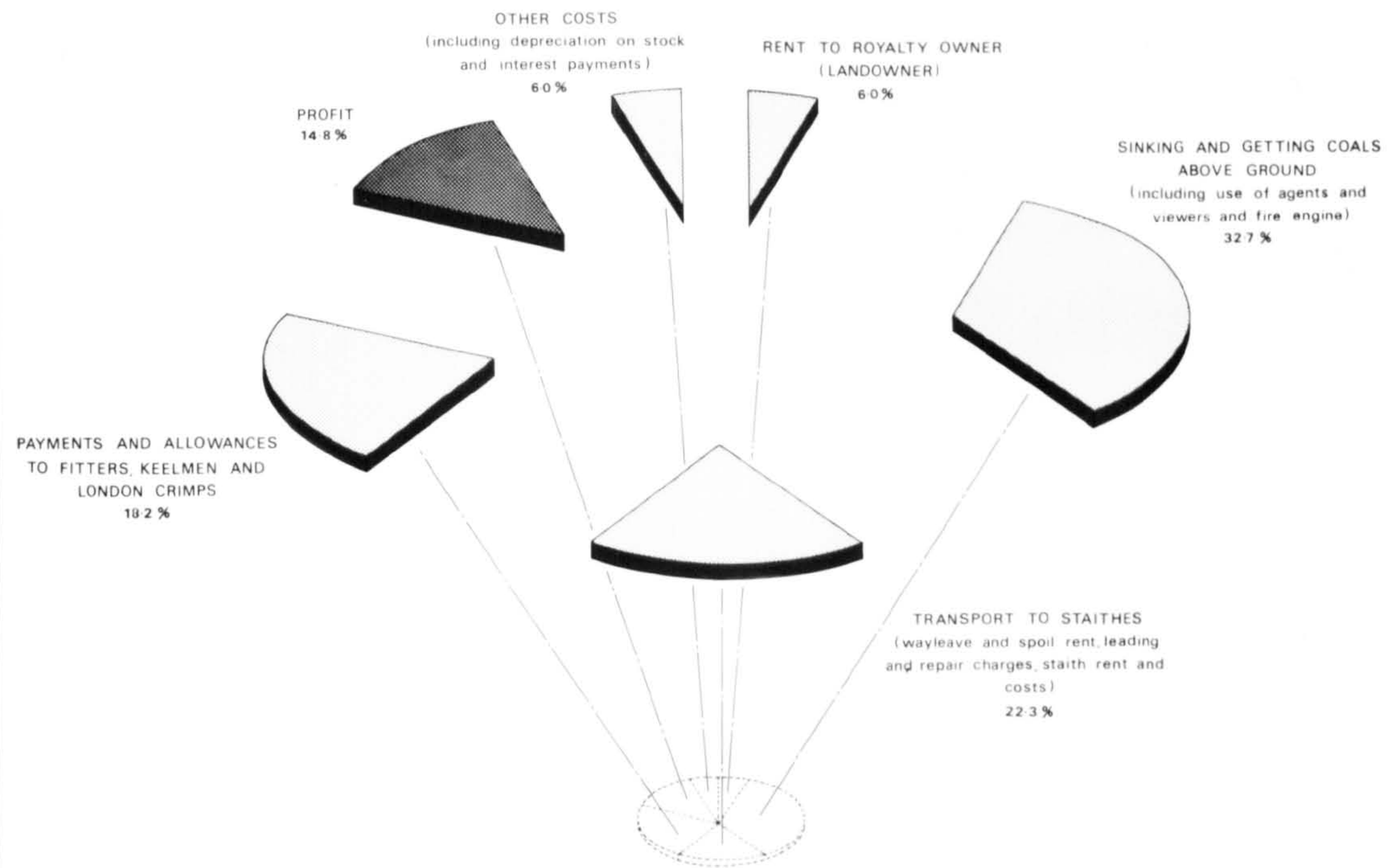
Figure 4.3b

Shipmaster's costs and profits, c1760/70

Sources: As for figure 4.3a above.

COALOWNER'S COSTS AND PROFITS c 1760/70

(On selling one Ten of coals at 15 shillings per Newcastle Chaldron)



SHIPMASTER'S COSTS AND PROFITS c 1760/70

(On selling a Keel of Newcastle coal at $32^{s}\ 4^{d}$ per London chaldron)

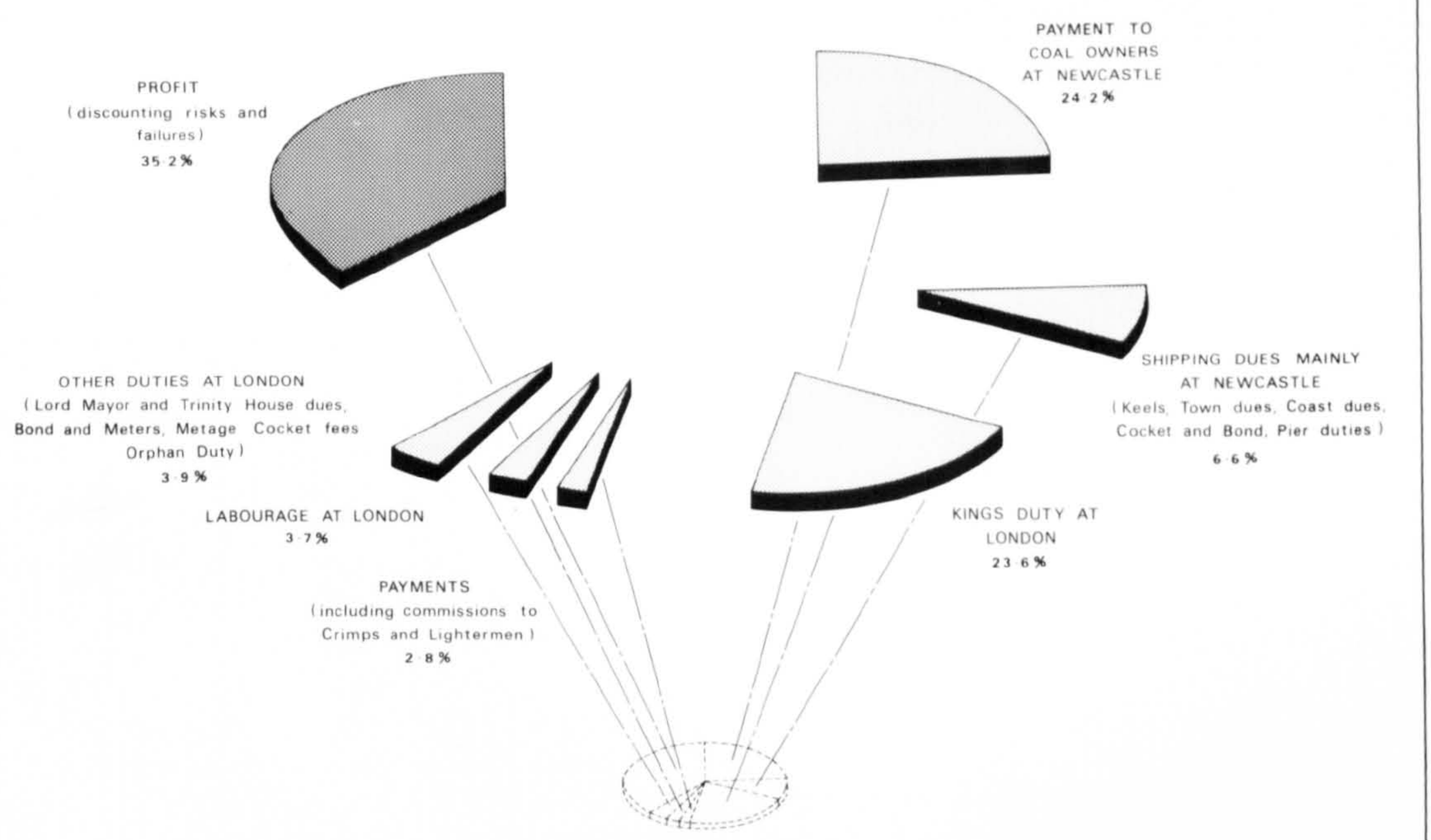


Figure 4.4

Tyne vend and colliery profits, 1767

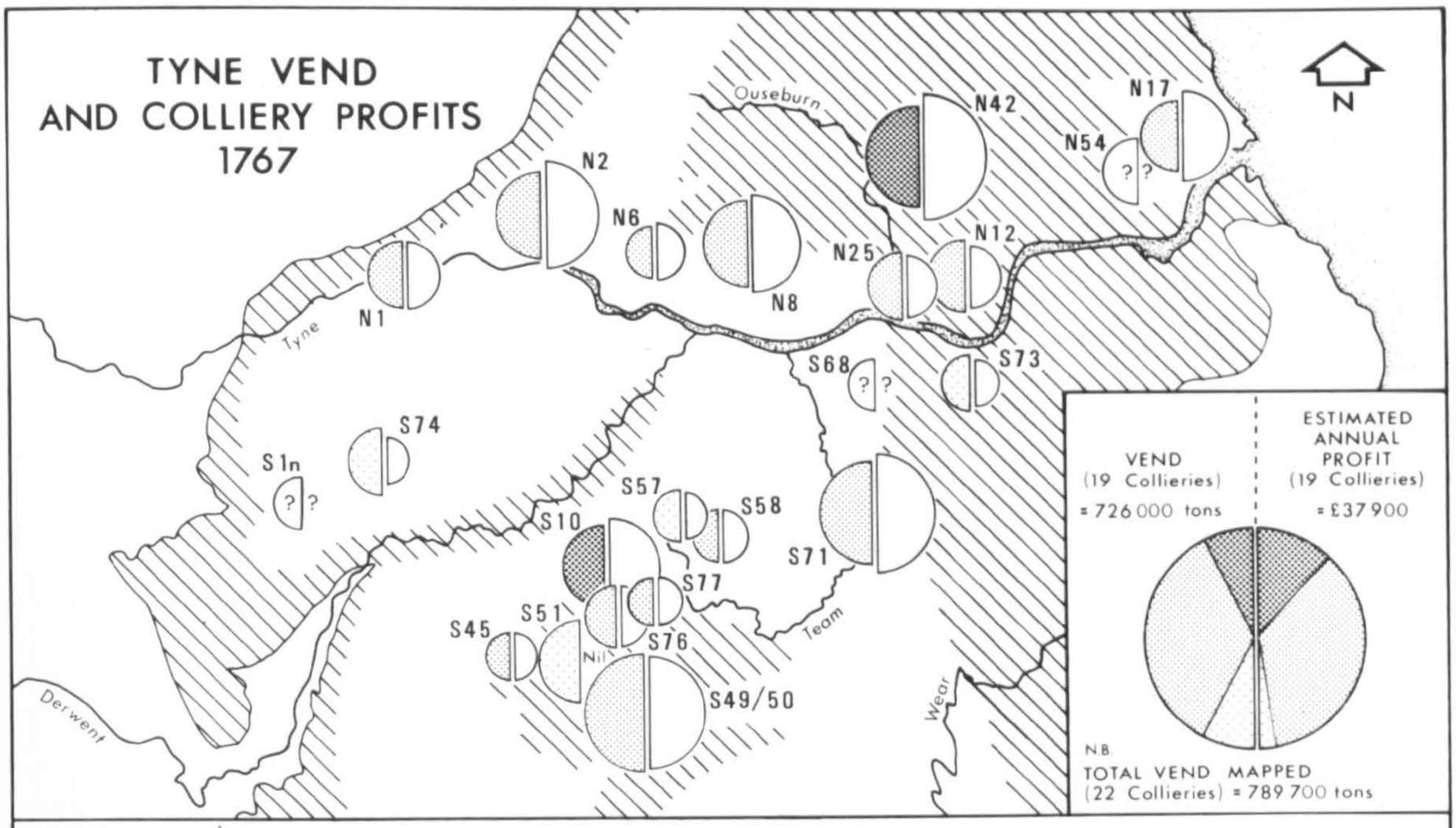
Sources: As for appendix 13e.

Figure 4.5

Tyne vend and colliery profits, 1788

Sources: As for appendix 13f.

TYNE VEND AND COLLIERY PROFITS 1767



TYNE VEND AND COLLIERY PROFITS 1788

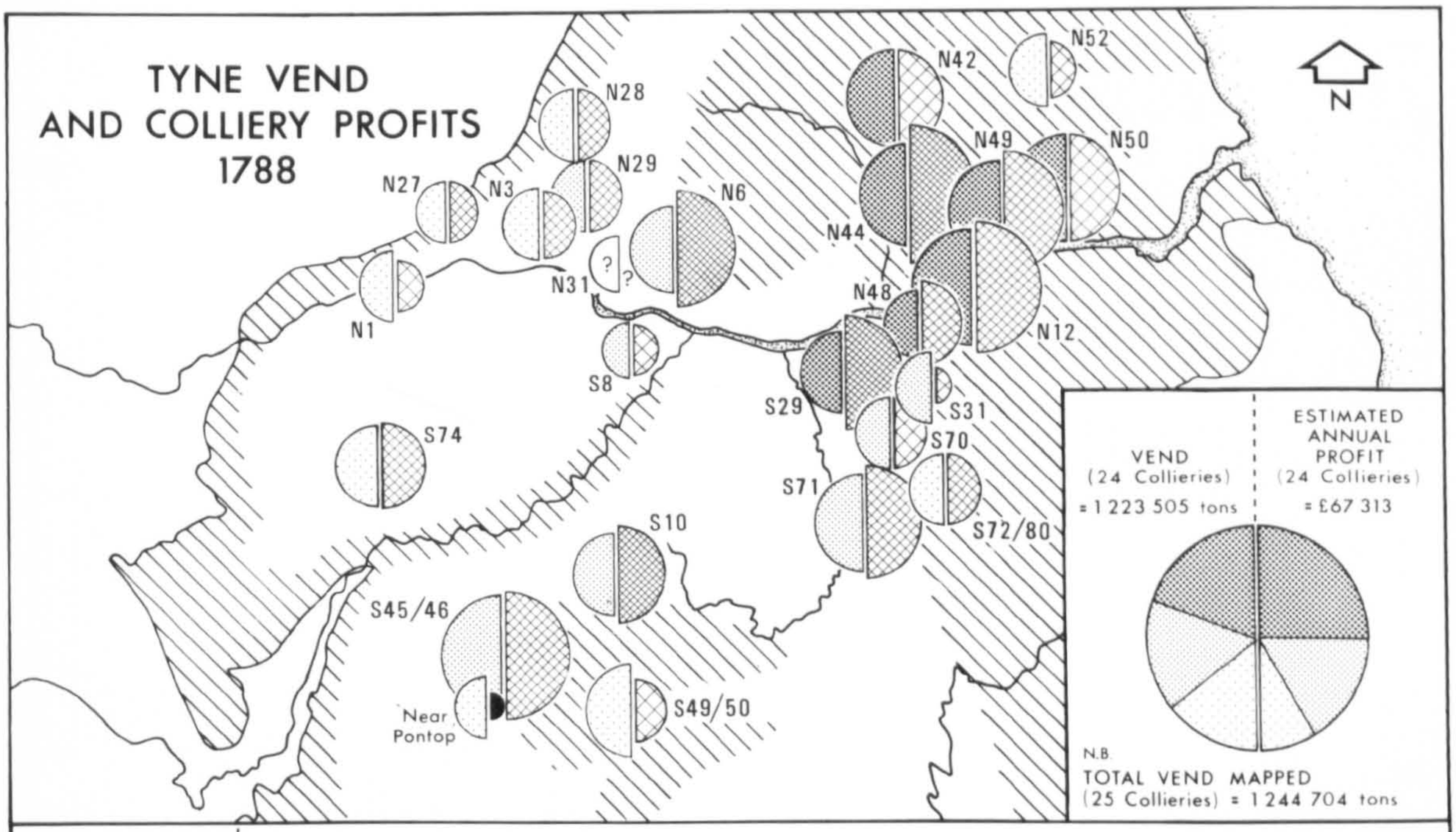
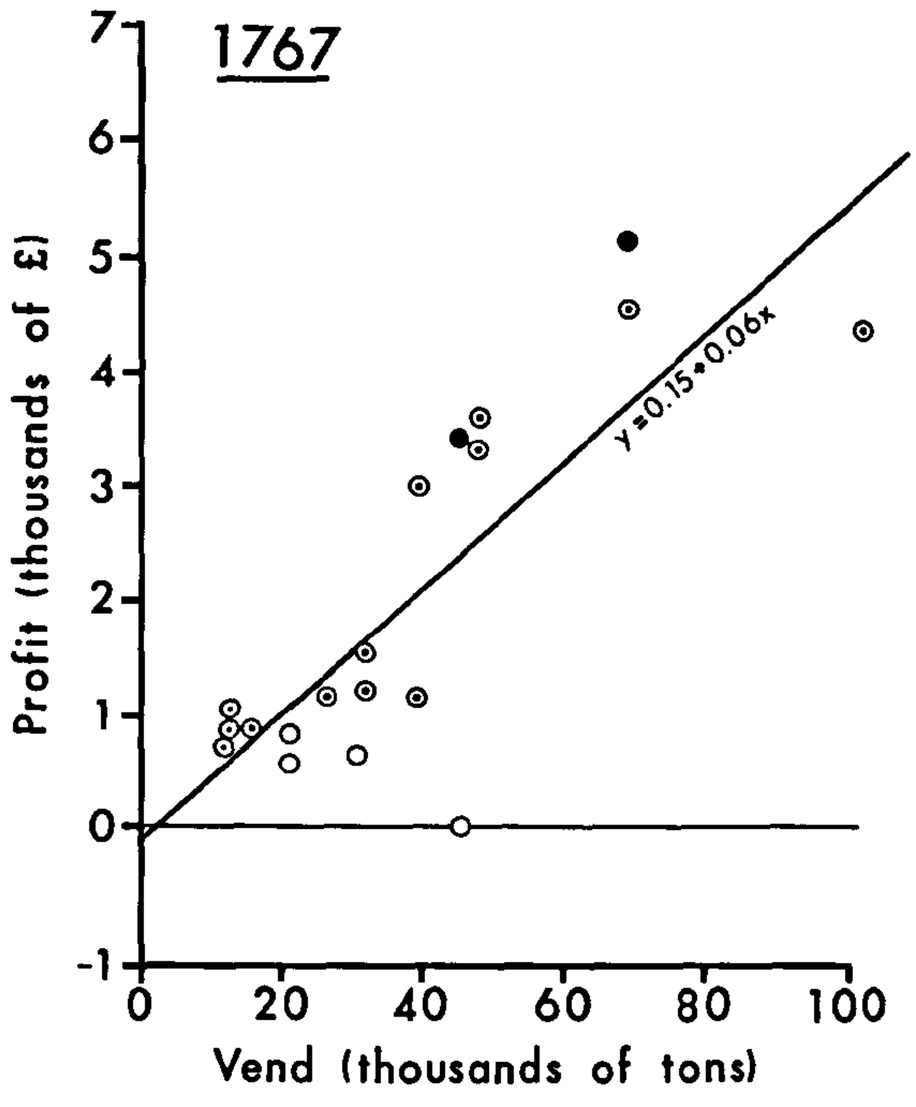


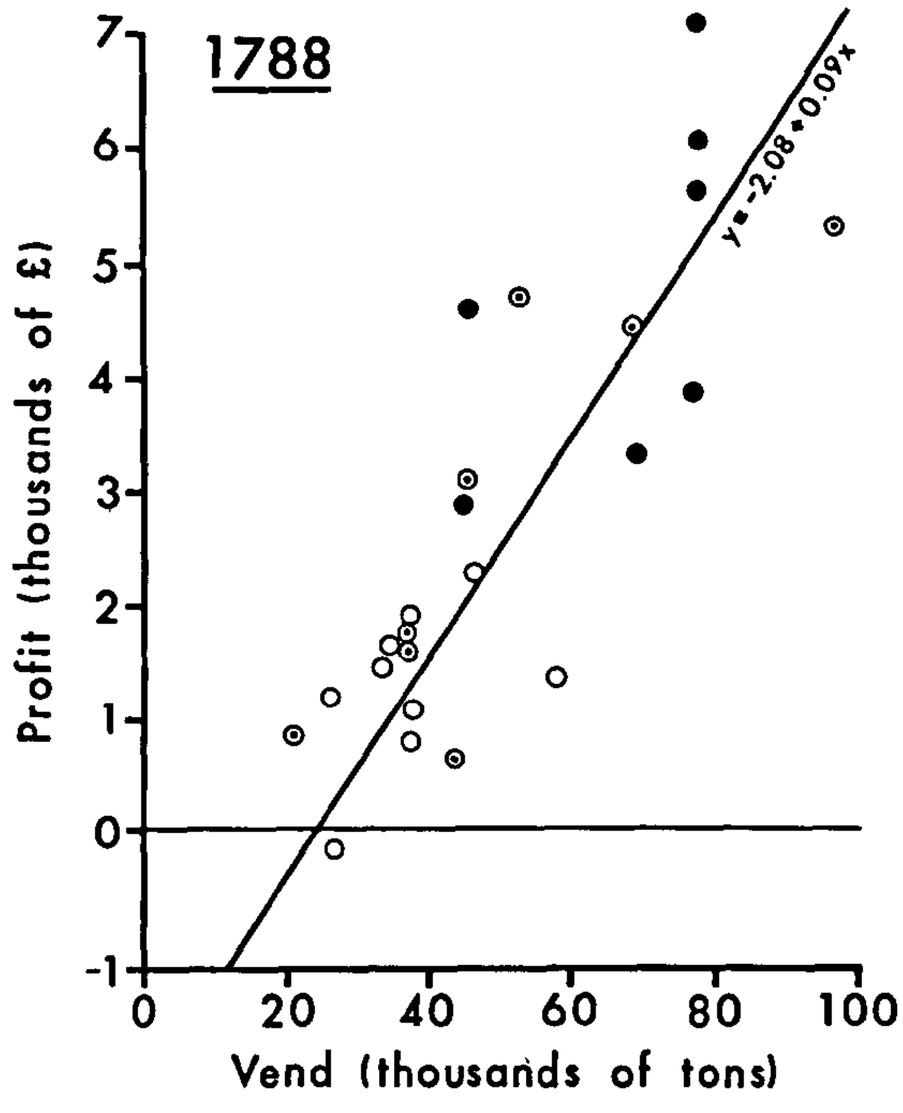
Figure 4.6

Tyne collieries, 1767 and 1788: vend, profit and investment

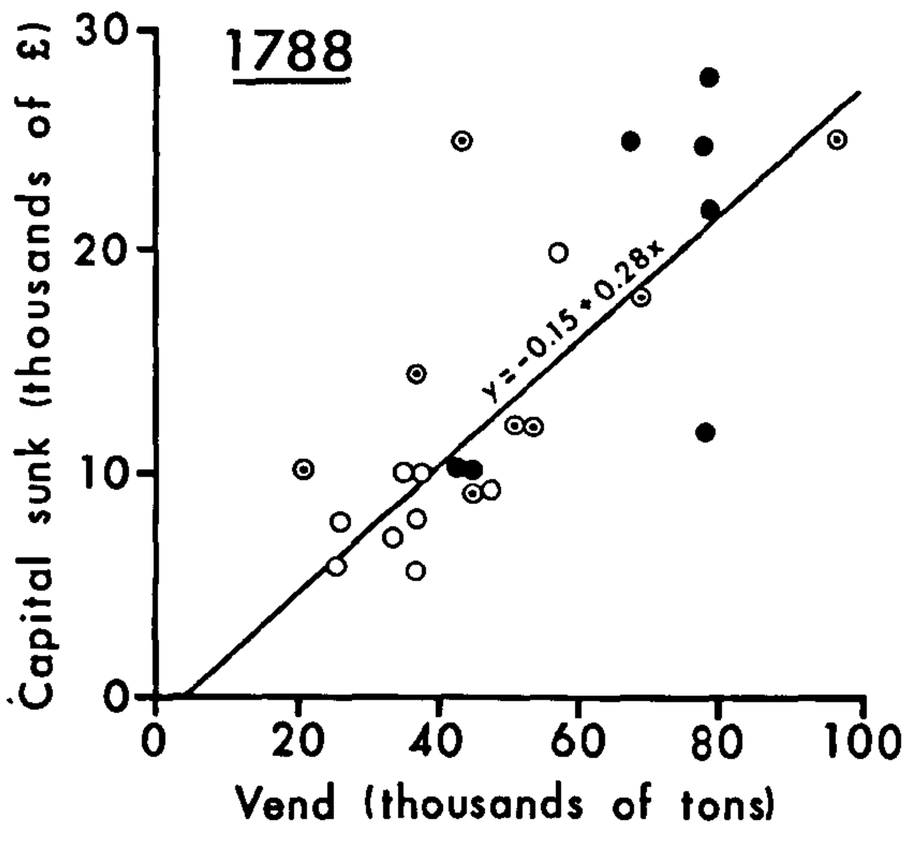
Sources: As for figures 4.4 and 4.5.

TYNE COLLIERIES 1767 AND 1788: VEND, PROFIT AND INVESTMENT





● COLLIERIES PRODUCING BEST QUALITY COALS
⊙ " " MEDIUM " "
○ " " POOR " "



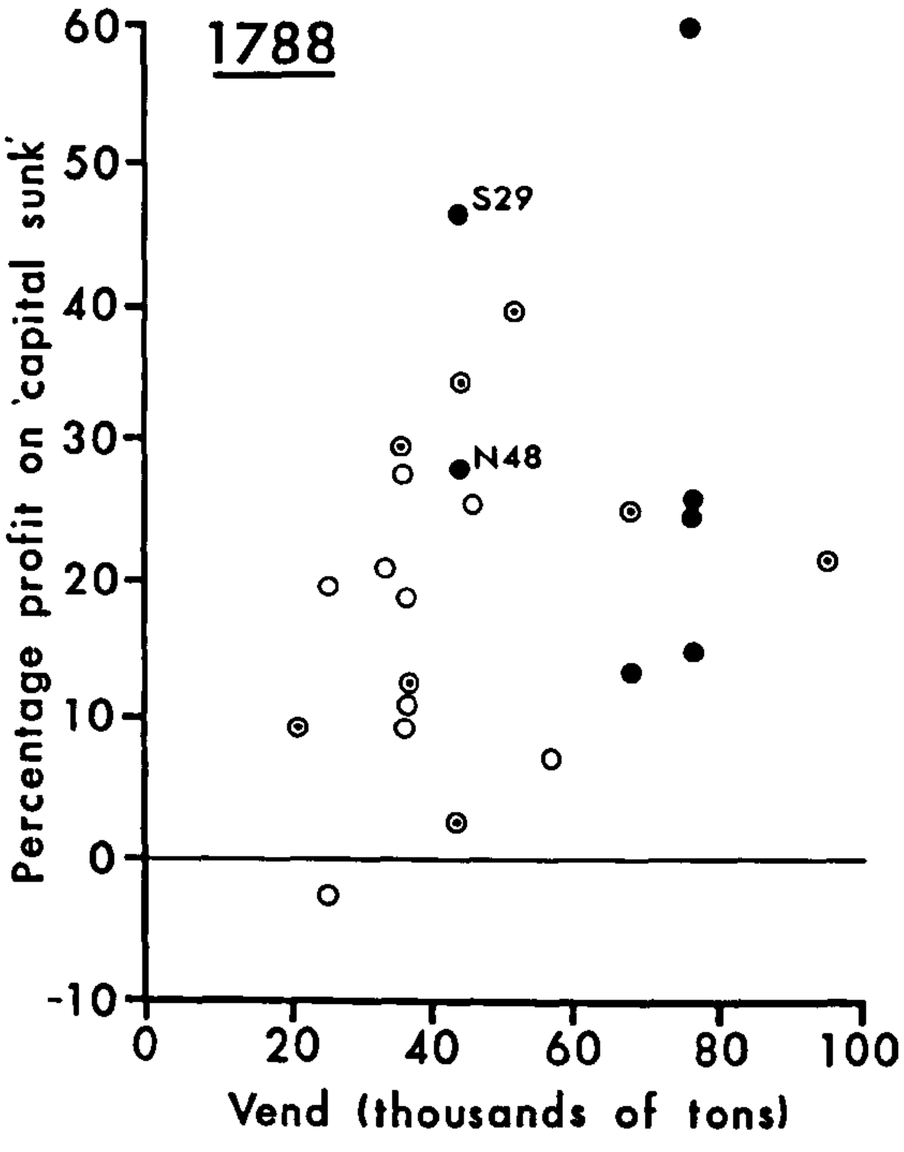


Figure 4.7

Markets and prices for Tyne vend, 1804-06

Source: NEIM Watson 8/9/29-30.

Notes:

1. On the meaning of 'freighting', see appendix 3.
2. Although price differentials between best, medium and poor quality grades were maintained throughout the period 1804-06, the prices actually experienced for each grade may sometimes have strayed outside the 'normal' range which is suggested here.

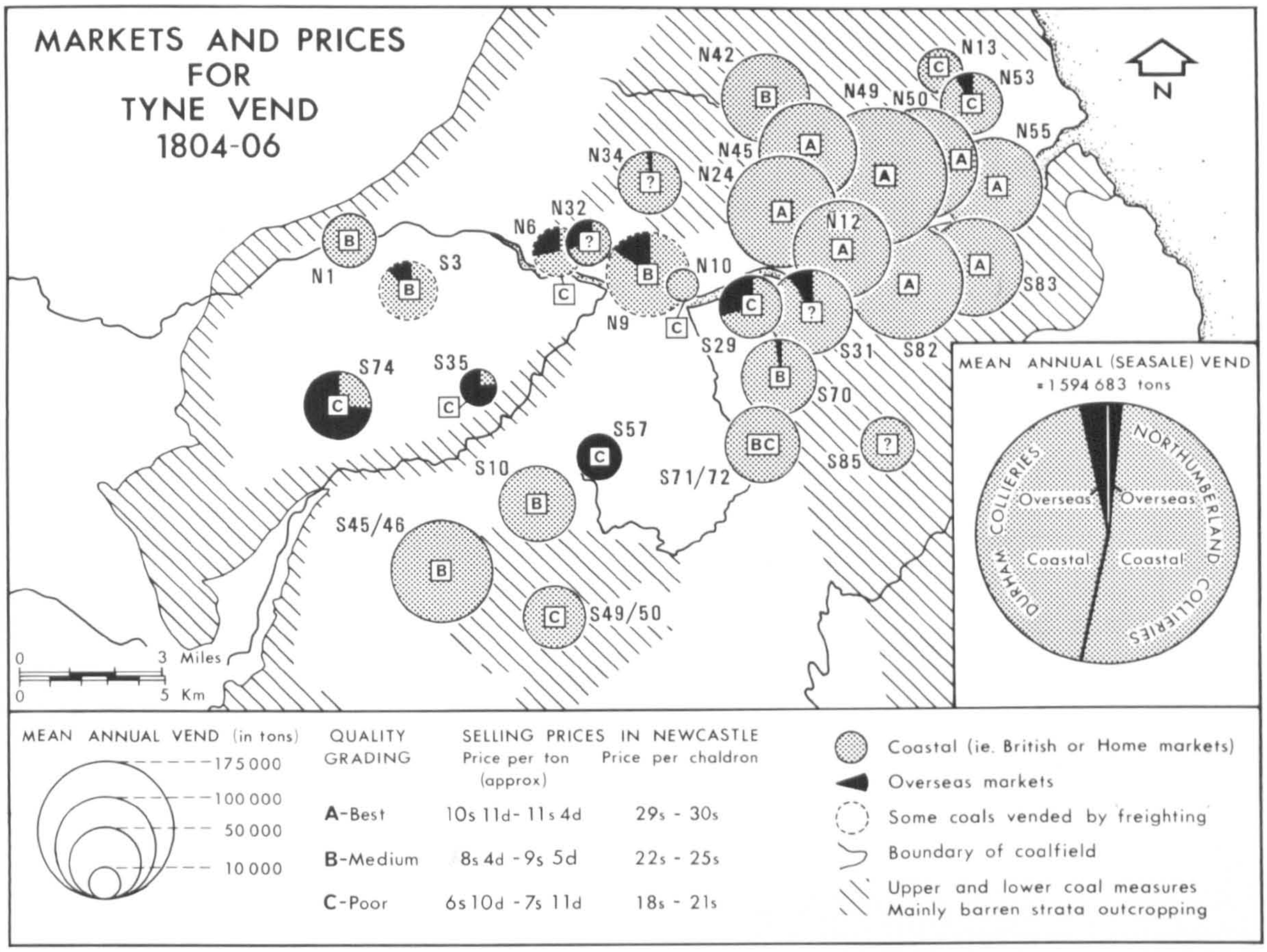

MARKETS AND PRICES FOR TYNE VEND 1804-06
N
N42
N13
N53
N49
N50
N55
N34
N45
N24
N32
N6
N12
N1
S3
N10
S83
N9
S29
S31
S82
S74
S35
S70
S57
S10
S71/72
S85
S45/46
S49/50
0 3 Miles
0 5 Km
MEAN ANNUAL (SEASALE) VEND
= 1 594 683 tons
DURHAM COLLIERIES
NORTHUMBERLAND COLLIERIES
Overseas
Coastal
MEAN ANNUAL VEND (in tons)
175 000
100 000
50 000
10 000
QUALITY GRADING
SELLING PRICES IN NEWCASTLE
Price per ton (approx)
Price per chaldron
A-Best
10s 11d - 11s 4d
29s - 30s
B-Medium
8s 4d - 9s 5d
22s - 25s
C-Poor
6s 10d - 7s 11d
18s - 21s
Coastal (ie. British or Home markets)
Overseas markets
Some coals vended by freighting
Boundary of coalfield
Upper and lower coal measures
Mainly barren strata outcropping

Figure 4.8

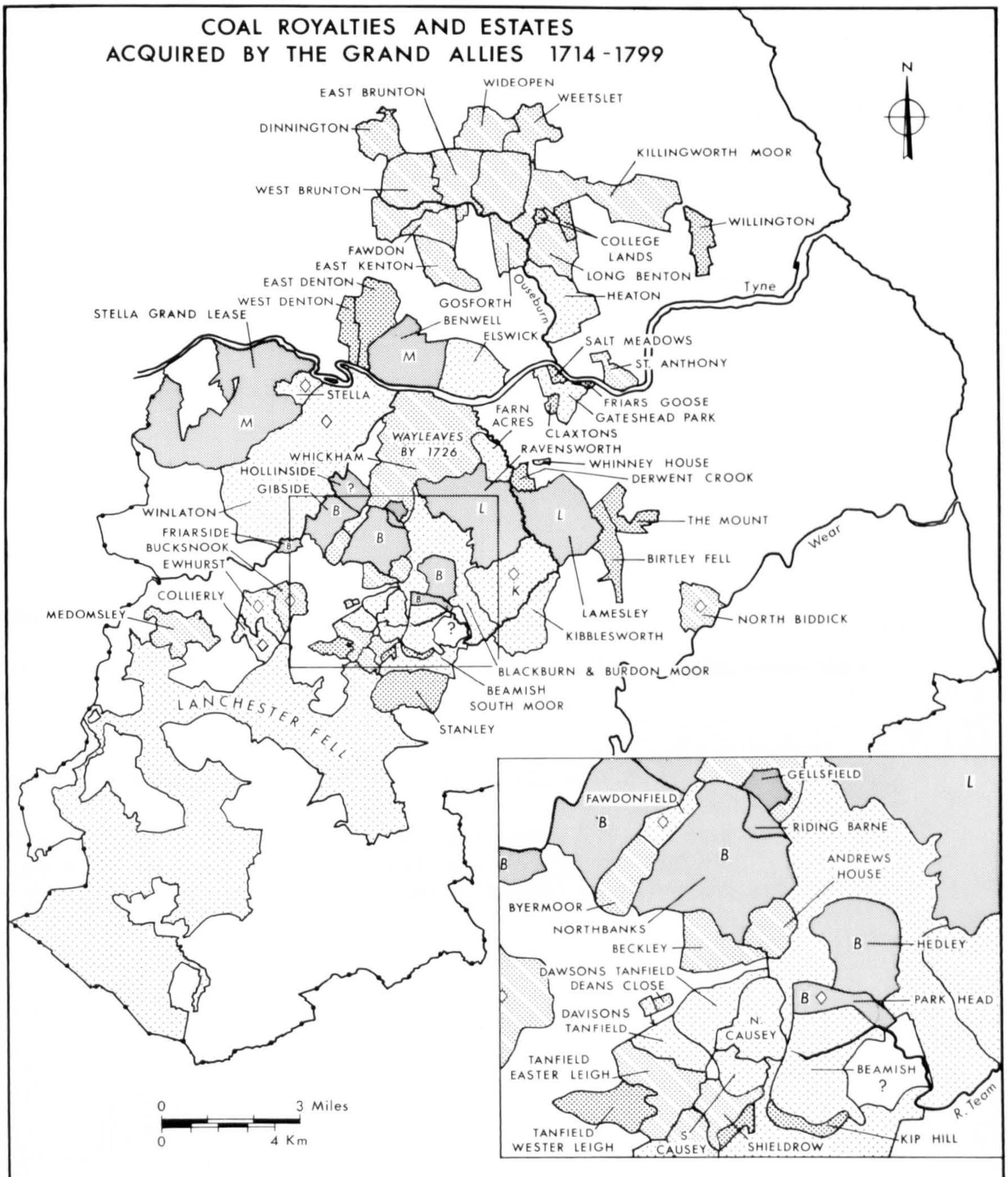
Coal royalties and estates acquired by the Grand Allies, 1714-99

Main sources: NRO 725/F1-8/enrolment books of leases and agreements; 725/F9-14/boring and sinking books; and 725/F49-54/ partnership minute books; DRO CG16/*passim*.

Notes:

1. Northbanks colliery was held by the Wortleys until reverting to the royalty owner, George Bowes, in 1723.
2. Weetslet was also known as Westslade.

COAL ROYALTIES AND ESTATES ACQUIRED BY THE GRAND ALLIES 1714 - 1799



Coal Royalties held or controlled in 1714 by future Grand Allies

Coal Royalty acquired 1714 - mid 1726 (ie. before Grand Alliance formed)

Coal Royalties acquired late 1726 - 40

Coal Royalties aquired after 1740

N.B. Map shows acquisitions only. Some properties disposed of prior to 1799 through sale, assignment or lease reversion.

L Mostly Liddell family estate/royalty

B Mostly Bowes family estate/royalty

M Colliery in which Wortley - Montagues had strong or controlling interest

K Kibblesworth purchase by Liddells

◇ Coal Royalties in which Grand Allies held part share

Following pages

Figure 4.9

Coal royalties and waggonway routes in North-west Durham, 1714-40

Sources: As for figures 2.3, 3.10, and 4.8.

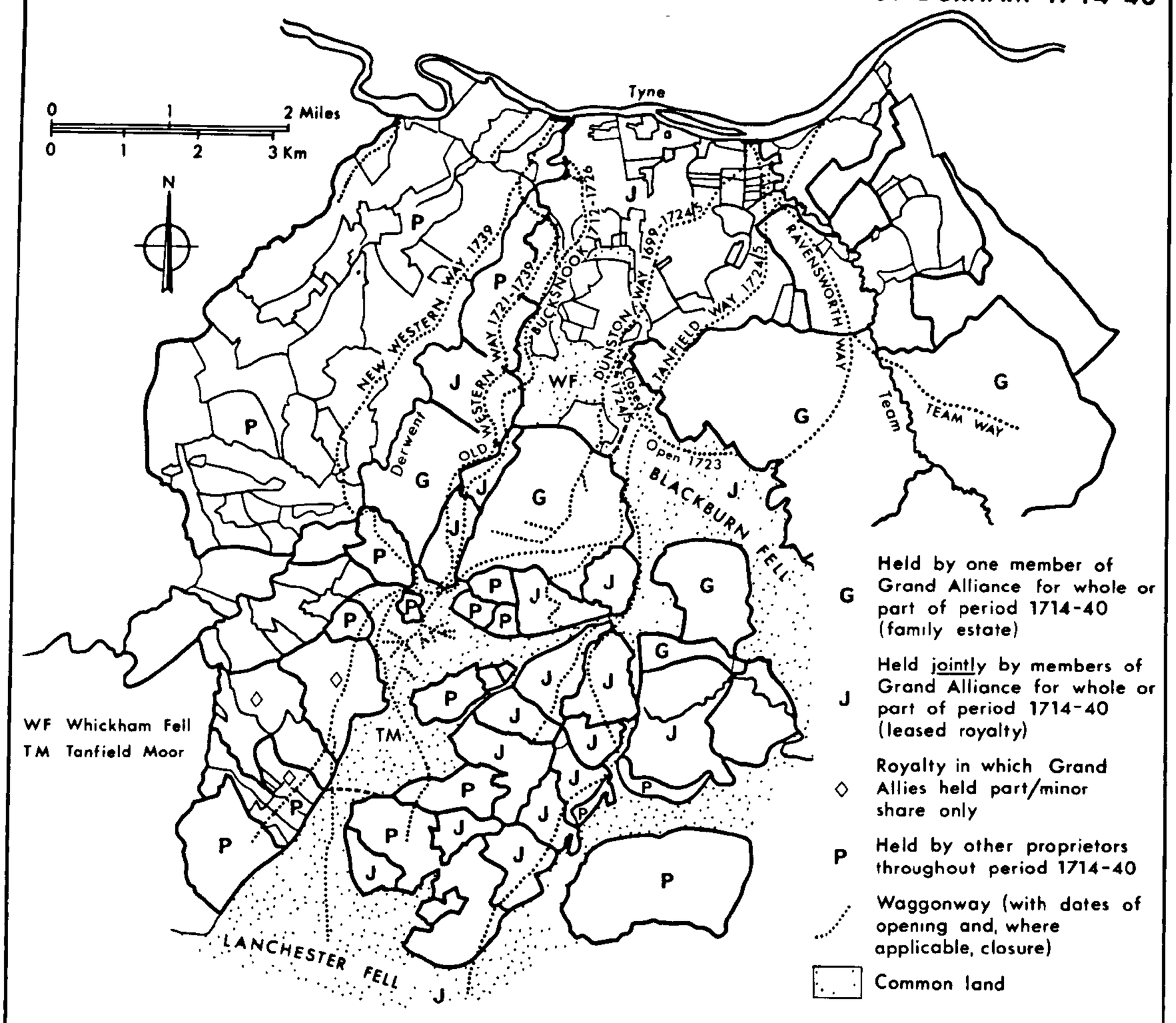
Figure 4.10

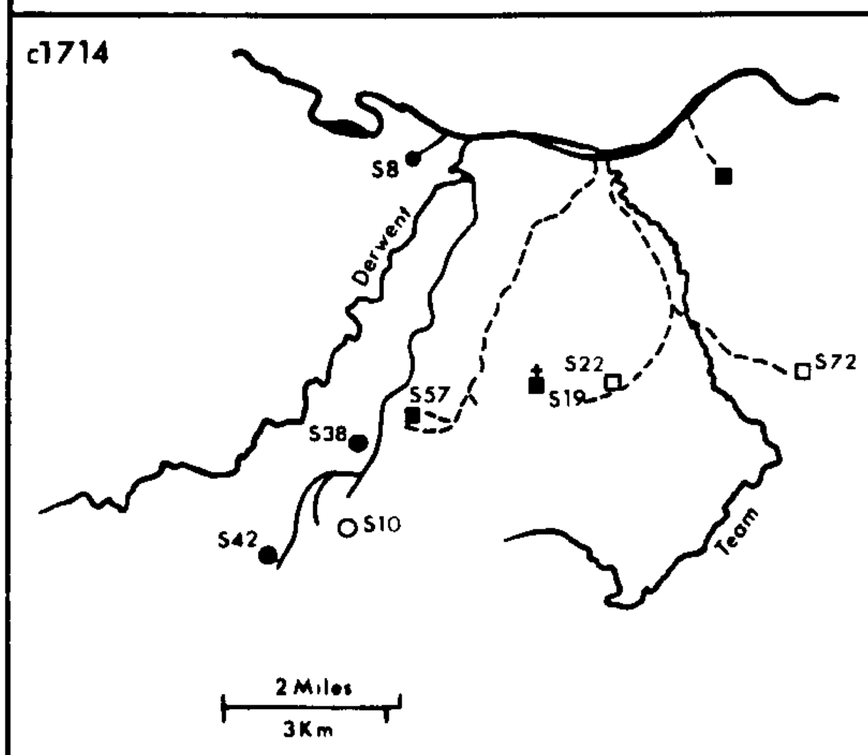
Working seasale collieries from c1714: aspects of proprietorship

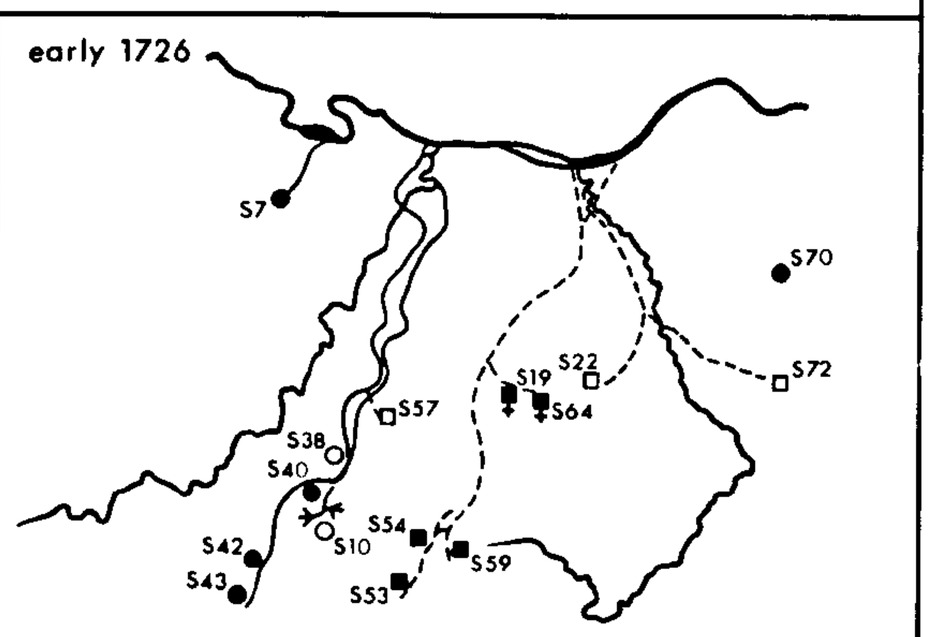
Sources: As for figures 2.3, 2.4, 3.10, and 4.8.

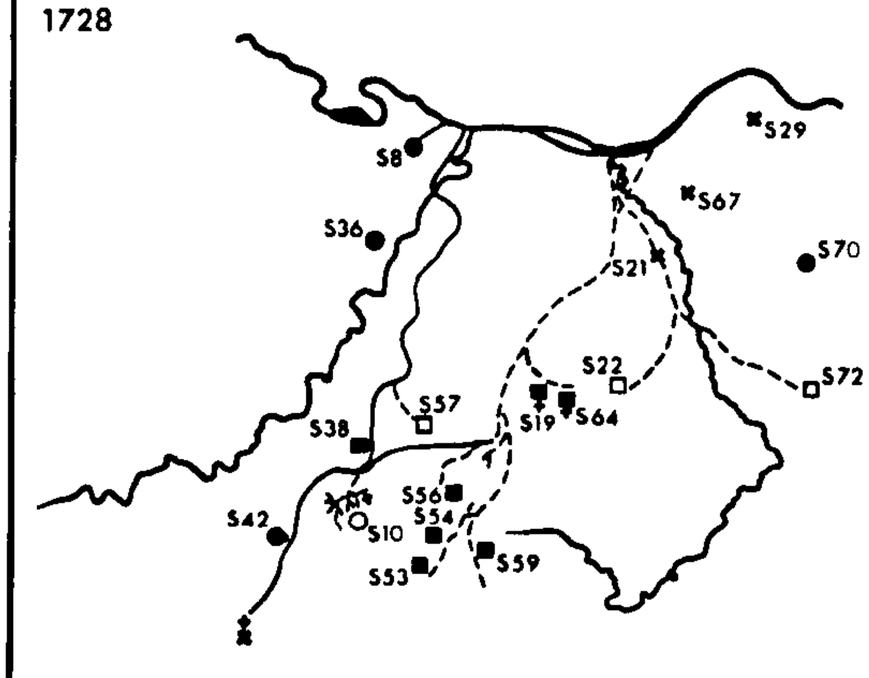
Note: Grand Allies' collieries are taken to be those held both jointly and separately by members of the partnership. Lambton's collieries were worked by 'undertakers' or sub-contractors from 1784.

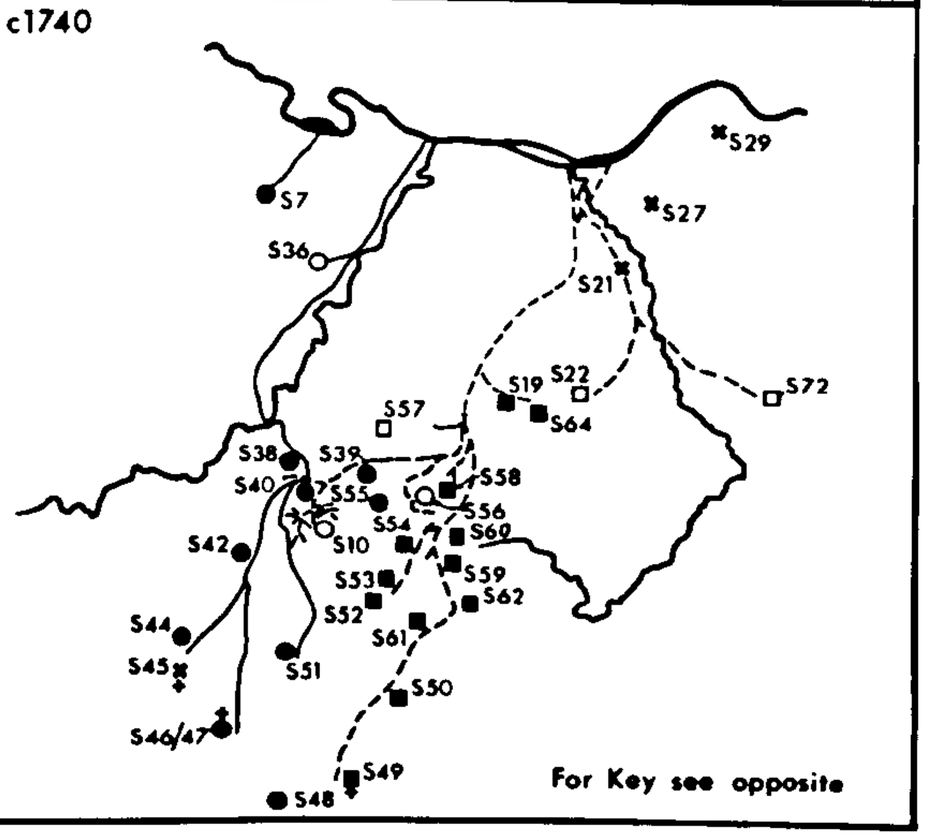
COAL ROYALTIES AND WAGGONWAY ROUTES IN NORTH-WEST DURHAM 1714-40











WORKING SEASALE COLLIERIES FROM c1714: ASPECTS OF PROPRIETORSHIP

Sole or Major Proprietor / Operator	As Royalty Owner (or supposed Owner)	As Lessee (or sub-lessee)	Waggonway
Grand Allies (future Grand Allies to 1726)	□	■	-------
Lambton (of Lambton)	◇	◆	....
Other	○	●	———

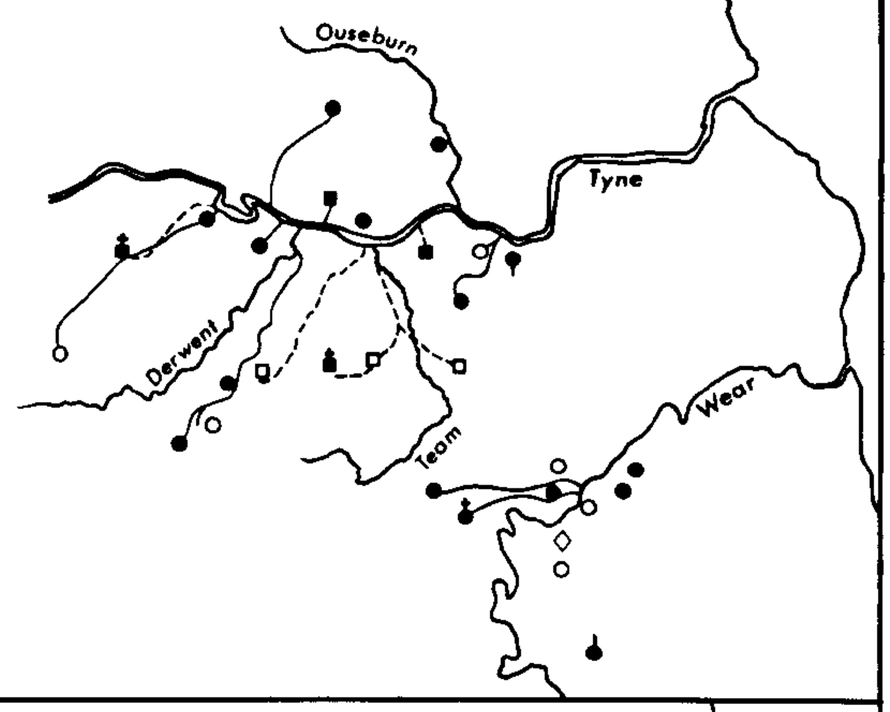
Church interest (or supposed interest) as sole or major Royalty Owner / Lessor: Bishop of Durham ✦; Dean & Chapter ı

Grand Allies Dead Rent colliery ✖

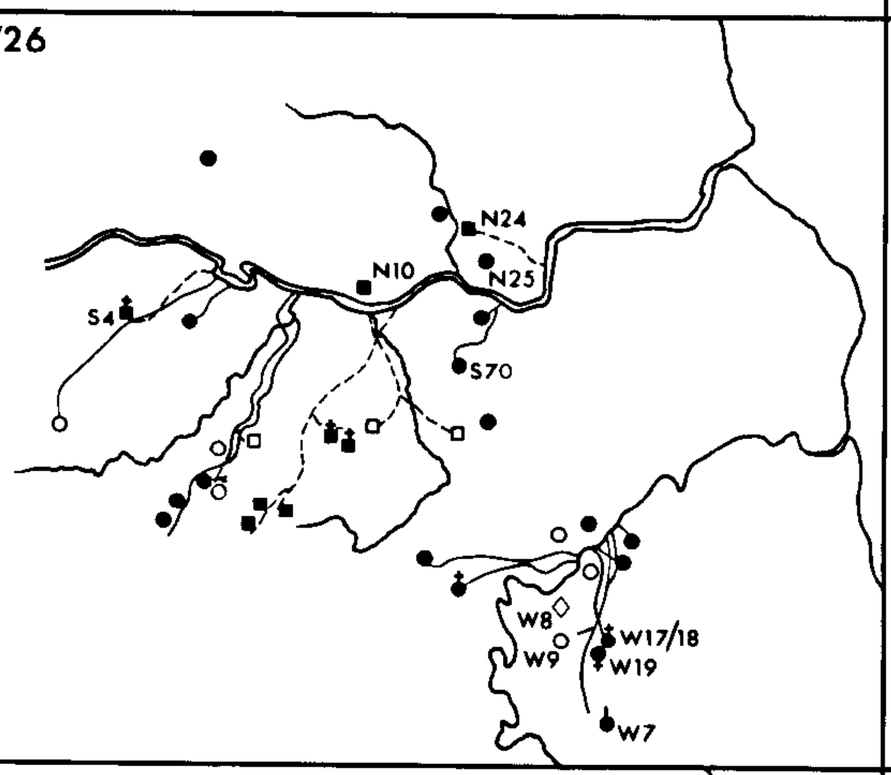
5 Miles
8 Km

N

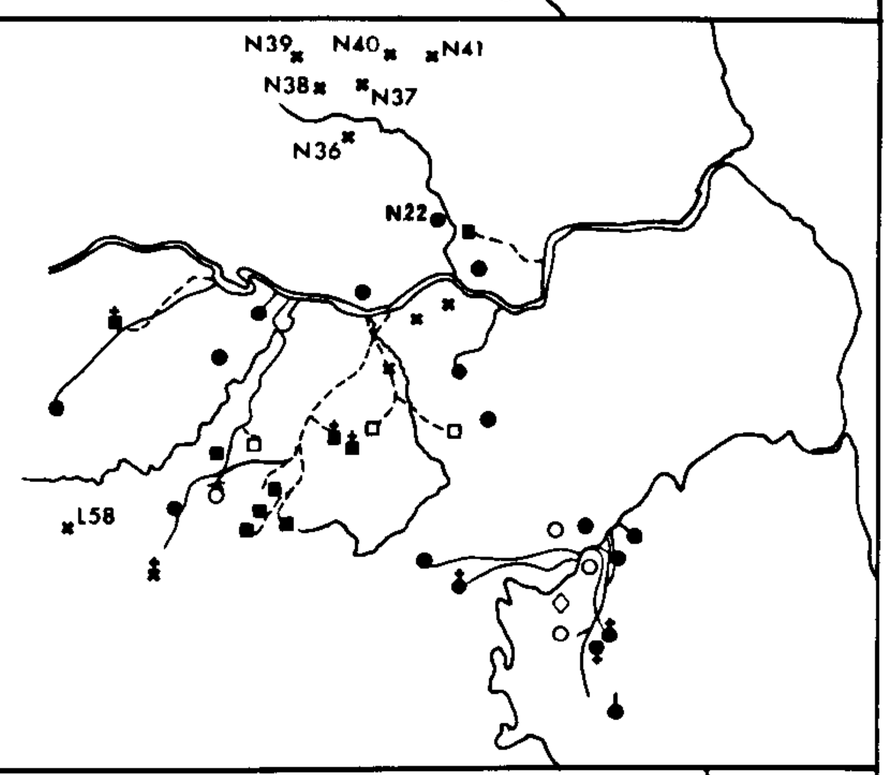
c1714



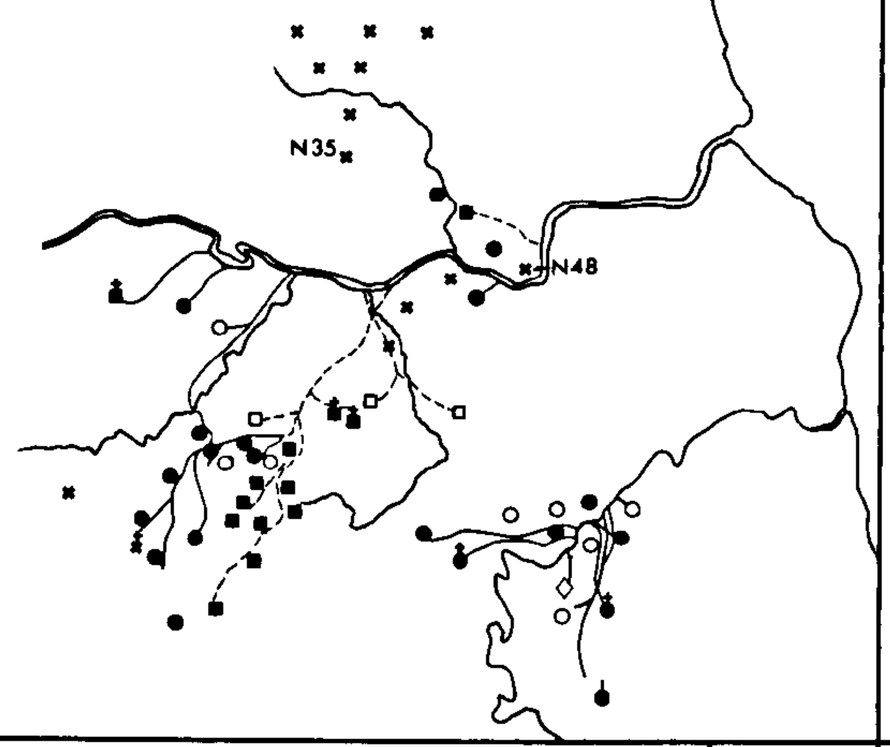
early 1726



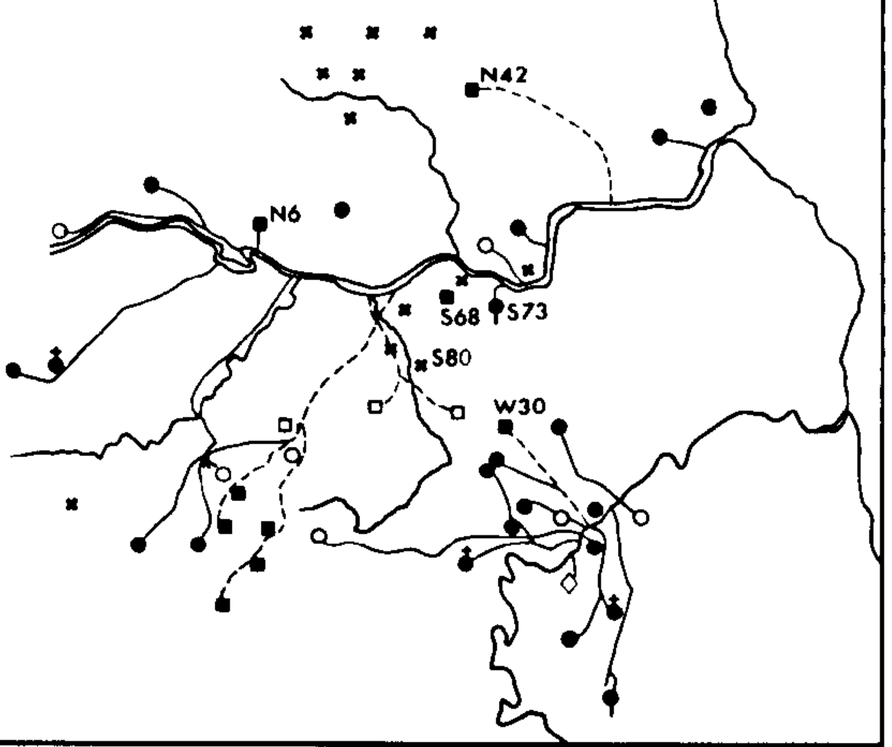
1728



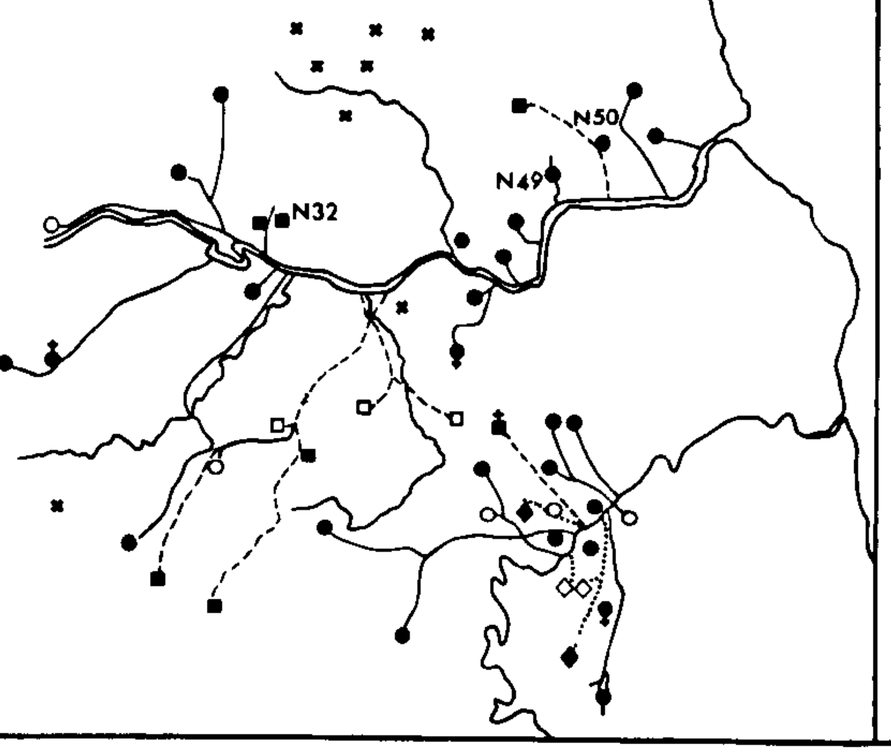
c1740



c1770



1784



1804

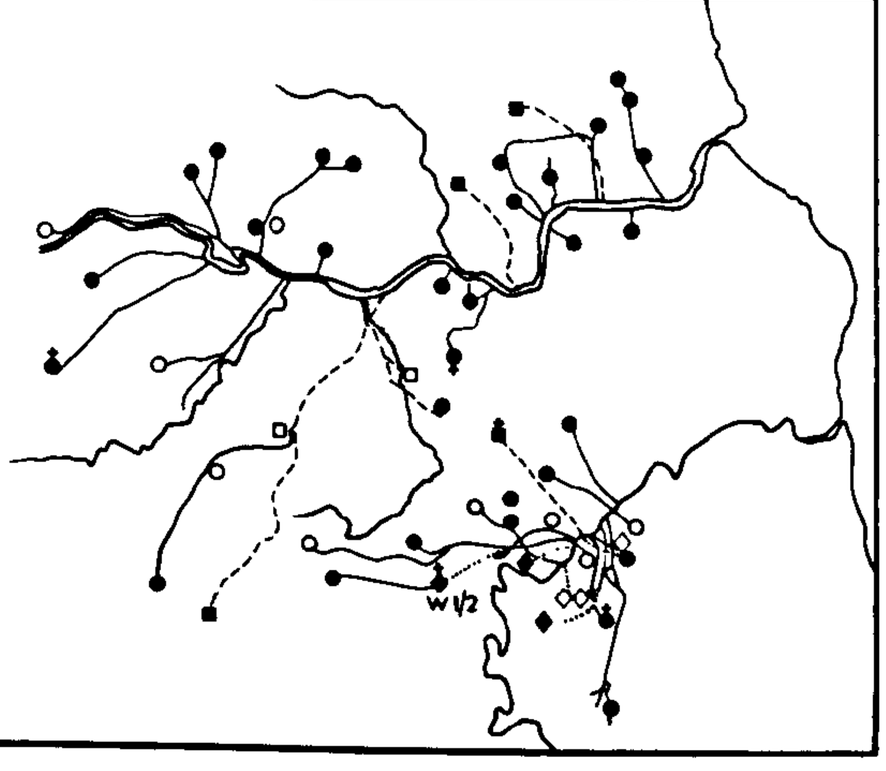


Figure 4.11

'A View of the Western Partnership Lands and Collieries..1739'

Source: Re-drawn, in style of original, from plan in NEIM Watson (MP) 31/10.

Note: The area of Tanfield Leigh Copyhold was, in fact, less extensive than suggested in the plan.

A View of the Western Partnership Lands & Collieries taken from a Survey made in 1739. by J.S. & J.M

North Bank

Mr Bowes's Ground

Crookbank

Crook Field

Wrights Barcus Close

Plain

George

Delight

Beckley

Venture

Thistle

Hedge

Prosperous

Broom

A

Level

Andrews House

Edge

Staple

Sir Henry Liddle

George Bowes

B

D

Sr H.L.

Town

Hedley

Sr Hl.

George Bowes

Hedley Common

Sinking

George Bowes

Burdon Moor

Parkhead

Nettle

Holly

Copy

Fort

C

East Stone drift

Rigg

W drift to rigg

Daybole

Estate

Southbridge House Mr Ords Land Branch

Burne

Beamish

Kiphill

Beamish South Moor

Tanfield Moor

Deans Close

Mr Davisons

Tanfield Towne head

the two Lords

Street

Mr Davisons

Tanfield

Hedge

Ash

Bogg

Tanfield

Lane

Hill

Tanfield Close

Violet

School Close

Tanfield Leigh

Copyhold

Meaburns Ground

Hare

Mr Davisons

Tanfield

Hound

Folly

Tred

Sough

Meadow

Chance

Angel

Spring

Ford

Wheat

Furr

Corn

Oak Tree

Bounder Flower

Green

Gate

Bridge

Gill

New Tree

Folly

Watch

Old Tree

Mount

North Causey

Middle Causey

Mr Davisons South Causey

Shiedrow

Mr Bowes & Partners

Shiedrow

Mr Bowes and Mr Scafes

Pea Ground

Lanchester Common

Swalley Dyke

Wrags & Hazwells Copyhold

Bounder Burn

Cobby Bogg

Burnt

Beamish

A Scale of 12 Chains to an Inch

0 12 24 36

N

E

S

W

Figure 4.12

Wear Vend, 1772-1809: colliery proprietorship shares

Sources: Data in appendix 15.

Note: Both coastal and overseas quantities are included in the vend data as depicted. For an indication of the years when it is possible to distinguish between the two, see appendix 4.

Wear Vend 1772-1809

Colliery Proprietorship Shares

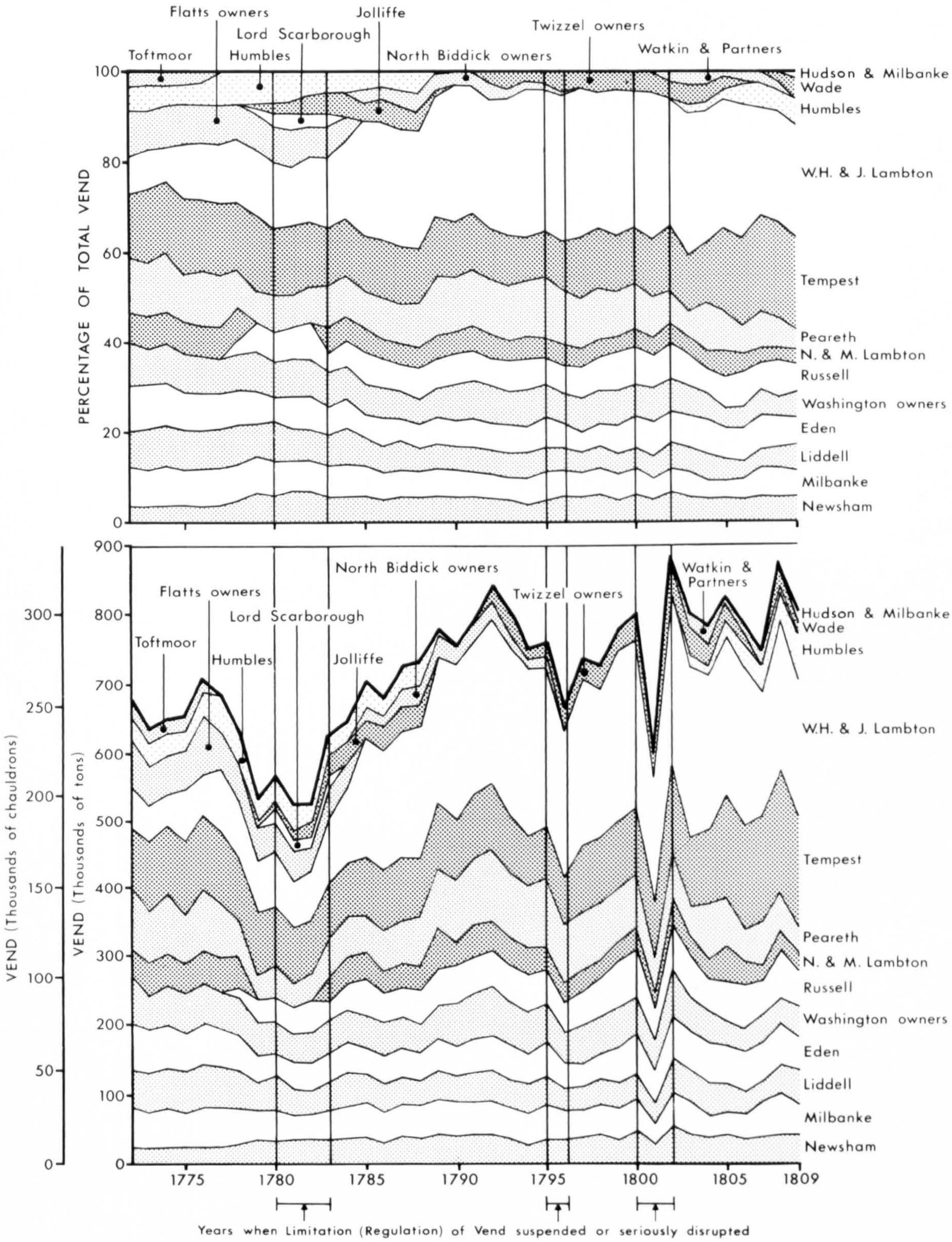


Figure 4.13

Tyne vend 1784

Source: NEIM Easton 17/4/misc. coal trade papers.

Figure 4.14

Projected Tyne vend, 1810

Sources: As for figure 4.13 above.

Note: The quality class designations 'first', 'second' and 'third' appear to be analagous to 'best', 'medium' and 'poor' as cited in some other sources (see figures 4.4 and 4.5).

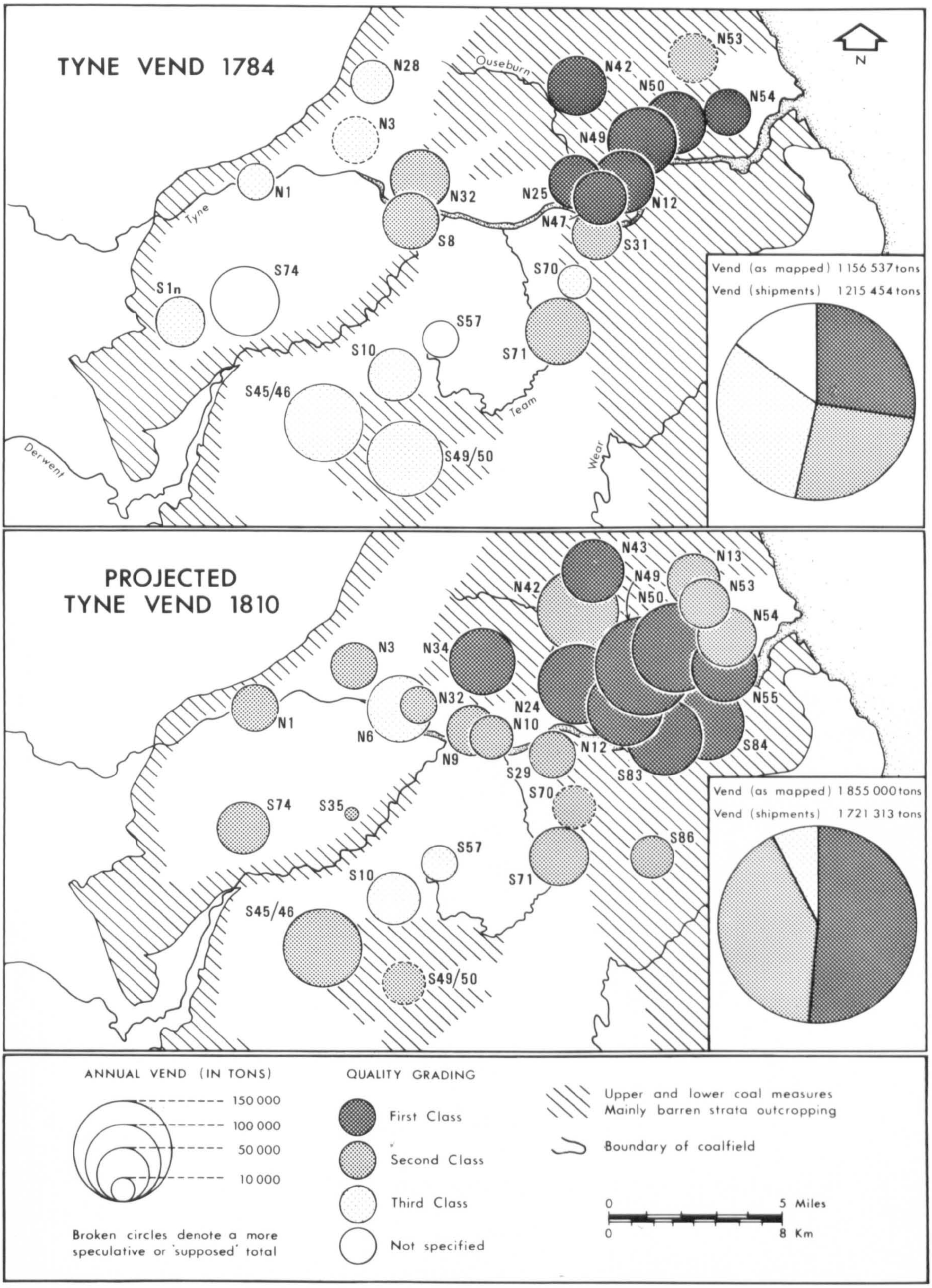

TYNE VEND 1784
N28
N3
N1
N32
S8
S74
S1n
S57
S10
S71
S70
S45/46
S49/50
Tyne
Derwent
Team
Wear
Ouseburn
N53
N42
N50
N54
N49
N25
N12
N47
S31
N
Vend (as mapped) 1 156 537 tons
Vend (shipments) 1 215 454 tons
PROJECTED
TYNE VEND 1810
N43
N13
N42
N49
N53
N50
N54
N3
N34
N32
N24
N10
N55
N1
N6
N12
S84
N9
S29
S83
S70
S74
S35
S57
S10
S71
S86
S45/46
S49/50
Vend (as mapped) 1 855 000 tons
Vend (shipments) 1 721 313 tons
ANNUAL VEND (IN TONS)
150 000
100 000
50 000
10 000
Broken circles denote a more speculative or 'supposed' total
QUALITY GRADING
First Class
Second Class
Third Class
Not specified
Upper and lower coal measures
Mainly barren strata outcropping
Boundary of coalfield
0
5 Miles
0
8 Km

Figure 5.1

County Durham: population, 1563

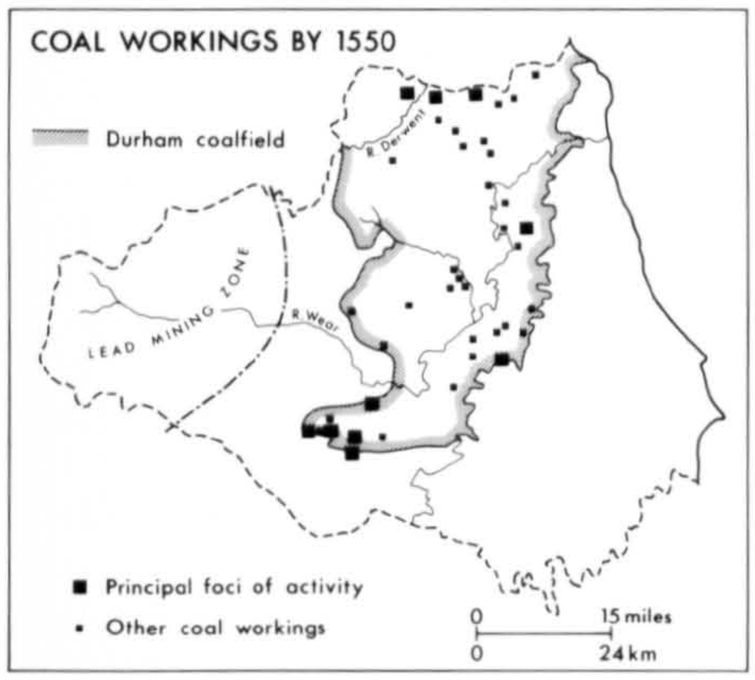
Sources:

Households 1563	BL Harl 594/189-91.
Coalworkings by 1550 (inset map)	As for figure 2.1.

Notes:

1. The broken line linking Medomsley to Lanchester denotes a territorial relationship for religious purposes only; the numbers of households for this and subsequent dates are returned with those for neighbouring Ebchester.
2. The broken line linking Satley and Durham denotes a territorial relationship in which tithes and other obligations were owed to the Master of Kepier at St. Giles, Durham. The Satley households should have been included in the total for Lanchester but no return survives for either place in 1563; the relationship is shown for 1674 and 1801, however.
3. The question mark below Bishop Middleham denotes the location of Kirk Merrington for which no return is made at this date; and that below Haughton, the location of Middleton St. George which is also omitted from the 1563 census.

POPULATION 1563



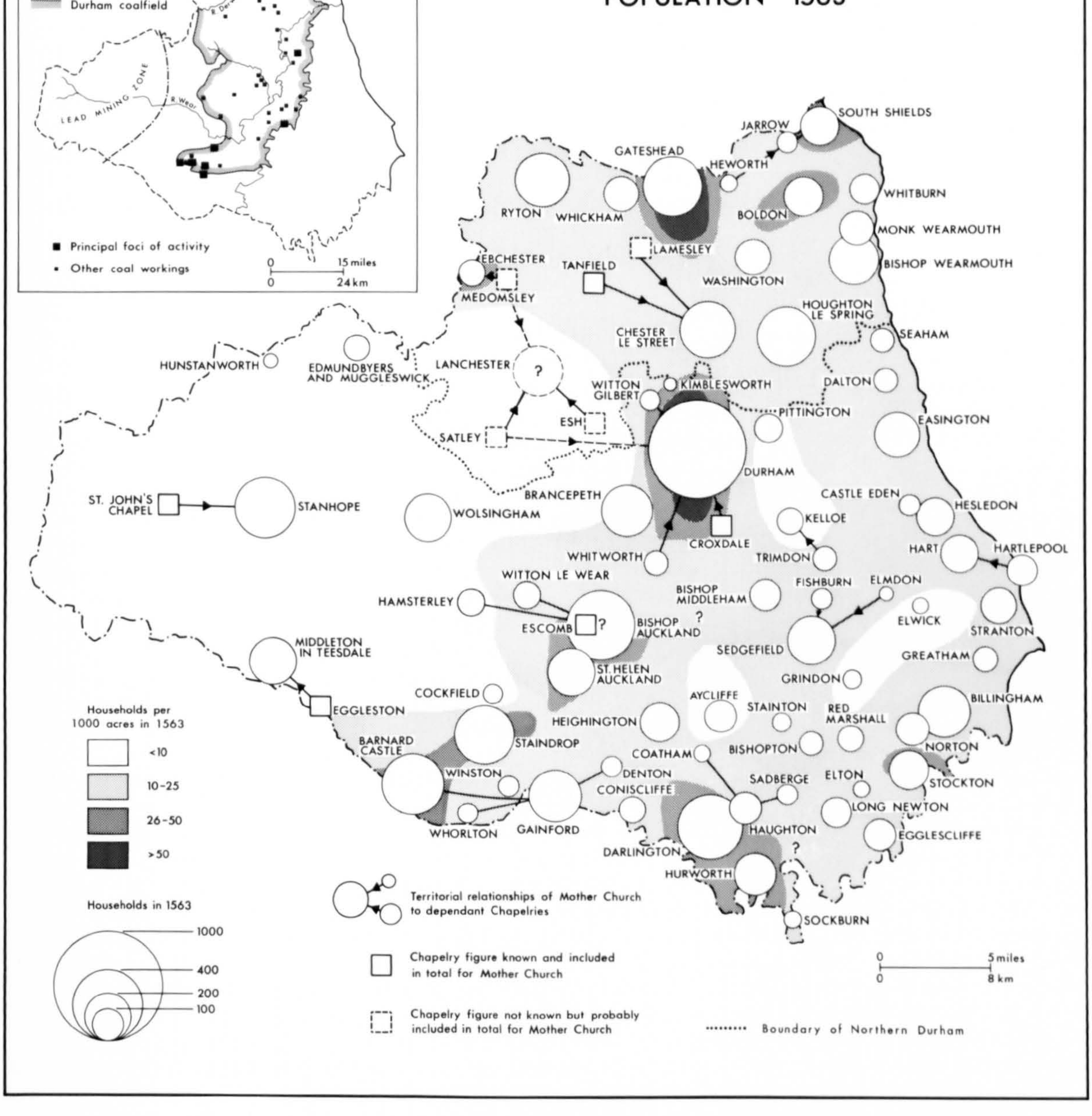


Figure 5.3

County Durham: population, 1674-1801

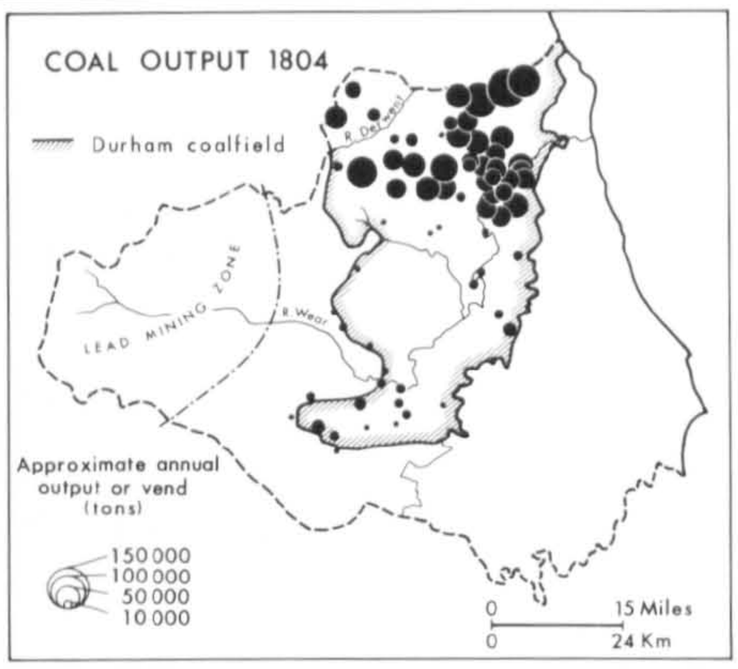
Sources:

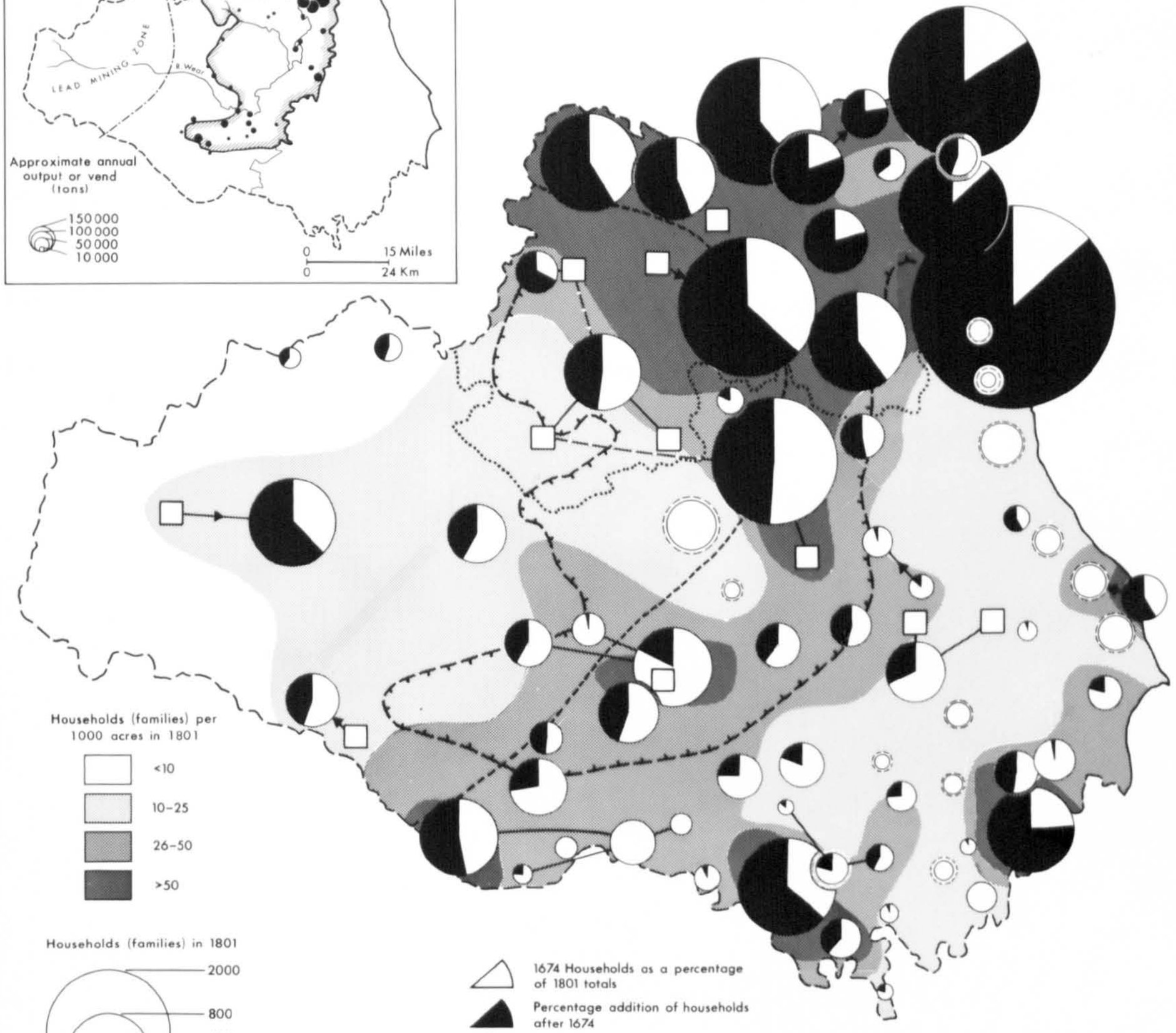
Households 1801	Census returns, 1801.
Households 1674	As for figure 5.2.
Coal output 1804	As for figure 2.4.

Note:

In four cases the total number of households/families in 1801 exceeded the maximum of 2000 allowed for in the map key: Bishop Wearmouth, 5,484; Chester-le-Street, 2661; Gateshead, 2099; and South Shields, 3035.

POPULATION 1674-1801





Households (families) per 1000 acres in 1801
- <10
- 10–25
- 26–50
- >50

Households (families) in 1801
- 2000
- 800
- 400
- 200

Territorial relationships of Mother Church to dependant Chapelries in 1563 with :-
- Chapelry total distinguished
- Chapelry total returned with Mother Church

1674 Households as a percentage of 1801 totals

Percentage addition of households after 1674

No change

1674 total / 1801 total — Decrease of households

0 5 miles
0 8 km

Eastward boundary of late upland enclosures

Westward and southward boundary of Durham coalfield (upper and middle coal measures only)

Boundary of Northern Durham

Following pages

Figures 5.4a-q

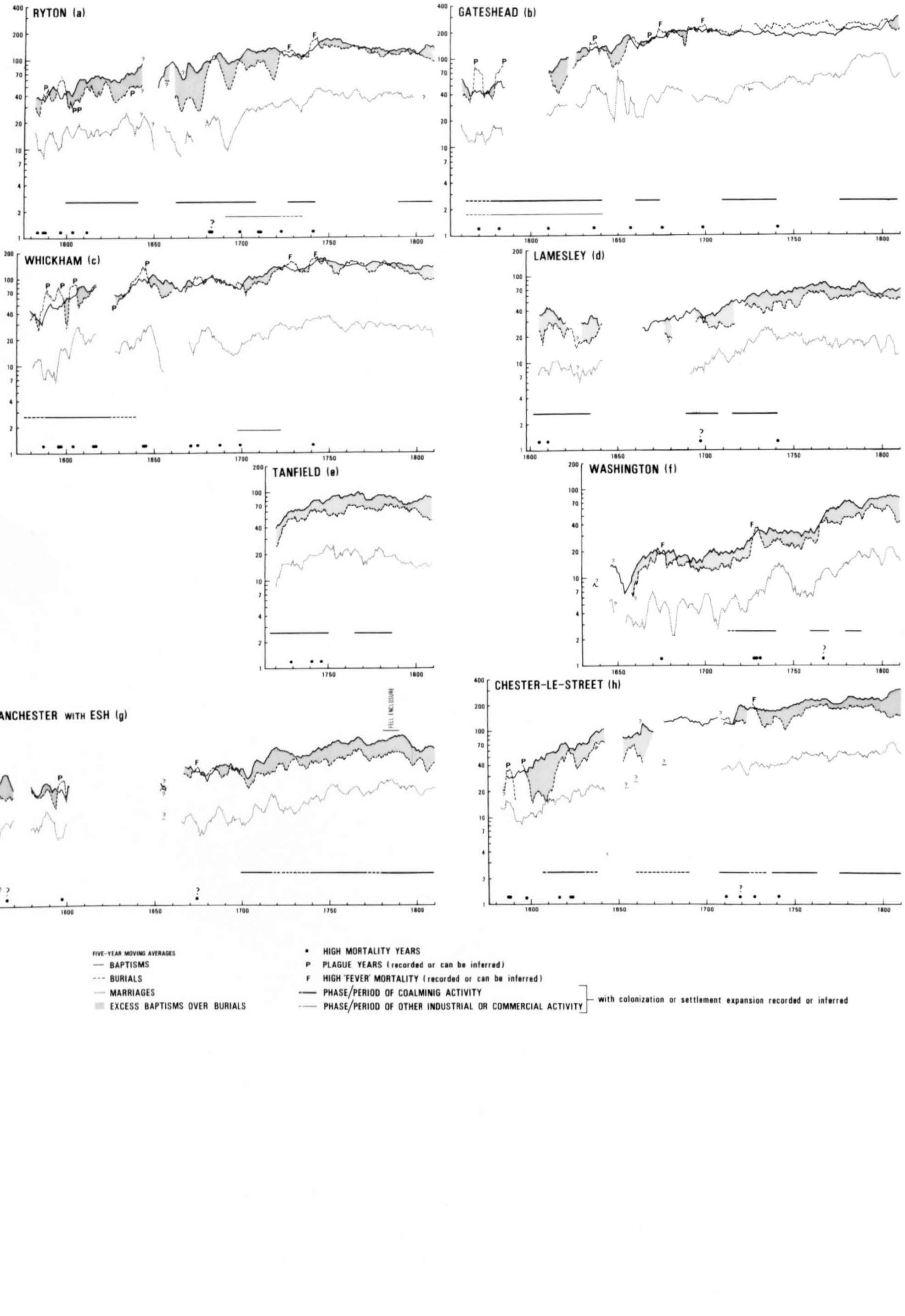
Analysis of Northern Durham Anglican registers: recorded baptism, burial, and marriage trends by five-year moving averages

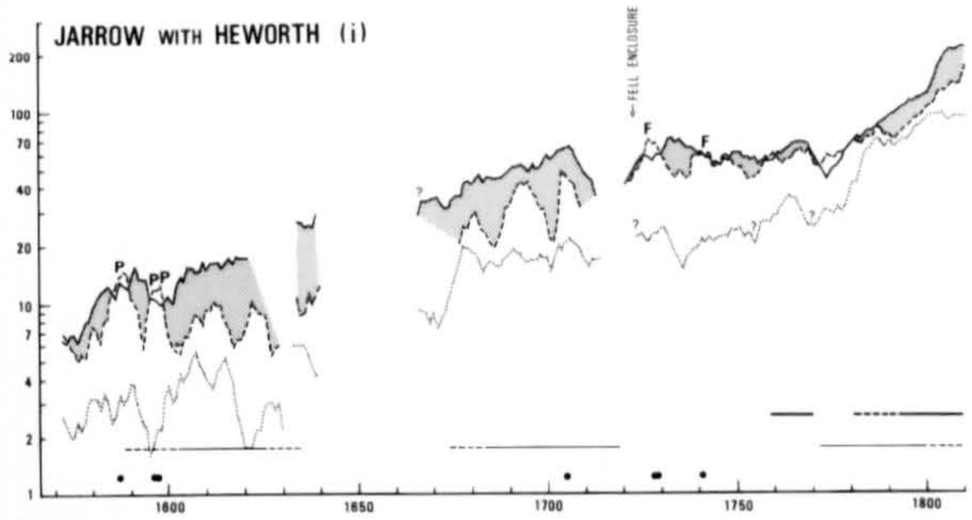
Sources: DRO/parish registers; with additional information from Creighton 1965, *passim*, and the sources on coalmining and other industrial activity cited in volume one, chapters 3 and 4.

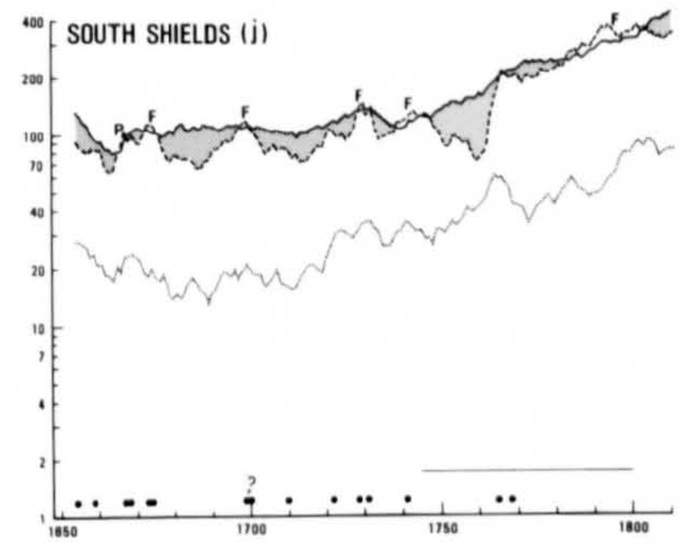
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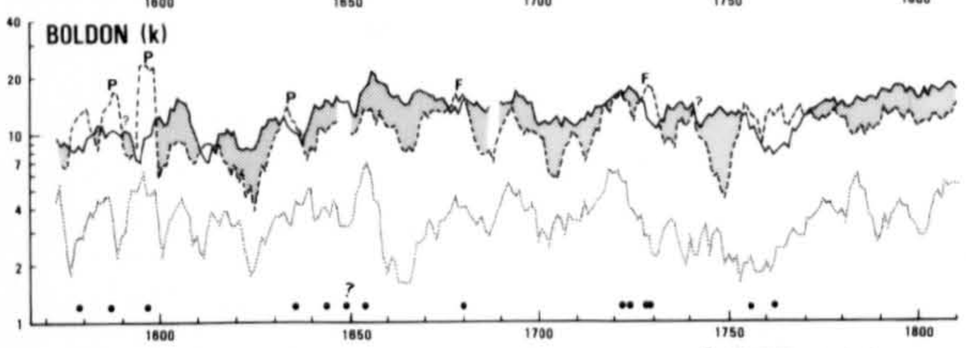
1. The graphs roughly follow the same spatial sequence as the parishes in Northern Durham to which they relate.
2. The data for Medomsley were judged inadequate for purposes of graphing.

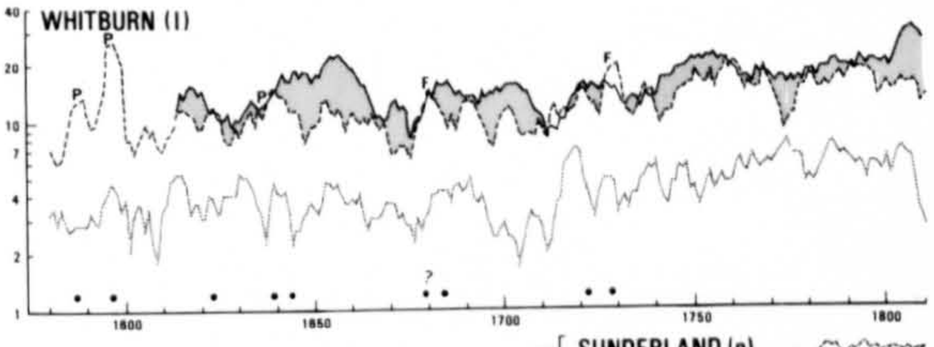
ANALYSIS OF NORTHERN DURHAM ANGLICAN REGISTERS

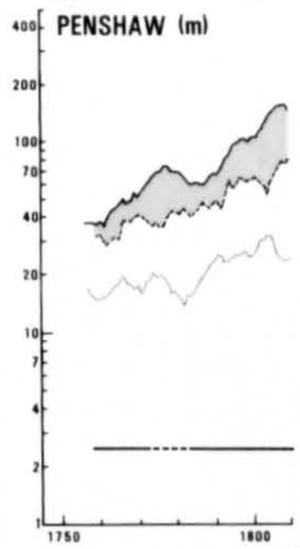


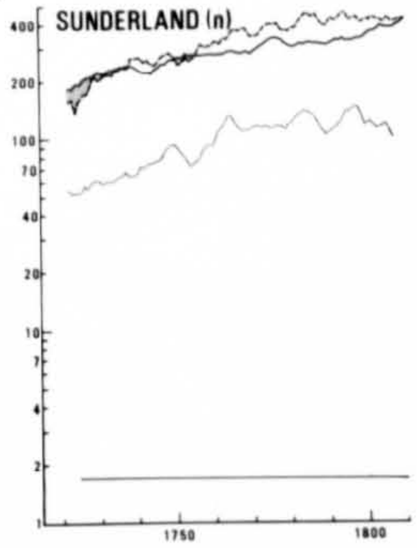

JARROW WITH HEWORTH (i)
←FELL ENCLOSURE
P
PP
F
?
200
100
70
40
20
10
7
4
2
1
1600
1650
1700
1750
1800

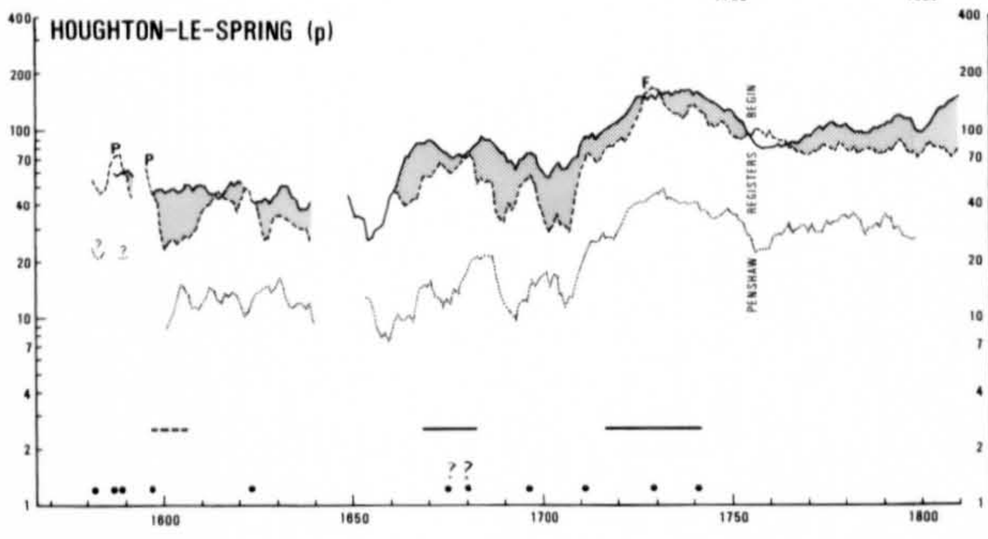

SOUTH SHIELDS (j)
P
F
?
400
200
100
70
40
20
10
7
4
2
1
1850
1700
1750
1800


BOLDON (k)
P
F
?
40
20
10
7
4
2
1
1600
1650
1700
1750
1800


WHITBURN (l)
P
F
?
40
20
10
7
4
2
1
1600
1850
1700
1750
1800


PENSHAW (m)
400
200
100
70
40
20
10
7
4
2
1
1750
1800


SUNDERLAND (n)
400
200
100
70
40
20
10
7
4
2
1
1750
1800


HOUGHTON-LE-SPRING (p)
P
F
?
PENSHAW REGISTERS BEGIN
400
200
100
70
40
20
10
7
4
2
1
1600
1650
1700
1750
1800

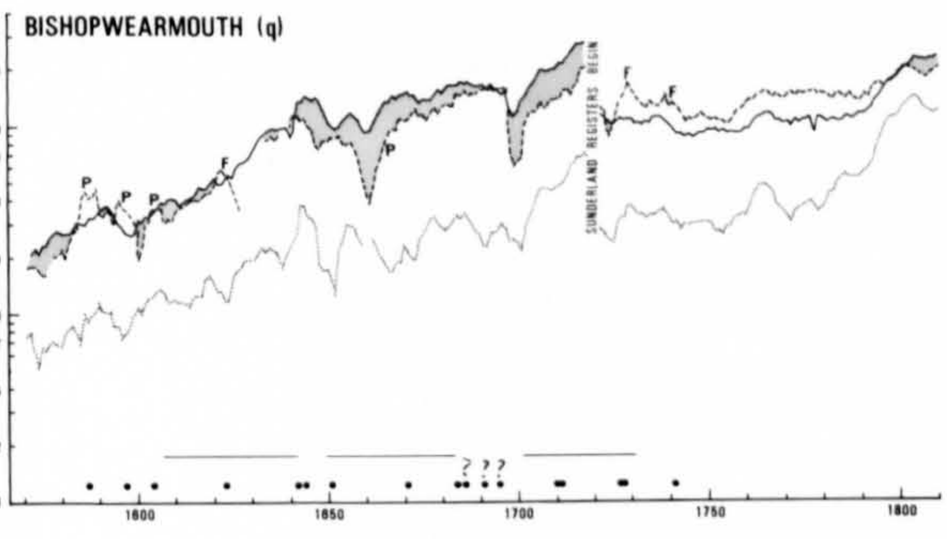
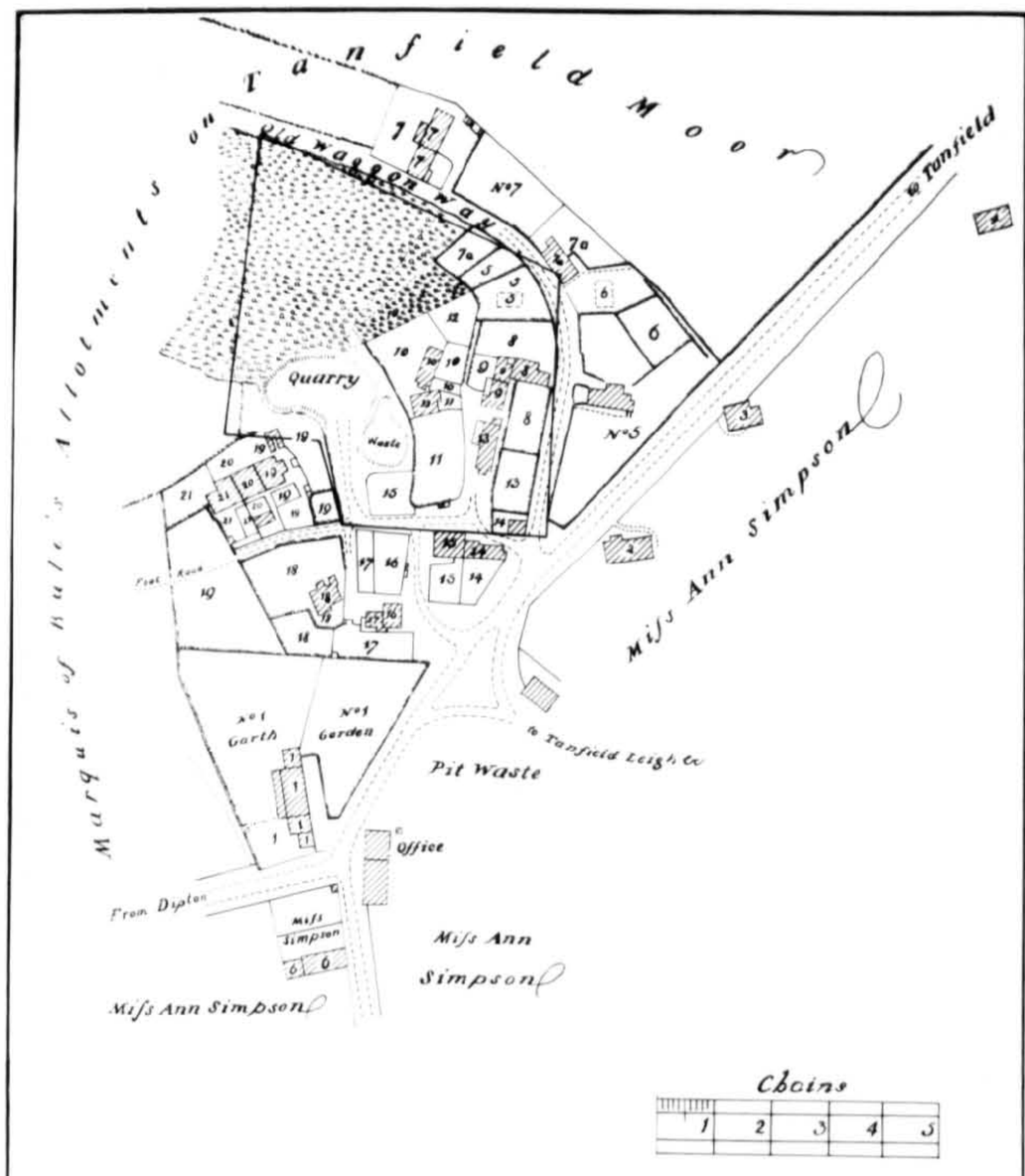

BISHOPWEARMOUTH (q)
P
F
?
SUNDERLAND REGISTERS BEGIN
400
200
100
70
40
20
10
7
4
2
1
1600
1850
1700
1750
1800

Figure 5.5

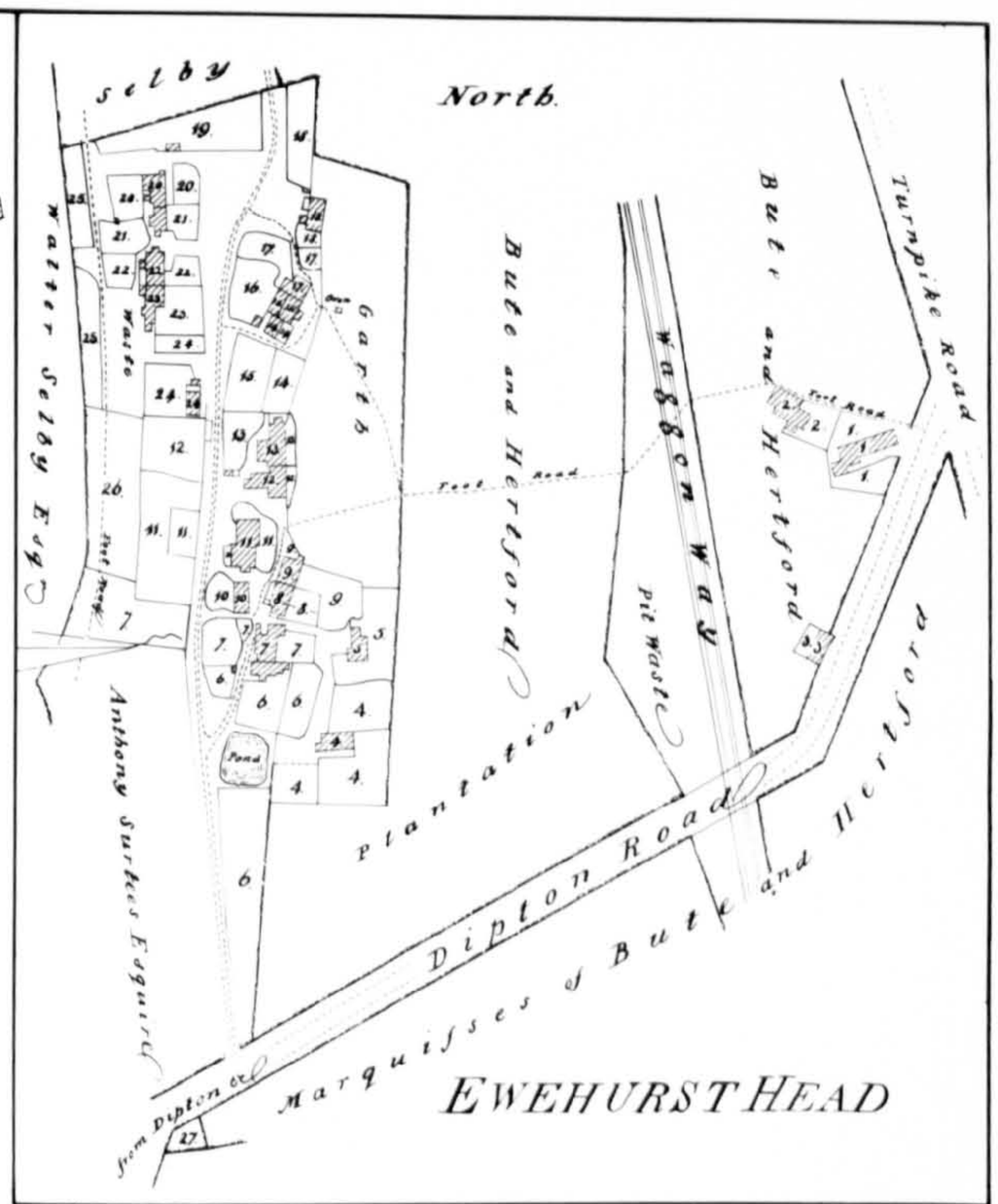
Early industrial settlements on Tanfield Moor: Tantobie, Ewehurst Head, Clow Dean and Whiteley Head c.1810

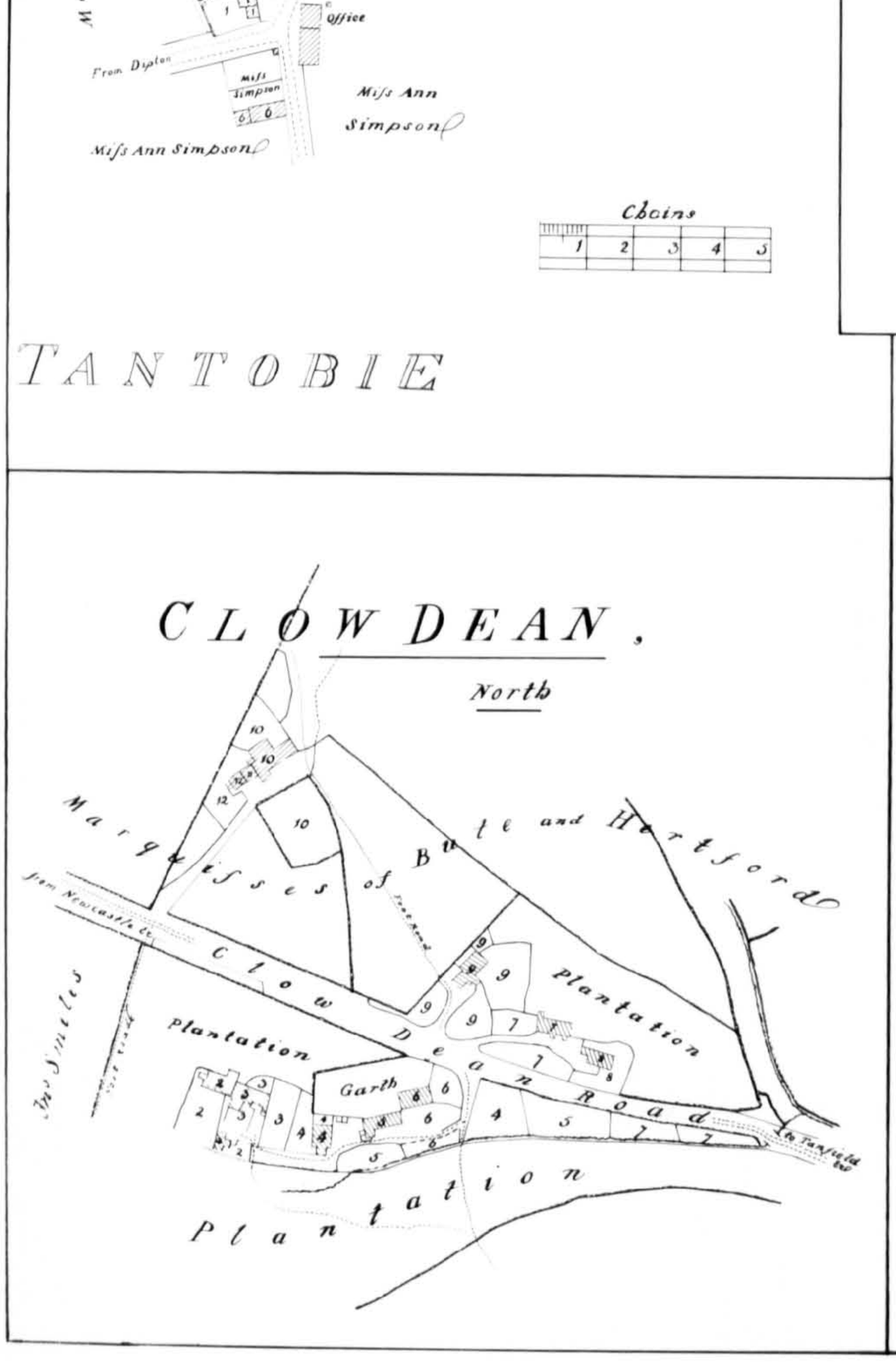
Sources: Redrawn, in original style, from Bell maps in NRO Armstrong Collection 303.

Note: For location of these settlements in relation to Tanfield village and other features on Tanfield Moor, see figure 7.15d.


Tantobie Moor
Old waggon way
to Tanfield
Miss Ann Simpson
Marquis of Hall's Allotments
Quarry
Waste
No 7
No 5
No 1 Garth
No 2 Garden
Pit Waste
to Tanfield Leigh &c
Office
From Dipton
Miss Simpson
Miss Ann Simpson
Miss Ann Simpson
Chains
1 2 3 4 5

TANTOBIE


Selby North
Selby Estate
Waste
Gates
Foot Road
Bute and Hertford
Turnpike Road
Waggon Way
Pit Waste
Anthony Surtees Esquire
Plantation
Pond
Dipton Road
Marquisses of Bute and Hertford
from Dipton &c
EWEHURST HEAD


CLOW DEAN.
North
Marquisses of Bute and Hertford
from Newcastle &c
Clow Dean Road
Plantation
Garth
Plantation
Plantation
to Tanfield &c

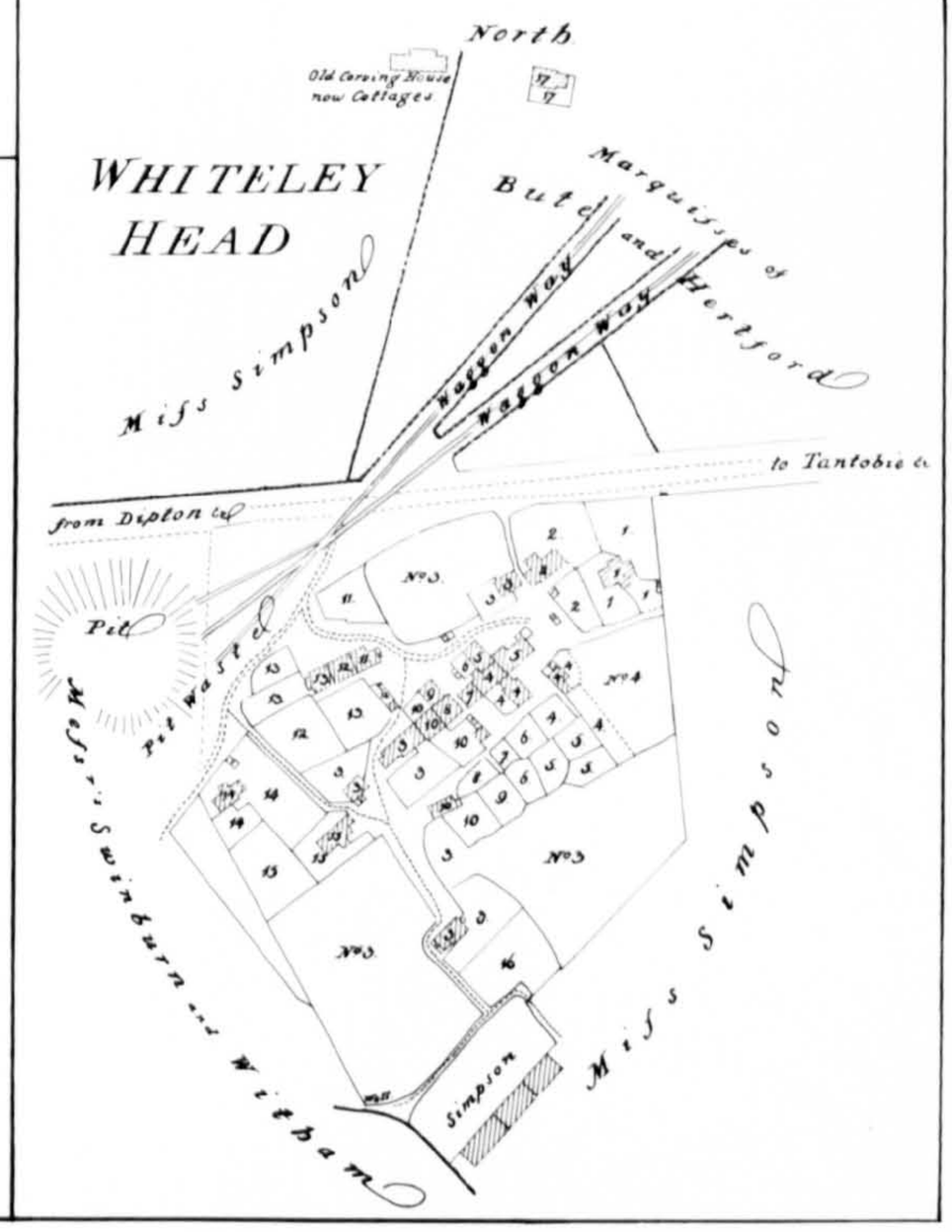

North
Old Corving House now Cottages
WHITELEY HEAD
Miss Simpson
Waggon Way
Waggon Way
Marquisses of Bute and Hertford
to Tantobie &c
from Dipton &c
Pit
Pit Waste
Messrs Swinburn and Witham
Miss Simpson
No 3
No 4
No 3
No 3
Simpson

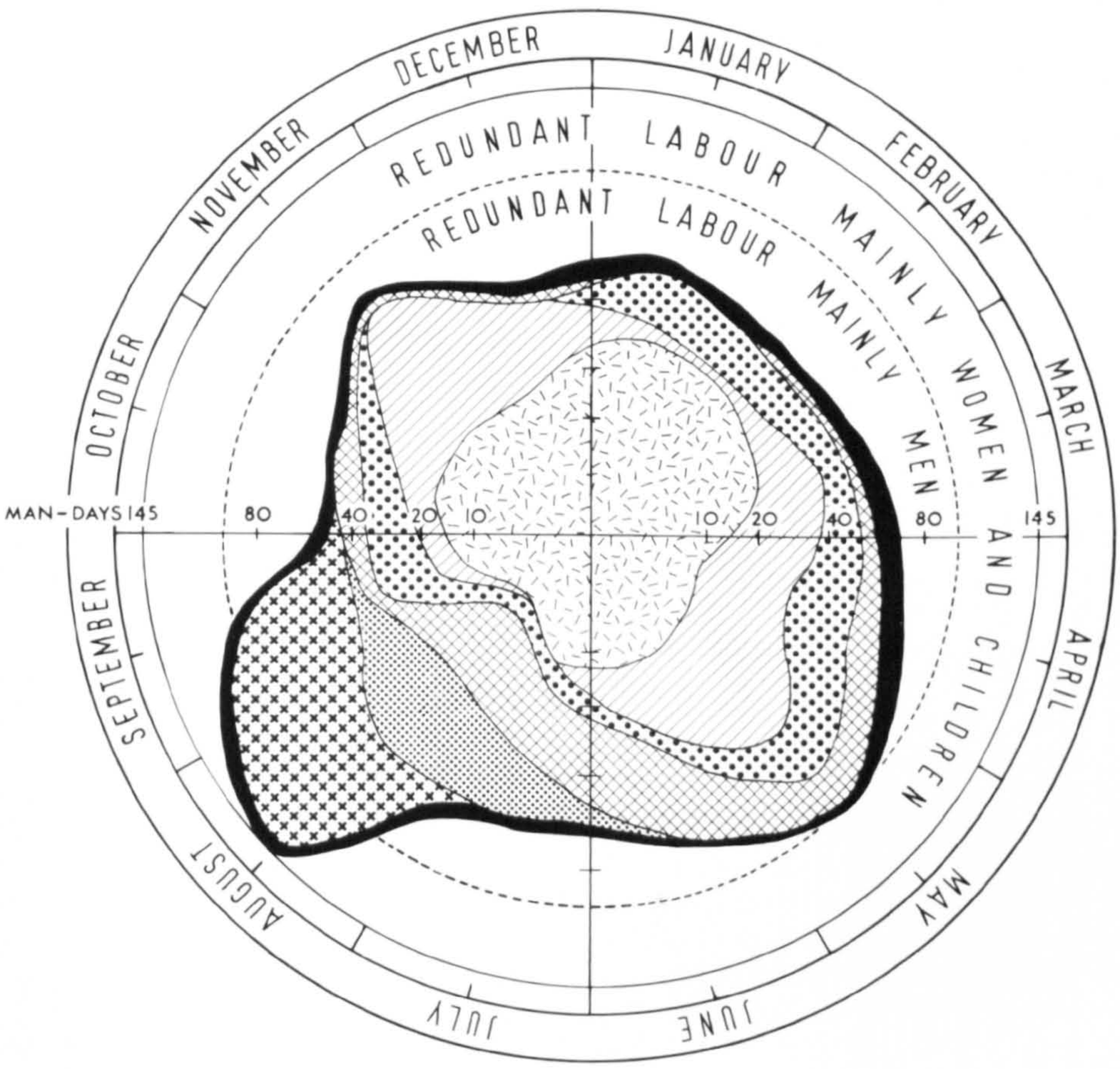
Figure 5.6

Gateshead Park and Shipcote estates: seasonal employment, 1730

Sources: GPL Cotesworth (OR)/box I/4.

Note: The sources upon which figure 5.6 is based provide a daily record of work undertaken and, usually, the sex and status (adult or child) of the worker. For purposes of drawing the graph, calculations were made of the average (mean) number of days worked per week in each month; thus, throughout August, 145 man-days were worked per week on average, while for September the figure was 80.

GATESHEAD PARK AND SHIPCOTE ESTATES
Seasonal Employment in Agriculture 1730



Thrashing and winnowing grain

Maintenance of hedges, fences, borders and lanes

Ploughing (with some sowing)

Maintenance of soil fertility (lime and manure work)

Haymaking

Harvesting

Miscellaneous work

Figure 6.1a

County Durham: enclosures, 1551-1620

Sources

Enclosures	As cited in appendix 18, nos. 1-54.
Physiographic units	As for figure 6.5.

Figure 6.1b

County Durham: enclosures, 1621-1680

Sources: As cited in appendix 18, nos. 55-129.

ENCLOSURES 1551-1620

Amount known uncertain

- Enclosure entirely or almost entirely of traditional townfield arable (ploughland) held in common
- Enclosure mainly of traditional townfield arable but including common, waste, fell, moor, pasture or meadow
- Enclosure entirely or almost entirely of common, waste, fell, moor, pasture or meadow
- Suspected depopulating enclosure and/or engrossment, with conversion of tillage to pasture
- Cases of enclosure and/or conversion of tillage to pasture taken to Quarter Sessions 1607-15
- Enclosure later declared void by Bishop
- ? Type of land uncertain

HIGH PENNINES

PENNINE DALES

PENNINE SPURS

TYNE AND WEAR LOWLANDS

SOUTH WEST DURHAM LIMESTONE RIDGE

DERWENT VALLEY

CRAWCROOK, WEST BOLDON, CLEADON, WASHINGTON, TUNSTALL, WALDRIDGE, GREAT LUMLEY, HARBOUR HOUSE, HETTON, SEAHAM, MURTON, EASINGTON, THORNLEY, KELLOE, WINGATE, CASTLE EDEN, HUTTON HENRY, SHERATON, THORPE BULMER, CORNFORTH, NEWTON CAP, ESCOMB, BISHOP AUKLAND, MAINSFORTH, STRANTON, OWTON, SEATON CAREW, SEDGEFIELD, HARDWICK, MORDON, WEST LAYTON, PRESTON, WHITTON, THORP THEWLES, BILLINGHAM, BRAFFERTON, STAINTON, CARLTON, WHESSOE, ELTON, WALWORTH, DENTON, ULNABY, COATHAM STOB, BONDGATE, EGGLESCLIFFE, MIDDLETON EAST ROW, BLACKWELL, AISLABY, DARLINGTON, DINSDALE, EGGLESTON

Boundary of Northern Durham

acres	hectares
2000	809
1000	405
500	202
200 or less	81 or less

0 5 mls
0 8 kms

ENCLOSURES 1621-1680

Amount known uncertain

- Enclosure entirely or almost entirely of traditional townfield arable (ploughland) held in common
- Enclosure mainly of traditional townfield arable but including common, waste, fell, moor, pasture or meadow
- Enclosure mainly of common, waste, fell, moor, pasture or meadow but including traditional townfield arable
- Enclosure entirely or almost entirely of common, waste, fell, moor, pasture or meadow
- ? Type of land uncertain
- D Enclosure confirmed by Chancery Decree

HIGH PENNINES

PENNINE SPURS

RYTON, RYTON WOODSIDE, WINLATON, WHICKHAM, WHITBURN, BOLDONS, CLEADON, BISHOP WEARMOUTH, HERRINGTON, TUNSTALL, NEWBOTTLE, RYHOPE, CHESTER-LE-STREET, HOUGHTON, SEAHAM, RAINTON, MURTON, EASINGTON, SHERBURN, LITTLE THORPE, SHADFORTH, SHINCLIFFE, SHOTTON, BRANDON, CROXDALE, QUARRINGTON, FROSTERLEY, TUDHOE, HETT, KELLOE, SPENNYMOOR, CORNFORTH, FERRYHILL, BISHOP AUKLAND, COUNDON, SEDGEFIELD, GREATHAM, ELDON, WEST AUCKLAND, MIDDRIDGE, THORP THEWLES, NEWTON BEWLEY, REDWORTH, AYCLIFFE, NORTON, HEIGHINGTON, BOLAM, INGLETON, CLEATLAM, HAUGHTON, LONG NEWTON, STOCKTON, HARTBURN, COCKERTON, MIDDLETON, EGGLESCLIFFE, WHORLTON, DARLINGTON

Boundary of Northern Durham

acres	hectares
4000	1619
2000	809
1000	405
500	202
200 or less	81 or less

0 5 mls
0 8 kms

Figure 6.2

County Durham: enclosures, 1681-1740

Sources: As cited in appendix 18, nos. 130-52.

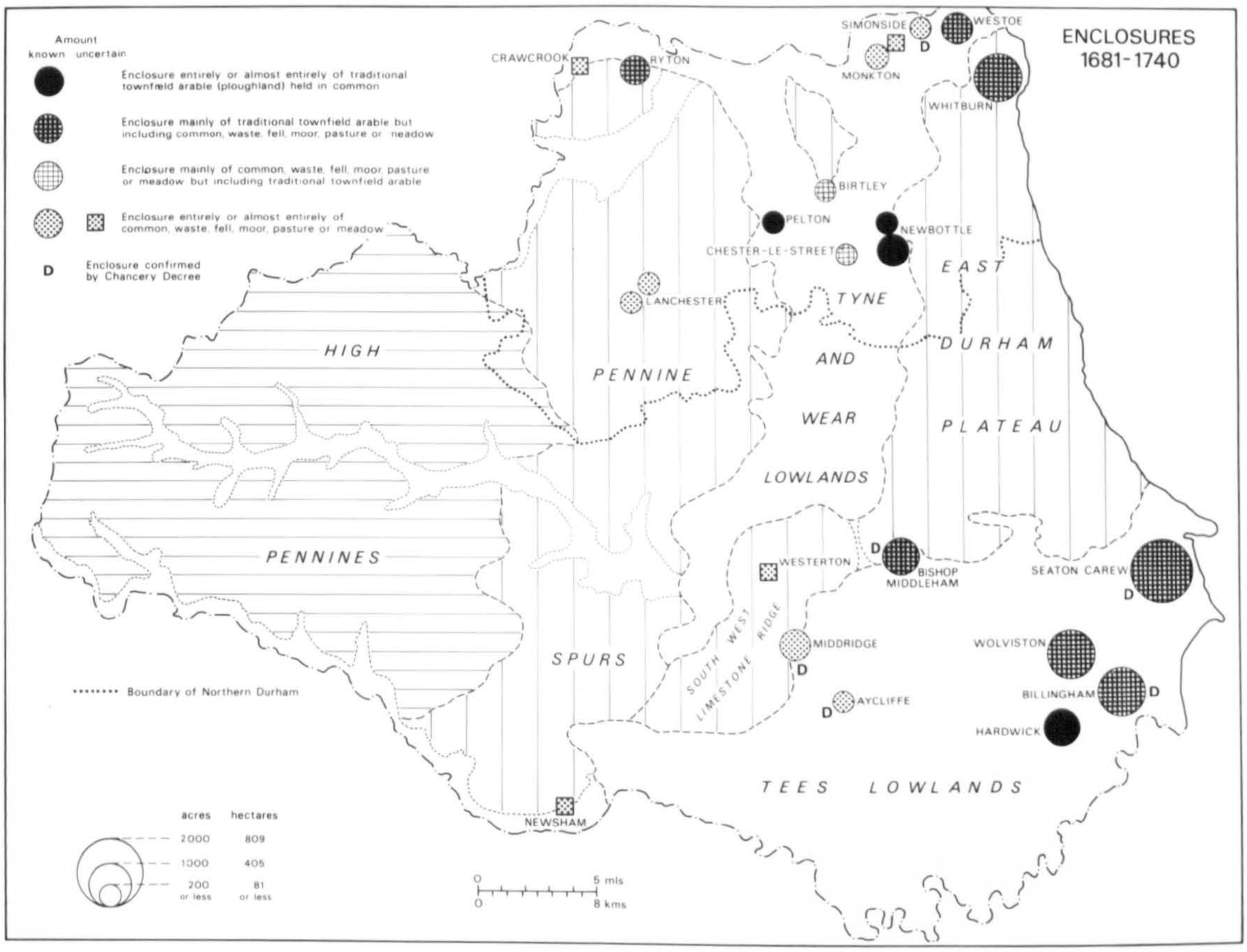

ENCLOSURES
1681-1740
Amount
known uncertain
Enclosure entirely or almost entirely of traditional townfield arable (ploughland) held in common
Enclosure mainly of traditional townfield arable but including common, waste, fell, moor, pasture or meadow
Enclosure mainly of common, waste, fell, moor, pasture or meadow but including traditional townfield arable
Enclosure entirely or almost entirely of common, waste, fell, moor, pasture or meadow
D
Enclosure confirmed by Chancery Decree
CRAWCROOK
RYTON
SIMONSIDE
D
MONKTON
WESTOE
WHITBURN
BIRTLEY
PELTON
NEWBOTTLE
CHESTER-LE-STREET
LANCHESTER
HIGH
PENNINE
TYNE
AND
WEAR
DURHAM
PLATEAU
LOWLANDS
PENNINES
SPURS
WESTERTON
D
BISHOP
MIDDLEHAM
SEATON CAREW
D
SOUTH WEST
LIMESTONE RIDGE
MIDDRIDGE
D
WOLVISTON
BILLINGHAM
D
D
AYCLIFFE
HARDWICK
TEES LOWLANDS
Boundary of Northern Durham
NEWSHAM
acres
hectares
2000
809
1000
405
200
or less
81
or less
0
5 mls
0
8 kms

Figure 6.3a

County Durham: enclosures, 1741-1791

Sources: As cited in appendix 18, nos. 153-81.

Figure 6.3b

County Durham: enclosures, 1791-1810 (and later)

Sources: As cited in appendix 18, nos. 181-210.

Note: In figure 6.3b, the caption 'enclosed after 1810' next to the open circle symbol, denotes an enclosure for which *both* the act and award were obtained *after* 1810 (but not later than 1870).

ENCLOSURES 1741-1790

Enclosure entirely or almost entirely of traditional townfield arable (ploughland) held in common

Enclosure mainly of traditional townfield arable but including common, waste, fell, moor, pasture or meadow

Enclosure entirely or almost entirely of common, waste, fell, moor, pasture or meadow

A Enclosed by agreement

D Enclosure confirmed by Chancery Decree

HEBBURN
HEWORTH
WASHINGTON A
MEDOMSLEY
LANCHESTER
PLAWSWORTH A
EAST DURHAM PLATEAU
HAMSTEELS
USHAW
CROSSGATE
ELVERT
WOLSINGHAM
ALLOTTED BUT NOT ENCLOSED A
IVESLEY A
THORNLEY
CROOK
BRANCEPETH
WILLINGTON
WITTON
HAMSTERLEY AND LYNESACK
BYERS GREEN A
HUNWICK
NEWBIGGIN A
EGGLESTON
PARTLY ENCLOSED
RAILEY
STAINDROP
BOLAM
BARNARD CASTLE
WINSTON D
TEES LOWLANDS

acres	hectares
16000	6476
12000	4856
8000	3238
4000	1619
2000	809
1000	405
200 or less	81 or less

Boundary of Northern Durham

0 5 mls
0 8 kms

ENCLOSURES 1791-1810

Enclosure entirely or almost entirely of traditional townfield arable (ploughland) held in common

Enclosure mainly of common, waste, fell, moor, pasture or meadow but including traditional townfield arable

Enclosure entirely or almost entirely of common, waste, fell, moor, pasture or meadow

RYTON Enclosed by 1810 (act obtained, award made)

RYTON Enclosure proceedings begun by 1810 (act obtained, award pending)

Enclosed after 1810

A Enclosed by agreement

RYTON A
CRAWCROOK
RYTON
GATESHEAD
GATESHEAD
BOLDON
WHICKHAM
BLACKBURN
TANFIELD
BEAMISH
URPETH A
TYNE
CHESTER
EAST AND WEAR DURHAM PLATEAU
RUFFSIDE
PENNINE
FRAMWELGATE & WITTON GILBERT
A
GILESGATE
MIDDLEHOPE
CORNSAY A
SPURS
LOWLANDS
WEARDALE PARK AND FOREST
FROSTERLEY A
BYERS GREEN
MIDDLETON
PART STINTED PASTURE
EGGLESTON
ESCOMB
SOUTH WEST LIMESTONE RIDGE
GREATHAM A
WOODLAND
COCKFIELD
BARNARD CASTLE
TEES LOWLANDS

acres	hectares
16000	6476
12000	4856
8000	3238
4000	1619
2000	809
1000	405
200 or less	81 or less

Boundary of Northern Durham

0 5 mls
0 8 kms

Figure 6.4

County Durham: location and amount of land affected by enclosure, 1551-1810 (and to 1870)

Sources: As cited in appendix 18.

Note: In the upper graph, values are plotted at the mid-point of each decade. The trend line for known values only (thin broken line), represents a rate of 6,286 acres enclosed per decade; that for all values, including estimates (broad broken line), 6,868 acres enclosed per decade.

County Durham; location and amount of land affected by enclosure

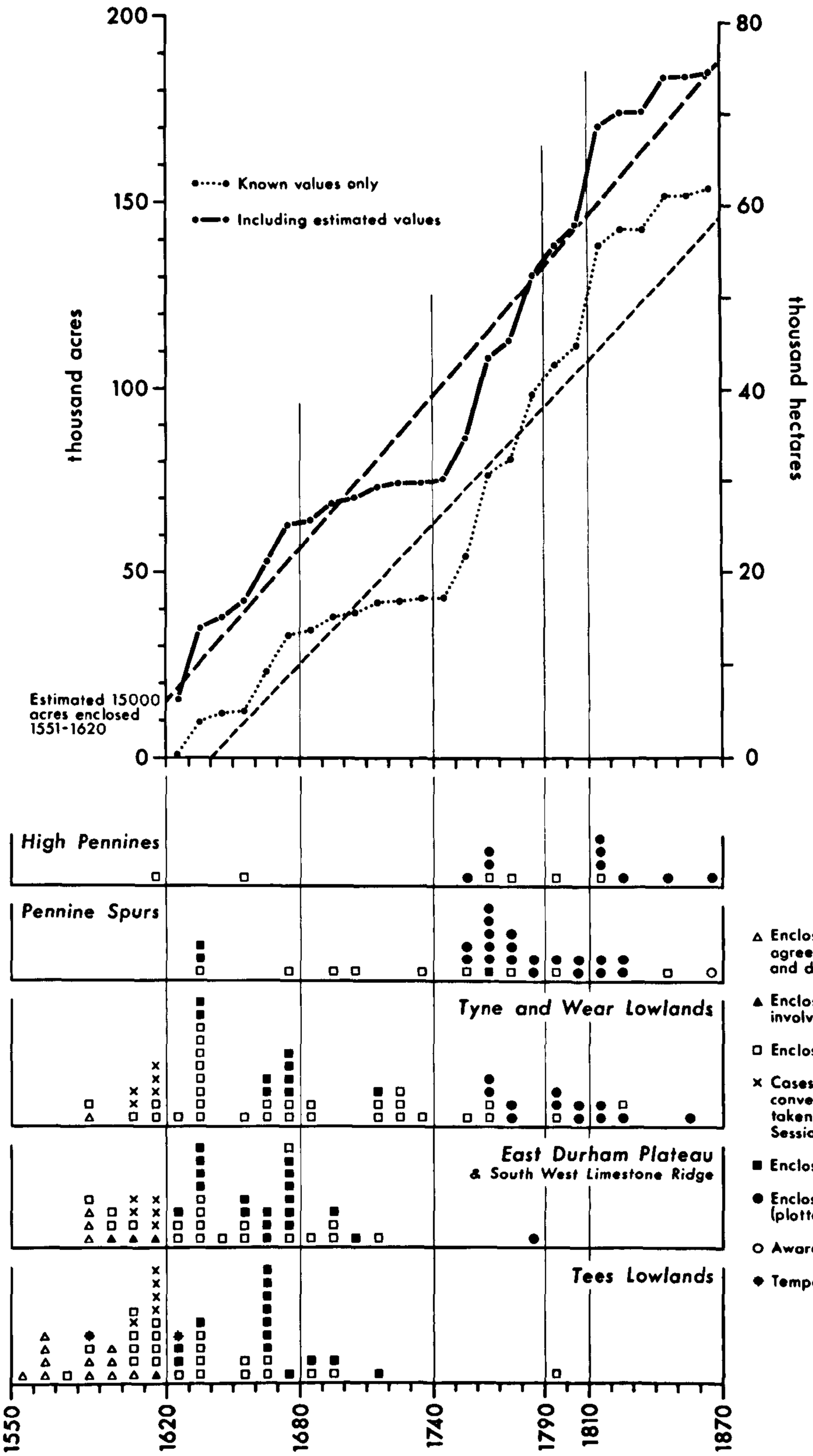


Figure 6.5

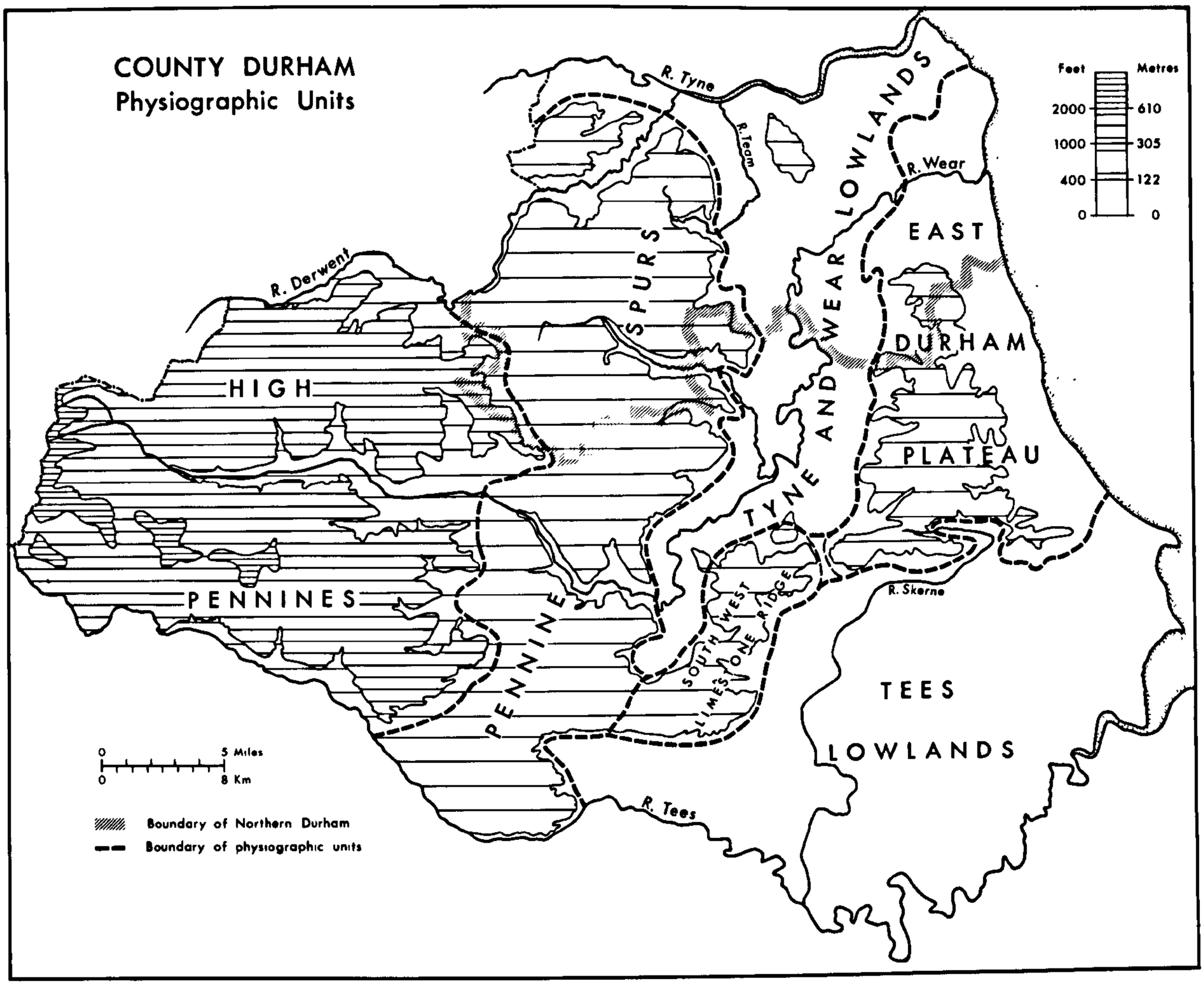
County Durham: physiographic units

Sources: Bailey 1810, 7-10 (plus his map opposite title page); with additional information from Dewdney 1970, 3-74; and Soils of Northern England (Soil Survey of England and Wales, sheet 1, 1983).

Figure 6.6

County Durham: soil regions identified by Bailey in 1810

COUNTY DURHAM
Physiographic Units



SOIL REGIONS: Identified by Bailey 1810

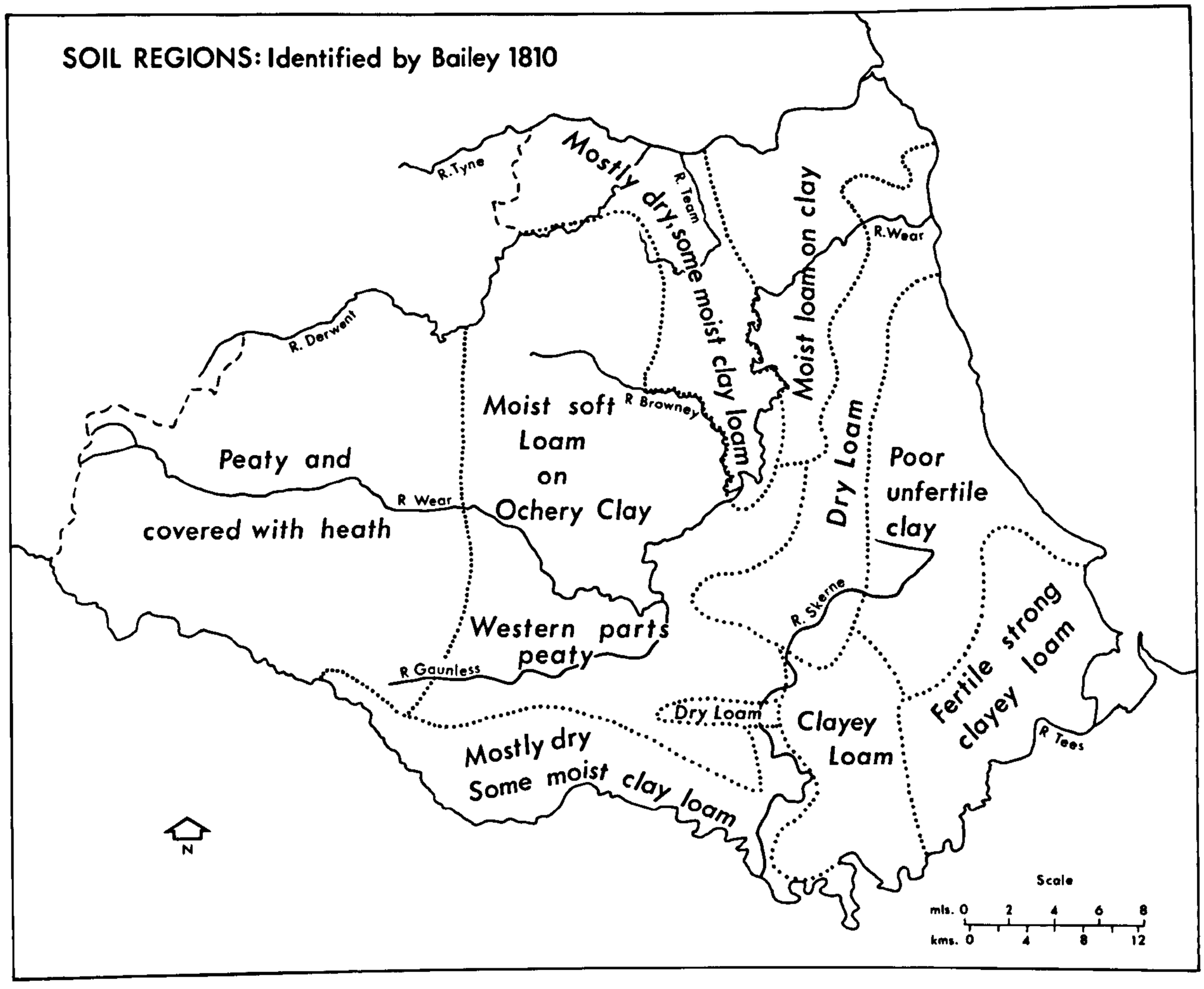


Figure 6.7

County Durham: recorded common-field arrangements, 1550-1870

Main Sources: Enclosure documents listed in appendix 18; DUPD CC/box 162/23376; box 163/23381; box 164/23383, 23386; Parl. Surveys I and II; HC/M.64; and tithe maps in DUPD.

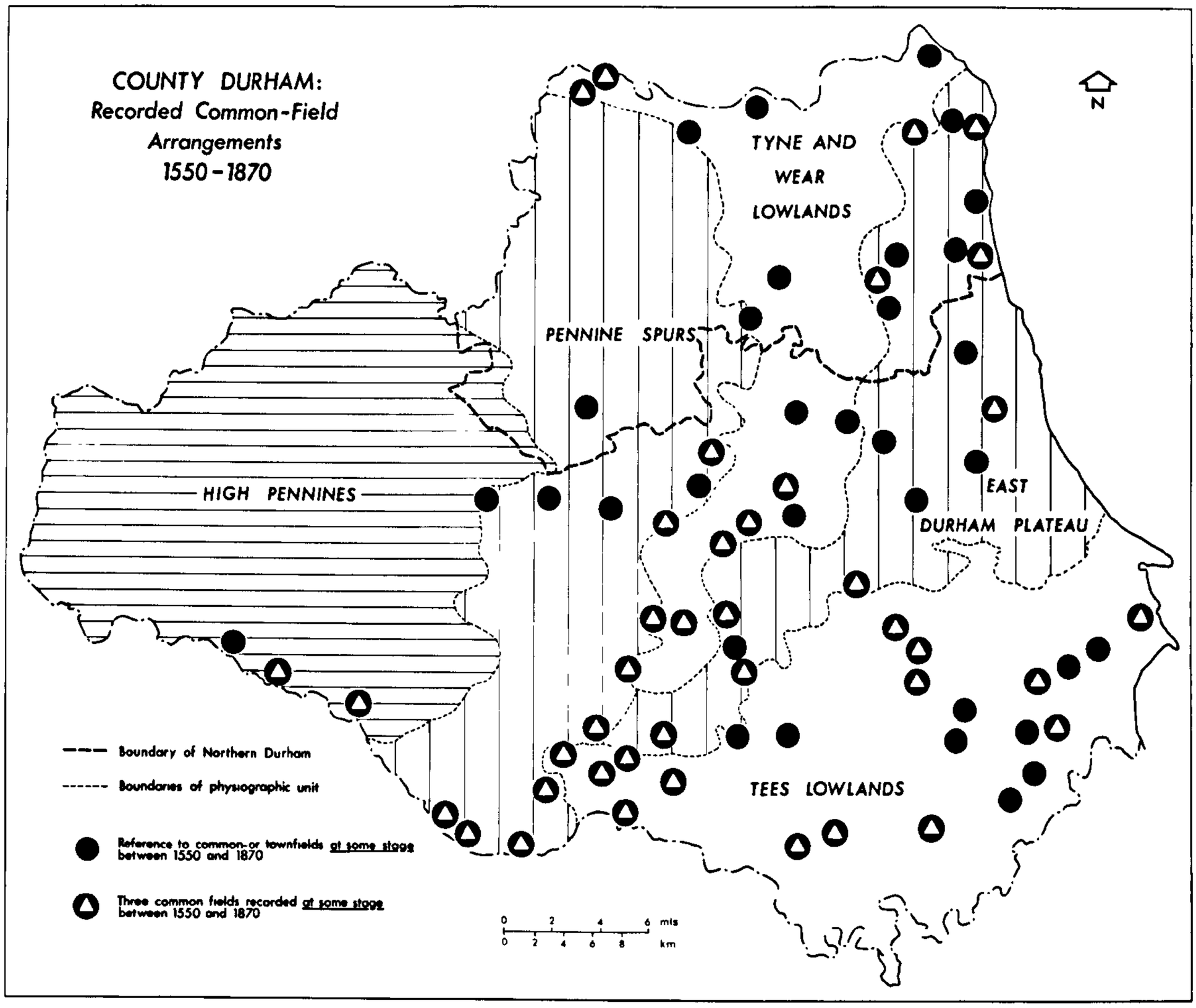

COUNTY DURHAM:
Recorded Common-Field
Arrangements
1550 - 1870
N
TYNE AND
WEAR
LOWLANDS
PENNINE SPURS
HIGH PENNINES
EAST
DURHAM PLATEAU
TEES LOWLANDS
Boundary of Northern Durham
Boundaries of physiographic unit
Reference to common- or townfields at some stage between 1550 and 1870
Three common fields recorded at some stage between 1550 and 1870
0 2 4 6 mls
0 2 4 6 8 km

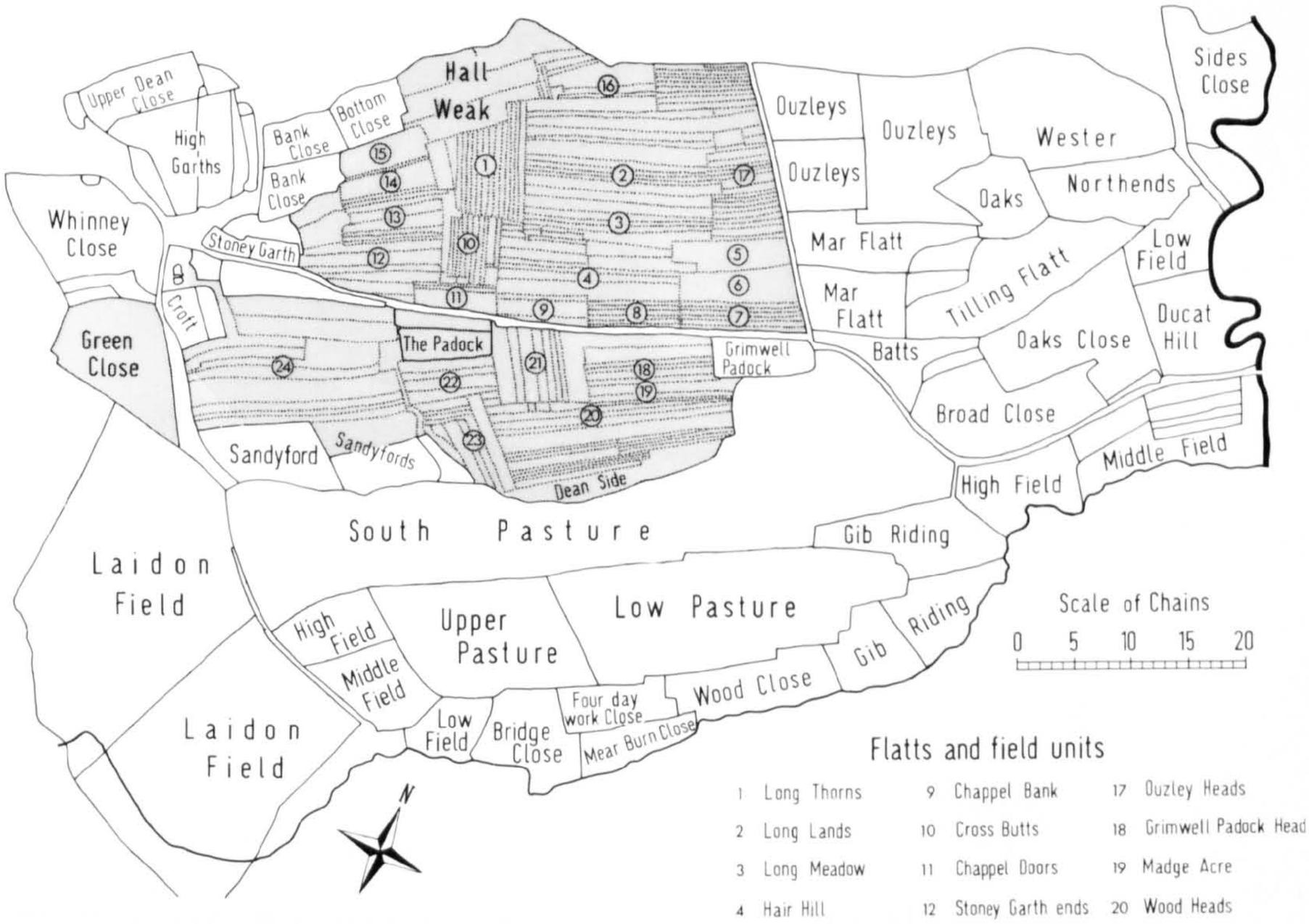
Figure 6.8

Ravensworth townfields, 1712

Sources: E. Hughes 1952, opposite p. 133; DRO Q/D/E 15-20.

Note: A number of the closes shown in 1712, especially those with 'flatt' names, may have been part of the townfield arable (ploughland) at some stage, though evidently not in 1712 or 1818; others, South, Low and Upper Pastures among them, may always have been pasture, though subject to communal grazing.

RAVENSWORTH TOWNFIELDS 1712



Area specifically designated 'Townfields' at Enclosure in 1818

Flatts and field units

1	Long Thorns	9	Chappel Bank	17	Ouzley Heads
2	Long Lands	10	Cross Butts	18	Grimwell Padock Head
3	Long Meadow	11	Chappel Doors	19	Madge Acre
4	Hair Hill	12	Stoney Garth ends	20	Wood Heads
5	Little Padock	13	Cattle Bank Close ends	21	Banks
6	Harbottle Padock	14	Piper Acre	22	Crimbles
7	Mar Flatt	15	Bank Close ends	23	Sandyford Bank
8	Chapel Bank Foot	16	Hall Weak Side	24	High Flatts

Following pages

Figure 6.9a

'A Plan of Crawcrook Open Fields... 1794' (before enclosure)

Sources: DRO D/XP/38; NRO ZGR/dm.13.

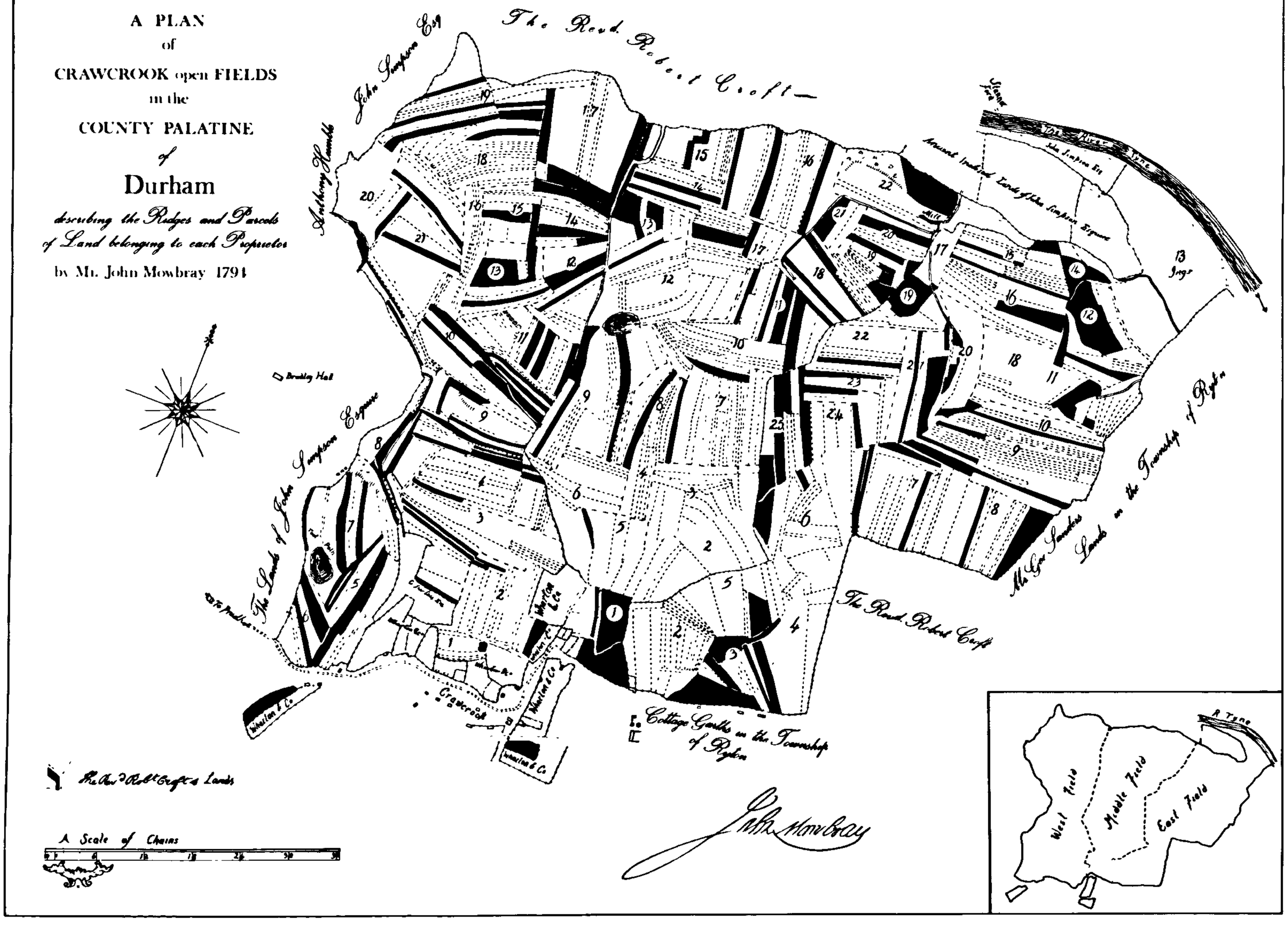
Note: The fragmented nature of landholding arrangements on the eve of enclosure is evident even from the sample holding of Robert Croft. The original map upon which figure 6.9a is based makes the point yet more strikingly by showing, in contrasting colours, the scattered properties of all interested parties (their names appear on the map in figure 6.9b)

Figure 6.9b

'A Plan of Crawcrook Open Fields...describing the Allotments... 1795'

Sources: DRO Q/D/E 9; and Q/D/B 5.

A PLAN
of
CRAWCROOK open FIELDS
in the
COUNTY PALATINE
of
Durham
describing the Ridges and Parcels of Land belonging to each Proprietor
by Mr. John Mowbray 1794



John Mowbray

A PLAN
of
CRAWCROOK open FIELDS
in the
PARISH of RYTON
in the
COUNTY PALATINE
of
Durham
describing the Allotments as made
by Mr. John Mowbray 1795

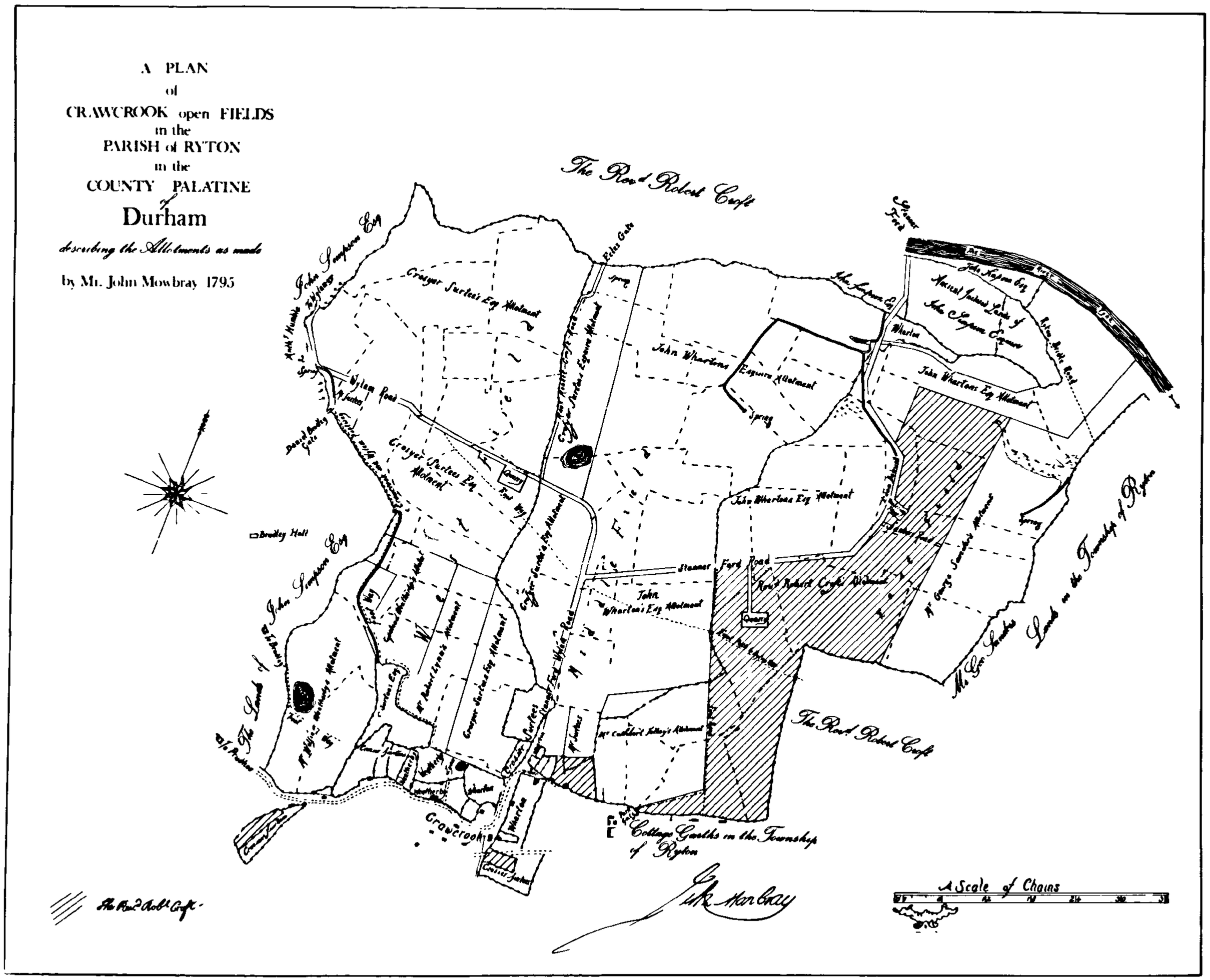


Figure 6.10

A scheme of husbandry for part of Hownes Farm, leased 1782-91

Sources: DUPD Baker-Baker 40/15 and 16a.

Note: Information for Broomy Hill Close is wanting.

A SCHEME OF HUSBANDRY
FOR PART OF HOWNS FARM LEASED 1782 - 1791

Woodland not leased

Not leased and probably most laid to grass

Mr Johnson's Ground

Consett Ground

HOWNS WOOD
25.3.24.

THE CLOVER FIELD
3.2.28.

MERRY BANKS RIGGS
8.0.17.

THE WOODY FIELD
5.3.2.

THE LIDGETS
4.3.10.

THE WELL FIELD
7.0.3.

WOODY DEAN
6.0.0.

THE HIGH FIELD
7.3.18.

THE STONEY PASTURE
8.3.21.

2.2.7.

KNITSLEY FIELD

THE WHITE FIELD
15.1.23.

THE DAM FIELD
11.0.25.

THE LONGING FIELD
7.1.0.

THE WHINNEY FIELD
16.1.9.

BROOMY HILL
9.2.28.

COBLERS LOW PASTURE
17.2.5.

THE COBLERS FIELD
16.3.9.

COBLERS HIGH PASTURE
16.2.29.

Mr Baker's Incroachment

THE ALLOTMENT ON LANCHESTER FELL
35.1.2.

1791 1782 1783 1984 1785 1786 1787 1788 1789 1790

ACRES TAKEN UP
20
10
5
2

Wheat
Oats
Barley
Grass
Clover (C)
Peas (P)
Seeds (S)
Fallow

0 500 1000 Feet
0 150 300 Metres

Lanchester Fell
Howns Farm
NORTHERN DURHAM
COUNTY DURHAM

Figure 6.11

County Durham: crops and crop combinations, 1801

Source: PRO HO/67/8.

Note: The crop combination map is based upon indices calculated according to the method employed by Thomas 1963. The maps in figure 6.11 have also appeared in Hodgson 1979.

CROPS AND CROP COMBINATIONS 1801

FIRST RANKING CROPS

Oats
Wheat
No data

0 2 4 6 mls

SECOND RANKING CROPS

Oats
Wheat
Barley
Potatoes
Peas & Beans

THIRD RANKING CROPS

Oats
Wheat
Barley
Turnips
Potatoes
Peas & Beans

CROP COMBINATIONS

?

O
OW
OWB
OWBT
OWT
OWPe
OWTPe
OWPo

Figure 7.1

Rainton coal royalty, 1815

Sources: DRO D/Lo/D/189/sketch of Rainton mines, 1815; County Durham first edition six-inch O.S. map, sheet XX (1857-61)

RAINTON COAL ROYALTY 1815



- Main engine pit
- Other working pit
- New pit sinking
- Intended new pit
- Intended new engine pit
- Landsale pit let to and worked by Mr. Croudace
- Old pit i.e. not working 1815
- Old freehold pit
- Old pit not working 1815 but mapped in 1777 and probably working then
- Waggonway in 1777
- Waggonway in 1815
- Waggonway in 1777 and 1815
- Freehold land
- Geological fault

Following pages

Figure 7.2

Rainton Townships: settlement features, 1777

Source: NRO 578/321/plan of East and West Rainton, 1777.

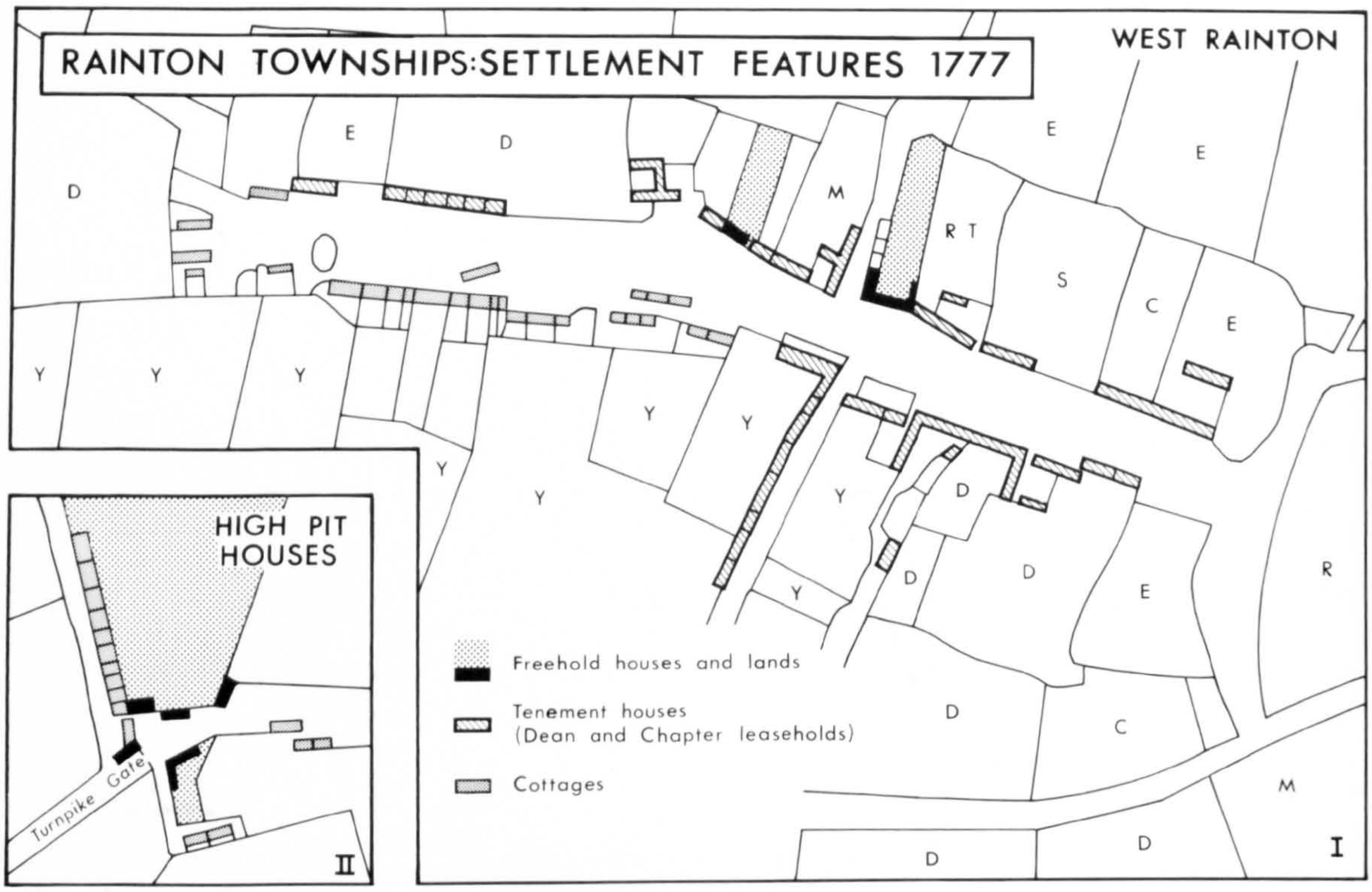
Figure 7.3

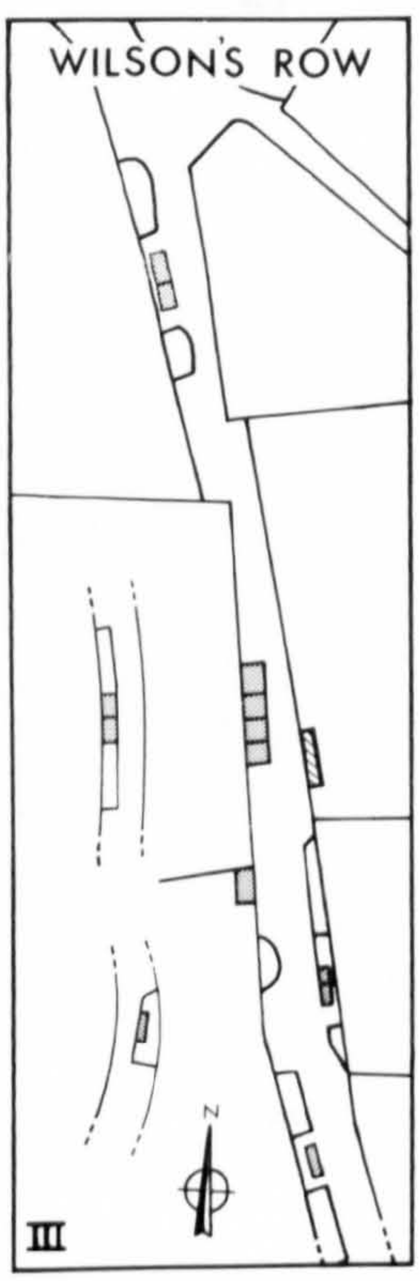
East and West Rainton Townships: landholdings, 1777

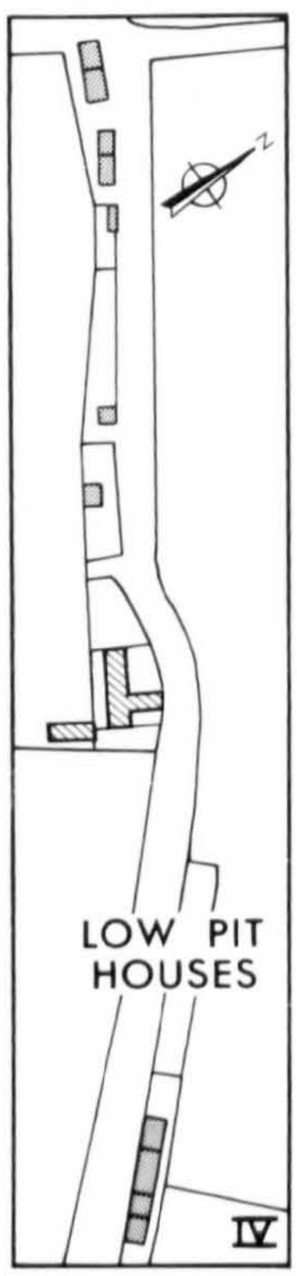
Source: As for figure 7.2.

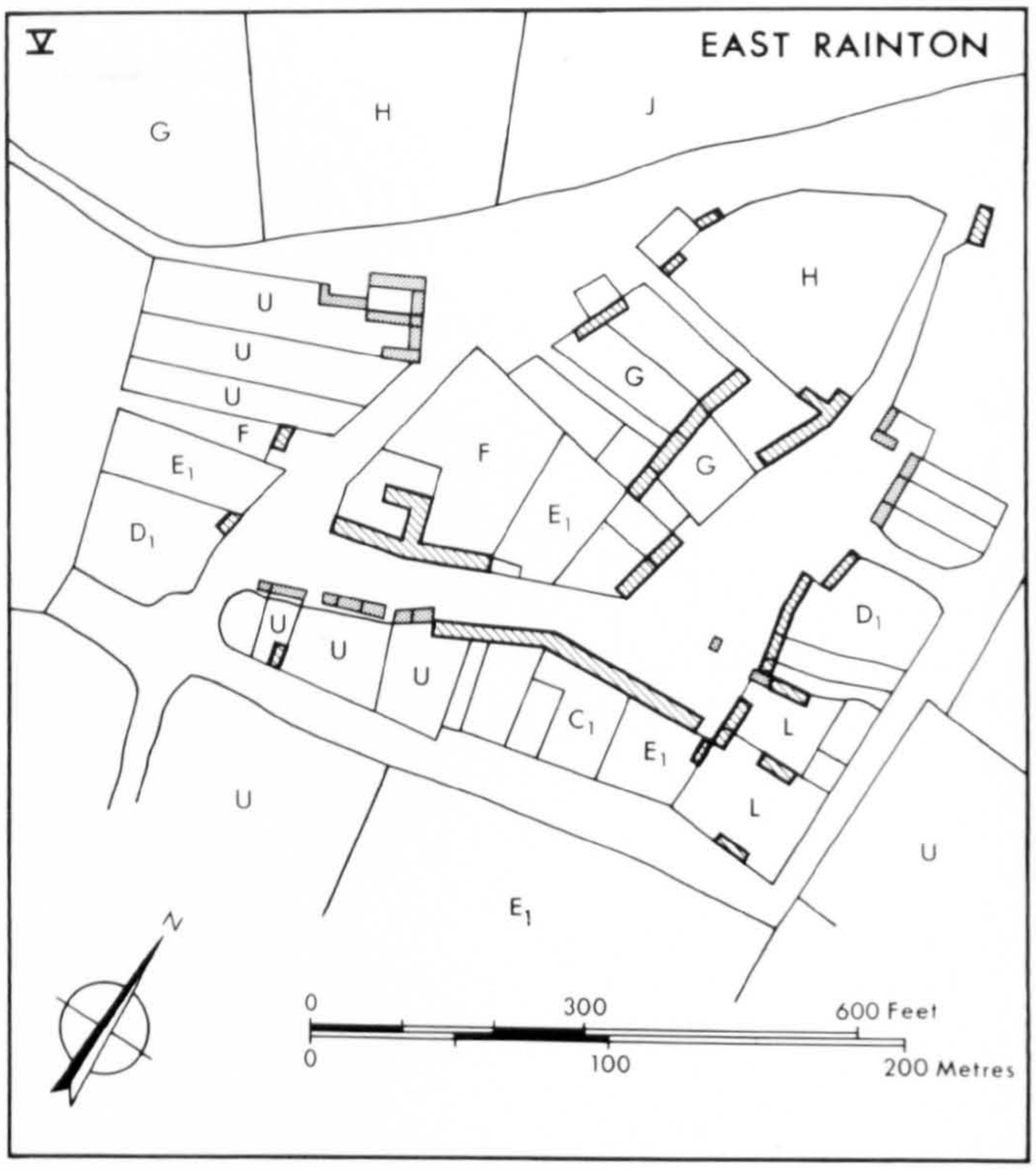
Notes:

1. Boundaries shown by a dashed line on Rainton Common Meadows are those set out at the enclosure of c.1821.
2. Those freeholds marked 'N' (held by Ralph Carr), 'U' (Mr Robinson) and 'D' (John Tempest), can have had little more than a vestigial obligation to the Dean and Chapter, in comparison with the remaining properties, which were held on lease.

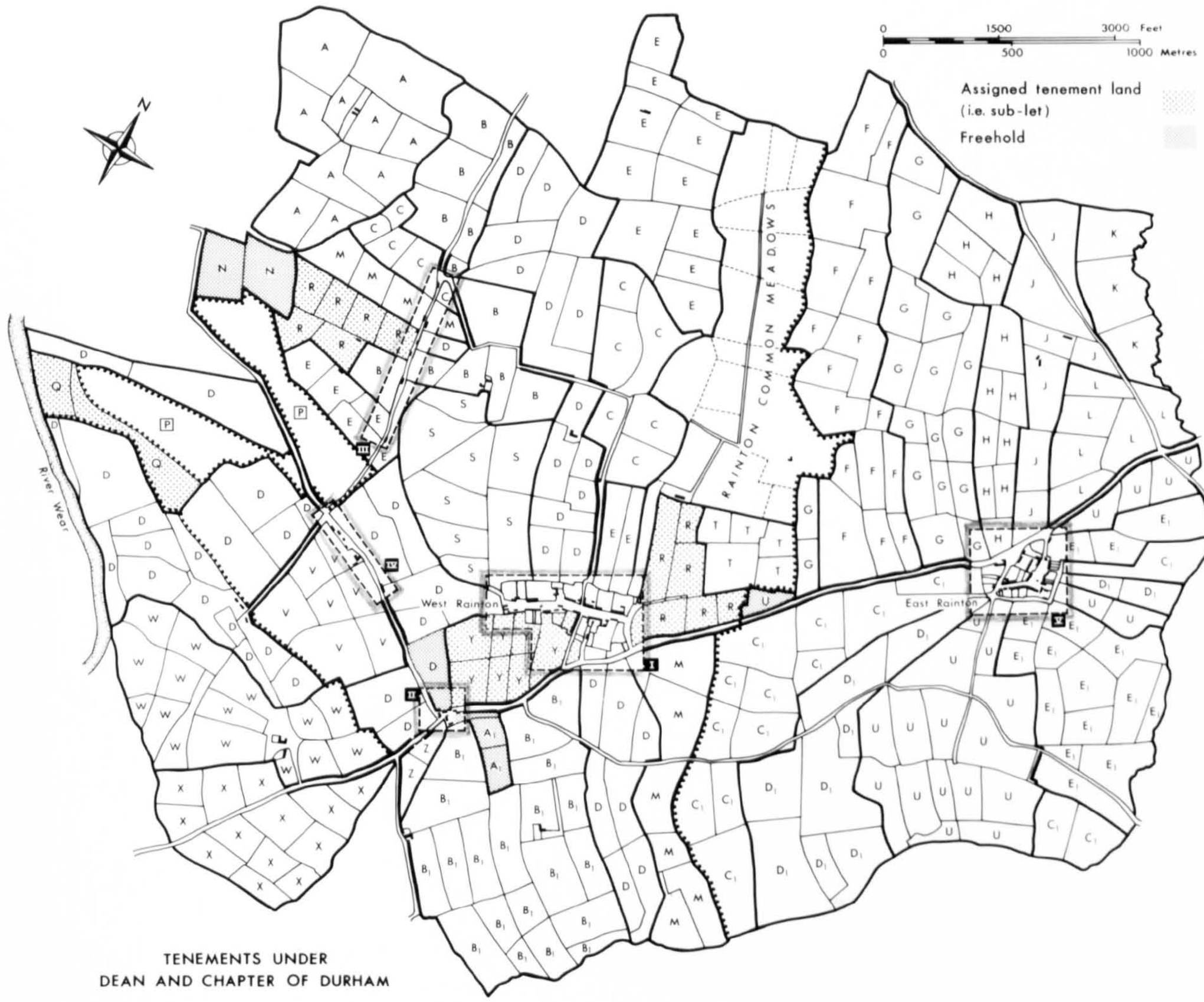

RAINTON TOWNSHIPS: SETTLEMENT FEATURES 1777
WEST RAINTON
HIGH PIT HOUSES
Turnpike Gate
II
Freehold houses and lands
Tenement houses (Dean and Chapter leaseholds)
Cottages
I


WILSON'S ROW
III


LOW PIT HOUSES
IV


V
EAST RAINTON
0 300 600 Feet
0 100 200 Metres

EAST AND WEST RAINTON TOWNSHIPS : LANDHOLDINGS 1777



TENEMENTS UNDER
DEAN AND CHAPTER OF DURHAM

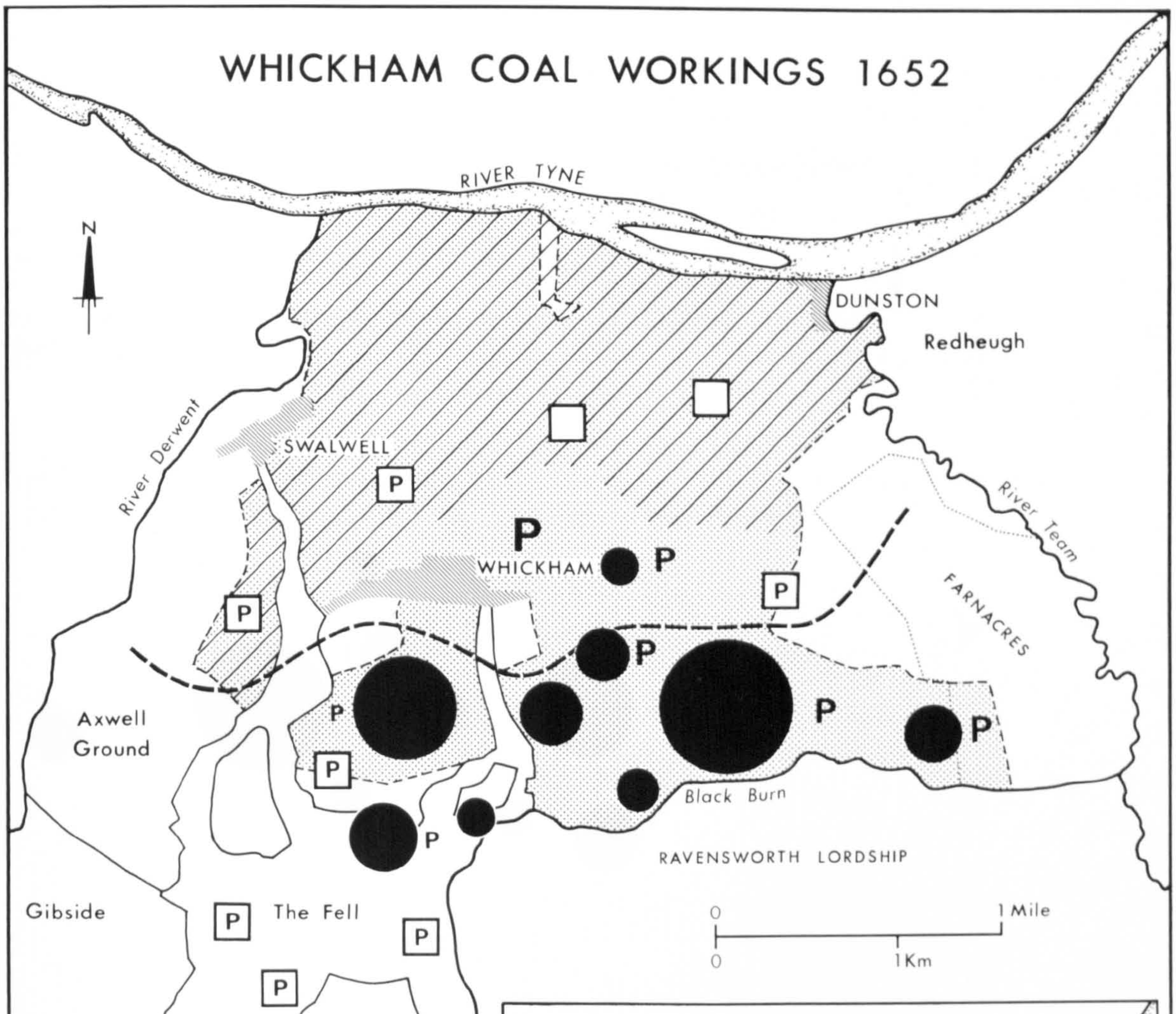
A *Dr. Ogle*
B *Mr. Clutterbuck*
C *Thos Wilkinson*
D *John Tempest*
E *Mr. Taylor*
F *Anthony Tilley*
G *Nicholas Wake*
H *Mr. Maskall*
J *Henry Walton*
K *Mr. Walton*
L *Mr. Rotheram*
M *Mr. Eeasterby*
N *Ralph Carr*
P *Pittington Township holdings*
Q *Mr. Newby*
R *Thos. Carr*
S *Eleanor Welch*
T *Jno. Harrison*
U *Mr. Robinson*
V *Henry Scorer*
W *Mr. White*
X *Mary Ingleby*
Y *Mr. Jackson*
Z *Mr. Creighton*
A_1 *Cornelius Wetherill*
B_1 *Mr. Greenwell*
C_1 *John Purvis*
D_1 *Mrs. Leighton*
E_1 *John Andrew*

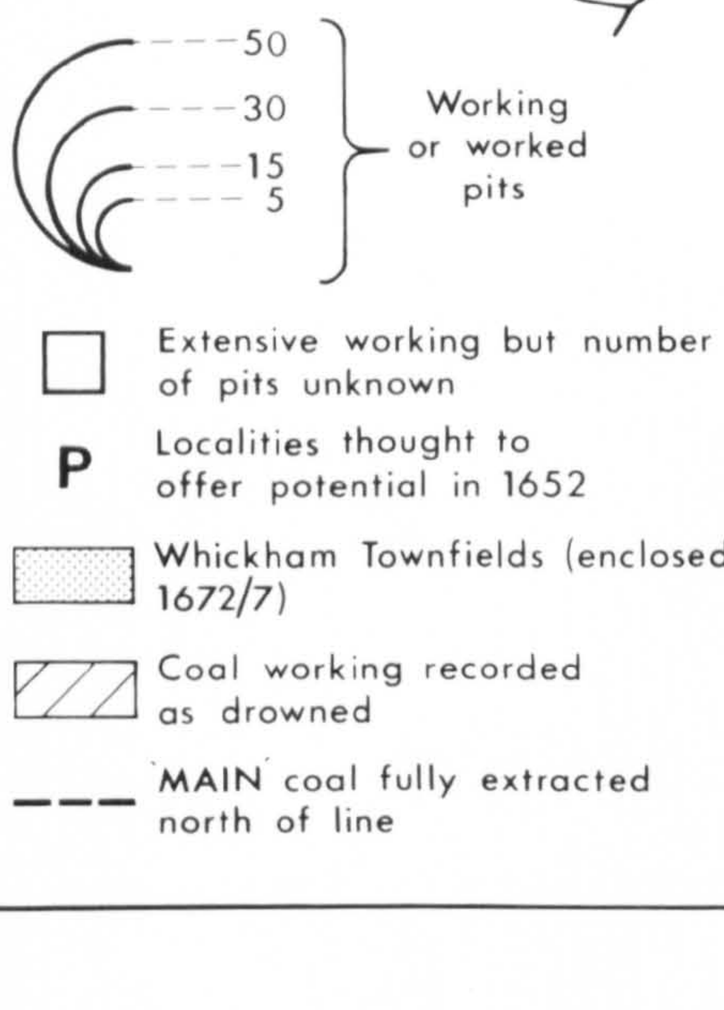
Figure 7.4

Whickham coal working, 1652

Sources: DUPD CC/box 163/23382/re-surveys of collieries in manors of Gateshead and Whickham, 1652; PRO E317 Durham 8/87/Whickham survey, 1649; DUPD CC/box 20/220629/valors of manors of Gateshead and Whickham on lease to Crown, 1582; Whickham parish registers, 1645; and Whickham enclosure agreement and award, 1672/7.

WHICKHAM COAL WORKINGS 1652





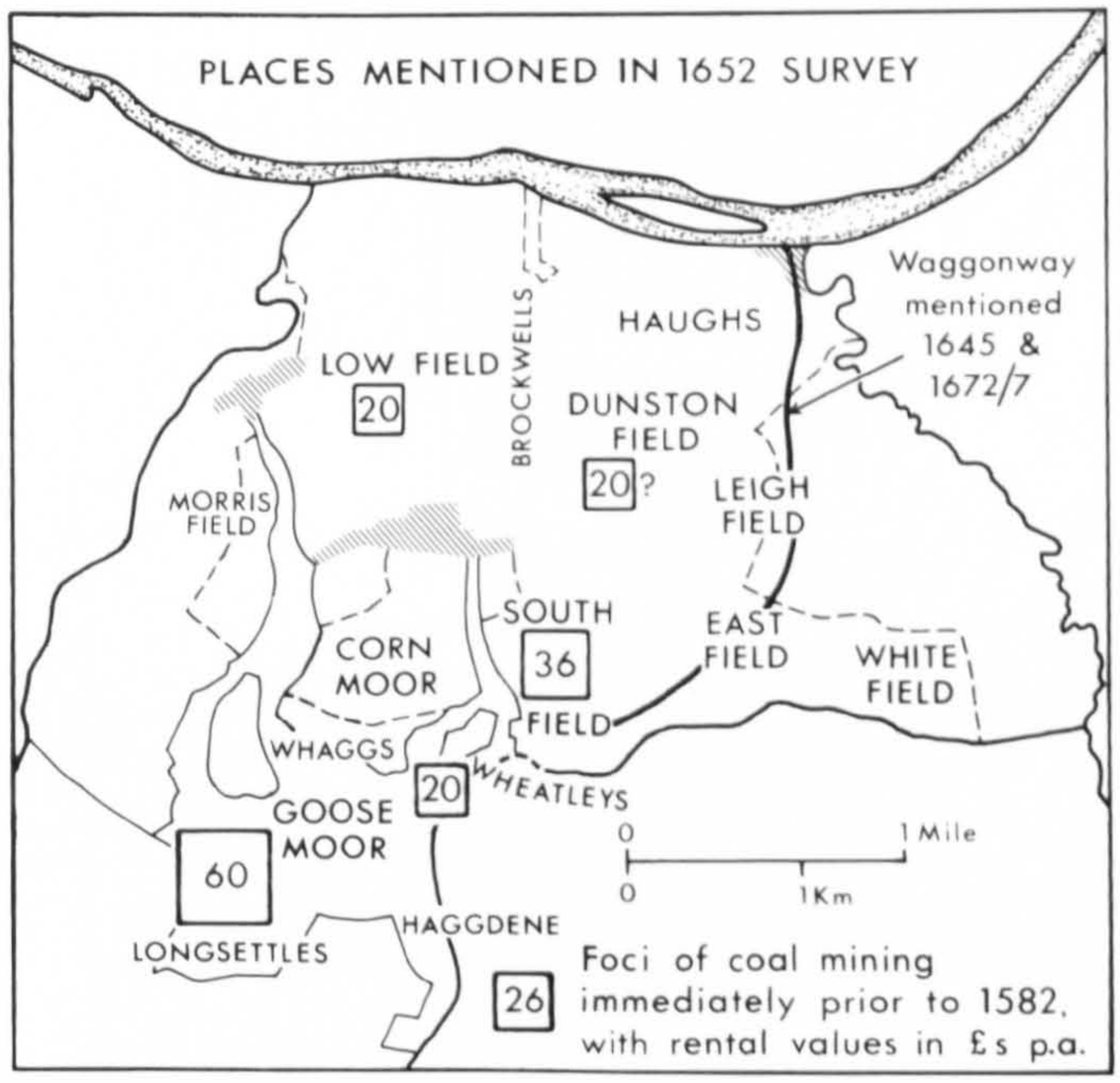
□ Extensive working but number of pits unknown

P Localities thought to offer potential in 1652

Whickham Townfields (enclosed 1672/7)

Coal working recorded as drowned

MAIN coal fully extracted north of line

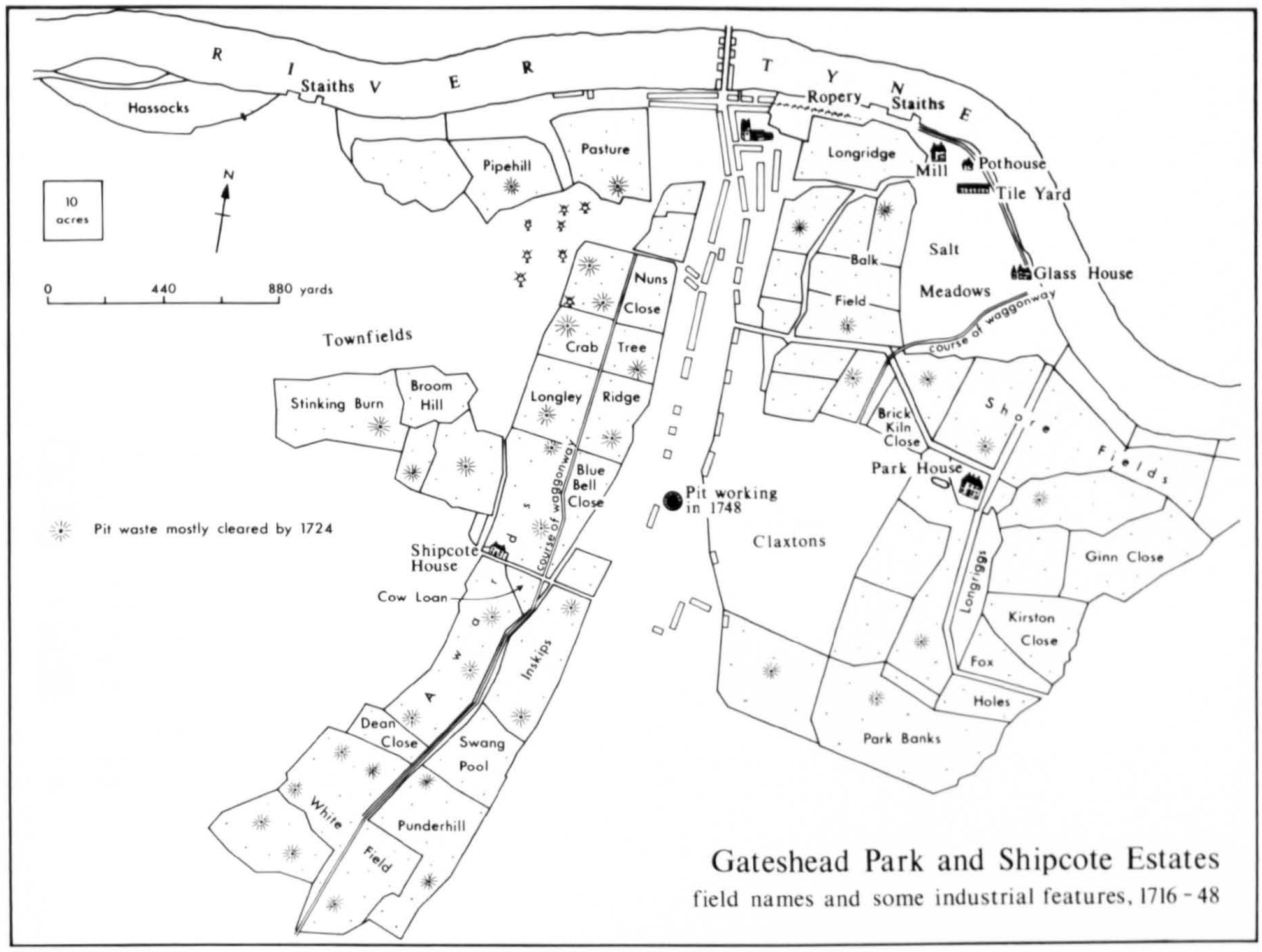


Following pages

Figures 7.5a-d

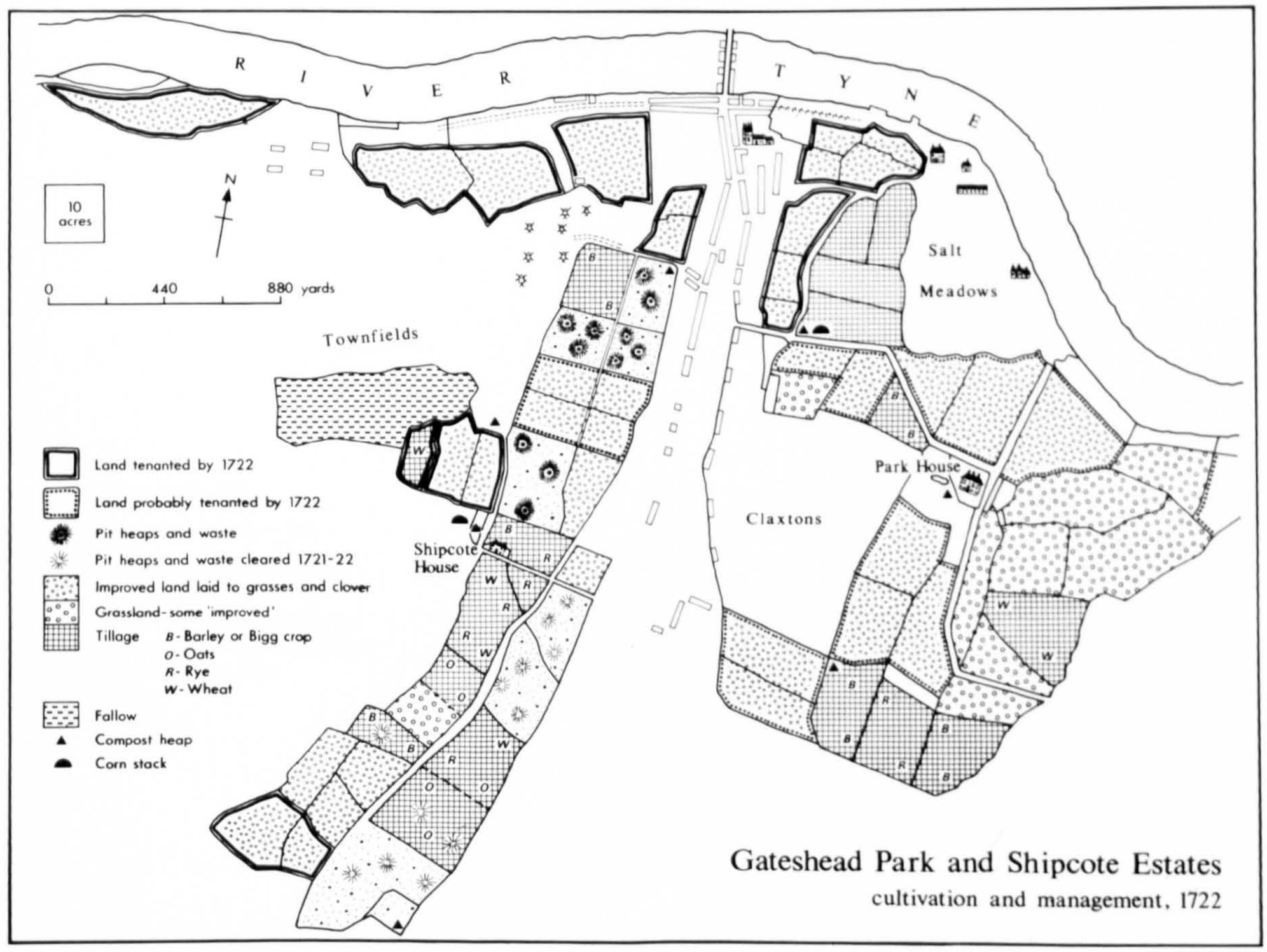
Gateshead Park and Shipcote estates: field names and some industrial features, 1716-1748; cultivation and management, 1722-4

Sources: Plans, accounts and correspondence in GPL Cotesworth (OR) Y/1/65(2,3); CB/1/9,21,25,89; CL/1/47,103; Bell BP/1/67,112.



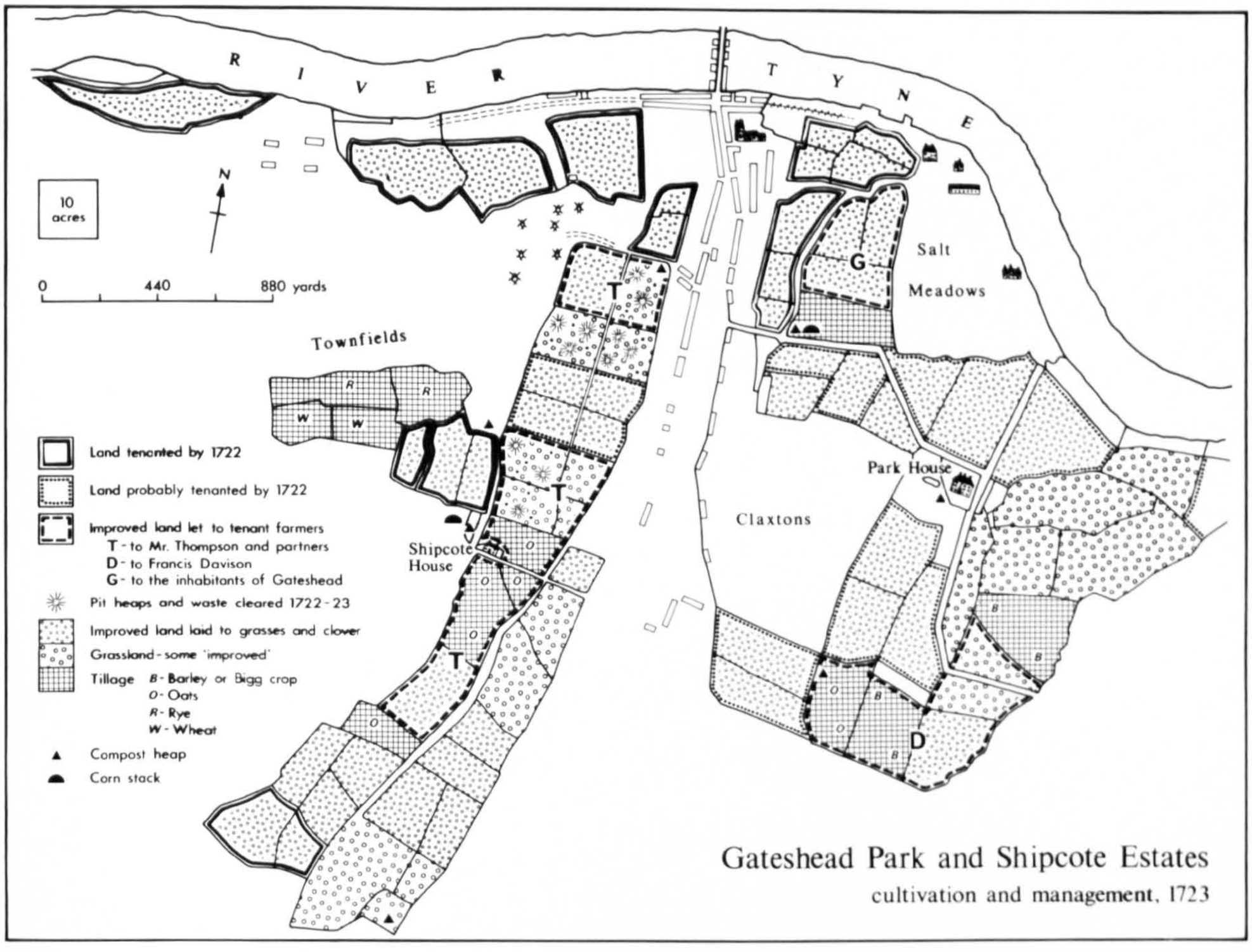
Gateshead Park and Shipcote Estates

field names and some industrial features, 1716 - 48

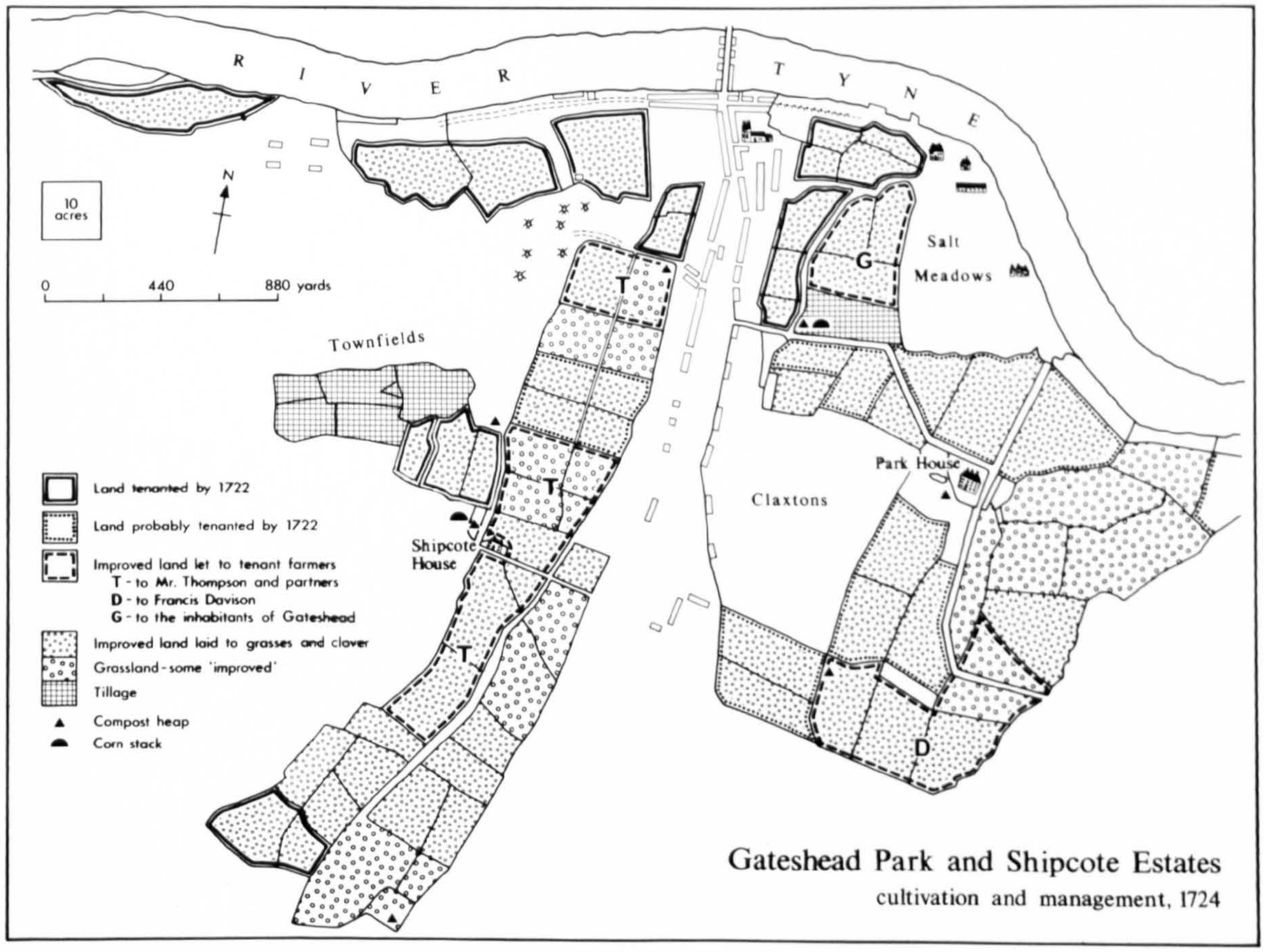


Gateshead Park and Shipcote Estates

cultivation and management, 1722



Gateshead Park and Shipcote Estates
cultivation and management, 1723



Gateshead Park and Shipcote Estates
cultivation and management, 1724

Figure 7.6

Gateshead Park and Shipcote estates: decline of tillage, 1722-24

Sources: As for figures 7.5a-d.

GATESHEAD PARK AND SHIPCOTE ESTATES

DECLINE OF TILLAGE 1722-1724

10 Acres

N

0 1 Mile

0 1 Kilometre

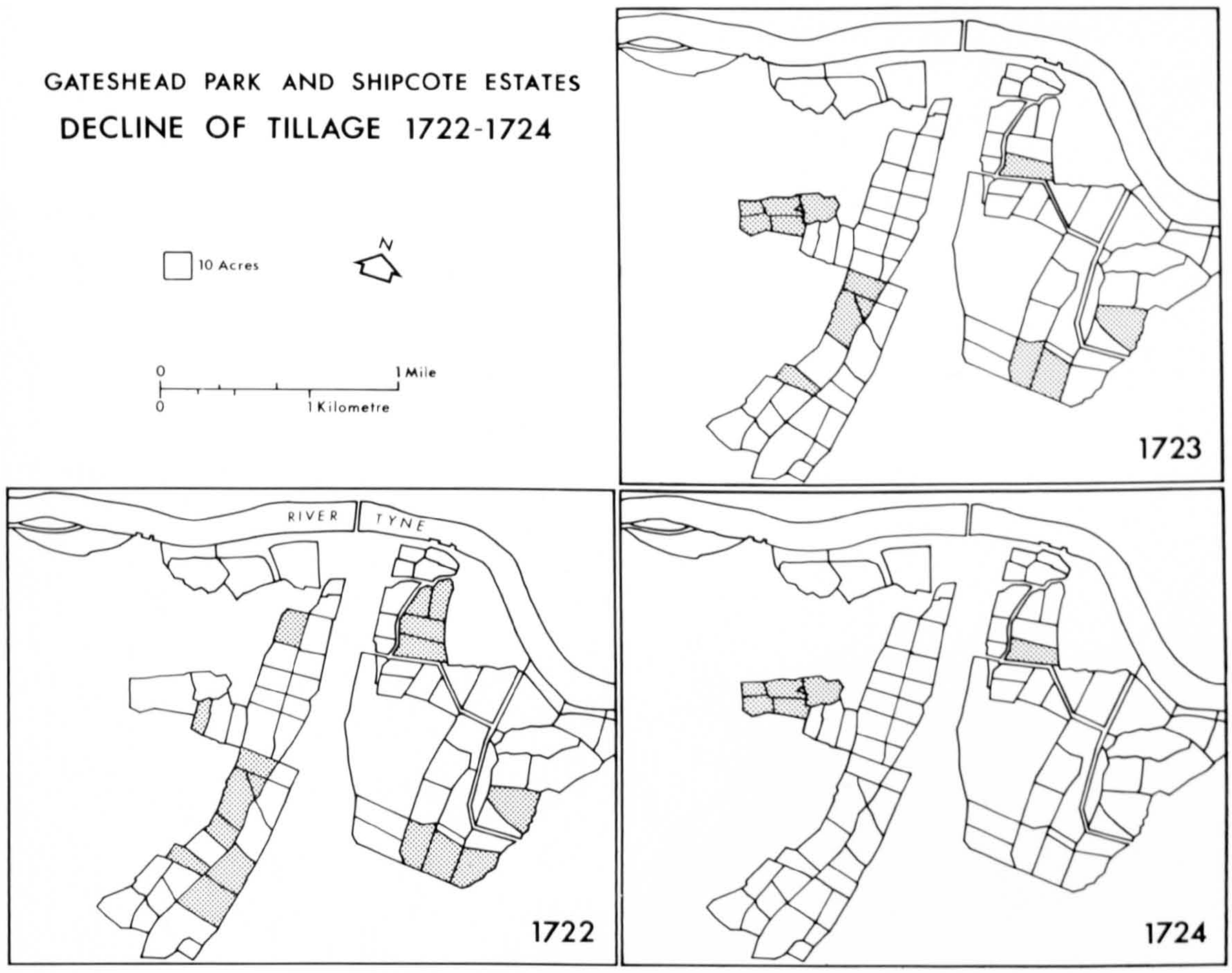


Figure 7.7a

Lanchester Fell enclosure, 1781: distribution of allotments by major landowners

Sources: DUPD HC/original award 11; copy award M.4; and copy plan 9.

LANCHESTER FELL ENCLOSURE 1781

Distribution of Allotments by Major Landholders

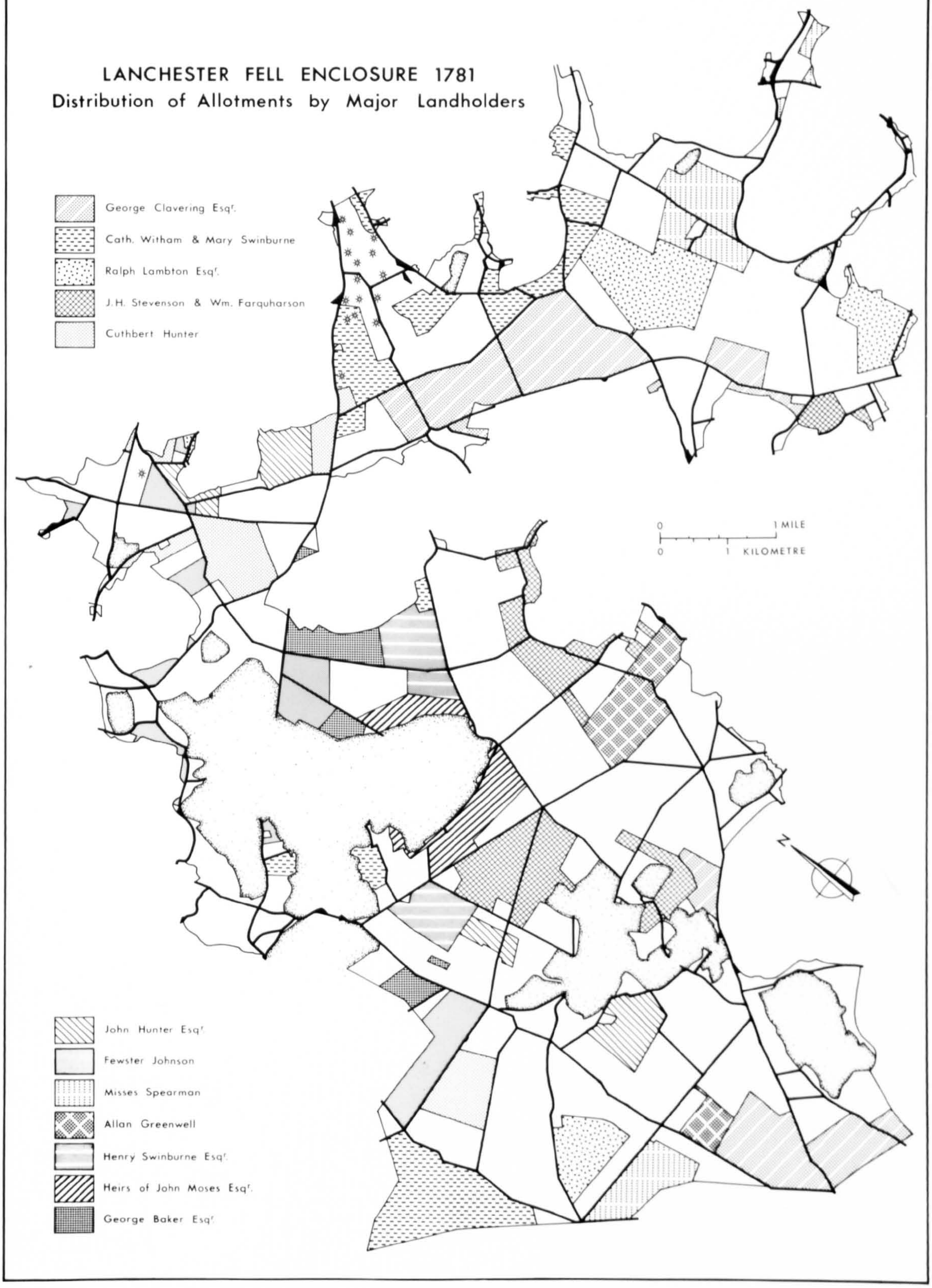
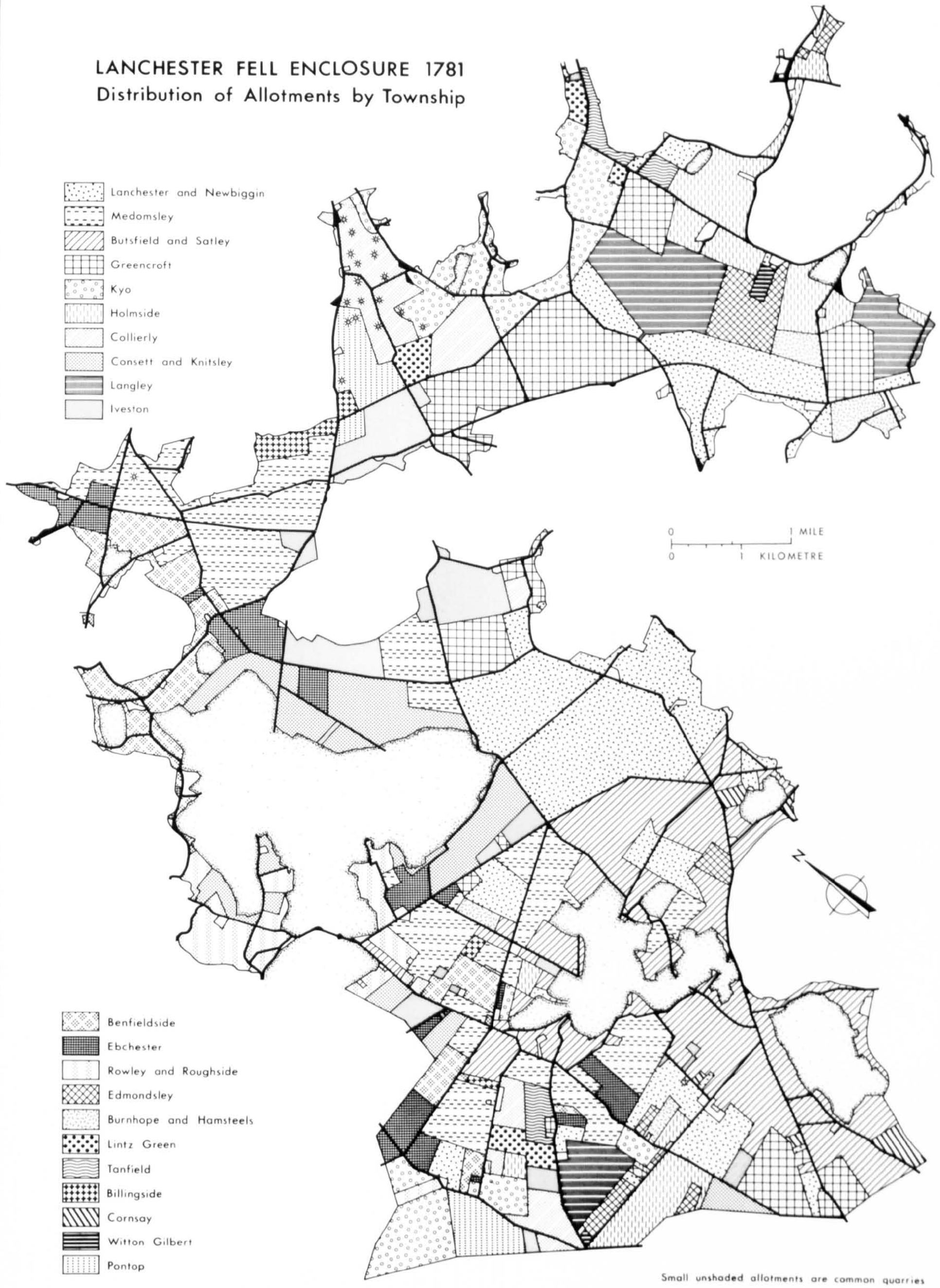


Figure 7.7b

Lanchester Fell enclosure, 1781: distribution of allotments by township

Sources: As for figure 7.7a.

LANCHESTER FELL ENCLOSURE 1781
Distribution of Allotments by Township



Small unshaded allotments are common quarries

Figure 7.7c

Lanchester Fell enclosure, 1781: distribution of allotments by tenure

Sources: As for figure 7.7a.

Note: Under the provisions of an amending act of 1779, the allotment awarded to the County Justices of the Peace was to be sold to Mr Thomas White of Retford, Nottinghamshire, in return for a certain and perpetual fee-farm rent of £30 per annum.

LANCHESTER FELL ENCLOSURE 1781
Distribution of Allotments by Tenure



S Sold to defray enclosure costs

(M) To County Justices of Peace to provide income for holders whose allotments are damaged by working and carriage of minerals

? Tenure unknown

Small unshaded allotments are common quarries

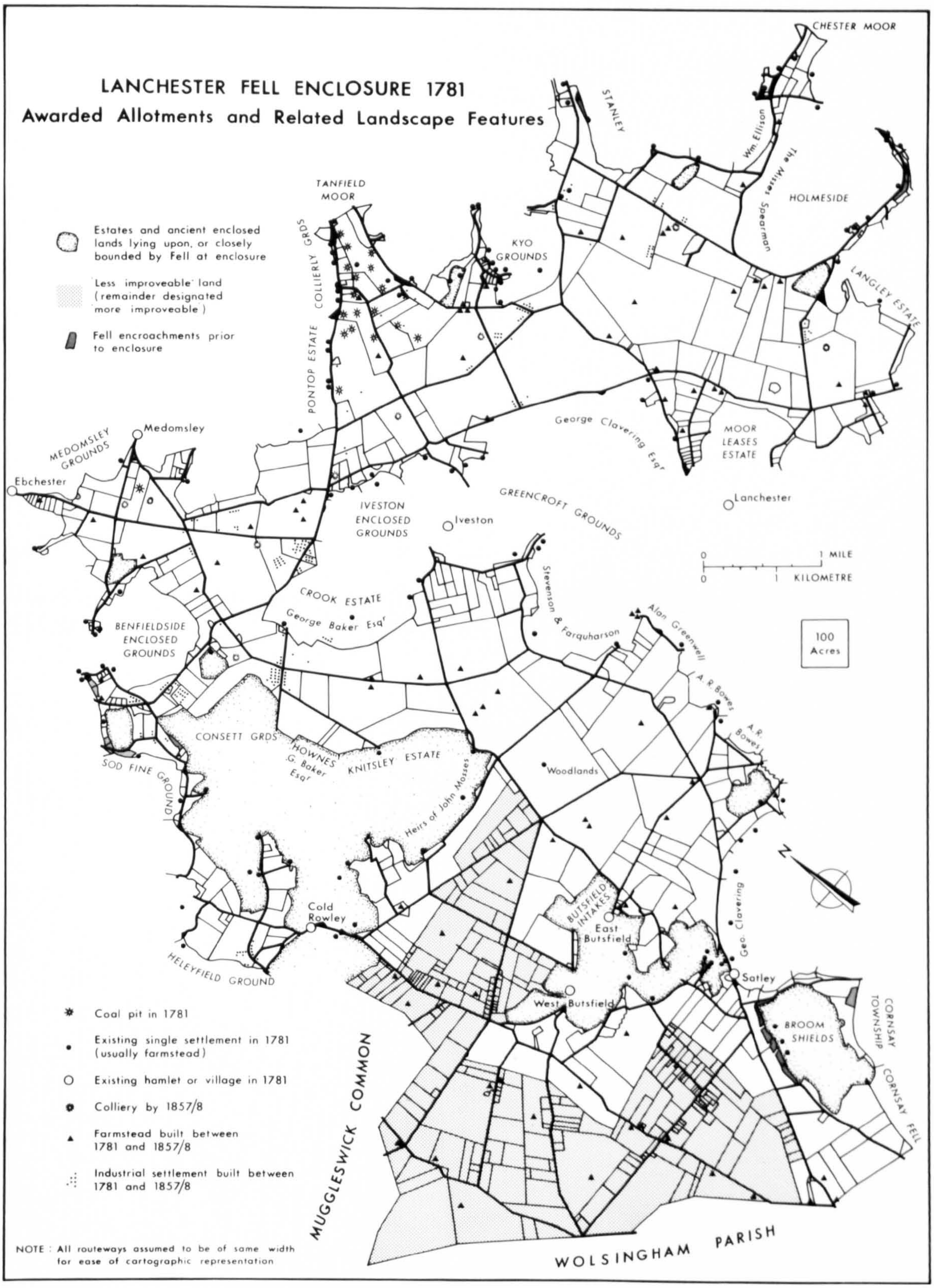
Figure 7.7d

Lanchester Fell enclosure, 1781: awarded allotments and related landscape features

Sources: As for figure 7.7a; and County Durham first edition six-inch O.S. maps, sheets XI, XII, XVII, XVIII, XXV.

LANCHESTER FELL ENCLOSURE 1781

Awarded Allotments and Related Landscape Features



NOTE : All routeways assumed to be of same width for ease of cartographic representation

Following pages

Figure 7.8

Lanchester Fell 1754, 'as ridden and surveyed by order of the Bishop of Durham'

Sources: Re-drawn, in original style, from plans and related documents in DRO D/XP/15,16; DUPD HC VII/box 14/70; HC/misc. maps and plans/32,38,57,115a; CC/maps and plans/47-9.

Figure 7.9

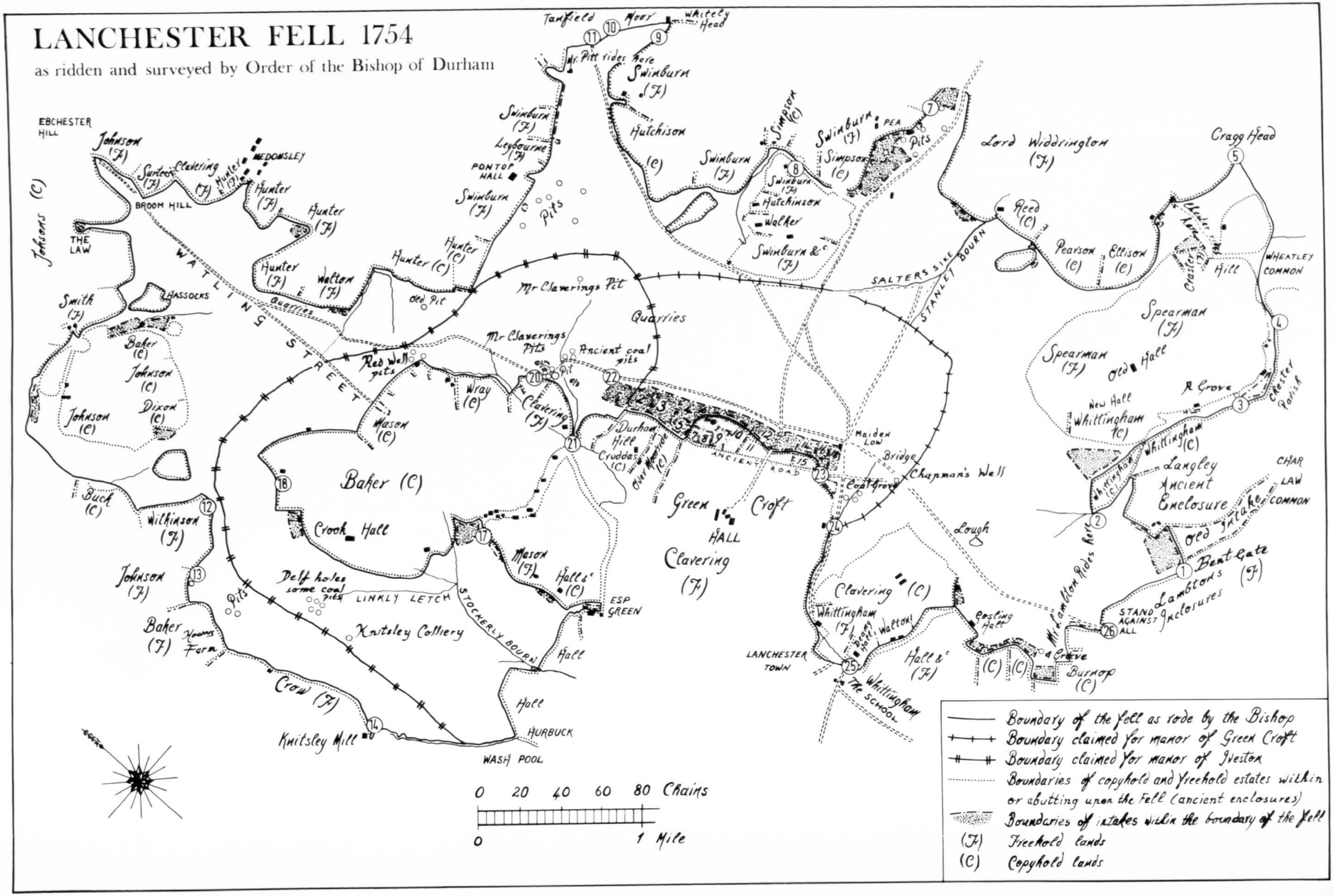
Lanchester Fell: intakes, encroachments and boundary claims before Parliamentary enclosure of 1773-81

Sources: As for figures 7.7a and 7.8.

Note: A 'grove' was where coals were brought out at bankside, by a drift or level. See Greenwell 1888, 45; Bailey 1810, 26.

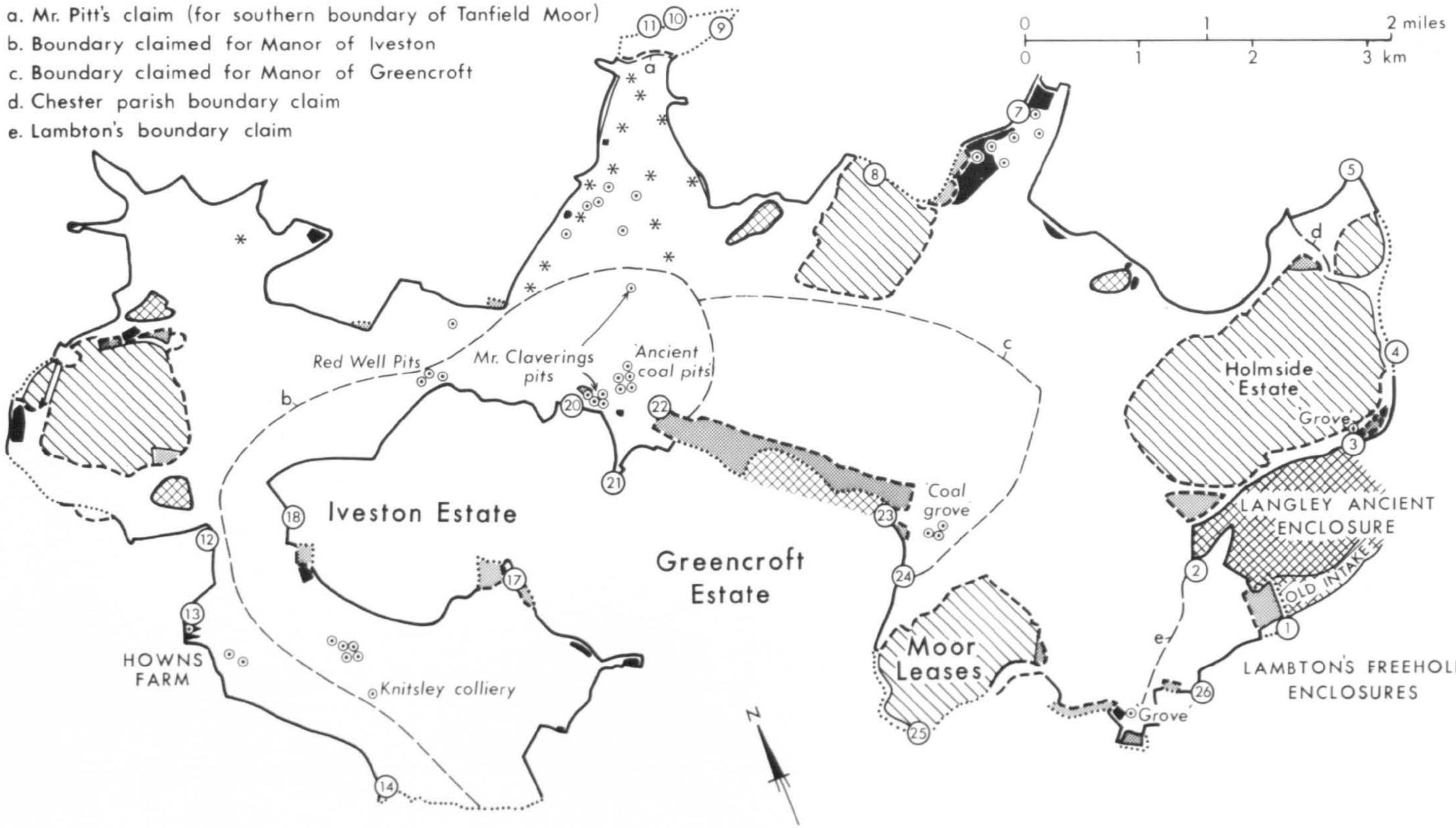
LANCHESTER FELL 1754

as ridden and surveyed by Order of the Bishop of Durham



LANCHESTER FELL : Intakes, Encroachments and Boundary claims before Parliamentary Enclosure of 1773-81

a. Mr. Pitt's claim (for southern boundary of Tanfield Moor)
b. Boundary claimed for Manor of Iveston
c. Boundary claimed for Manor of Greencroft
d. Chester parish boundary claim
e. Lambton's boundary claim



Intakes allowed and no longer regarded as part of Fell in 1754
Intakes allowed but regarded as part of Fell in 1754
Intakes in dispute 1754 but allowed by 1781
Intakes in dispute 1754 and still part of Fell to be allotted in 1781
⊙ Coal pits and 'groves' identified in 1754
* (Additional) pits identified in 1781

Boundary claims of 1754 (a-e). Not resolved until enclosure 1781
Boundary in 1754 and 1781
Boundary in 1781 only
Boundary in 1754 only
① → ㉖ Site of boundary proclamations in 1754. Location of 6, 15, 16 and 19 unknown

Figure 7.10

'A Plan of the Manor of Langley describing its Boundaries as they are Rode...'

Source: Re-drawn, in original style, from DUPD CC/maps and plans/ 51/plan of Langley manor [n.d., but almost certainly pre-1736 and probably c.1730].

A PLAN of the MANOR of LANGLEY describing it's Boundaries as they are Rode by a Red Line circumscribing the same beginning and ending at Langley Mill.

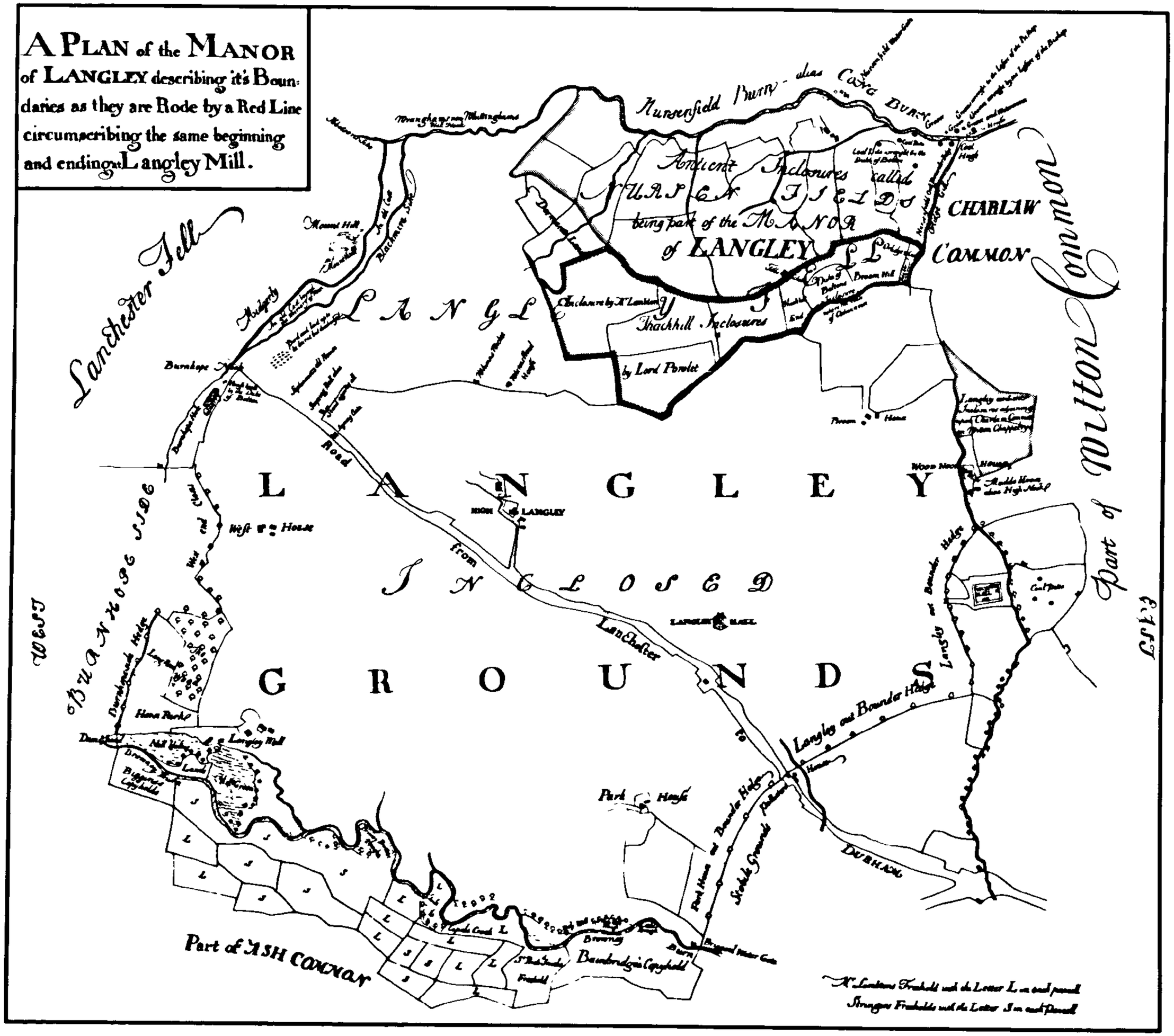
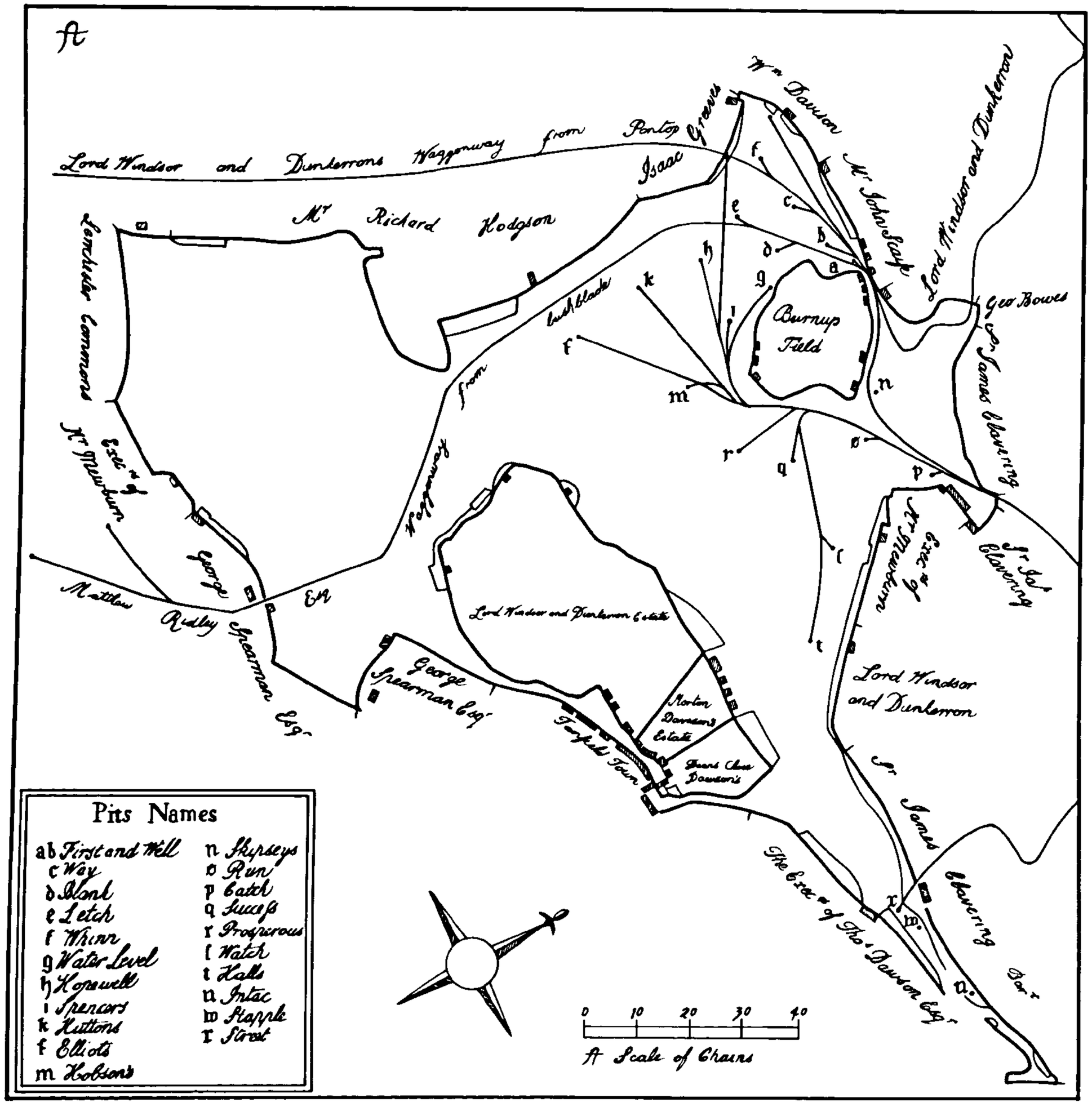

Lanchester Fell
Mount Hill
Blackmire Side
Burnhope Side
West Side
Langley Mill
Langley Hall
Home Park
Langley Moor
Nurseyfield Burn - alias Cocks Burn
Ancient Inclosures called CHARLAW COMMON
being part of the MANOR of LANGLEY
Inclosures by N. Lambton
Thackhill Inclosures
by Lord Pawlet
Broom Hill
Langley Side
Langley Mill
Langley Moor
Langley Moor House
Road from LANGLEY
Lanchester
Langley Park
Langley Park Side
Langley Park Grounds
Langley and Boundary Hedge
Park House
Park House and Boundary Hedge
Scalehill Grounds
DURHAM
Part of ASH COMMON
Part of MUGGLESWICK COMMON
INCLOSED GROUNDS
WEST
EAST
Brandon Colliery
Brandon Colliery Engine
Brandon Water Course
Brandon Burn
Brandon Colliery Fenced
Langley Moor House
Langley Moor Chapel
Woon Moor
Woon Moor House
Middle House alias High Middle
Cut Pits
Pond
Pond House
Langley Park Chapel
Langley Park Chapel Yard
Langley Park Vicarage
Langley Park Vicarage Garden
Langley Park Vicarage Orchard
Langley Park Vicarage Yard
Langley Park Vicarage Barn
Langley Park Vicarage Stable
Langley Park Vicarage Pasture
Langley Park Vicarage Meadow
Langley Park Vicarage Wood
Langley Park Vicarage Glebe
Langley Park Vicarage Tithe
Langley Park Vicarage Boundary
Langley Park Vicarage Road
Langley Park Vicarage Lane
Langley Park Vicarage Path
Langley Park Vicarage Gate
Langley Park Vicarage Stile
Langley Park Vicarage Bridge
Langley Park Vicarage Ford
Langley Park Vicarage Well
Langley Park Vicarage Spring
Langley Park Vicarage Brook
Langley Park Vicarage Pond
Langley Park Vicarage Mill
Langley Park Vicarage Mill Dam
Langley Park Vicarage Mill Race
Langley Park Vicarage Mill Wheel
Langley Park Vicarage Mill House
Langley Park Vicarage Mill Yard
Langley Park Vicarage Mill Garden
Langley Park Vicarage Mill Orchard
Langley Park Vicarage Mill Meadow
Langley Park Vicarage Mill Pasture
Langley Park Vicarage Mill Wood
Langley Park Vicarage Mill Glebe
Langley Park Vicarage Mill Tithe
Langley Park Vicarage Mill Boundary
Langley Park Vicarage Mill Road
Langley Park Vicarage Mill Lane
Langley Park Vicarage Mill Path
Langley Park Vicarage Mill Gate
Langley Park Vicarage Mill Stile
Langley Park Vicarage Mill Bridge
Langley Park Vicarage Mill Ford
Langley Park Vicarage Mill Well
Langley Park Vicarage Mill Spring
Langley Park Vicarage Mill Brook
Langley Park Vicarage Mill Pond

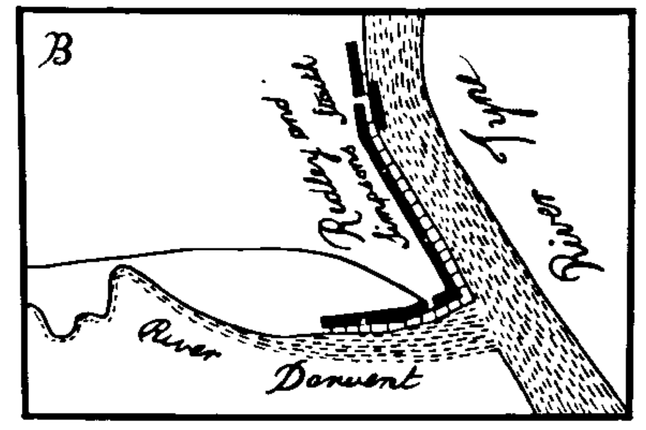
Figure 7.11

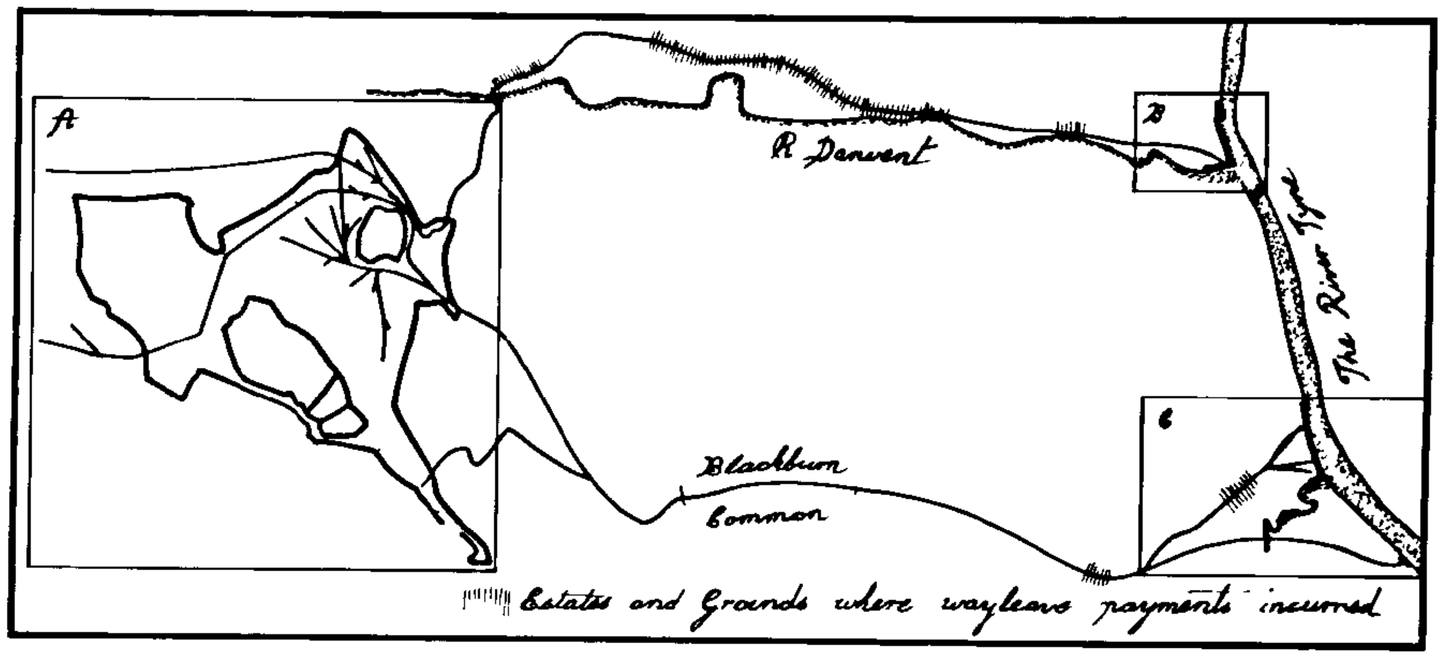
'A Plan of Tanfieldmoor with the Waggon-ways from Thence to the River Tyne' (after Rawling and Newton, 1742)

Sources: Based upon NRO 960/original plan [much faded] and DRO D/XP/14/copy plan; with additional information from NRO 725/F1-6, F8, F49-52.

A PLAN
of
Tanfieldmoor
with the Waggon-ways from
Thence to the River Tyne
After
Rawling and Newton
1742







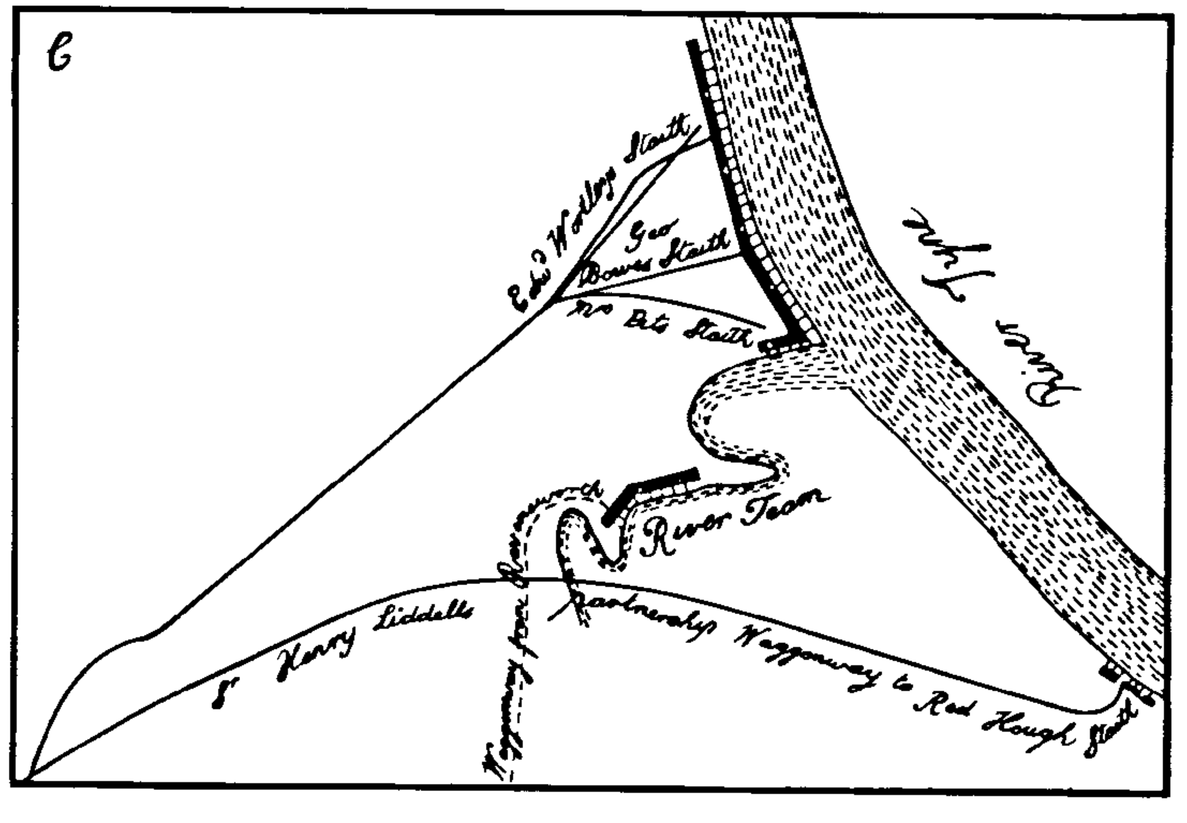


Figure 7.12

'A Plan of Tanfieldmoor... 1761'

Sources: Re-drawn, in original style, from plans in NRO ZAN M17/197/c64-5.

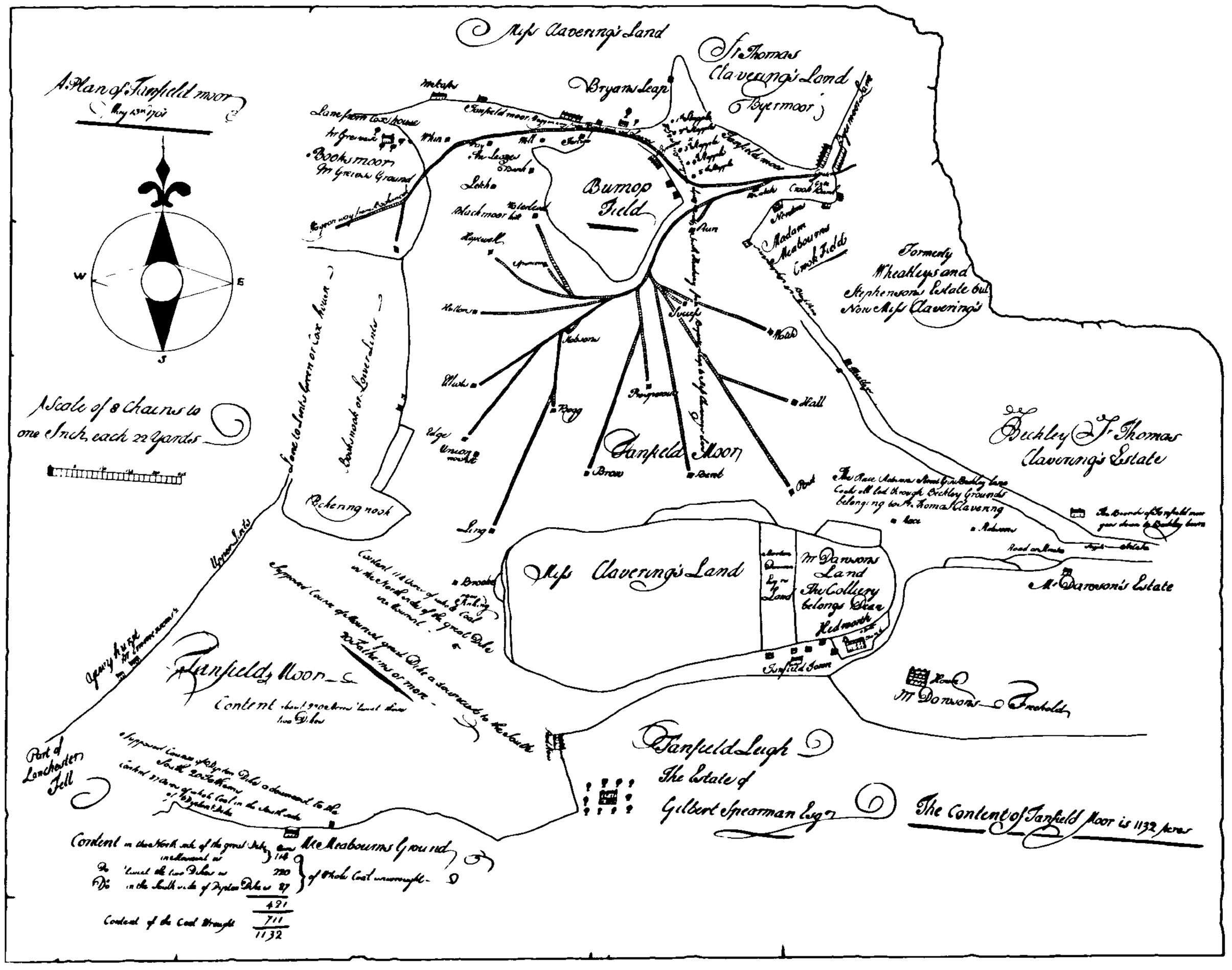
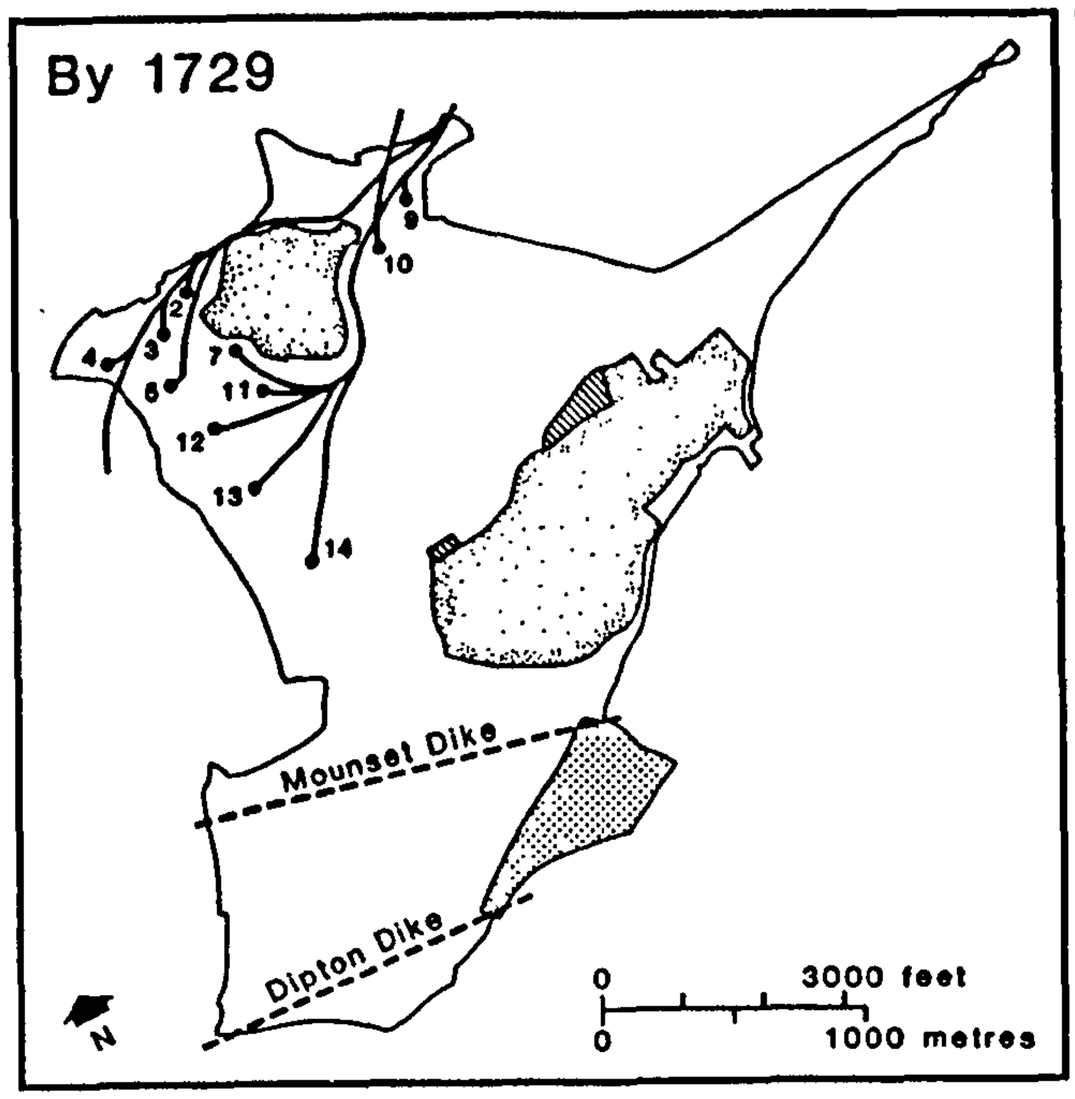

A Plan of Tanfield moor
May 13th 1791
W
E
S
Miss Clavering's Land
Sr Thomas Clavering's Land
Byermoor
Bryans Leap
Bumop Field
Madam Mowbrays Coal Fields
Formerly Wheatleys and Stephensons Leadale but Now Miss Clavering's
Buckley & Sr Thomas Clavering's Estate
Tanfield Moor
Tanfield Leigh
The Estate of Gilbert Spearman Esqr
Miss Clavering's Land
Mr Donnons Land The Colliery belongs there
Mr Donnon's Estate
Mr Donnons Freehold
Mr Mowbourns Ground of Whole Coal unwrought
Scale of 8 Chains to one Inch, each 22 Yards
Content in the North side of the great Dike 114
Content all the rest Dikes 310
Do in the South side of Peglaw Dike 67
491
711
1132
Content of the Coal Wrought
The Content of Tanfield Moor is 1132 Acres

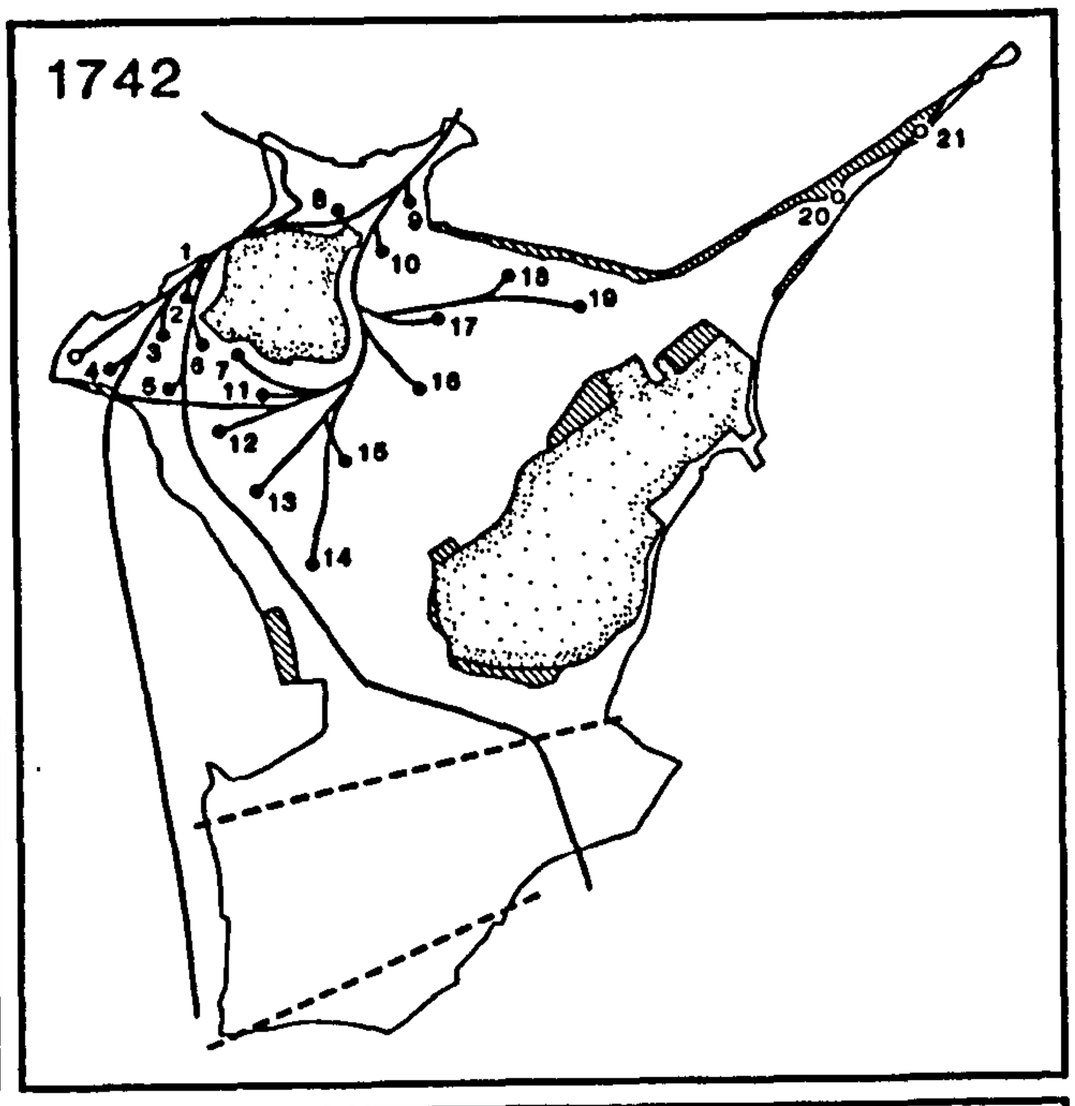
Figure 7.13

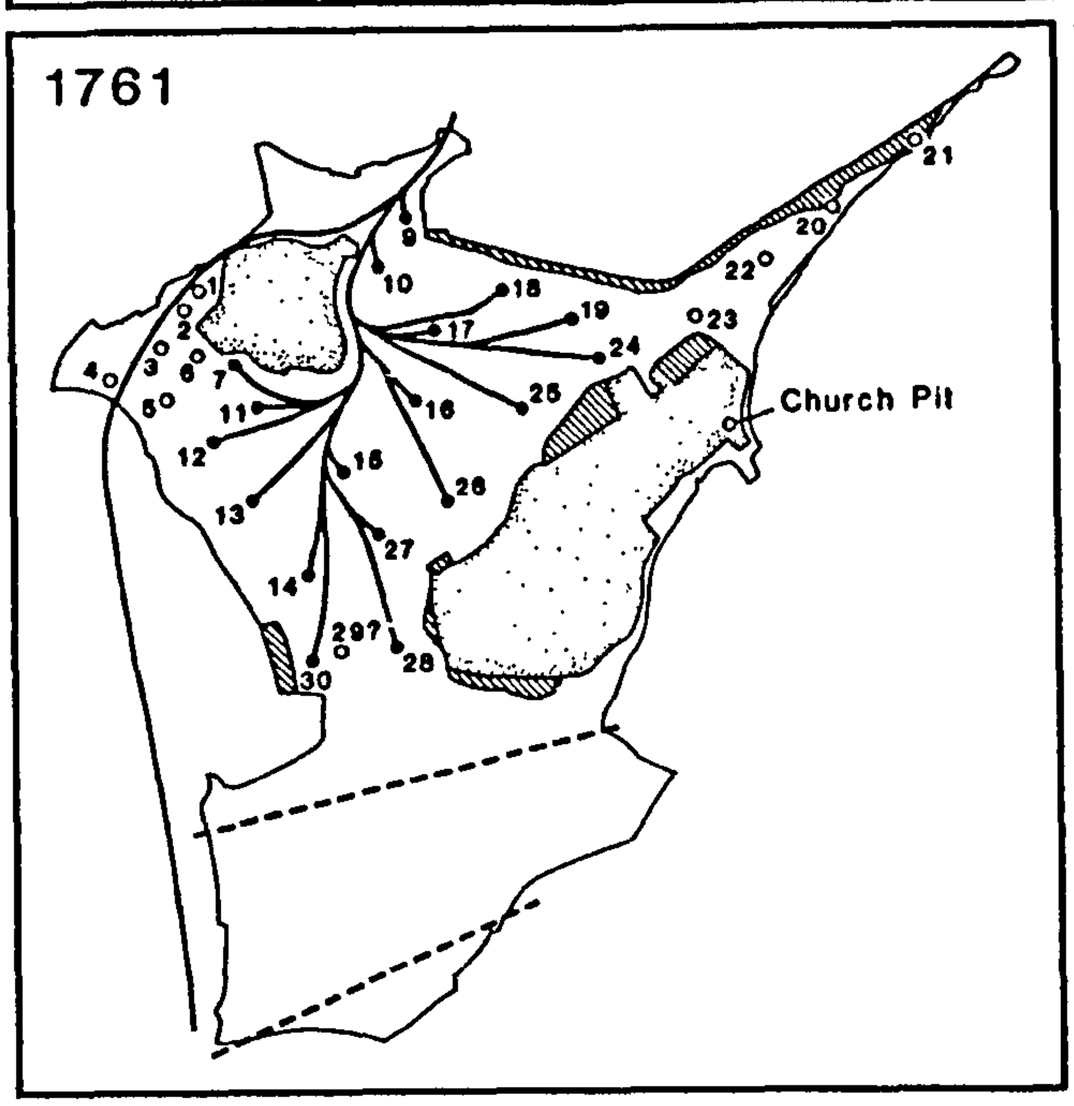
Tanfield Moor: waggonways and working pits

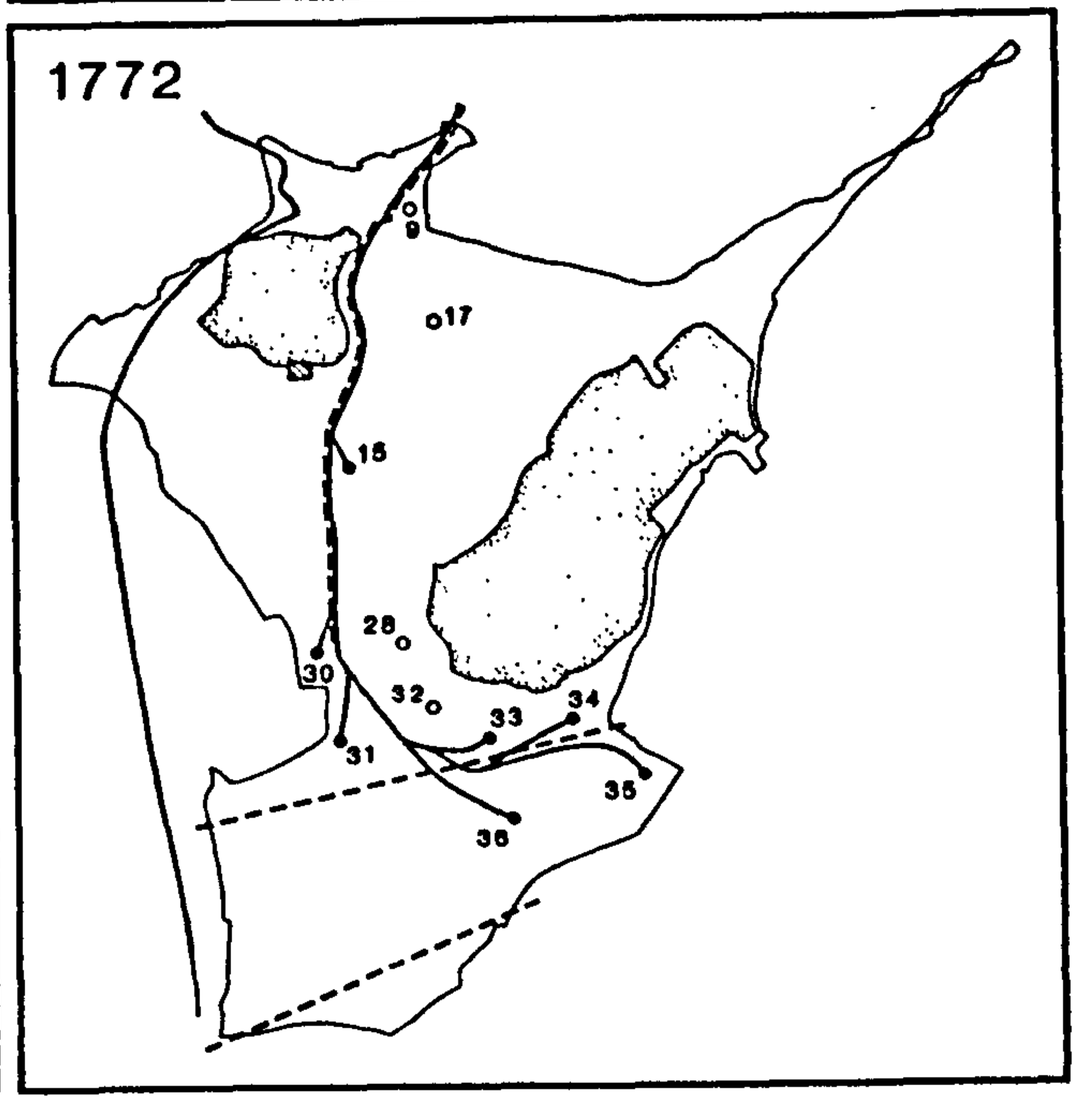
Sources: NEIM Buddle 22; NRO 960; NRO ZAN/M17/197/62-76; 309/N3/29; 309/M/193,231; 725/F1-6, F8, F49-52; DRO/XP/14.

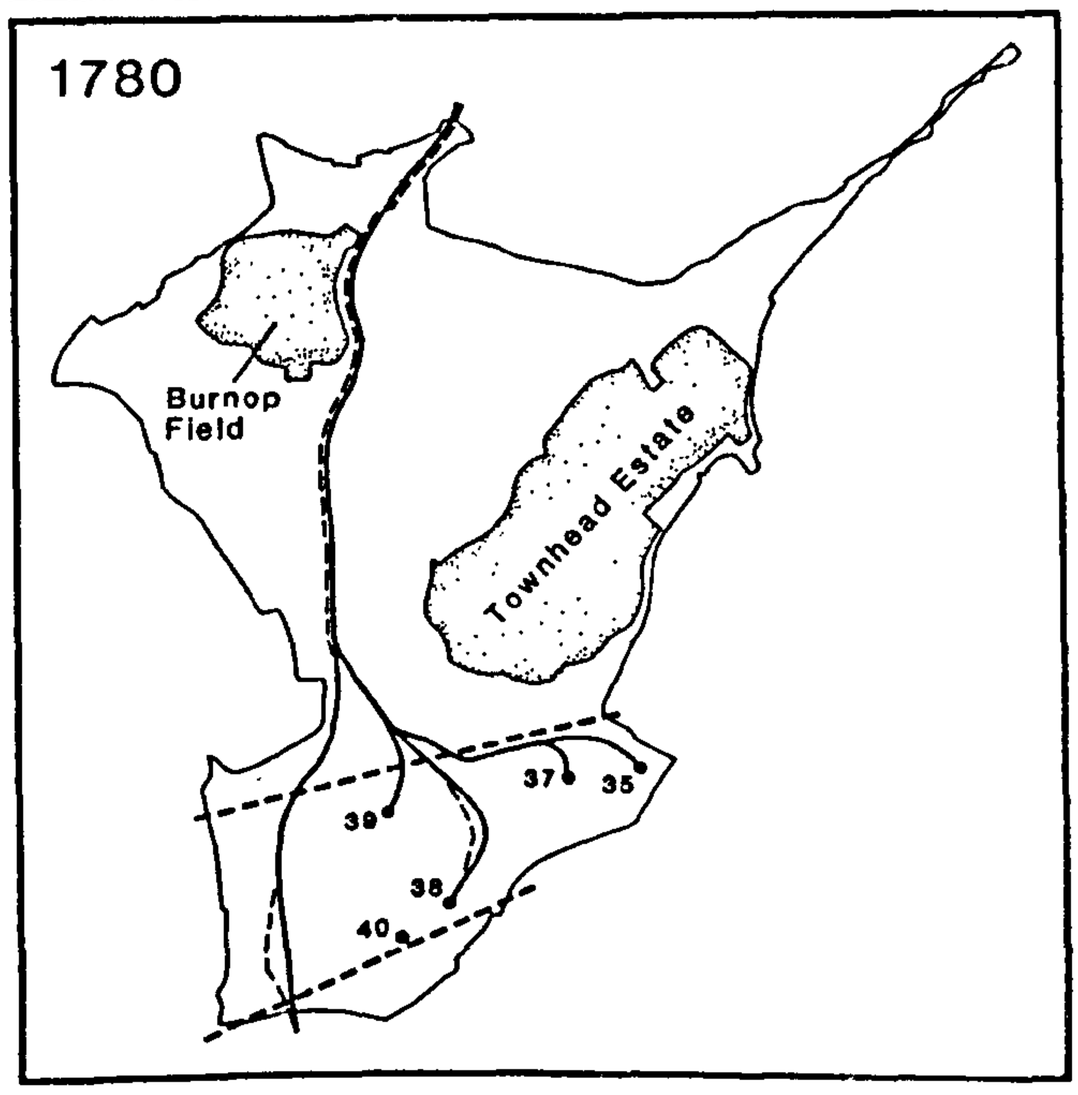
Tanfield Moor: waggonways and working pits











Pits
- • Working
- o Possibly working

Waggonways
- ——— Main way
- – – – – Bye way

Intake by 1715, later removed

Encroachments on fell

Ancient enclosed lands

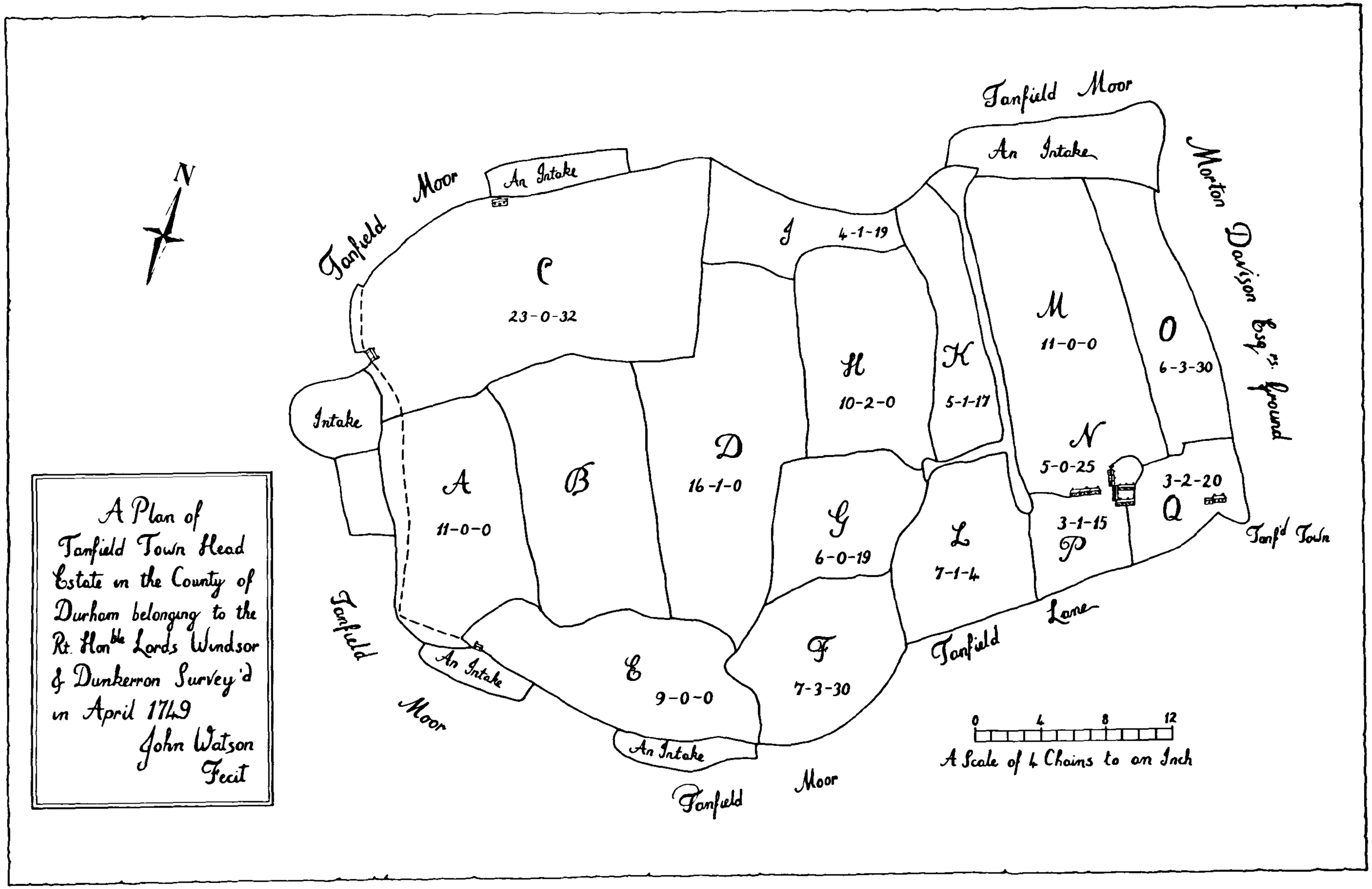
Pit names

1. First
2. Well
3. Way
4. Whin
5. Letch
6. Blank
7. Waterlevel
8. Skipseys
9. Catch
10. Run
11. Spencers
12. Hopewell
13. Huttons
14. Elliots
15. Hobson
16. Prosperous
17. Success
18. Watch
19. Halls
20. Street
21. Intac
22. Robsons
23. Race
24. Post
25. Bent
26. Brow
27. Bogg
28. Ling
29. Union
30. Edge
31. Flatts
32. Brook
33. Cape
34. East
35. Engine
36. Stob
37. Dobsons
38. Willey
39. Mount
40. Conquest

Figure 7.14

'A Plan of Tanfield Town Head Estate... 1749'

Source: Re-drawn, in original style, from a plan in NEIM Watson (MP) 31/16.



A Plan of Tanfield Town Head Estate in the County of Durham belonging to the Rt. Hon.ble Lords Windsor & Dunkerron Survey'd in April 1749

John Watson Fecit

Figure 7.15a

Tanfield Moor enclosure, 1807: distribution of allotments by major landowners

Sources: DRO Q/D/E 32/award and plan; Q/D/B 5/enrolled award; DUPD Shafto 606.

TANFIELD MOOR ENCLOSURE 1807

Distribution of Allotments by Major Landowners

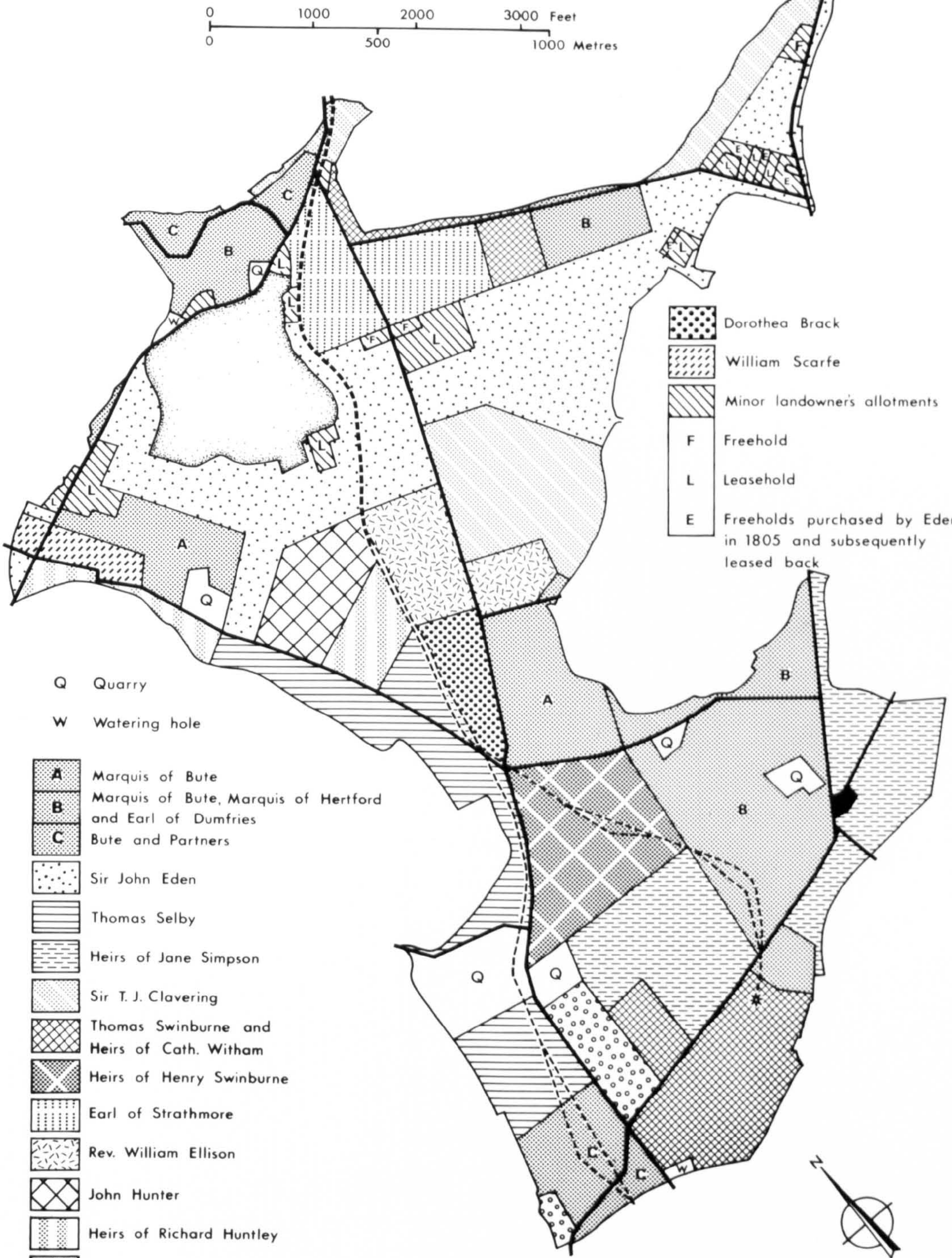


Figure 7.15b

Tanfield Moor enclosure, 1807: distribution of allotments by township.

Source: As for figure 7.15a.

TANFIELD MOOR ENCLOSURE 1807

Distribution of Allotments by Township

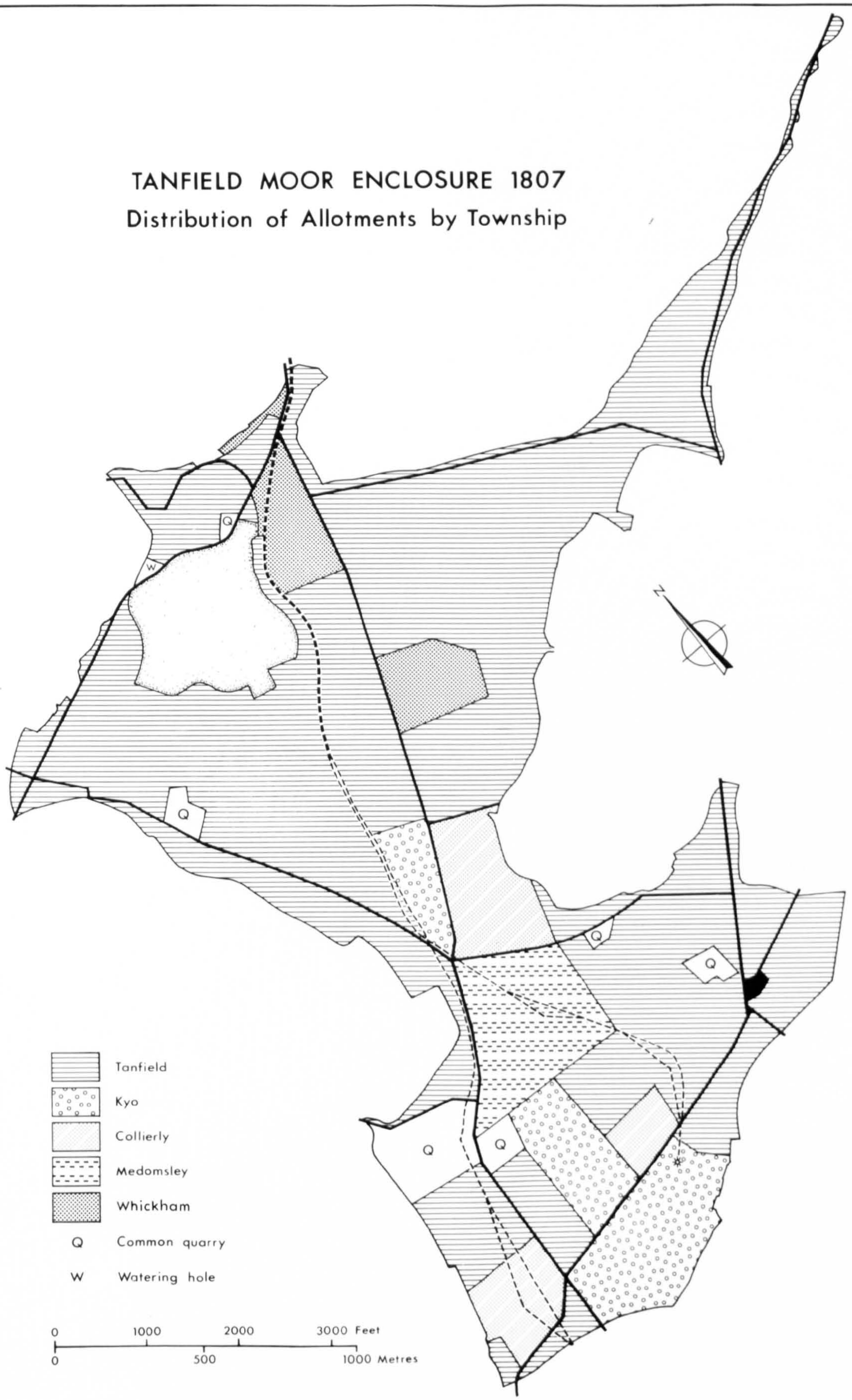


Figure 7.15c

Tanfield Moor enclosure, 1807: distribution of allotments by tenure

Source: As for figure 7.15a.

TANFIELD MOOR ENCLOSURE 1807

Distribution of Allotments by Tenure

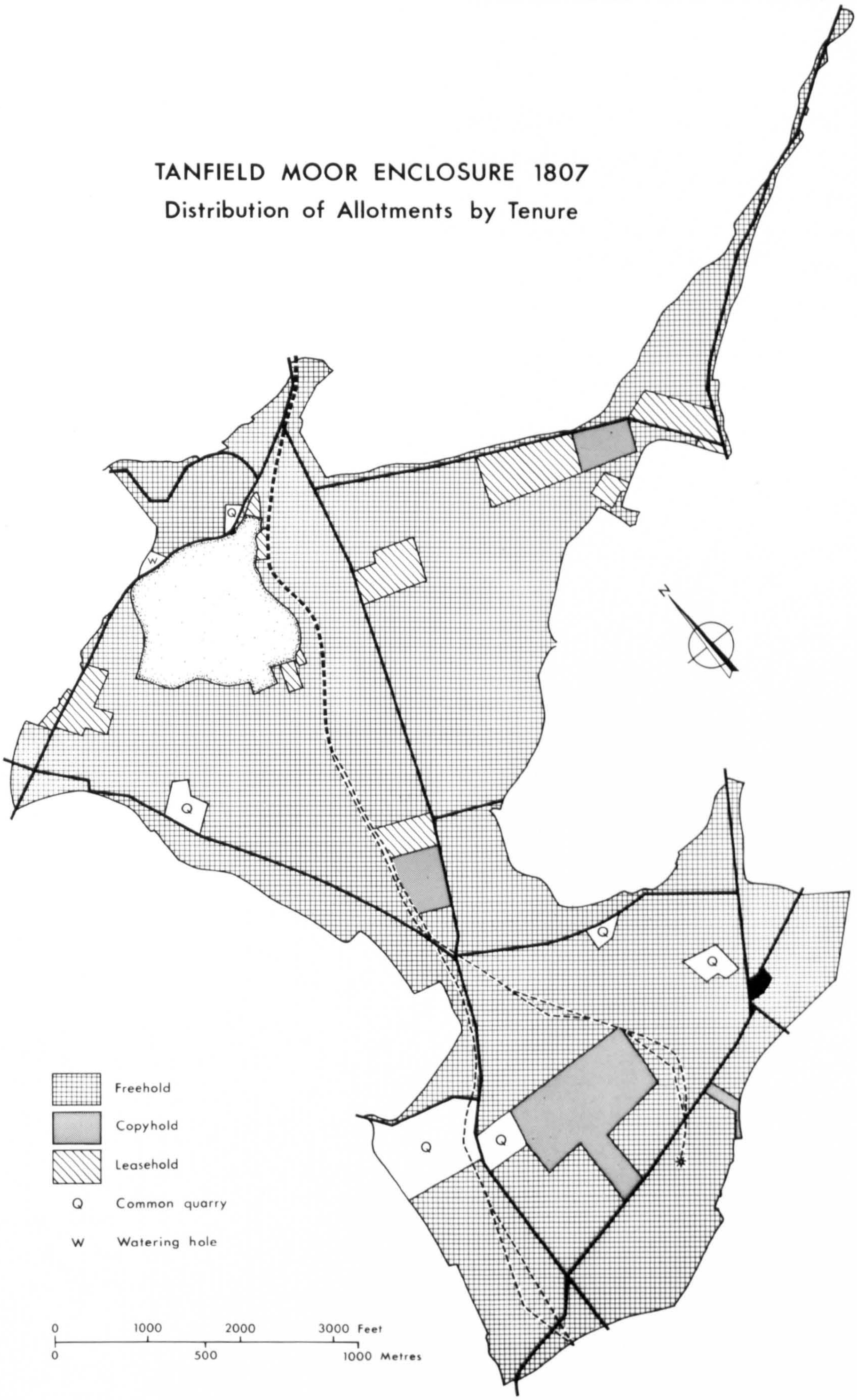


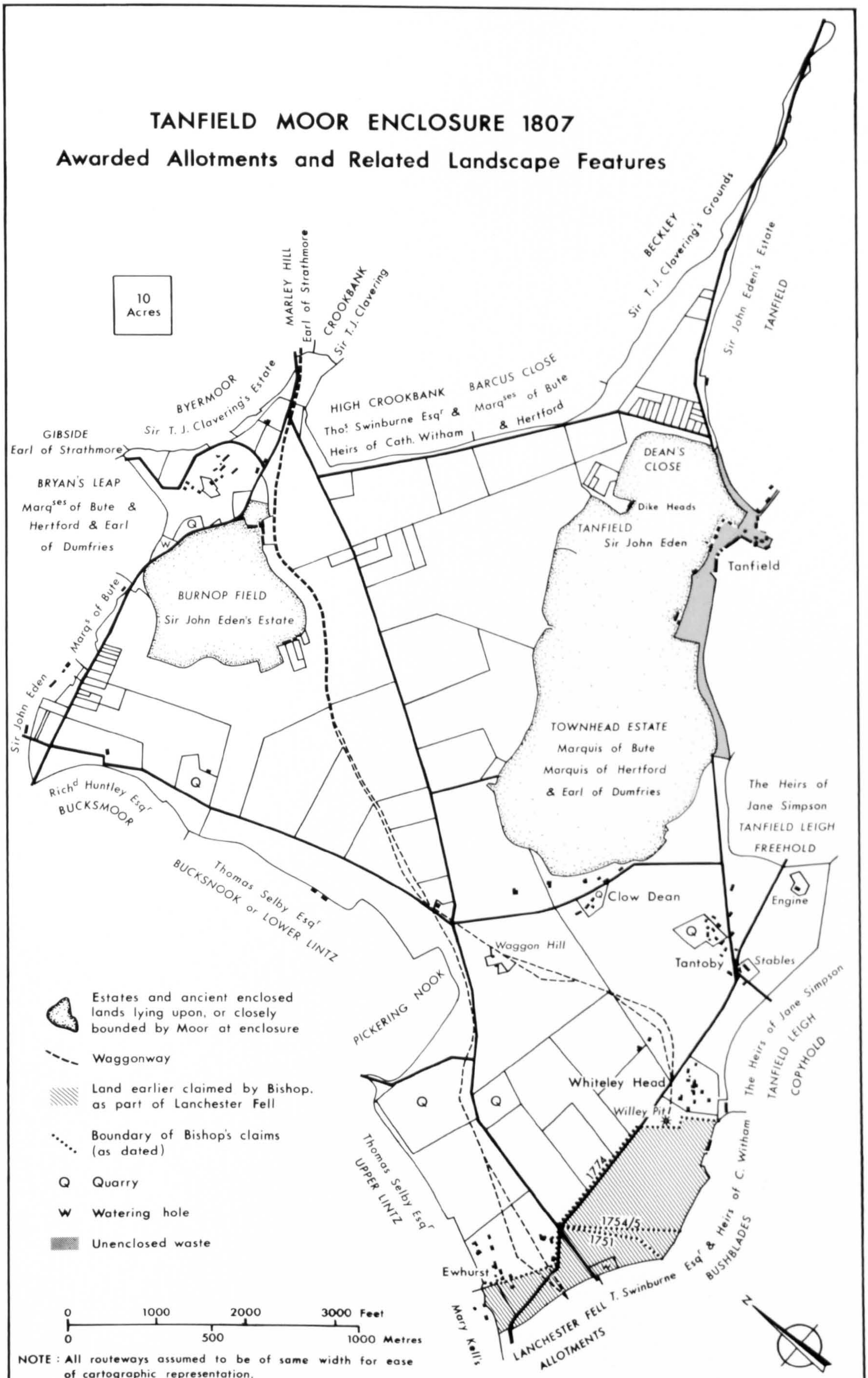
Figure 7.15d

Tanfield Moor enclosure, 1807: awarded allotments and related landscape features

Source: As for figures 7.9 and 7.15a; and DUPD HC/arbitration award re. Lanchester Common and Tanfield Moor, 27 Oct. 1774; GPL Bell BP/4/18a-b/plan of west part of Tanfield Moor/Bishop's claim ... in manor of Lanchester, 1774.

TANFIELD MOOR ENCLOSURE 1807

Awarded Allotments and Related Landscape Features



NOTE : All routeways assumed to be of same width for ease of cartographic representation.

A P P E N D I C E S

Appendix 1

INFORMATION SOURCES ON COLLIERIES, WITH PARTICULAR REFERENCE TO THE TYNE AND WEAR SEASALE MINES, 1551-1810

Information used to reconstruct temporal and spatial patterns of coalworking, and to elucidate the factors which fashioned them, has been gathered from a wide range of sources including records of coal exports in the port books and customs returns, coal proprietors' accounts, minutes and memoranda, colliery viewers' reports and boring books, title deeds (especially those relating to leasehold arrangements), estate rentals, surveys and correspondence, records of lawsuits, topographical writings and other, miscellaneous documentation. These are separately itemized in appendix 4 and, more particularly, in appendix 6 which also includes an additional listing of sources used for examining the fortunes of the Durham landsale mines. The most common and reliable interpretations proffered in this study are, in the main, those which derive from the employment of a range of complementary or corrobarative sources. It has to be remembered, however, that sometimes it is only possible to use a single source and under such circumstances the customary need to test the document for internal consistency becomes especially crucial.

For the period 1551-1680 there is ample evidence of colliery working but little in the way of direct statistical information concerning performance. For the most part, output levels and trends must be judged from the evidence of qualitative sources; or deduced from the 'values' set upon them for purposes of rent or taxation. Even on the unlikely assumption that these surrogate measures lean unerringly on the side of truth, the problem remains of assigning real meaning to them. The rents and renewal fines paid by the lessee of a colliery did not inevitably bear a fixed or realistic relation to its actual output; indeed, there were occasions when, despite the apparent existence of leaseholding arrangements involving the payment of annual rents and periodic renewal fines, a colliery was not worked at all for some considerable time. Some valuations, notably those made of the King's mines in 1611,[1] appear to represent the expected annual return to the owner or lessee of a mine after charges had been met; and, since some collieries might have been more profitable than others per unit of output, the values given must be regarded as a poor guide to the scale of production achieved. While some valuations clearly represented a conscientious effort to reach a genuine estimate of what the colliery was really worth, others appear to have been merely speculative or wishful, seriously understating, through ignorance or by design, the true value of the enterprise. Yet others might have exaggerated its worth in order to impress a prospective lessee, or even to validate a grievance. In 1662, for instance, the episcopal coalmines of Durham provided Bishop Cosin with an income that paled into insignificance

when set against their true worth. In order to demonstrate the alleged impropriety of his predecessors, who, in the interests of immediate gain only, had granted leases for three lives in return for modest entry or renewal fines, Cosin was anxious to note that the great coalmines of Whickham and Gateshead had 'bin worth heretofore & so may be hereafter 5000£ and sometimes 8000£ p.a.'.[2] In fact, the mines had already fallen in value to £2,000 by 1662 and probably never again reached the pre-Civil War levels of profitability to which Cosin was alluding.

It is important not to exaggerate the likely shortcomings of these seventeenth-century data sources. Once the chimera of complete accuracy has been laid to rest and cross-checking procedures completed, it is possible to approach the records with more confidence. Contemporaries were no less aware, than is the modern researcher, of the need for sound and reliable information; indeed, to this end, they encouraged periodic adjustments of colliery valuation figures, as is evident from the recorded 'improvements', emendations or marginal annotations which often appear on their working documents. Perhaps the clearest indication of a contemporary effort to arrive at a satisfactory or reasonable data collection is seen in the parliamentary *re-surveys* of several Durham manors in the mid-seventeenth century, which provided a wealth of detail not previously forthcoming. The outcome may have been a series of figures and statements which fell short of perfect accuracy but we can rest assured that these were far superior to anything that had gone before. As a single source, aimed at providing an accurate portrayal of the performance of a large number of collieries at a particular point in time, the Ship Money assessment of 1636 appears unrivalled, as explained more fully in appendix 5.

The period after 1680 brings sharply into focus a number of other difficulties in source evaluation and handling. Even the apparently simple task of locating, in succeeding generations, a particular colliery can be frustrated by the not infrequent practice of changing names: a single enterprise might at various times be identified according to the name or title of its proprietor, the name of the parish or township within which the coal royalty occurred, the geographical location of the mine itself or of the riverside staiths from which its coals were shipped. During the course of the eighteenth century it became quite common to promote coal sales by attaching 'brand names' to both the colliery and its product. Especially favoured were 'brand names' which proved popular on the London market; they were often persisted with regardless of whether or not they signified the true origin of the coal.

The presentation of information on coal output often exhibits a strong proprietorial bias, to the extent that it may be far easier to discover the contribution to total vend (see appendix 3 for the meaning of this term) accounted for by a particular coalowner -perhaps with interests in several undertakings- rather than by a particular colliery. This is entirely consonant with the production and marketing arrangements prevailing on the coalfield. At several stages in the

eighteenth century, attempts were made to fix vend or output quotas, sometimes by formal agreement or regulation. Indeed, several major archival collections used in this study,[3] relate, *inter alia*, to the founding and progress of a partnership grouping known as the Grand Alliance, which was active on the coalfield from 1726 and whose abiding concern was to ensure as large a share as possible of the market for its members. To this end it was essential to present vend data in such a manner as to reveal not only their own joint or individual quotas or portions but also those of their rivals. It was also necessary to differentiate clearly between vend figures that had been agreed to in advance, or anticipated, and those actually realised. In fact, the distinction was not invariably made nor successfully discovered by contemporaries and this has left some perplexing problems for later generations of scholars.

The proprietorial bias of vend or output data must not be overstated; it did not operate to the exclusion of all other forms of data collection. In particular, major coalowners who might have parts or shares in several enterprises could not afford to neglect the locational variable. Separate collieries and their seams varied greatly with regard to the quantity and quality of coal they were able to produce at particular dates or stages, and product differentiation had an important influence on price structures and the promotion of markets. Thus the vend performance of individual collieries was a factor of prime concern. In fact the periodic inclusion of collieries within a carefully organized regulation of trade could facilitate their achieving a fairly constant level of output/vend over a number of years. Moreover, in those many instances where seasale collieries were not directly worked by the royalty owner, the terms of leasehold agreements could, in theory at least, ensure some measure of uniformity by restricting annual workings or, more commonly, the quantity of marketable coals that could be led from the mine to the staiths. In practice, however, 'shorts' and 'overleadings' were not uncommon, and annual statements of colliery seasale vend might or might not conceal quantities of coal that remained at pit bank or resting at the staiths.

Like many another indicated source in this inquiry, the port books and customs accounts do not comprise a comprehensive and totally reliable data set. Though the former are usually regarded as the more reliable, there are many years for which data are absent, and even in those years when export totals are extant there is an ever fluctuating margin of error to be conscious of, even if it is not possible to measure it with any precision. Every chaldron of coal exported was liable to a tax or duty, especially after 1600; and it has yet to be convincingly argued by anyone that there was ever an age in which taxes were universally enjoyed and evasion never contemplated! In fact, the practice of granting 'overmeasures' or 'gift coals' to shipmasters in order to secure markets, and for which no taxes were paid, was a quite common one and might well have led at times to quantities being shipped out that were fifteen or twenty percent in excess of the recorded vend.

In devising figure 2.5, every effort has been made to provide an

accurate portrayal of coal shipment trends. This has involved an extension of the time-series data beyond the *terminus post quem* set by Nef, as well as augmentation to, and emendation of, his basic data which, it will be recalled, were invoked in support of his claim for an early industrial revolution in Elizabethan and early Stuart England. Nef overestimated the magnitude of shipments from Newcastle and Sunderland in the years before c.1636 owing to a misunderstanding about the size of measure, the chaldron,[4] used in the coal industry. More seriously, it has been alleged, he engaged in unsound statistical reasoning in order to advance his cause, assuming that export figures which related to isolated years within a particular decade were typical of all years within that decade.[5]

---

1. PRO SP14/63/19.
2. DCL Sharp 167/Bishop Cosin's survey, 1662, 170.
3. See chapter 4, note 137, for details.
4. For further details on this measure, see appendix 3.
5. See chapter 2, notes 5 and 12.

Appendix 2

IDENTIFICATION OF TYNE AND WEAR SEASALE COLLIERIES AND DURHAM LANDSALE COLLIERIES, 1551-1810: NUMERICAL AND ALPHABETICAL LISTING

Essentially, a colliery was a single organizational and managerial unit consisting of one or, more commonly, several pits operating separately or jointly. Such a definition -the only sensible one to adopt- unfortunately presents some difficulty to a geographer interested in the location of mining activity, for a colliery often acquired a degree of mobility. Within the limits of the mining concession, the focus of activity might shift greatly from one generation to the next, in response to seam exploitation and technological advances; and where additional reserves could be obtained, through the purchase or lease of adjoining mineral estates, the field of operations could extend yet further. Within the constraints of an imperfect information base, this study attempts to accommodate the need for some locational precision in the plotting of collieries (figures 2.2 to 2.4) while recognising that the essentially organizational criteria used to define a colliery frustrate that task. In practice this means that in one time-period two or more separate collieries occupying contiguous royalties might merge thereafter; as, for instance, with W1 and W2 which become W1/2 after 1680, only to be swallowed up by a distinctively new, large-scale undertaking, W24, from the 1790s (figures 2.2-2.4 and appendix 6). Alternatively, a coal royalty could be divided in such a way that the territory theoretically available to one undertaking became the scene of activity for two. Thus Stella Grand Lease colliery (S4) worked within some part or parts of the Bishop of Durham's extensive royalty of Ryton and Kyo in most years between 1551 and 1740. However, after a period of dormancy, from the 1740s to the '90s, the Bishop's lessees sub-let part of the territory -which they had the power to do- for a new winning (Whitefield, S74) in the very south of the royalty (and probably extending into Chopwell royalty too) while the old colliery (S4), now known as Townley Main, was revived in the northern part of the concession.

To assist with locational identification, one- or two-digit numbers are employed and prefixed as follows:

N = Seasale collieries leading to the NORTH bank of the Tyne
S = Seasale collieries leading to the SOUTH bank of the Tyne*
W = Seasale collieries leading to the river WEAR
L = Durham LANDSALE collieries

---

* All but two collieries leading to the south bank of the Tyne are in Durham. The exceptions, in Northumberland, are given the suffix 'n': Hedley Fell (S1n) and Wylam South (S75n).

It will be noted that some collieries are identified by more than one letter and/or number. This may signify a merging of two separate collieries, as explained above; or it may denote a single landsale colliery which, during the period mapped, became a seasale mine (for example, L17/W7 in figure 2.2). Some single enterprises have two numbers because they led coals first to one river and then the other (as with S62/W22 in figure 2.4), or to both at the same time (as with S85/W31 for some years around 1800).

Within the distinct though partly overlapping seasale and landsale zones, the sequence of numbering is broadly chronological. For example, on the south bank of the Tyne, S2 to S32 are collieries which are recorded working between 1551 and 1680, S33 to S73 are those first recorded working between 1681 and 1740, and S74 to S85 those first recorded working in the period 1741-1810. It will be noted that the period of first working is not necessarily the same as that of maximum duration or vendible output. Numbering also follows a roughly spatial sequence (figures 2.2-2.4) such that within each time-period the allocation moves from west to east in the case of Tyne north-bank and south-bank collieries, from north-west bank to south-east bank in the case of Wear collieries, and moves in an arc from north-west Durham through the Wear lowlands near Durham City to the south-western corner of the coalfield in the case of Durham landsale collieries.

In the following listings an oblique line is used to separate the different names by which a colliery could be known. The names in square brackets are those which were sometimes used when there occurred a *temporary* merger or extension of the royalty; one that was of insufficinet duration or importance to warrant its being given a new code according to the criteria set out above in paragraph 1.

NUMERICAL LISTING

Code	Colliery Name(s)
	Leading to NORTH bank of Tyne
N1	WYLAM [sometimes including WYLAM MOOR]
N2	THROCKLEY
N3	WALBOTTLE [sometimes including WALBOTTLE MOOR]
N4	WHORLTON
N5	NEWBURN
N6	DENTON/BAKER'S MAIN
N7	BRUNTON
N8	FENHAM/BEAMONTS
N9	BENWELL/ADAIR'S MAIN
N10	ELSWICK

N11	NEWCASTLE MOOR/NUN'S MOOR
N12	WALKER
N13	MURTON
N14	MONKSEATON
N15	EARSDEN
N16	PRESTON
N17	TYNEMOUTH [sometimes including TYNEMOUTH MOOR]
N18	WHORLTON MOOR
N19	BELL'S CLOSE
N20	SCOTSWOOD
N21	(OLD) KENTON
N22	JESMOND
N23	LONGBENTON 1/BENTON
N24	HEATON
N25	BYKER
N26	ST. LAWRENCE
N27	HEDDON
N28	GREENWICH MOOR
N29	HOLYWELL MAIN
N30	LEMINGTON
N31	WEST DENTON
N32	MONTAGU(E) MAIN
N33	EAST DENTON
N34	WEST KENTON & COXLODGE
N35	EAST KENTON
N36	FAWDON
N37	EAST BRUNTON
N38	WEST BRUNTON
N39	DINNINGTON
N40	WIDEOPEN
N41	WESTSLADE
N42	LONGBENTON 2
N43	KILLINGWORTH
N44	BIGGES MAIN 1/EAST BENTON
N45	BIGGES MAIN 2
N46	LAWSON'S MAIN
N47	WALKER HILL
N48	ST. ANTHONY
N49	WALLSEND/(RUSSELL'S) WALLSEND
N50	WILLINGTON/(BELL AND BROWN'S) WILLINGTON & WALLSEND
N51	BACKWORTH
N52	SHIREMOOR
N53	FLATWORTH/PRESTON MOOR
N54	CHIRTON/BURDON MAIN/COLLINGWOOD
N55	PERCY MAIN/HOWDON PANNS

Leading to SOUTH bank of the Tyne

S1n	HEDLEY FELL/RISE MOOR/TOP MOOR
S2	CHOPWELL/CLAVERING STELLA/STELLA CLAVERING
S3	CRAWCROOK/CROFT'S MAIN/RYTON MOOR/RYTON WEST FIELD MAIN

S4	STELLA GRAND LEASE/TOWNLEY MAIN esp. post-1810
S5	STELLA GLEBE LANDS/PARSON'S
S6	STELLA FREEHOLD/TEMPEST'S FREEHOLD/WIDDRINGTON'S STELLA AND RYTON/PARSON'S COLLIERIES
S7	WINLATON/BROCKWELLS
S8	BLAYDON MAIN/SHIPDON/SHIBDON/BROCKWELLS/DERWENT MAIN
S9	GIBSIDE 1/BLAX(I)STONS
S10,L5	TANFIELD MOOR/TANFIELD FELL
S11	FAWDON FIELD
S12	RID(D)ING FIELD [sometimes including HOLLINSIDE]
S13	CLOCKBURNE
S14	GREENLAW
S15	WHICKHAM GRAND LEASE
S16	LINGYFIELD
S17	FUGERFIELD/FUGERHOUSE
S18	BRINKBURNE FREEHOLD
S19	BLACKBURN (Fell)
S20	BEWICKE'S EAST FIELD
S21	FARNACRES
S22	RAVENSWORTH/LIDDELL'S/COX CLOSE/COW CLOSE/'TEAM'
S23,W25,L4	URPETH/URPETH BIRTLEY/URPETH with BIRTLEY and KIBBLESWORTH
S24	HODGSON'S FIELD
S25	WILSON'S FIELD/FIELD HOUSE
S26	SALTWELLSIDE
S27	SHIPCOTE/SIR THOMAS RIDDELL'S
S28	CHOWDEAN/CHOPRIDON/SIR PETER RIDDELL'S
S29	GATESHEAD PARK/TYNE MAIN
S30,W30	BIRTLEY 2/BIRKLEY/BIRTLEY FELL/BLACK FELL [sometimes including MOUNT MOOR and TOFT MOOR]
S31	FELLING/BRANDLING MAIN
S32	(OLD) JARROW
S33	DERWENT/DARWENT/CLAVERING'S DERWENT
S34	HOLLINSIDE [sometimes with S12]
S35	GARESFIELD/BARLOW FELL/BARLEY FIELD
S36	LANDS/LAWNDS/LAUNDS
S37	AXWELLS
S38,L56	BYERMOOR
S39	CROOKBANK
S40	BURNOPFIELD
S41	BRYANSLEAP
S42	BUCKSNOOK/LINTZ/HIGH FRYERSIDE/BUCKSMOOR
S43	EWHURST/EWHURST HEAD
S44	COLLIERL(E)Y/WEED PARK
S45	PONTOP(S)
S46	LANCHESTER COMMON 1/PONTOP PIKE/LANCHESTER FELL/DIPTON
S47	LANCHESTER COMMON 2/SILVERTOP'S LANCHESTER COMMON
S48,L6	GREENCROFT
S49	LANCHESTER SOUTH MOOR/SOUTH MOOR 1
S50	SOUTH MOOR 2 [part Lanchester South Moor, part Shield Row]
S51	BUSHBLADES
S52	TANFIELD LEIGH
S53	DAVISON'S TANFIELD

S54	DAWSON'S TANFIELD
S55	BARCUS (BARKER'S) CLOSE
S56	BECKLEY
S57	NORTHBANKS/HUTTON/MARLEY HILL/GIBSIDE 2
S58	ANDREW'S HOUSE/ANDERSON'S HOUSE
S59	CAUSEY
S60	PARK HEAD
S61	SHIELD ROW
S62,W22	BEAMISH/BEAMISH SOUTH MOOR
S63	HEDLEY MOOR
S64	BURDON MOOR
S65	REDHEUGH
S66	GATESHEAD PETTY OWNERS [including PAPEHILL, PARSON'S FLATT]
S67	BENSHAM
S68	CLAXTONS/FAWD(S)
S69	DECKHAM(S)/MITFORD'S FIELD/MITFORD'S SWARD
S70	GATESHEAD FELL/SHERRIF HILL/PARK MOOR
S71	TEAM
S72	EIGHTON/AYTON
S73	HEWORTH/(JARROW) HEWORTH
S74	WHITEFIELD
S75n	WYLAM SOUTH
S76	TANFIELD MOOR EDGE/TANFIELD WESTER LEIGH (COPYHOLD)
S77	TANFIELD TOWNHEAD
S78,W21	STANLEY/PELTON MOOR
S79	KIPHILL
S80	DERWENT CROOK [sometimes including BRECKEN BEDS]/LOW MOOR
S81	FRIAR'S GOOSE
S82	HEBBURN
S83	JARROW TEMPLE MAIN/TEMPLE WALLSEND
S84	CHAPTER MAIN/(TEMPLE) MANOR WALLSEND/WESTOE/SOUTH SHIELDS
S85,W31	WASHINGTON/(RUSSELL'S) WASHINGTON USWORTH/USWORTH MAIN

Leading to River WEAR

W1	CHESTER 1 [CHESTER (ALLAN'S) FLATTS, COPYHOLDS & NEWBRIDGE
W2	CHESTER 2 [CHESTER MOORS, incl. URPETH MOORS] WASTES]
W3	HARRATON [LAMBTON'S HARRATON post-1740]
W4	NORTH BIDDICK
W5	OFFERTON
W6	PENSHAW 1/WHARTON'S PENSHAW/WHARTON'S MAIN
W7,L17	RAINTON/WHARTON'S RAINTON
W8	LAMBTON/LAMBTON MAIN
W9	LUMLEY
W10	HEDWORTH'S CHESTER [incl. parts of OUSTON, PELTON, URPETH]
W11	DONNISON'S (PICKTREE, RICKLETON & LEEFIELD)
W12	CHARTERSHAUGH/PEARETH'S
W13	(HEDWORTH'S) FATFIELD/MILBANKE'S FATFIELD
W14	OXCLOSE WASHINGTON/OXCLOSE & RECTORY MAIN
W15	PENSHAW HILL/(SMITH'S) PENSHAW
W16	SOUTH BIDDICK

W17	NEWBOTTLE/NEWBOTTLE HOUGHTON
W18,L16	HOUGHTON LE SPRING
W19,L15	(SMITH'S) MORTON/MORTON GRANGE/MORTON HOUSE
W19	RAINTON/WHARTON'S RAINTON
W20	WALDRIDGE/DEANERY MOOR
W21,S78	STANLEY/PELTON MOOR
W22,S62	BEAMISH/BEAMISH SOUTH MOOR
W23	TWIZZELL/TWIZZLE/BEDFORD MAIN
W24	PELTON FELL/PELTON FELL & FLATTS
W25,S23,L4	URPETH/URPETH BIRTLEY/URPETH with BIRTLEY & KIBBLESWORTH
W26	OUSTON
W27	LEEFIELD 1/LEEFIELD & SOUTH BIRTLEY/(HUMBLE'S) LEEFIELD
W28	LEEFIELD 2/PEARETH'S LEEFIELD & PICKTREE WITH HARRATON
W29,L3	BIRTLEY 1/(DONNISON'S) BIRTLEY
W30	BIRTLEY 2/BIRKLEY/BIRTLEY FELL/BLACK FELL [sometime including Mount Moor and Toft Moor]
W31,S85	WASHINGTON/(RUSSELL'S) WASHINGTON USWORTH/USWORTH MAIN
W32	HARRATON OUTSIDE/BOUNDARY MOOR
W33	PEARETH'S MAIN [merging CHARTERSHAUGH & part of HARRATON]
W34	PENSHAW/LAMBTON'S PENSHAW
W35	EDEN MAIN/HERRINGTON MILL
W36	BOURN MOOR/NEWBOTTLE BOURN MOOR
W37	PRIMROSE MOOR

Durham LANDSALE collieries

L1	STREETGATE
L2	HOLLERBUSH
L3	BIRTLEY
L4	URPETH
L5	TANFIELD MOOR
L6	GREENCROFT
L7	CONSETT
L8	KNITSLEY & CLEWBURN
L9	LANCHESTER
L10	CHARLAW
L11	FINDON (with BARRAS LONINGE & HARTMOOR)
L12	PLAWSWORTH
L13	KIMBLESWORTH
L14	COCKEN
L15	MORTON
L16	HOUGHTON LE SPRING
L17,W7	RAINTON
L18	FRANKLAND
L19	FRAMWELLGATE/FRAMWELLGATE MOOR
L20	DURHAM
L21	SHERBURN
L22	BRANDON
L23	BRANCEPETH
L24	COXHOE
L25	FERRYHILL

L26	TUDHOE
L27	SPENNYMOOR
L28	WILLINGTON
L29	HUNWICK MOOR/HUNWICK & BIRTLEY or BIRKLEY/BIRCHLEYS
L30	BITCHBURN
L31	COUNDON & BYERS GREEN
L32	ELDON
L33	SHILDON
L34	EVENWOOD/RAMSHAW
L35	ETHERLEY
L36	RAILEY FELL/ RAILEY & CARTERTHORNE
L37	COCKFIELD FELL
L38	NORWOOD/RABY
L39	GREWBURN & LYNESACK/BUTTERKNOWLE
L40	COLDKNOT & HARGILL
L41	SOFTLEY/LANTON HILLS
L42	HAMSTERLEY
L43	HELME PARK
L44	THORNLEY
L45	TOW LAW
L46	WHITTLE/WHITE HILL
L47	POTTER (HOUSE) MOOR
L48	USHAW MOOR
L49	PITTINGTON/PITTINGTON HALLGARTH
L50	SHINCLIFFE
L51	HETT
L52	CORNFORTH
L53	MIDDRIDGE
L54	BISHOP AUCKLAND (BONDGATE)
L55	WEST AUCKLAND
L56,S38	BYERMOOR
L57	COW CLOSE
L58	MEDOMSLEY
L59	SEGGERSTON/SACRISTON
L60	CORNSAY/CORNSEY
L61	KEPIER
L62	DURHAM ELVET
L63	CROWTREES
L64	COPPYCROOKS
L65	BRUSSELTON
L66	WOODHOUSE
L67	WITTON PARK
L68	LUNTON HILL
L69	WOODLAND(S)
L70	WEST PITTS
L71	WOODYFIELD

ALPHABETICAL LISTING

Code	Colliery Name
	ADAIR'S MAIN [see BENWELL]
	(ALLAN'S) FLATT(S) [see CHESTER 1]
	ANDERSON'S HOUSE [see ANDREW'S HOUSE]
S58	ANDREW'S HOUSE
S37	AXWELLS
	AYTON [see EIGHTON]
N51	BACKWORTH
	BAKER'S MAIN [see DENTON]
S55	BARCUS (BARKER'S) CLOSE
	BARLEY FIELD [see GARESFIELD]
	BARLOW FELL [see GARESFIELD]
	BARRAS LONINGE [see FINDON]
S62,W22	BEAMISH/BEAMISH SOUTH MOOR
	BEAMONTS [see FENHAM]
S56	BECKLEY
	BEDFORD MAIN [see TWIZZELL]
N19	BELL'S CLOSE
S67	BENSHAM
	BENTON [see LONGBENTON 1]
	BENTON, EAST [see BIGGE'S MAIN 1]
N9	BENWELL
S20	BEWICKE'S EAST FIELD
W4	BIDDICK, NORTH
W16	BIDDICK, SOUTH
N44	BIGGE'S MAIN 1
N45	BIGGE'S MAIN 2
	BIRKLEY [see BIRTLEY; and HUNWICK MOOR]
W29,L3	BIRTLEY 1
W30,S30	BIRTLEY 2
L54	BISHOP AUCKLAND BONDGATE
L30	BITCHBURN
	BIRCHLEYS [see HUNWICK MOOR]
S19	BLACKBURN (FELL)
	BLACK FELL [see BIRTLEY 2]
	BLAX(I)STONS [see GIBSIDE 1]
S8	BLAYDON (MAIN)
	BONDGATE [see BISHOP AUCKLAND]
	BOUNDARY MOOR [see HARRATON OUTSIDE]
W36	BOURN MOOR/(NEWBOTTLE) BOURN MOOR
L23	BRANCEPETH
L22	BRANDON
	BRANDLING MAIN [see FELLING]

S18	BRINKBURN (FREEHOLD)
	BROCKWELL'S [see WINLATON or BLAYDON]
N7	BRUNTON
N37	BRUNTON, EAST
N38	BRUNTON, WEST
L65	BRUSSELTON
S41	BRYANSLEAP
S42	BUCKSNOOK
	BURDON MAIN [see CHIRTON]
S64	BURDON MOOR
S40	BURNOPFIELD
S51	BUSHBLADES
	BUTTERKNOWLE [see GREWBURN]
S38,L56	BYERMOOR
	BYERS GREEN [see COUNDON]
N25	BYKER
L36	CARTERTHORNE [see RAILEY FELL]
S59	CAUSEY
S84	CHAPTER MAIN
L10	CHARLAW
W12	CHARTERSHAUGH
W1	CHESTER 1
W2	CHESTER 2
N54	CHIRTON
S2	CHOPWELL
	CHOPRIDON [see CHOWDEAN]
S28	CHOWDEAN
	CLAVERING'S DERWENT [see DERWENT]
	CLAVERING'S STELLA [see CHOPWELL]
S68	CLAXTONS/FAWD(S)
	CLEWBURN [see KNITSLEY]
S13	CLOCKBURNE
L14	COCKEN
L37	COCKFIELD FELL
L40	COLDKNOT (AND HARGILL)
S44	COLLIERL(E)Y
	COLLINGWOOD [see CHIRTON]
L7	CONSETT
L64	COPPYCROOKS
L60	CORNSAY/CONSEY
L52	CORNFORTH
L31	COUNDON (and BYERS GREEN)
L57,S22	COW CLOSE [and see also RAVENSWORTH]
	COX CLOSE [see RAVENSWORTH]
L24	COXHOE
	COXLODGE [see KENTON, WEST]
S3	CRAWCROOK
	CROFT'S MAIN [see CRAWCROOK]
S39	CROOKBANK
L63	CROWTREES

S53	DAVISON'S TANFIELD
S54	DAWSON'S TANFIELD
	DEANERY MOOR [see WALDRIDGE]
S69	DECKHAM(S)
N6	DENTON
N33	DENTON, EAST
N31	DENTON, WEST
S33	DERWENT
S80	DERWENT CROOK
	DERWENT MAIN [see BLAYDON]
N39	DINNINGTON
	DIPTON [see LANCHESTER COMMON 1]
W11	DONNISON'S (PICKTREE, RICKLETON, LEEFIELD)
L20	DURHAM
L62	DURHAM ELVET
N15	EARSDEN
	EAST BRUNTON [see BRUNTON]
	EAST DENTON [see DENTON, EAST]
	EAST BENTON [see BIGGE'S MAIN]
W35	EDEN MAIN
S72	EIGHTON
L32	ELDON
N10	ELSWICK
	ELVET [see DURHAM ELVET]
L35	ETHERLEY
L34	EVENWOOD
S43	EWHURST (HEAD)
S21	FARNACRES
W13	FATFIELD/(HEDWORTH'S) FATFIELD
	FAWD(S) [see CLAXTONS]
N36	FAWDON
S11	FAWDON FIELD
S31	FELLING
N8	FENHAM
L25	FERRYHILL
L11	FINDON (with BARRAS LONINGE and HARTMOOR)
	FIELD HOUSE [see WILSON'S FIELD]
	FLATT(S) [see CHESTER 1]
N53	FLATWORTH
L19	FRAMWELLGATE (MOOR)
L18	FRANKLAND
	FRYERSIDE (HIGH)/FRIARSIDE [see BUCKSNOOK]
S81	FRIAR'S GOOSE
S17	FUGERFIELD/FUGERHOUSE
S35	GARESFIELD
S29	GATESHEAD PARK/TYNE MAIN
S66	GATESHEAD PETTY OWNERS (including PAPEHILL & PARSON'S FLATT)
S70	GATESHEAD FELL
S9	GIBSIDE 1

	GIBSIDE 2 [see NORTHBANKS]
S48,L6	GREENCROFT
S14	GREENLAW
N28	GREENWICH MOOR
L39	GREWBURN (AND LYNESACK)
L42	HAMSTERLEY
	HARGILL [see COLDKNOT]
W3	HARRATON
W32	HARRATON OUTSIDE
	HARTMOOR [see FINDON]
N24	HEATON
S82	HEBBURN
N27	HEDDON
S1n	HEDLEY FELL
S63	HEDLEY MOOR
W10	HEDWORTH'S CHESTER (PELTON, OUSTON, URPETH)
L43	HELME PARK
	HERRINGTON MILL [see EDEN MAIN]
L51	HETT
S73	HEWORTH/(JARROW) HEWORTH
	HIGH FRYERSIDE [see BUCKSNOOK]
S24	HODGSON'S FIELD
L2	HOLLERBUSH
S34	HOLLINSIDE
N29	HOLYWELL MAIN
W18,L16	HOUGHTON-LE-SPRING
	HOWDON PANNS [see PERCY MAIN]
L29	HUNWICK MOOR
	HUTTON [see NORTHBANKS]
S32	JARROW/(OLD) JARROW
	JARROW HEWORTH [see HEWORTH]
S83	JARROW TEMPLE MAIN
N22	JESMOND
N21	KENTON/(OLD) KENTON
N35	KENTON, EAST
N34	KENTON, WEST (& COXLODGE)
L61	KEPIER
	KIBBLESWORTH [see URPETH]
N43	KILLINGWORTH
L14	KIMBLESWORTH
S79	KIPHILL
L8	KNITSLEY (AND CLEWBURN)
W8	LAMBTON (MAIN)
L9	LANCHESTER
S46	LANCHESTER COMMON 1
S47	LANCHESTER COMMON 2
	LANCHESTER FELL [see LANCHESTER COMMON 1]
	LANCHESTER SOUTH MOOR [see SOUTH MOOR 1]

S36	LANDS
	LANTON HILLS [see SOFTLEY]
N46	LAWSON'S MAIN
W27	LEEFIELD 1
W28	LEEFIELD 2
	LEEFIELD [see DONNISON'S]
N30	LEMINGTON
	LIDDELL'S [see RAVENSWORTH]
S16	LINGYFIELD
	LINTZ [see BUCKSNOOK]
N23	LONGBENTON 1
N42	LONGBENTON 2
	LOW MOOR [see DERWENT CROOK]
W9	LUMLEY
L68	LUNTON HILL
	LYNESACK [see GREWBURN]
	MANOR WALLSEND [see CHAPTER MAIN]
	MARLEY HILL [see NORTHBANKS]
L58	MEDOMSLEY
L53	MIDDRIDGE
	MIDFORD'S FIELD or SWARD [see DECKHAM('S)]
	MILBANKE'S FATFIELD [see FATFIELD]
N14	MONKSEATON
N32	MONTAGU(E) MAIN
L15,W19	MORTON/(SMITH'S MORTON
	MOUNT MOOR [see BIRTLEY 2]
N13	MURTON
W17	NEWBOTTLE/NEWBOTTLE HOUGHTON
	NEWBOTTLE BOURN MOOR [see BOURN MOOR]
N5	NEWBURN
N11	NEWCASTLE MOOR
S57	NORTHBANKS
	NORTH BIDDICK [see BIDDICK]
L38	NORWOOD
W5	OFFERTON
W26	OUSTON
W14	OXCLOSE WASHINGTON
	PAPEHILL [see GATESHEAD PETTY OWNERS]
S60	PARK HEAD
	PARK MOOR [see GATESHEAD FELL]
	PARSON'S [see STELLA GLEBE LANDS]
	PARSON'S FLATT [see GATESHEAD PETTY OWNERS]
	PEARETH'S [see CHARTERSHAUGH]
W33	PEARETH'S MAIN (CHARTERSHAUGH with HARRATON)
	PELTON [see HEDWORTH'S CHESTER]
W24	PELTON FELL
	PELTON MOOR [see STANLEY]
W6	PENSHAW 1/PENSHAW MAIN

W34	PENSHAW 2
W15	PENSHAW HILL/(SMITH'S) PENSHAW HILL
N55	PERCY MAIN
	PETTY OWNERS [see GATESHEAD PETTY OWNERS]
	PICKTREE [see DONNISON'S or LEEFIELD 2]
L49	PITTINGTON/PITTINGTON HALLGARTH
L12	PLAWSWORTH
S45	PONTOP(S)
S46	PONTOP PIKE [see LANCHESTER COMMON 1]
L47	POTTER (HOUSE) MOOR
N16	PRESTON
	PRESTON MOOR [see Flatworth]
W37	PRIMROSE MOOR
	RABY [see NORWOOD]
W7,L17	RAINTON/(WHARTON'S) RAINTON
	RAMSHAW [see EVENWOOD]
S22	RAVENSWORTH
L36	RAILEY FELL/RAILEY & CARTERTHORNE
	RECTORY MAIN [see OXCLOSE WASHINGTON]
S65	REDHEUGH
	RICKLETON [see DONNISON'S]
S12	RID(D)ING FIELD
	RISE MOOR [see HEDLEY FELL]
	(RUSSELL'S) WASHINGTON USWORTH [see WASHINGTON USWORTH]
	RYTON MOOR [see CRAWCROOK]
	(RYTON) WEST FIELD MAIN [see CRAWCROOK]
L59	SACRISTON/SEGGERSTON
N48	SAINT ANTHONY
N26	SAINT LAWRENCE
S26	SALTWELLSIDE
N20	SCOTSWOOD
	SEGGERSTON [see SACRISTON]
L21	SHERBURN
	SHERRIF HILL [see GATESHEAD FELL]
S61	SHIELD ROW [and see also SOUTH MOOR 2]
L33	SHILDON
L50	SHINCLIFFE
	SHIBDON/SHIPDON [see BLAYDON]
S27	SHIPCOTE
N52	SHIREMOOR
	SILVERTOP'S LANCHESTER COMMON [see LANCHESTER COMMON 1]
	SIR PETER RIDDELL'S [see CHOWDEAN]
	SIR THOMAS RIDDELL'S [see SHIPCOTE]
	SMITH'S PENSHAW HILL [see PENSHAW HILL]
L15,W19	(SMITH'S) MORTON
L41	SOFTLEY
	SOUTH BIDDICK [see BIDDICK]
S49	SOUTH MOOR 1
S50	SOUTH MOOR 2
	SOUTH SHIELDS [see CHAPTER MAIN]

L27	SPENNYMOOR
S78,W21	STANLEY
S6	STELLA FREEHOLD
	STELLA CLAVERING [see CHOPWELL]
S4	STELLA GRAND LEASE
S5	STELLA GLEBE LAND
L1	STREETGATE
	SWARDS [see DECKHAM'(S)]
S52	TANFIELD LEIGH
S10,L5	TANFIELD MOOR/TANFIELD FELL
S76	TANFIELD MOOR EDGE
S77	TANFIELD TOWNHEAD
	TANFIELD WESTER LEIGH (COPYHOLD) [see TANFIELD MOOR EDGE]
S71	TEAM
	TEMPLE MAIN [see JARROW TEMPLE MAIN]
	(TEMPLE) MANOR WALLSEND [see CHAPTER MAIN]
	TEMPLE WALLSEND [see JARROW TEMPLE MAIN]
	TEMPEST'S FREEHOLD [see STELLA FREEHOLD]
L44	THORNLEY
N2	THROCKLEY
	TOFT MOOR [see BIRTLEY 2]
	TOP MOOR [see HEDLEY FELL]
L45	TOW LAW
	TOWNLEY MAIN [see STELLA GRAND LEASE]
L26	TUDHOE
W23	TWIZZELL/TWIZZLE
	TYNE MAIN [see GATESHEAD PARK]
N17	TYNEMOUTH (MOOR)
S23,W25,L4	URPETH/URPETH BIRTLEY/URPETH with BIRTLEY and KIBBLESWORTH
	URPETH MOORS [see CHESTER 2]
	USWORTH (MAIN) [see WASHINGTON]
L48	USHAW MOOR
N3	WALBOTTLE (MOOR)
W20	WALDRIDGE
N12	WALKER
N47	WALKER HILL
N49	WALLSEND/(RUSSELL'S) WALLSEND
	WALLSEND, MANOR [see CHAPTER MAIN]
W14	(OXCLOSE) WASHINGTON
W31,S85	WASHINGTON/(RUSSELL'S) WASHINGTON USWORTH/USWORTH MAIN
	WEED PARK [see COLLIERL(E)Y]
L55	WEST AUCKLAND
	WEST BRUNTON [see BRUNTON]
	WEST DENTON [see DENTON]
	WEST FIELD MAIN [see CRAWCROOK]
	WEST KENTON [see KENTON]
	WESTOE [see CHAPTER MAIN]
L70	WEST PITTS
N41	WESTSLADE

	WHARTON MAIN [see PENSHAW 1]
	WHARTON'S RAINTON [see RAINTON]
S15	WHICKHAM GRAND LEASE
S74	WHITEFIELD
L46	WHITTLE/WHITE HILL
N4	WHORLTON
N18	WHORLTON MOOR
	WIDDRINGTON'S STELLA & RYTON [see STELLA FREEHOLD]
N40	WIDEOPEN
L28	WILLINGTON
N50	WILLINGTON/(BELL AND BROWN'S) WILLINGTON AND WALLSEND
S25	WILSON'S FIELD/FIELD HOUSE
S7	WINLATON
L67	WITTON PARK
L66	WOODHOUSE
L69	WOODLAND(S)
L71	WOODYFIELD
N1	WYLAM (MOOR)
S75n	WYLAM SOUTH

Appendix 3

SOME TERMS, AND WEIGHTS AND MEASURES, USED IN THE TYNE AND WEAR COAL INDUSTRY, 1551-1810

Terms

Colliery Rent. This usually consisted of a certain rent and a tentale rent, as specified in mining leases. *Certain rent* was paid whether the colliery worked or not but normally covered a certain minimum quantity of coal to be mined and led without further charge. *Tentale rent* was the sum paid for each ten of coal led from the colliery over and above that quantity covered by the certain rent. The amount levied per ten could vary according to the particular seam or quality of coal mined, and might rise or fall as the quantity led exceeded specified totals. Certain rents were known as *dead rents* when paid for coal reserves that were not worked as such but held in anticipation of some future need and/or taken to prevent their being granted to a rival coalowner. Sometimes, an additional major source of income, particularly on Church properties, was the *entry* or *renewal fine*, levied when the mining lease was first taken or renewed.

Freighting. Shipment of coal undertaken by a coalowner at his own risk for sale at whatever price could be obtained, in contrast to the usual practice of a sale negotiated by a fitter to a shipmaster.

Royalty. The mineral estate or territory available for working by a colliery. This is the only sense in which the word is used in this study. Not until the nineteenth century was the term additionally used to describe the rent or royalty payment which the colliery operator (commonly referred to as coalowner) owed the landowner. See Gresley 1883, 201.

Seasale. As a noun the word is more or less interchangeable with vend (q.v.). As an adjective it describes those collieries which were principally concerned with supplying markets reached by sea but which in addition contributed to the local or *landsale* markets, along with those *landsale collieries* whose sole purpose was to meet local demand.

Vend. The proportion of colliery output, whether from an individual undertaking or all mines, which entered the sea-borne trade to serve customers in the national (coastal) market or overseas.

Wayleave rent. This was paid by the colliery operator to the owner of an estate across which coals were led from the worked royalty (q.v.), and usually took the form of a fixed annual payment; but it did sometimes vary according to the amount of coal actually transported, and was thus analagous to a tentale rent (q.v.).[1] *Negative wayleaves* were analagous to dead rents (q.v.) paid on collieries: passage rights were not used but held, and rents paid, to prevent their being granted to another mining adventurer.

Appendix 4

QUANTITIES OF COAL SHIPPED FROM THE TYNE AND WEAR TO COASTAL AND OVERSEAS MARKETS, 1551-1810 (in tons~)

Year*	From Newcastle to Coastal 1	Overseas 2	Both 3 (1+2)	From Sunderland to Coastal 4	Overseas 5	Both 6 (4+5)	From Newcastle & Sunderland to Coastal 7 (1+4)	Overseas 8 (2+5)	Both 9 (7+8)
1550 > 1554 <	43688[EA]	-	-	-	-	-	-	-	-
1554 < 1562 >	34148[EA]	-	-	-	-	-	-	-	-
1562 > 1564 <	38821[EA]	-	-	-	-	-	-	-	-
1564 < 1566 >	-	-	38443^	-	-	-	-	-	-
1566 > 1575 <	38821[EA]	-	-	-	-	-	-	-	-
1575 < 1592	-	-	64132^	-	-	-	-	-	-
1592	95991	21743	117734	-	-	-	-	-	-
1593	109536	26689	136225	-	-	-	-	-	-
1594	113350	37731	151081	-	1344	-	-	(39075)	-
1595	134715	34007	168722	-	-	-	-	-	-
1596	128430	32285	160715	-	-	-	-	-	-
1597	148445	27394	175839	-	-	-	-	-	-
1598 > 1603 <	147756	20824	168580	-	-	-	-	-	-
1603 < 1606 >	-	-	190600[E]	-	-	-	-	-	-
1606 > 1608	-	-	-	-	2684	-	-	-	-
1608	221075	14502	235577	-	-	-	-	-	-
1609 < 1612	214305	24872	239177	9265	2383	11648	(223570)	(27255)	250825
1612	206661	21945	228606	21412	3906	25318	(228073)	(25851)	253924
1613	202421	24906	237327	-	3945	-	-	(28851)	-
1614	213826	25620	239446	-	4673	-	-	(30293)	-
1615	209055	26229	235284	-	4578	-	-	(30807)	-
1616	212919	24734	237653	23379	3463	26842	(236298)	(28197)	264495
1617	195369	28476	223845	-	3282	-	-	(31758)	-
1618	211134	29190	240324	-	2564	-	-	(31754)	-
1619 >	-	32288	-	-	2484	-	-	(34772)	-

	1	2	3 (1+2)	4	5	6 (4+5)	7 (1+4)	8 (2+5)	9 (7+8)
1622	249795	-	300720E	22004	-	-	(271799)	-	-
1623	301785	-	-	23468	-	-	(325253)	-	-
1624	261356	-	-	23988	-	-	(285344)	-	-
1625	320276	-	-	20878	-	-	(341154)	-	-
1626	233503	31187	264690	27329	2505	29834	(260832)	(33692)	294524
1627	300985	-	-	-	-	-	-	-	-
<									
1629	336000E	-	-	-	-	-	-	-	-
1630	266049	38369	304418	-	-	-	-	-	-
>									
1633	-	33569	-	-	7104	-	-	-	-
1634	337050EA	35700EA	372750EA	50488	6445	56933	(387538)	(42145)	429683
<									
1636	-	-	-	-	-	-	-	-	c430000
1637	-	36629	-	-	6862	-	-	-	-
1638	343180EA	-	-	-	-	-	-	-	-
1639	-	46709	-	-	12036	-	-	-	-
1640	-	26003	-	-	9342	-	-	-	-
>									
1643	-	-	52899	-	-	-	-	-	-
1644	336000E	-	-	105000E	-	-	(441000)	-	-
1645	-	-	333089	-	-	-	-	-	-
<									
1652	276885EA	-	-	-	-	-	-	-	-
>									
1655	386080	-	-	78750E	-	-	(464830)	-	-
1656	-	-	439672	-	-	-	-	-	-
<									
1658	347786	16398	364184	69237	5636	74873	(417023)	(22034)	439057
1659	491489	42995	534484	113925	7479	121404	(605414)	(50474)	655888
1660	437196	28786	465982	102680	28990	131670	(539876)	(57776)	597652
1661	438162	26518	464680	-	3888	-	-	(30406)	-
1662	510355	-	-	-	-	-	-	-	-
1663	469211	-	-	-	-	-	-	-	-
1664	520719	-	-	-	-	-	-	-	-
1665	325826	-	-	-	-	-	-	-	-
1666	220765	7778	228543	52986E	305	(53291)	(273751)	(8083)	(281834)
1667	279358	10017	289375	-	1294	-	-	(11311)	-
1668	494603	-	-	-	-	-	-	-	-
1669	461179	-	-	-	-	-	-	-	-
1670	485888	-	-	-	-	-	-	-	-
1671	496758	-	-	-	-	-	-	-	-
1672	394876	-	-	-	-	-	-	-	-
1673	409639	32138	441777	-	1759	-	-	(33897)	-
1674	446954	35944	482898	116009	8122	124131	(562963)	(44066)	607029
1675	509954	40134E	550087	-	13889E	-	-	54023)	-
1676	511733	27316	539049	104286	11148	115434	(616019)	(38464)	654483

	1	2	3 (1+2)	4	5	6 (4+5)	7 (1+4)	8 (2+5)	9 (7+8)
1677	510313	38126	548439	-	13010	-	-	(51136)	-
1678	571678	30933	602611	142100	7996	150096	(713778)	(38929)	752707
1679	511739	-	-	124569	-	-	(636308)	-	-
1680	530938	41995	572933	-	13905	-	-	(55900)	-
1681	574722	-	-	-	-	-	-	-	-
1682	499747	41186	540933	-	12928	-	-	(54114)	-
1683	547756	-	-	122574	-	-	(670330)	-	-
1684	532521	-	-	-	-	-	-	-	-
1685	560854	55162	616016	141280	22139	163419	(702134)	(77301)	779436
1686	467945	-	-	-	-	-	-	-	-
1687	521136	-	-	-	-	-	-	-	-
1688	607070	-	-	-	-	-	-	-	-
1689	440115	-	-	-	-	-	-	-	-
1690	359223	-	-	-	-	-	-	-	-
1691	462748	-	-	137093	-	-	(599841)	-	-
1692	410285	-	-	-	-	-	-	-	-
1693	471581	-	-	-	-	-	-	-	-
1694	421084	-	-	-	-	-	-	-	-
1695	448807	-	-	-	-	-	-	-	-
1696	400404	-	-	-	-	-	-	-	-
1697	480392	-	-	-	-	-	-	-	-
1698	518987	41209	560196	-	-	-	-	-	-
1699	548566	38505	587071	-	17506	-	-	(56011)	-
1700	503635	38923	542558	-	-	-	-	-	-
1701	569207	79396	648603	-	-	-	-	-	-
1702	484886	78273	406613	-	-	-	-	-	-
1703	409221	47371	456592	109336	-	-	-	-	-
1704	506537	18953	525490	-	-	-	-	-	-
1705	462104	21471	483575	-	-	-	-	-	-
1706	412910	20259	433169	-	-	-	-	-	-
1707	374787	26007	400794	-	-	-	-	-	-
1708	473782	38916	512698	-	-	-	-	-	-
1709	516949	41146	558095	-	-	-	-	-	-
1710 >	413387	27147	440534	177799	26770	204569	(591186)	(53917)	645103
1721	-	36029	-	-	37702	-	-	(73731)	-
1722	649825	48023	697848	249948	-	-	(899773)	-	-
1723	649094	42273	691367	-	-	307432	-	-	998799
1724	614440	56954	671393	-	-	288458	-	-	959851
1725	670742	34445	705187	-	-	300868	-	-	1006055
1726	709962	46783	756745	-	-	357477	-	-	1114222
1727	671521	63195	734715	-	-	389394	-	-	1124109
1728	611898	40211	652109 [648701]	-	-	345364 [344651]	-	-	997473 [993352]
1729	734050	46171	780221	-	-	326374	-	-	1106595
1730	671317	63627	734944	237066	50191	287257	-	-	1022201

	1	2	3 (1+2)	4	5	6 (4+5)	7 (1+4)	8 (2+5)	9 (7+8)
1731	762718	62169	824887	-	-	288479	-	-	1113366
1732	659932	53252	713184	-	-	-	-	-	-
1733	726747	45222	771969	274293	51768	326061	(1001040)	(96990)	1098030
1734	668624	57775	726399	-	-	308484	-	-	1034883
1735	702854	45328	748182	-	-	351944	-	-	1100126
1736	733011	54956	787967	-	-	-	-	-	-
1737	678880	51092	729972	-	58872	-	-	(109964)	-
1738	668667	47363	716030	281745	-	-	(950412)	-	-
1739	704956	58427	763383	-	-	-	-	-	-
1740	-	-	850245	-	-	-	-	-	-
1741	-	-	696916	-	-	-	-	-	-
1742	-	-	715860	-	-	-	-	-	-
1743	-	-	789093	-	-	-	-	-	-
1744	-	-	723341	-	-	-	-	-	-
1745	-	-	782224	-	-	-	-	-	-
1746	-	-	803891	-	-	-	-	-	-
1747	-	-	686554	-	-	-	-	-	-
1748	-	-	718277	-	-	389550	-	-	1107827
1749	748667	(42816)	791483	357724	(46496)	404220	(1106391)	(89312)	1195703
1750	(712206)	51227	763433	(374509)	54791	429300	(1086715)	(106018)	1192733
1751	-	-	909882	-	-	341850	-	-	1251732
1752	-	-	815071	-	-	469050	-	-	1284121
1753	-	-	798903	-	-	442550	-	-	1241453
1754	-	-	808366	-	-	439900	-	-	1248266
1755	-	-	778519	-	-	461100	-	-	1239619
1756	-	-	825135	-	-	463750	-	-	1288885
1757	-	-	727242	-	-	474350	-	-	1201592
1758	-	-	636667	-	-	495550	-	-	1132217
1759	-	-	799931	-	-	495550	-	-	1295481
1760	-	-	754362	-	-	457952	-	-	1212314
1761	-	-	869046	-	-	450500	-	-	1319546
1762	-	-	780361	-	-	455800	-	-	1236161
1763	-	-	776497	-	-	482300	-	-	1258797
1764	-	-	923914	-	-	543250	-	-	1467164
1765	-	-	923914	-	-	540600	-	-	1464514
1766	-	-	937469	-	-	545900	-	-	1483369
1767	-	-	947338	-	-	519400	-	-	1466738
1768	-	-	983264	-	-	537950	-	-	1521214
1769	-	-	947762	-	-	569750	-	-	1517512
1770	-	-	943925	-	-	564450	-	-	1508375
1771	-	-	1025762	-	-	583000	-	-	1608762
1772	-	-	1110717	-	-	681776	-	-	1792493
1773	-	-	891738	-	-	639983	-	-	1531721
1774	-	-	929630	-	-	654368	-	-	1583998
1775	-	-	972966	-	-	658528	-	-	1631494
1776	-	-	1002537	-	-	712743	-	-	1715280

	1	2	3 (1+2)	4	5	6 (4+5)	7 (1+4)	8 (2+5)	9 (7+8)
1777	-	-	992454	-	-	690525	-	-	1682979
1778	-	-	981698	-	-	633204	-	-	1614902
1779	-	-	843262	-	-	537783	-	-	1381045
1780	-	-	970589	-	-	574390	-	-	1544979
1781	-	-	888916	-	-	527518	-	-	1416434
1782	-	-	965035	-	-	529285	-	-	1494320
1783	-	-	1095542	-	-	631948	-	-	1727490
1784	-	-	1215454	-	-	647891	-	-	1863345
1785	-	-	1192492	-	-	705935	-	-	1898427
1786	(1046224)	101780	1148004	-	-	686125	-	-	1834129
1787	(989365)	98584	1087950	-	-	729794	-	-	1817744
1788	(1053807)	127735	1181542	-	-	738714	-	-	1920256
1789	(1177870)	111699	1289570	664115	118230	782345	(1841985)	(229929)	2071914
1790	(963675)	118845	1082520	-	-	762985	-	-	1845505
1791	(1023589)	121182	1144771	651541	143498	795039	(1675130)	(264680)	1939810
1792	(1186384)	113924	1300308	546539	141274	687813	(1732923)	(255198)	1988121
1793	-	-	1208747	673553	156520	830073	-	-	2038820
1794	-	-	1129918	644120	103045	747165	-	-	1877082
1795	-	-	1339973	747731	15593	763323	-	-	2103297
1796	-	-	1263194	661860	16678	678538	-	-	1941732
1797	-	-	1289607	731107	17051	748159	-	-	2037765
1798	1049360	118603	1167963	725159	13545	738704	(1774519)	(132148)	1906667
1799	1196666	114917	1311583	789234	10703	799937	(1985900)	(125620)	2111520
1800	1425151	125841	1550992	791918	12250	804168	(2217069)	(138091)	2355160
1801	1198309	133563	1331872	612198	12607	624805	(1810507)	(146170)	1956678
1802	1305093	116600	1421693	808451	82694	891145	(2113544)	(199294)	2312838
1803	1338613	117459	1456072	792207	26942	819149	(2130820)	(144401)	2275221
1804	1536812	139361	1676173	793812	11030	804842	(2330624)	(150391)	2481015
			[1687082]			[788505]			[2475587]
1805	1464992	131366	1596358	830264	15782	846046	(2295256)	(147148)	2442404
1806	1558934	123710	1682644	811618	6924	818542	(2370552)	(130634)	2501186
1807	1404368	72674	1477042	770986	11331	782317	(2175354)	(84005)	2259359
1808	1640681	42403	1683084	923851	5455	929306	(2564532)	(47858)	2612390
1809	1428610	36143	1464753	858945	2580	861525	(2287555)	(38723)	2326278
1810	1675592	45720	1721312	982387	5087	987474	(2657979)	(50807)	2708786

Notes:

~ The original data, given in Newcastle chaldrons, have been converted into tons according to the ratios set out in appendix 3.

* The Exchequer year ran from Michaelmas to Michaelmas (29 September), and the early port books follow this convention. However, in 1604 the customs were farmed out for a number of calendar years running from Christmas to Christmas. From 1604 onwards the port books ran from Christmas (25 December) even after the last farm of the English custom expired in 1671, but changed in 1753 to the 5 January. For ease of presentation, data have been allocted to the calendar year (new style) in which the

greater part of the accounting year fell; that is, it is assumed that the year began on 1 January throughout.

E Denotes estimated total.

EA Estimated total, which includes allowance for missing entries in original source.

^ Probably an underestimate.

[] Figures in square brackets represent totals drawn from colliery vend data and mapped for 1728 and 1804 in figures 2.3 and 2.4 respectively.

() Deduced totals, i.e., quantities resulting from addition or subtraction of values given in sources.

- No data available

Notes on sources:

On the basis of available data, it is not possible to make any meaningful and consistent allowance for the 'overmeasures' or 'gift coals' which escaped entry in the shipping records. The Wear proprietors were generally believed to give more than those on the Tyne and in consequence the term 'Sunderland measure' was quite widely used in the region when anyone wished to refer to a particular act of generosity. In fact, in 1728 Sunderland owners were said to give one chaldron free in every eight. NEIM 18/GAPB(views)/23. For 'gift coals' on the Tyne which could exceed even this amount, see chapter 4, note 9. Because overseas shipments were heavily taxed in comparison with coastal, they may have been especially prone to under-recording; and the occasional practice of clearing a ship for an English port and then sending it abroad only served to confuse matters further. See Moller 1933, 363; Kent 1973, 99-100; Hall 1933, 100.

For the period 1698 to 1710, Dendy (Hostmen's Records, 260) purports to give Newcastle coastal vend by relying upon the data in the Hornsby manuscripts in the possession of the Duke of Northumberland. However, I think it more likely that these data relate to the total vend of the Tyne; that is, the coastal and overseas vends combined. This is the only way of explaining the lower figures for the coastal vend given in both the Cotesworth manuscripts and the port books which I have examined.

The following sources have been used to compile the above table. In the listing, 'C' relates to coastal vend, 'O' to overseas, and 'CO' to the combined vends when the two components, coastal and overseas, are not separately distinguished in the sources.

		Dates covered	
Newcastle:	C	1550, 1566, 1592-8, 1608-9, 1612, 1616, 1622-7, 1634, 1638, 1652, 1655, 1658-90, 1695-8, 1700, 1706-9, 1733.	Nef 1932, II, appendix D
		1562, 1683, 1691, 1703, 1710, 1722, 1730, 1738, 1749.	Moller 1933, 724-32
		1608-9, 1612-18, 1621-26, 1630, 1634, 1638.	Hall 1933, 108-9
		1661-1710	Hostmen's Records, 260-1
		1661-1710.	NEIM Watson 8/19
		1698-1710	GPL Cotesworth box CH/B4
		1722-39	NEIM 18/GAPB(views)/21,68
		1789	PRO E190 289/1
		1800-10	Sykes 1829, 6

O	1592-8, 1608-9, 1619, 1626, 1630, 1633-4, 1637, 1639-40, 1733.	Nef 1932, II, appendix D
	1608-9, 1612-19, 1626, 1630, 1633-4 1637, 1640.	Hall 1933, 108
	1661, 1666, 1673, 1682, 1699, 1710, 1721, 1730, 1737, 1750.	Moller 1933, 746-55
	1722-39	NEIM 18/GAPB(views)/21,68
	1789	PRO E190/289/4
	1800-10	Sykes 1829, 6
CO	1562, 1575, 1643, 1644-5	Nef 1932, II, app. D
	1608	Hall 1933, 108
	1603, 1616, 1622, 1627	Hostmen's Records, 44-5, 67, 71,74
	1710	E. Hughes 1952, 159
	1723-66, 1784-6	Hostmen's Records, 260-1
	1722-1800	Ashton and Sykes 1928, 249-51
	1722-1806	NEIM Watson 8/19
Sunderland: C	1612, 1616, 1622-4, 1626, 1634, 1658-60, 1674, 1676, 1678-9, 1685, 1733.	Nef 1932, appendix D
	1609, 1612, 1615-16, 1621-6, 1634, 1638	Hall 1933, 109, 215
	1612, 1644, 1655, 1666, 1673, 1683, 1691, 1703, 1710, 1722, 1730, 1738, 1749.	Moller 1933, 349, 733-40
	1789	PRO E190/289/1
	1791-9	NEIM Easton 17/4
	1800-10	Sykes 1829, 6
O	1594, 1616-9, 1626, 1633-4, 1637, 1639-40, 1658-61, 1666-7, 1674-8, 1680, 1685, 1733	Nef 1932, appendix D
	1609, 1612-19, 1626, 1633-4, 1639-40	Hall 1933, 112, 339
	1661, 1667, 1673, 1682, 1699, 1710, 1721, 1730, 1737, 1750.	Moller 1933, 755-60
	1789	PRO E190/289/4
	1791-9	NEIM Easton 17/4
	1800-10	Sykes 1829, 6
CO	1704-10	Mitchell 1919, 140-1
	1710	E. Hughes 1952, 159
	1727-31	SPLum BA/2/1-23
	1731	SPLum BA/5/24
	1760, 1772-1809	NEIM Watson 8/29

In most instances where dates covered by one source overlap with those of another the figures given are identical or nearly so. Where there is a significant difference perference has been given in the table to whichever appears the more reliable or likely. For any single year this is usually the higher or highest figure cited or calculated. Clearly, since the vend was subject to taxtation, its size was more likely to be understated than exaggerated.

Appendix 5

VEND OF WORKING SEASALE COLLIERIES c.1636, 1728 AND 1804. OUTPUT OF DURHAM LANDSALE COLLIERIES c.1636, c.1728 and c.1804.

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a: VEND (AND USABLE OUTPUT) OF WORKING SEASALE COLLIERIES, c.1636

As noted in appendix 1, little specific information survives on the output performances of individual collieries up to 1680; reliance must be placed instead upon such surrogate measures as tax assessments, survey valuations, and, to some extent, qualitative evaluations. If these are to be given meaning as vend equivalents, they must occur in sufficient number and be of a sufficient quality to allow the aggregate colliery vend recorded in the port books (appendix 4) to be broken down into appropriate shares. Only in 1636 do the necessary conditions exist for undertaking such an exercise and even then some difficulties of interpretation remain. For the Durham seasale collieries on the south bank of the Tyne, where around 261,000 tons, or seventy per cent, of the total Tyne vend originated on the eve of the Civil War,^ the ship money assessment of 1636 provides a clear indication of the ranking of collieries according to their 'value'. Less clear, unfortunately, is the precise meaning of the term 'value'. It may simply refer to the profitability of each colliery. A more likely explanation, however, is that it first and foremost reflects, albeit imperfectly, the information most readily discoverable by a contemporary investigator: the size of the undertaking. But is this to be regarded as the amount of coal produced for the vend alone (effectively the better quality coal only); or is it the total output of the mine, including its seasales, landsales and even other usable quantities of coal such as might be consumed by colliery equipment or allowed to workmen at reduced rates? In other words, does the valuation take into account everything but 'waste'? The most likely interpretation is surely that the assessment was based upon that part of the output which was known about and had already in the past attracted taxation: the vend. In fact, the table below provides, *pro rata*, both vend and output totals for the twenty-two south-bank seasale collieries covered by the survey, as well as for seventeen others, nine on the Tyne north bank and eight on the Wear, which are also believed to have been working in 1636, and for which different information sources have had to be used in making performance estimates. It is, of

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^ For further information on the relative contributions of the south- and north-bank collieries to the total vend of the Tyne in c.1636 and at other times, see chapter 2, p. 37, including note 16.

course, most unlikely that in practice all seasale collieries vended the same proportion (about three-quaters) of their total output. Indeed, in an attempt to circumvent this difficulty, symbols are employed in figure 2.2 in such a way as to allow for a range of values at any particular location, whether depicting assumed vend and output totals for 1636, or attempting to measure the achievable performance of all collieries -seasale and landsale- within a period of twenty years on either side of 1636.

It will be noted in the table below that a small amount of coal originating on the Tyne north- and south-banks is entered as 'unspecified'. This quantity results in part from the rounding of numbers when calculating estimates but principally serves as an allowance for a small number of minor collieries which, though not recorded for 1636, might well have been vending then.

Leading to NORTH BANK of TYNE

		Assumed VEND in tons 1636	*Assumed OUTPUT in tons 1636*	*Estimated achievable VEND per annum within 20 years of 1636*	*OUTPUT*
N1	Wylam			*3900*	*5200*
N2	Throckley	3750	*5000*	*3750*	*5000*
N3	Walbottle			*3000*	*4000*
N4	Whorlton			*2100*	*2800*
N5	Newburn	16800	*22400*	*18000*	*24000*
N6	Denton	18000	*24000*	*18000*	*24000*
N7	Brunton			*2100*	*2800*
N8	Fenham			*2100*	*2800*
N9	Benwell	18000	*24000*	*18000*	*24000*
N10	Elswick	18000	*24000*	*18000*	*24000*
N11	Nun's Moor	16800	*22400*	*18000*	*24000*
N12	Walker			*3000*	*4000*
N13	Murton	3750	*5000*	*3750*	*5000*
N14	Monkseaton			*3000*	*4000*
N15	Earsden			*3000*	*4000*
N16	Preston	3750	*5000*	*3750*	*5000*
N17	Tynemouth	3750	*5000*	*3750*	*5000*
Unspecified		9400	*11200*		
NORTH BANK TOTAL		112000 (30% Tyne vend)	*148000 (30% Tyne output)*		

Leading to SOUTH BANK of TYNE

		'Value' in 1636 in £s	Assumed VEND in tons 1636~	Assumed OUTPUT in tons 1636^	Estimated achievable VEND per annum	OUTPUT within 20 years of 1636
S2	Chopwell				3900	5200
S3	Crawcrook	500	7500	10000	9000	12000
S4	Stella Grand Lease	1700	25500	34000	33000	44000
S5	Stella Glebe Lands	300	4500	6000	6000	8000
S6	Stella Freehold	500	7500	10000	10500	14000
S7	Winlaton				18000	24000
S8	Blaydon	2200	33000	44000	36000	48000
S9	Gibside 1/Blaxstons	650	9750	13000	10500	14000
S10	Tanfield Moor				2100	3000
S11	Fawdon Field	200	3000	4000	3900	5200
S12	Riding Field	300	4500	6000	6000	8000
S13	Clockburne	300	4500	6000	6000	8000
S14	Greenlaw				10500	14000
S15	Whickham Gr'd Lease	4500	67500	90000	75000	100000
S16	Lingyfield	300	4500	6000	6000	8000
S17	Fugerfield	300	4500	6000	6000	8000
S18	Brinkburne				3900	5200
S19	Blackburn	300	4500	6000	9000	12000
S20	Bewicke's East Field	200	3000	4000	3000	4000
S21	Farnacres	800	12000	16000	15000	20000
S22	Ravensworth	1200	18000	24000	18000	24000
S23	Urpeth				1200	1600
S24	Hodgson's Field	200	3000	4000	3900	5200
S25	Wilson's Field	200	3000	4000	3900	5200
S26	Saltwellside	200	3000	4000	3900	5200
S27	Shipcote	800	12000	16000	15000	20000
S28	Chowdean	300	4500	6000	6000	8000
S29	Gateshead Park	300	4500	6000	10500	14000
S30	Birtley				2100	2800
S31	Felling				3900	5200
S32	Jarrow				3000	4000
Unspecified			14000	21000		
SOUTH BANK TOTAL		16350	261000	346000		
			(70% Tyne vend)	(70% Tyne output)		

~ £1 'value' equivalent to 15 tons
^ £1 'value' equivalent to 20 tons

Leading to river WEAR

		Assumed VEND in tons 1636	*Assumed OUTPUT in tons 1636*	*Estimated achievable VEND per annum*	*OUTPUT within 20 years of 1636*
W1	Chester 1	4500	*6000*	*9000*	*12000*
W2	Chester 2	3000	*4000*	*3000*	*4000*
W3	Harraton	10000	*13350*	*10500*	*14000*
W4	North Biddick	2500	*3330*	*3750*	*5000*
W5	Offerton			*3000*	*4000*
W6	Penshaw 1	3500	*4660*	*3750*	*5000*
W7	Rainton	3500	*4660*	*3750*	*5000*
W8	Lambton	15000	*20000*	*30000*	*40000*
W9	Lumley	15000	*20000*	*30000*	*40000*
	WEAR TOTAL	57000	*76000*		
	TYNE AND WEAR GRAND TOTAL	430000	570000		

Sources: DCL Hunter 22/17/'A Particular Note ...' [1636]; and other references cited in appendix 6:

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b: VEND OF WORKING SEASALE COLLIERIES IN 1728

Leading to NORTH BANK of TYNE

		Tons	% share of Tyne	% share of Tyne + Wear
N10	Elswick	17925		
N22	Jesmond	31800		
N24	Heaton	12272		
N25	Byker	26500		
	NORTH BANK TOTAL	88497	13.6	(8.9)

Leading to SOUTH BANK of TYNE

		Tons	% share of Tyne	% share of Tyne + Wear
S2	Clavering Stella	3763		
S4	Stella Grand Lease	26600		
S8	Blaydon Main	8480		
S10	Tanfield Moor	43990		
S19	Blackburn	37100		
S22	Ravensworth	26500		
S30	Birtley	39750		
S36	Lands	3392		
S38	Byermoor	13250		
S42	Bucksnook	54643		
S53	Davison's Tanfield	31800		
S54	Dawson's Tanfield	31800		
S56	Beckley	87450		
S57	Northbanks	19538		
S59	Causey	31800		
S64	Burdon Moor	37100		
S70	Gateshead Fell	37100		
S72	Eighton	26148		
	SOUTH BANK TOTAL	560204	86.4	(56.4)
ALL TYNE TOTAL (as identified above)		648701	100.0	(65.3)
ALL TYNE TOTAL (as recorded in Port Books)		652109		

Leading to river WEAR

		Tons
W1/W2	Chester 1 and 2	42400
W4	North Biddick	22713
W6	Penshaw (Wharton's)	30286
W7	Rainton (Wharton's)	21200
W8	Lambton	37250
W9	Lumley	27258
W10	Hedworth's Chester	27258
W13	(Hedworth's) Fatfield	27258
W15	Penshaw (Smith's)	30286

W16	South Biddick	42400		
W17/W18	Newbottle	21200		
W19	Morton (Smith's)	15142		
WEAR TOTAL (as identified above)			344651	(34.7)
WEAR TOTAL (as recorded in Port Books)			345364	
GRAND TOTAL for TYNE AND WEAR (as above)			993352	(100.0)
GRAND TOTAL for TYNE & WEAR (as in Port Books)			997473	

Note: The original figures are given in chaldrons (of 53 cwt) and some rounding of numbers appears to have taken place; thus the converted quantities as stated above must be regarded in most cases as very sound estimates rather than precise measures of what was actually vended in 1728.

Sources:
Tyne: NEIM 18/GAPB; with additional information from NRO 725/F1-6; DUPD CC/notitia 54001; and, mainly for corroboration, other sources cited in appendix 6
Wear: NEIM 18/GAPB, with additional information from DUPD CC/notitia 54001; DUPD (PK) DC audit & contract books; SPLum BA/5/24; and, mainly for corroboration, other sources cited in append. 6.

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c: VEND OF WORKING SEASALE COLLIERIES IN 1804

Leading to NORTH BANK of TYNE

		Tons	% share of Tyne	% share of Tyne + Wear
N1	Wylam	29280		
N3/N29	Walbottle & Holywell	41064		
N6	Baker's Main	9349		
N9	Benwell	82781		
N12	Walker	99807		
N13	Murton	22424		
N24	Heaton	85939		
N32	Montague Main	33843		
N34	West Kenton	22056		
N35	East Kenton	46309		

N42	Long Benton 2	57619		
N45	Bigges Main	79699		
N49	Wallsend	159350		
N50	Willington	106959		
N53	Flatworth	29677		
N55	Percy Main	97128		
	NORTH BANK TOTAL	1003284	59.5	(40.5)

Leading to SOUTH BANK of Tyne

S3	Crawcrook (Crofts Main)	24468		
S10	Tanfield Moor	45471		
S29	Tyne Main (Gateshead Park)	43550		
S31	Felling	73273		
S35	Garesfield	13412		
S45/46	Pontop (Pike)	85563		
S49	South Moor	36978		
S57	Marley Hill	16867		
S70	Sherrif Hill (Gateshead Fell)	45212		
S71	Team	58308		
S74	Whitefield	33909		
S80	Low Moor	14596		
S82	Hebburn	112511		
S83	Temple Main (Jarrow)	79680		
	SOUTH BANK TOTAL	683798	40.5	(27.6)
ALL TYNE TOTAL (as identified above)		1687082	100.0	(68.1)
ALL TYNE TOTAL (as in Port Books)		1676173		

Leading to river WEAR

		Tons
W3	Harraton	45287~
W6	Wharton Main	36466^
W7	Rainton	35283^
W8	Lambton	32330~
W9	Lumley	38771~*
W12/13	Fatfield	33472
W14	Oxclose Washington	43892
W16	South Biddick	33984
W17/W18	Newbottle	37288
W22	Beamish	61183

W23	Twizzell	32531
W24	Pelton Fell	37251~
W25	Urpeth with Birtley	44756
W27	Leefield 1	12142
W28	Leefield 2	18696
W30	Birtley Fell	45326
W31	Washington Usworth	43953
W32	Harraton Outside	27369
W33	Peareth's Main	17500
W34	Penshaw	51564~
W35	Eden Main	34100^
W36	Bourn Moor	25361~

WEAR TOTAL	788505	(31.9)
WEAR TOTAL (as in Port Books)	804842	
GRAND TOTAL for TYNE AND WEAR (as above)	2475587	(100.0)
GRAND TOTAL for TYNE AND WEAR (Port Books)	2481015	

Notes:

^ The quantities vended by these three collieries, all worked by Tempest, are recorded only in aggregate form for 1804, but qualitative information for that date and a surviving breakdown of quantities for the period 1799-1803 (in NEIM Buddle 5/58-65) allows a reliable estimate to be made, as above, of the shares or amounts contributed by each colliery.

~ The aggregate vend of the six collieries worked by the Lambtons (of Lambton) was 230,563 tons in 1804. With the exception of Lumley, figures for individual collieries are not given for that date but survive for years on either side (in NEIM Buddle-Atkinson 34/8) and so these have been consulted in order to calculate appropriate proportions for the 1804 vend. It should be borne in mind that these estimates, though believed to be good ones, do not allow for sudden and largely unpredictable marked variations in annual performance, which we know could sometimes affect individual collieries. See, for instance, the examples given in appendix 13.

Sources: Tyne: NEIM Buddle 14; with additional information from Buddle 8, 21 and 29, and 35(II); DRO Joint Coal Owners' Association 263/not numbered; and, mainly for corroboration, other sources cited in appendix 6.
Wear: NEIM Watson 8/20; with additional information from SPLum BA/16/1; NEIM Buddle 8/44; NEIM Buddle-Atkinson 34; and, mainly for corroboration, other sources cited in appendix 6.

d: OUTPUT OF DURHAM LANDSALE COLLIERIES, c.1636, c.1728 AND c.1804

The output estimates for Durham landsale collieries as depicted in figures 2.2 to 2.4 are derived from the sources described more fully in appendix 6. For c.1636 and c.1728 surrogate measures have had to be used in most cases. Only for c.1804 is there anything approaching a comprehensive record of output. During the first decade of the nineteenth century, Bailey (1810, 23-7) assembled the following information on the performance of thirty-five landsale mines:

		Tons			Tons
L7	Consit	980	L54	Bishop Auckland	6160
L9	Lanchester	2100	L56	Byermoor	7700
L10	Charlaw	2800	L57	Cow Close	1820
L14	Cocken	1400	L58	Medomsley	8400
L24	Coxhoe	11200	L59	Seggerston	2800
L25	Ferryhill	4340	L60	Cornsey	3220
L29?	Birchleys	2800	L61	Kepier	9800
L30	Bitchburn	3640	L62	Durham	6160
L32	Eldon	3640	L63	Crow Trees	5600
L34	Evenwood/Ramshaw	4620	L64	Coppy Crooks	6160
L36	Railey Fell	18620	L65	Brusleton	2800
L37	Cockfield Fell	11200	L66	Woodhouse	11200
L38	Norwood	4340	L67	Witton Park	12320
L39	Buttleknowle	12320	L68	Lunton Hill	2100
L43	Helme Park	4620	L69	Woodlands	4620
L44	Thornley	3080	L70	West Pits	6160
L46	Whittle	7000	L71	Woodyfield	3080
L49	Pittington	7000			
Sub-total		105700	Sub-total		100100
GRAND TOTAL FOR DURHAM LANDSALE COLLIERIES					205800

Appendix 6

WORKING COLLIERIES, 1551-1810

a: SEASALE COLLIERIES: ANALYSIS BY PERIODS OR DECADES

	1551 - 1680						1681 - 1740						1741 - 1810							
COLLIERY (Code, name and sub-district)^	1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80		1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES (see pp.201-3 for details to which below numbers refer)
Tyne north bank																				
N1 WYLAM	w	-	+	+	-	-	+	X	?	-	-	-	?	?	X	X	X	X	X	5,38,81,82,86,89,90 92,93,94
N2 THROCKLEY	w	-	-	X	+	-	+	X	?	-	-	-	-	+	X	X	-	-	-	26,38,81,82,106
N3 WALBOTTLE	w	-	-	+	+	X	+	X	?	-	-	-	?	?	?	X	X	X	X	38,39,81,86,87,89,90 92,93,94
N4 WHORLTON	w	-	-	-	+	X	+	+	?	-	-	-	-	-	-	-	-	-	-	40,106
N5 NEWBURN	w	+	X	+	+	X	+	?	-	-	-	-	-	-	-	-	-	-	-	38,40,106
N6 DENTON	w	+	X	X	X	+	?	X	?	-	-	-	-	-	X	X	X	X	X	24,25,38,81,86,87,89 90,92,94,106
N7 BRUNTON	w	-	-	-	?	X	-	-	-	-	-	-	-	-	-	-	-	-	-	40
N8 FENHAM	w	-	-	+	X	?	+	X	-	-	-	-	-	-	X	-	-	-	-	27,38,81,90,106
N9 BENWELL	w	X	X	X	X	+	+	X	X	?	-	-	-	-	-	X	X	X	X	5,23,38,43,45,56,63 72,80,86,87,90,93,97 106
N10 ELSWICK	w	+	X	X	+	X	?	-	-	X	X	X	?	-	-	-	-	-	X	5,17,38,39,56,60,61 80,86,87,93,106
N11 MUN'S MOOR	w	-	-	+	+	X	-	-	-	-	-	-	-	-	-	-	-	-	-	27,41
N12 WALKER	e	-	-	?	X	-	-	-	-	-	-	-	-	-	X	X	X	X	X	42,71,81,83,86,87,89 90,92,93,94
N13 MURTON	e	-	-	X	-	-	-	-	-	-	-	-	-	-	-	?	?	X	X	86,87,90,93,105,112
N14 MONKSEATON	e	+	-	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105
N15 EARSDEN	e	+	-	?	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105

PERIODS OR DECADES

			1551 - 1690							1691 - 1740						1741 - 1810					
COLLIERY			1551		1621		1651	1691		1701		1721		1741		1761		1781		1801	SOURCES
(Code, name and			-1600	1601	-40	1641	-80	-90	1691	-10	1711	-30	1731	-50	1751	-70	1771	-90	1791	-10	
sub-district)^				-20		-60			-1700		-20		-40		-60		-80		-1800		
N16	PRESTON	e	X	+	+	?	?	?	?	-	-	-	-	-	-	-	-	-	-	-	105
N17	TYNEMOUTH	e	X	X	X	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	5,81,82,105
N18	WHORLTON MOOR	w	-	-	-	-	?	-	-	-	-	?	X	-	-	-	-	-	-	-	40,60
N19	BELL'S CLOSE	w	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	38
N20	SCOTSWOOD	w	-	-	-	-	-	?	+	?	-	-	-	-	-	-	-	-	-	-	55,56
N21	(OLD) KENTON	w	-	-	-	-	?	+	X	X	?	-	D	D	-	-	-	-	-	-	56,106
N22	JESMOND	w	-	-	-	-	-	+	X	X	+	X	X	-	-	-	-	-	-	-	38,56,60,61,106
N23	LONG BENTON 1	e	-	-	-	-	-	-	-	-	-	-	+	X	X	X	-	-	-	-	80,85,99,106,161
N24	HEATON	e	-	-	-	-	-	-	X	+	?	X	?	?	?	?	?	X	X	X	38,60,61,80,81,82,86 90,94,99,106,108,155 166
N25	BYKER	e	-	-	-	-	-	?	?	?	?	X	X	X	+	X	?	X	X	+	38,60,61,81,82,86,90 94,106
N26	ST. LAWRENCE	e	-	-	-	-	-	+	?	-	-	-	-	-	-	-	-	-	-	-	38
N27	HEDDON	w	-	-	-	-	-	-	-	-	-	-	-	-	+	?	-	X	X	-	86,89,94,106
N28	GREENWICH MOOR	w	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	?	79,82,86,89,92,94
N29	HOLYWELL MAIN	w	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	79,82,87,89,90,92,93 94
N30	LEMINGTON	w	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	111
N31	WEST DENTON	w	-	-	-	-	-	-	-	-	-	-	-	X	+	-	-	X	X	-	80,86,89,93
N32	MONTAGU MAIN	w	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	82,86,87,90,92,93,94 98
N33	EAST DENTON	w	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	80,83,84
N34	WEST KENTON	w	-	-	-	-	-	-	-	-	-	-	D	D	-	-	X	X	X	X	86,87,90,93,98

PERIODS OR DECADES

			1551 - 1680						1681 - 1740						1741 - 1810							
COLLIERY			1551		1621		1661	1681		1701		1721		1741		1761		1781		1801		SOURCES
(Code, name and			-1600	1601	-40	1641	-80	-90	1691	-10	1711	-30	1731	-50	1751	-70	1771	-90	1791	-10		
sub-district)^				-20		-60			-1700		-20		-40		-60		-80		-1800			
N35	EAST KENTON	w	-	-	-	-	-	-	-	-	-	-	D	D	-	-	-	-	?	X		80,87,93
N36	FAWDON	w	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	-	X		80,106
N37	EAST BRUNTON	e	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	-	-		80
N38	WEST BRUNTON	e	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	-	-		80
N39	DINNINGTON	e	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	-	-		80
N40	WIDEOPEN	e	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	-	-		80
N41	WESTSLADE	e	-	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	-	-		80
N42	LONG BENTON 2	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	81,82,86,89,92,93,99
N43	KILLINGWORTH	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	80,86,87,93,99,106
N44	BIGGES MAIN 1	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	89,90,94,106
N45	BIGGES MAIN 2	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	86,87,90,92,93
N46	LAWSON'S MAIN	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	90,92
N47	WALKER HILL	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	86,94
N48	ST. ANTHONY	e	-	-	-	-	-	-	-	-	-	-	D	D	D	D	X	X	X	X	-	80,81,89,92,94,106
N49	WALLSEND	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	86,87,89,90,92,93,94 127
N50	WILLINGTON	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	79,80,86,87,89,90,92 93,94,96,106
N51	BACKWORTH	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	139
N52	SHIREMOOR	e	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-		89,92,94,105
N53	FLATWORTH	e	-	-	?	-	-	-	-	-	-	-	-	-	-	?	-	X	X	X		79,86,87,90,92,93,94 105
N54	CHIRTON	e	-	-	?	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X		81,82,86,105
N55	PERCY MAIN	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X		86,87,93

PERIODS OR DECADES

COLLIERY (Code, name and sub-district)^	1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES
Tyne south bank																			
S1n HEDLEY FELL w	-	-	-	-	?	?	X	-	-	-	-	X	+	X	X	X	-	-	38,55,81,82,86,111 135
S2 CHOPWELL/ CLAVERING STELLA w	-	X	+	X	+	+	X	X	X	X	X	D	-	-	-	-	X	X	2,5,38,55,56,59,60,61 78,132,135,190
S3 CRAWCROOK w	-	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	X	X	6,30,52,66,87,90,91 92,93,114,116,146
S4 STELLA GRAND LEASE w	+	+	X	X	X	X	X	X	+	X	X	-	-	-	-	-	X	X	6,9,13,19,21,22,38,51 56,55,60,61,74,98,115 116,122
S5 STELLA GLEBE LANDS w	-	-	X	-	-	-	?	+	+	+	-	-	-	-	-	-	-	-	6
S6 STELLA FREEHOLD w	-	-	X	-	-	-	X	X	+	X	-	X	-	-	-	-	-	-	6,50,55,56,60,115?
S7 WINLATON w	X	X	?	?	-	-	-	X	+	X	X	-	-	-	-	-	-	-	1,28,56,59,60,61,80 125,169
S8 BLAYDON MAIN w	-	+	X	+	+	+	X	X	+	X	-	-	-	-	-	X	X	-	6,38,56,60,61,86,87 89,92,94
S9 GIBSIDE 1 w	-	-	X	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	6,80,152
S10/L5 TANFIELD MOOR w	-	?	?	?	?	+	X	X	+	X	X	X	+	X	X	X	X	X	13,21,22,38,56,60,61 55,80,81,82,86,87,89 90,92,93,94,111;119 122,123,139,140,189
S11 FAWDON FIELD w	-	?	X	X	+	?	+	X	?	X	-	-	-	-	-	-	-	-	6,14,16,56,87,148, 165,186
S12 RIDING FIELD w	-	?	X	X	+	?	+	X	?	X	-	-	-	-	-	-	-	-	6,14,16,56,150,187

PERIODS OR DECADES

			1551 - 1680								1681 - 1740								1741 - 1810									
COLLIERY (Code, name and sub-district)^			1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES
S13	CLOCKBURNE	w	-	?	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,14,16
S14	GREENLAW	w	+	X	X	X	?	-	-	-	-	-	-	-	-	-	-	-	-	-	5,14,16,28,53,64,69
S15	WHICKHAM GRAND LEASE	w	X	X	X	X	X	X	X	X	?	-	-	-	-	-	-	-	-	-	4,6,7,9,11,12,13,14 16,22,47,48,49,80,96 121,150,152,163
S16	LINGYFIELD	w	?	+	X	X	?	-	-	-	-	-	-	-	-	-	-	-	-	-	6,14,16,69,103,121
S17	FUGERFIELD	w	X	+	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,14,16,69,70,121
S18	BRINKBURNE	w	+	X	X	X	+	-	-	-	-	-	-	-	-	-	-	-	-	-	5,8,14,16,18,54,69, 148
S19	BLACKBURN	w	-	+	X	X	X	X	X	X	+	X	X	-	-	-	-	-	-	-	6,9,13,21,22,36,56,61 80,99,122,137
S20	BEWICKE'S EAST FIELD	w	?	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,14,16,69
S21	FARNACRES	w	?	+	X	X	?	?	-	-	-	-	D	D	D	D	-	-	-	-	6,14,16,80,183
S22	RAVENSWORTH	w	X	X	X	X	X	+	X	X	+	X	X	X	+	X	X	X	X	?	6,29,55,56,60,61,65 80,91,96,99,116,155
S23/W25/L4	URPETH	w	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	X	9,21,91
S24	HODGSON'S FIELD	e	?	+	X	X	+	-	-	-	-	-	-	-	-	-	-	-	-	-	6,15,36
S25	WILSON'S FIELD	e	?	+	X	+	+	X	X	?	-	-	-	-	-	-	-	-	-	-	6,15,36,55,56,87,150 182,190
S26	SALTWELLSIDE	e	?	+	X	+	+	-	-	-	-	-	-	-	-	-	?	-	-	-	6,15,87

PERIODS OR DECADES

			1551 - 1680						1681 - 1740						1741 - 1810							
COLLIERY			1551		1621		1661	1681		1701		1721		1741		1761		1781		1801	SOURCES
(Code, name and sub-district)^			-1600	1601 -20	-40	1641 -60	-80	-90	1691 -1700	-10	1711 -20	-30	1731 -40	-50	1751 -60	-70	1771 -80	-90	1791 -1800	-10	
S27	SHIPCOTE	e	?	+	X	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	6,15
S28	CHOWDEAN	e	-	-	X	+	-	-	-	X	-	-	-	-	-	-	-	-	-	-	6,15,36,56
S29	GATESHEAD PARK	e	X	X	X	X	X	X	X	X	-	-	-	-	-	-	X	X	X	X	5,6,8,9,13,15,16,22 39,49,55,56,80,86,87 89,90,91,93,101,112 137,163,168
S30/W30/L3	BIRTLEY	e	-	-	?	?	?	?	?	+	+	X	X	-	-	-	-	-	-	-	38,56,60,61,80,122, 151
S31	FELLING	e	-	-	?	+	+	+	X	X	-	X	X	+	+	X	X	X	X	X	38,55,56,82,86,87,90 91,92,93,94,116,175
S32	JARROW	e	-	+	?	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
S33	DERWENT	w	-	-	-	-	-	?	?	X	+	-	-	-	-	-	-	-	-	-	80
S34	HOLLINSIDE	w	-	-	-	-	-	-	-	+	+	-	X	-	-	-	-	-	-	-	80,96,150
S35	GARESFIELD	w	-	-	-	-	-	?	X	?	-	-	-	-	+	X	-	?	?	X	38,82,86,87,90,91,93, 111,179,180
S36	LANDS	w	-	-	-	-	-	-	-	-	+	X	X	-	-	X	-	-	-	-	61,82
S37	AXWELLS	w	-	-	-	-	-	+	+	-	-	-	X	-	-	-	-	-	-	-	38,96,152
S38/L55	BYERMOOR	w	-	-	-	-	?	+	X	X	+	X	X	-	-	-	-	-	-	?	55,56,60,61,80,186
S39	CROOKBANK	w	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	111,112,178
S40	BURNOPFIELD	w	-	-	-	-	-	-	-	-	-	X	X	X	X	?	-	-	-	-	60 +
S41	BRYAN'S LEAP	w	-	-	-	-	-	-	-	-	-	+	X	X	X	-	-	-	-	-	177
S42	BUCKSNOOK	w	-	-	-	-	-	-	+	X	X	X	+	-	-	-	-	-	-	-	56,60,61,80,96,116 116,154,157,164,176

PERIODS OR DECADES

			1551 - 1680								1681 - 1740								1741 - 1810								
COLLIERY (Code, name and sub-district)^			1551 -1600		1601 -20	-40	1621 -60	-80	1641 -90	1661 -1700	1681 -10	1691 -20	1701 -30	1711 -40	1721 -50	1731 -60	1741 -70	1751 -80	1761 -90	1771 -1800	1781 -10	1791	1801				SOURCES
S43	EWHURST HEAD	w	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-						60,80,135,149
S44	COLLIERLY	w	-	-	-	-	-	-	-	-	-	-	X	X	+	X	X	X	X	X							80,154,159,181,188, 189
S45	PONTOP	w	-	-	-	-	-	-	?	+	+	-	X	X	+	X	X	X	X	X							38,81,82,86,87,89,94 112,179
S46	LANCHESTER COMMON 1	w	-	-	-	-	-	-	-	-	-	-	+	+	+	X	X	X	X	X							80,81,82,86,87,89,90 91,92,93,94,99,122 137,145,157,189
S47	LANCHESTER COMMON 2	w	-	-	-	-	-	-	-	-	-	-	X	+	+	-	X	X	X	X							80,92,99,101,122,137 145,157
S48/L6	GREENCROFT	w	-	-	-	-	-	-	-	-	-	-	X	?	-	-	-	-	-	-							77,80
S49	SOUTH MOOR 1	w	-	-	-	-	-	-	-	-	-	-	X	X	+	X	X	X	X	X							80,81,82,86,87,89,90 91,92,93,94,99,112 122,137,145,156,189
S50	SOUTH MOOR 2	w	-	-	-	-	-	-	-	-	-	-	X	?	?	-	X	X	X	X							80,86,87,89,90,99,112 122,137,156,189
S51	BUSHBLADES	w	-	-	-	-	-	-	-	-	-	-	X	X	+	X	X	X	X	-							59,80,81,87,96,111 112,117,140,189
S52	TANFIELD LEIGH	w	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-							59,61?,80,137,184
S53	DAVISON'S TANFIELD	w	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-							61,80,96,99,154;185
S54	DAWSON'S TANFIELD	w	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-							80,96,99,154,185
S55	BARCUS CLOSE	w	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-							111,112,178
S56	BECKLEY	w	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-							77,80,96,99,154

PERIODS OR DECADES

			1551 - 1680						1681 - 1740						1741 - 1810							
COLLIERY (Code, name and sub-district)^			1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES
S57	NORTHBANKS	w	-	-	-	-	-	X	X	X	X	X	X	?	+	X	X	X	X	X	38,55,56,60,61,80,81 82,86,87,90,91,92,93 96,99,148,149
S58	ANDREW'S HOUSE	w	-	-	-	-	-	-	-	-	-	-	X	X	?	X	X	-	-	-	80,81,82,96,99,160
S59	CAUSEY	w	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	61,80,96,99,154,157 185
S60	PARK HEAD	w	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	80,96,99,157
S61	SHIELD ROW	w	-	-	-	-	-	-	-	-	-	-	X	X	?	X	-	-	-	-	80,96,99,157
S62/W22	BEAMISH SOUTH MOOR	w	-	-	-	-	-	-	-	-	-	?	X	+	+	?	(	see	W22	)	87,92,99,112,157,162 185
S63	HEDLEY MOOR	w	-	-	-	-	-	-	-	-	-	X	X	X	-	X	X	-	-	-	80,96,99
S64	BURDON MOOR	w	-	-	-	-	-	-	-	-	+	X	X	X	?	?	-	-	-	-	61,62,80,96,99,154
S65	REDHEUGH	e	-	-	-	-	-	+	X	-	-	-	-	-	-	-	-	-	-	-	50,55
S66	GATESHEAD PETTY OWNERS	e	-	-	-	-	-	+	X	+	-	-	-	-	-	-	-	-	-	-	55
S67	BENSHAM	e	-	-	-	-	-	+	X	X	-	D	D	D	D	D	D	D	D	D	55,56,87,96
S68	CLAXTONS	e	-	-	-	-	-	+	+	+	-	-	-	X	?	X	X	-	-	-	80
S69	DECKHAMS	e	-	-	-	-	-	?	X	+	-	-	-	-	-	-	-	-	-	-	55,182
S70	GATESHEAD FELL	e	-	-	-	?	?	?	+	X	+	X	X	X	-	-	X	X	X	X	15,16,60,61,79,86,87 89,90,92,93,94,99,100 101,111,112,116,126 137,167

PERIODS OR DECADES

			1551 - 1680							1681 - 1740						1741 - 1810					
COLLIERY (Code, name and sub-district)^			1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES
S71	TEAM	e	-	-	-	-	-	-	-	X	-	-	?	X	-	X	X	X	X	X	56,80,81,82,86,87,89 90,91,92,93,94,99,116
S72	EIGHTON	e	-	-	-	-	-	-	-	X	+	X	X	X	?	X	-	-	-	-	60,61,80,89,92,99,144
S73	HEWORTH	e	-	-	-	-	-	X	X	X	X	-	-	?	-	X	-	-	-	-	38,56,81,112,127
S74	WHITEFIELD	w	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	81,82,86,87,89,90,93 94,98
S75	WYLAM SOUTH	w	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	92
S76	TANFIELD MOOR EDGE	w	-	-	-	-	-	-	-	-	-	-	-	X	+	X	-	-	-	-	59,81,82,111
S77	TANFIELD TOWNHEAD	w	-	-	-	-	-	-	-	-	-	-	-	X	+	X	-	-	-	-	81,111,176,189
S78/W21	STANLEY	w	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	-	80,90,92
S79	KIPHILL	w	-	-	-	-	-	-	-	-	-	-	-	?	+	X	X	-	-	-	80,111,112
S80	DERWENT CROOK	e	-	-	-	-	-	-	-	-	-	-	-	D	D	D	-	X	X	X	80,87,89,90,91,92,93 94,99,112
S81	FRIAR'S GOOSE	e	-	-	-	-	-	-	-	-	-	-	-	D	X	?	-	-	-	-	80,112
S82	HEBBURN	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	86,87,90,91,92,93 116,127
S83	TEMPLE MAIN	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	86,87,91,93,99,116
S84	CHAPTER MAIN	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	91,113
S85/W31	WASHINGTON USWORTH	e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	86,90,91,94

PERIODS OR DECADES

		1551 - 1680							1681 - 1740						1741 - 1810							
COLLIERY (Code, name and sub-district)^		1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10		SOURCES
Wear mines																					
W1 CHESTER 1	nw	?	+	X	X	X	X	X	+	X	X	X	+	+	+	X	X	see W24			9,13,19,21,22,37,38 46,61,62,65,73,121 122,128,134,137,142
W2 CHESTER 2	nw	?	?	+	+	+	?	(	with	W1	from	c.1700	to	1790	)	see W24					21,37,46,65,121
W3 HARRATON	nw	X	+	X	X	+	(	a	part	with	W13	)	+	+	X	X	X	X			32,33,35,36,65,75,87 88,92,93,94,99,107 112,118,119,120,121 134,142,143,144
W4 NORTH BIDDICK	nw	?	+	+	+	+	-	-	?	?	X	X	+	+	+	X	X	X	-		61,62,80,92,94,121 128,158
W5 OFFERTON	sw	+	X	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		31,121
W6 PENSHAW	sw	+	+	+	?	?	+	X	+	+	X	X	+	X	+	X	X	X	X		38,61,62,75,87,87,88 91,92,93,116,121,128 134,141,142
W7 RAINTON	sw	?	+	+	+	X	+	+	X	X	X	X	+	X	+	X	X	X	X		38,42,44,58,61,62,87 88,91,93,94,101,116 121,127,128,130,153
W8 LAMBTON	sw	+	+	X	+	+	+	X	+	+	X	X	+	X	X	X	X	X	X		20,34,35,36,38,52,61, 62,68,75,76,87,88,91 104,121,128,134,141 142,143,144
W9 LUMLEY	sw	?	+	X	X	X	+	X	+	+	X	X	?	-	?	X	X	X	X		10,20,34,37,46,52,68 75,87,88,91,92,101 102,109,110,116,121 134,141,142,143,144 153,170,171,172,173 174

PERIODS OR DECADES

		1551 - 1680						1681 - 1740						1741 - 1810								
COLLIERY (Code, name and sub-district)^		1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80		1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES	
W10	HEDWORTH'S CHESTER	nw	-	-	-	-	-	-	?	X	X	X	X	?	-	-	-	-	-	-	21,46,57,61,62,87,128	
W11	DONNISON'S	nw	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	62,128	
W12	CHARTERSHAUGH	nw	-	-	-	-	?	+	X	+	+	+	X	-	-	-	-	-	-	-	38,121?,128	
W13	FATFIELD	nw	-	-	-	-	-	+	X	+	+	X	X	-	X	?	X	X	X	X	38,61,62,87,88,91,116 128	
W14	OXCLOSE WASHINGTON	nw	-	-	-	-	-	-	+	?	?	+	+	+	X	X	X	X	X		76?,87,88,92,112,129	
W15	PENSHAW HILL	sw	-	-	-	-	-	?	?	+	+	X	X	-	-	-	-	-	-	-	61,62,128	
W16	SOUTH BIDDICK	sw	-	?	?	?	?	+	+	+	+	X	X	+	X	+	X	X	X	X	61,62,87,88,91,92,93 94,121,128	
W17/18	NEWBOTTLE	sw	-	-	-	-	-	-	?	?	?	X	X	+	X	+	X	X	X	X	61,62,67,87,88,91,92 95,121,122,128,171	
W18/L16	HOUGHTON	sw	-	-	-	-	-	-	?	?	?	see W17 for post-1720									122	
W19	MORTON GRANGE	sw	-	-	-	-	-	-	?	?	?	+	+	-	-	+	?	?	+	-	9,22,61,91,134	
W20	WALDRIDGE	nw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	92,94	
W21/S78	STANLEY	nw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	92,94	
W22/S62	BEAMISH	nw	-	-	-	-	-	-	-	-	-	(see S62)				+	X	X	X	X	87,88,91,92,94,162	
W23	TWIZZEL	nw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	87,88,92,93,116,134	
W24	PELTON FELL	nw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	87,88,92,116,122 137?	
W25/S23	URPETH	nw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	87,88,91,99	
W26	OUSTON	nw	-	-	-	-	-	-	-	-	-	-	-	X	+	?	?	?	X		91,93,112,116	
W27	LEEFIELD 1	nw	-	-	-	-	-	-	-	-	-	-	+	X	+	X	X	?	X		87,88,91,92,94	

PERIODS OR DECADES

		1551 - 1680					1681 - 1740						1741 - 1810							
COLLIERY (Code, name and sub-district)^		1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -90	1691 -1700	1701 -10	1711 -20	1721 -30	1731 -40	1741 -50	1751 -60	1761 -70	1771 -80	1781 -90	1791 -1800	1801 -10	SOURCES
W28	LEEFIELD 2 nw	-	-	-	-	-	-	-	-	-	-	-	?	?	X	X	+	X		87,88,93
W29	BIRTLEY nw	-	-	-	-	-	-	-	-	-	-	-	+	+	+	X	X	X	?	91,92,94,111,112,151
W30	BIRTLEY FELL nw	-	-	-	-	-	see S30 for 1681-1740					-	X	X	+	X	X	X	X	87,88,91,92,93,94,99 111,122,137,151
W31/S85	WASHINGTON USWORTH nw	-	-	-	-	-	-	-	-	-	-	-	-	-	?	X	X	X	X	76?,87,88,92,93,94,98 129,131,133,136
W32	HARRATON OUTSIDE nw	-	-	-	-	-	-	-	-	-	-	-	-	-	?	?	X	X	X	87,88,92,93,94,112 116
W33	PEARETH'S MAIN nw	-	-	-	-	-	-	-	-	-	-	-	-	X	+	X	X	X	X	92,94
W34	PENSHAW 2 sw	-	-	-	-	-	-	-	-	-	-	-	-	-	?	+	+	X		75,87,88,91,94
W35	EDEN MAIN sw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	87,88,91,92,93
W36	BOURN MOOR sw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X		75,87,88,91,92,93,94 134,141,142,144
W37	PRIMROSE MOOR sw	-	-	-	-	-	-	-	-	-	-	-	-	-	?	X	+	X		92,94

w Western sub-district (west of Ouseburn for Tyne north-bank collieries, west of Team for Tyne south-bank collieries).
e Eastern sub-district (east of Ouseburn for Tyne north-bank collieries, east of Team for Tyne south-bank collieries).
nw North-western sub-district (leading to north and west banks of Wear).
se South-eastern sub-district (leading to south and east banks of Wear).

X Good, firm evidence of working for seasale throughout, or at some stage in, this period or decade.
+ Probably working for seasale. Evidence is inferential/circumstantial rather than direct or specific.
? Possibly working for seasale. Evidence rather weak or less reliable.
- Information lacking for this period or decade; OR, evidence suggests little or no coal produced for seasale (though might have been producing coal for the landsale market).
D Dead rent colliery (i.e. a 'certain' rent paid but colliery not worked for technical and/or strategic reasons).

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2. PRO E178/5037.
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4. BL Harl 6850/39.
5. PRO SP14/63/19/value of Crown mines in Durham and Northumberland, 1611.
6. DCL Hunter 22/17/'A Particular Note ... with all the Persons and Colyers taxed ...' [1636].
7. PRO E317 Durham 8/87/Whickham survey, 1649.
8. DUPD (Land Revenue Records) CC/box206/244378/survey of King's mines, 1611.
9. DUPD CC/box 22/221346/Episcopal revunue from mines, 1642-7.
10. Galloway 1898, 105-6 & 296.
11. DUPD CC/box 23/misc. accts/220203/arrears temp. Bishop Cuthbert Tunstall, 1530-59.
12. DUPD CC/box 80/221700/dispute re. coal working and wages at Whickham, 1616/7.
13. DUPD CC/220233/Receiver-General's accts, 1639-40 (revenue from mines).
14. DUPD CC/box 164/23386/survey of manor of Whickham, 1647.
15. DUPD CC/box 163/23381/survey of manor of Gateshead, 1647.
16. DUPD CC/box 163/23382/re-survey of collieries of Gateshead and Whickham, 1652.
17. PRO E178/4355.
18. PRO E134, 29 Charles I, East. 20.
19. DUPD CC/box 162/23376/survey of manor of Chester-le-Street, 1647.
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21. NRO ZCR/6/additional survey of Chester-le-Street manor, 1647.
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30. CLRO Guildhall broadsides 4.24/'Reasons offered to Parliament for the not laying of any further imposition upon coals imported to London'. (1689).
31. CalSPD Addenda, 1580-1625, 327.
32. PRO Durham 2/2 (case of Sir John Hedworth, 3 Oct. 1605).
33. PRO SP16/506/59.
34. PRO SP16/502/77-8.
35. PRO E134, 9 Charles I, Mich. 11.
36. Compounding Records, 262.
37. PRO Durham 2/24 (Parkinson v. Lee).
38. Dunn 1844, 20.
39. Nef 1932, I, 26, 362n.
40. Welford 1895, i,297-301.
41. Documents of Newcastle Corporation: abstract of 1820 case re. Town Moor. Cited by Nef 1932, I, 323.
42. Leister 1975, 17-20.
43. PRO E134, 11 Charles I, Mich. 46.
44. DRO D/Lo/D371-4/Rainton colliery leases, 1683-1793.
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47. NEIM Bell 14/XX/373/re. Whickham colliery.
48. NEIM Misc. ZB/15/Whickham mines lease, 1687.
49. DRO D/Lo/F117-26/Gateshead and Whickham Grand Lease, 1586-1690.
50. DRO D/Lo/F127/Redheugh colliery, 1693-6.
51. DRO D/Lo/F129-69/Stella Grand Lease, 1652-1793.
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53. BL Lans 156/109/'Touching certaine landes and Colemines in Grenelawe ... June 1st, 1611'.
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60. NEIM Forster 49/5.
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81. NEIM Watson 10/1-48.
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83. GPL Oxberry/Gateshead Park colliery leadings, 1776-8.
84. NEIM Barnes 49/4.
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87. NEIM Buddle 14/passim.
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91. Bailey 1810, 10-35.
92. NEIM Bell 15/9/Casson's map of the coalfield, 1801.
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97. NEIM Watson 8/11/120.
98. NEIM Buddle 3/Washington, 1803-9 and Stella Grand Lease, 1798-1809.
99. DRO D/St/v1373-84/Grand Allies' partnership collieries 1761, 1790, 1807, 1809.
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116. NEIM Buddle 21/several colls, c1791-1810.
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124. NRO ZCO IV/47 and VIII/1 (Stella 1653-1714).
125. PRO FEC1/W26/1/10,11
126. NEIM Easton 17/10/daily journal of Christopher Bedlington, 1765-8.
127. NEIM Buddle 5/reports on Dean and Chapter collieries, 1800-6.
128. NRO ZCR 54/1/plan of the River Wear by Burleigh and Thompson, 1737.
129. NEIM Buddle 7/Washington colliery lease, 1764-95.
130. NEIM Buddle 8/Vane-Tempest collieries.
131. NEIM Buddle 9/Washington Usworth coals, 1798-1803.
132. NEIM Buddle 10/Chopwell, 1789, 1799-1805.
133. NEIM Buddle 12/Washington colliery.
134. NEIM Buddle 13/Lambton collieries, 1800-10; Twizzell waggonway.
135. NEIM 18/Peck's view books.
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137. NEIM Buddle 20/views for Bishop of Durham, 1792-1838.
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149. DRO D/St/72,128,142,220-3,348 and v36,v46/Northbanks and Ewhurst collieries.
150. DRO D/St/24-5/Riding Field, Field House, Hollinside and Whickham collieries.
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152. DRO D/St/4,6/Gibside, Axwell and Whickham, 1576-1724.
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155. DRO D/St/32,77/Tanfield, Heaton and Ravensworth.
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164. GPL Cotesworth CK/5/Bucksnook, 1715-27.
165. GPL Cotesworth CK/6/Fawdon Field, 1714-22.
166. GPL Cotesworth CK/7/Heaton, 1720-6.
167. GPL Cotesworth CK/8/Gateshead Fell, 1712-71.
168. GPL Cotesworth CK/9/Gateshead Park, 1713-94.
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173. SPLum BD/1/3-6/lease of Lumley, 1654.
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176. DRO D/CG/6/5/Lintz and Tanfield Townhead.
177. DRO D/CG/6/231/Bryansleap, 1739.
178. DRO D/CG/6/465/deeds, including Crookbank coals.
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180. DRO D/CG/6/1405-7/Garesfield letter books.
181. DRO D/CG/6/1666/Collierly coals, 1766.
182. DRO D/CG/15/27-30/Gateshead manor and parish collieries, 1703-07.
183. DRO D/CG/16/580/Farnacres, 1694.
184. DRO D/CG/16/648,253-5/Tanfield Leigh 1706, 1739.
185. DRO D/CG/16/1083-4/Grand Allies' collieries.
186. DRO D/CG/7/236-7/Byermoor and Fawdon, 1712-3.
187. DRO D/CG/7/638,3961,3964/Riding Field, 1612 & 1638.
188. DRO D/CG7/262-9/Weed Park (Collierly), 1613-1718.
189. DRO D/CG/6/1405-6/LWLBs I and II/South Moor, Lintz, Townhead, Pontop Pike, Collierly, Bushblades and Tanfield Moor.
190. NUL SRMisc 10/JCLB/re. Clavering Stella and Fieldhouse.

b. SEASALE COLLIERIES: SUMMARY TABLES.

PERIODS OR DECADES

TYNE NORTH BANK		1551 - 1680						1681 - 1740						1741 - 1810					
		1551 -1600	1601 -20	1621 -40	1641 -60	1661 -80	1681 -1700	1680 -90	1701 -10	1721 -30	1741 -50	1761 -70	1781 -90	1801 -10	1741 -1760	1751 -80	1771 -1800	1791 -10	1741 -1810
Western sub-district	X	1	4	4	3	6	0	8	3	1	2	3	1	0	8	10	10	10	10
	+	4	1	5	6	2	9	2	0	1	0	0	1	3	0	0	0	0	0
	(X+)	5	5	9	9	8	9	10	3	2	2	3	2	3	8	10	10	10	10
	?	0	0	0	1	3	3	0	6	2	1	0	3	2	2	0	0	1	1
	(X+?)	5	5	9	10	11	12	10	9	4	3	3	5	5	10	10	10	11	11
Eastern sub-district	X	2	1	2	1	0	0	1	0	0	2	1	2	3	7	6	14	15	12
	+	1	1	1	0	0	1	0	1	0	0	1	0	1	0	0	0	0	2
	(X+)	3	2	3	1	0	1	1	1	0	2	2	2	4	7	6	14	15	14
	?	0	0	3	2	1	2	3	1	2	0	1	1	1	2	3	1	0	0
	(X+?)	3	2	6	3	1	3	4	2	2	2	3	3	5	9	9	15	15	14
All north bank	X	3	5	6	4	6	0	9	3	1	4	4	3	3	15	16	24	25	22
	+	4	2	6	6	2	10	2	1	1	0	1	1	4	0	0	0	0	2
	(X+)	7	7	12	10	8	10	11	4	2	4	5	4	7	15	16	24	25	24
	?	0	0	3	3	4	5	3	7	4	1	1	4	3	4	3	1	1	1
	(X+?)	8	7	15	13	12	15	14	11	6	5	6	8	10	19	19	25	26	25

X Good, firm evidence of working for seasale throughout, or at some stage, in this period or decade.
+ Probably working for seasale. Evidence is inferential/circumstantial rather than direct or specific.
? Possibly working for seasale. Evidence rather weak or less reliable.
NOTE: Only values for 'certains' (X) and 'probables' (+) are mapped in figures 2.2-2.4.

PERIODS OR DECADES

TYNE SOUTH BANK		1551 - 1680						1681 - 1740						1741 - 1810					
		1551		1621		1661		1680		1701		1721		1741		1761		1781	
		-1600	1601	-40	1641	-80		-90	1691	-10	1711	-30	1731	-50	1751	-70	1771	-90	1791	-10
				-20		-60		-1700		-20		-40		-60		-80		-1800	
Western sub-district	X	4	7	18	15	5	5	12	15	3	22	32	16	3	19	16	14	16	15
	+	3	6	2	3	6	6	4	3	14	2	3	3	15	0	0	0	0	0
	(X+)	7	13	20	18	11	11	16	18	17	24	35	19	18	19	16	14	16	15
	?	3	4	3	2	6	6	3	1	3	1	0	4	4	3	0	1	1	2
	(X+?)	10	17	22	20	17	17	19	19	20	25	35	23	22	22	16	15	17	16
Eastern sub-district	X	1	1	6	2	1	2	8	8	1	4	4	4	1	5	6	6	7	9
	+	0	5	0	5	5	6	2	4	3	0	0	1	1	0	0	0	0	0
	(X+)	1	6	6	7	6	8	10	12	4	4	4	5	2	5	6	6	7	9
	?	4	0	3	2	1	3	1	1	0	0	1	1	2	1	0	0	0	0
	(X+?)	5	5	9	9	7	11	11	13	4	4	5	6	4	6	6	6	7	9
All south bank	X	5	8	24	17	6	7	20	23	4	26	36	20	4	24	22	20	23	23
	+	3	11	2	8	11	12	6	7	17	2	3	4	16	0	0	0	0	0
	(X+)	8	19	26	25	17	19	26	30	21	28	39	24	20	24	22	20	23	24
	?	7	4	5	4	7	9	4	2	3	1	1	5	6	4	0	1	1	2
	(X+?)	15	23	31	29	24	28	30	32	24	29	40	29	26	28	22	21	24	26

X Good, firm evidence of working for seasale throughout, or at some stage, in this period or decade.

+ Probably working for seasale. Evidence is inferential/circumstantial rather than direct or specific.

? Possibly working for seasale. Evidence rather weak or less reliable.

NOTE: Only values for 'certains' (X) and 'probables' (+) are mapped in figures 2.2-2.4.

PERIODS OR DECADES

WEAR COLLIERIES		1551 - 1680						1681 - 1740						1741 - 1810					
		1551		1621		1661		1680		1701		1721		1741		1761		1781		1801
		-1600	1601	-40	1641	-80		-90	1691	-10	1711	-30	1731	-50	1751	-70	1771	-90	1791	-10
				-20		-60			-1700		-20		-40		-60		-80		-1800	
North-west sub-district	X	1	0	2	2	1	1	3	1	2	4	6	1	5	1	13	14	12	14	
	+	0	3	2	2	3	2	0	4	2	1	1	5	5	9	0	1	1	0	
	(X+)	1	3	4	4	4	3	3	5	4	5	7	6	10	10	13	15	13	14	
	?	3	1	0	0	0	1	1	1	2	1	0	2	1	4	2	1	2	1	
	(X+?)	4	4	4	4	4	4	4	6	6	6	7	8	11	14	15	16	15	15	
South-east sub-district	X	0	1	2	1	2	0	3	1	1	7	7	0	5	1	6	8	7	10	
	+	3	4	3	2	1	5	2	5	5	1	1	5	0	5	0	1	3	0	
	(X+)	3	5	5	3	3	5	5	6	6	8	8	5	5	6	6	9	10	10	
	?	2	1	1	2	2	1	4	3	3	0	0	0	0	1	3	1	0	0	
	(X+?)	5	6	6	5	5	6	9	9	9	8	8	5	5	7	9	10	10	10	
All Wear	X	1	1	4	3	3	1	6	2	3	11	13	1	10	2	19	22	19	24	
	+	3	7	5	4	4	7	2	9	8	2	2	10	5	14	0	2	4	0	
	(X+)	4	8	9	7	7	8	8	11	11	13	15	11	15	16	19	24	23	24	
	?	5	2	1	2	2	2	5	4	4	1	0	2	1	5	5	2	2	1	
	(X+?)	9	10	10	9	9	10	13	15	15	14	15	13	16	21	24	26	25	25	

X Good, firm evidence of working for seasale throughout, or at some stage, in this period or decade.
+ Probably working for seasale. Good inferential/circumstantial evidence rather than direct or specific.
? Possibly working for seasale. Evidence rather weak or less reliable.
NOTE: Only values for 'certains' (X) and 'probables' (+) are mapped in figures 2.2-2.4.

c. DURHAM LANDSALE COLLIERIS: ANALYSIS BY PERIODS.

COLLIERY (Code and name)	1551-1680	1681-1740	1741-1810
L1 STREETGATE	X	-	-
L2 HOLLERBUSH	X	-	-
L3 BIRTLEY	X	-	-
L4 URPETH	X	-	-
L5 TANFIELD MOOR	X	-	-
L6 GREENCROFT	X	-	-
L7 CONSETT	X	-	X
L8 KNITSLEY & CLEWBURN	X	X	-
L9 LANCHESTER	X	-	X
L10 CHARLAW	X	X	X
L11 FINDON	X	X	-
L12 PLAWSWORTH	X	X	-
L13 KIMBLESWORTH	X	-	-
L14 COCKEN	X	-	X
L15 MORTON	X	X	-
L16 HOUGHTON LE SPRING	X	X	-
L17 RAINTON	X	-	-
L18 FRANKLAND	X	-	-
L19 FRAMWELLGATE	X	X	-
L20 DURHAM	X	-	-
L21 SHERBURN	X	-	-
L22 BRANDON	X	-	-
L23 BRANCEPETH	X	-	-
L24 COXHOE	X	-	X
L25 FERRYHILL	X	X	X
L26 TUDHOE	X	-	-
L27 SPENNYMOOR	X	-	-
L28 WILLINGTON	X	-	-
L29 HUNWICK MOOR	X	X	-
L30 BITCHBURN	X	-	X
L31 COUNDON & BYERS GREEN	X	X	-
L32 ELDON	X	X	-
L33 SHILDON	X	-	-
L34 EVENWOOD/RAMSHAW	X	X	X
L35 ETHERLEY	X	X	-
L36 RAILEY/CARTERTHORNE	X	X	X
L37 COCKFIELD FELL	X	-	X
L38 NORWOOD/RABY	X	-	X
L39 GREWBURN & LYNESACK	X	X	X
L40 COLDKNOT & HARGILL	X	X	-
L41 SOFTLEY	X	-	-
L42 HAMSTERLEY	X	-	-
L43 HELME PARK	X	-	X
L44 THORNLEY	X	-	X
L45 TOW LAW	X	X	-
L46 WHITTLE/WHITE HILL	-	X	X
L47 POTTER (HOUSE) MOOR	-	X	-
L48 USHAW MOOR	-	X	-
L49 PITTINGTON	-	X	X
L50 SHINCLIFFE	-	X	-
L51 HETT	-	X	-
L52 CORNFORTH	-	X	-
L53 MIDDRIDGE	-	X	-
L54 BISHOP AUCKLAND	-	X	X
L55 WEST AUCKLAND	-	X	-
L56,S38 BYERMOOR	-	-	X
L57 COW CLOSE	-	-	X
L58 MEDOMSLEY	-	-	X
L59 SACRISTON	-	-	X
L60 CORNSAY	-	-	X
L61 KEPIER	-	-	X
L62 DURHAM ELVET	-	-	X
L63 CROWTREES	-	-	X
L64 COPPYCROOKS	-	-	X
L65 BRUSSELTON	-	-	X
L66 WOODHOUSE	-	-	X
L67 WITTON PARK	-	-	X
L68 LUNTON HILL	-	-	X
L69 WOODLAND(S)	-	-	X
L70 WEST PITTS	-	-	X
L71 WOODYFIELD	-	-	X

Note: Only the landsale working of landsale collieries is taken account of in the above listing; permanent or temporary conversions to seasale are allowed for in the list of seasale collieries.

Main Sources: PRO StaCha (James I) 265/3; E134, 22 & 23 Eliz., Mich 5; 23 Eliz., East 6; E317/Durham 6; E178/5276; Parl Surveys I, 6, 122; DUPD CC/184957 to 184962/lease enrolments; Parl Surveys II, 145; Bailey 1810, 23-6; Galloway 1898, passim; Nef 1932, I, 37-40; and the following references cited in appendix 6a above: nos. 5, 6, 8, 9, 13, 19, 21, 22, 70, 111, 112, 122, 127, 137, 148.

Appendix 7.

COAL SHIPMENTS FROM THE TYNE AND WEAR

a. NUMBER OF SHIPS LEAVING THE TYNE FOR NAMED COASTAL DESTINATIONS

	1562	1683	1691	1703	1710	1722	1730	1738	1749
ABERDEEN, Scotland	.	.	.	.	1	7	14	20	22
ALDEBURGH, Suffolk	5	15	3	4	3	13	11	9	5
ANSTRUTHER, Scotland	.	.	.	.	.	.	.	.	1
ARUNDEL, Sussex	.	4	5	3	1	1	7	9	7
BERWICK, Berwickshire	5	3	.	1	2	.	2	.	.
BLAKENEY, Norfolk	15	18	17	14	7	33	35	20	.
BLYTH, Northumberland	.	1	.	.	.	.	.	.	.
BOSTON, Lincolnshire	18	34	17	16	7	11	35	20	11
BRIDLINGTON, Yorks	10+	13	14	10	1	3	7	6	4
BRIGHTON, Sussex	.	34	9	3	1	.	.	.	.
BURNHAM, Norfolk	5	.	1	.	.	.	.	.	.
CHICHESTER, Sussex	.	3	4	1	.	6	6	9	4
CLEY, Norfolk	.	.	.	.	1	3	9	1	17
COLCHESTER, Essex	5	55	45	34	14	16	15	14	7
COWES, Isle of Wight	.	17	1	2	5	.	7	10	13
DARTMOUTH, Devon	.	10	.	.	.	8	6	2	3
DEAL, Kent	.	14	6	15	8	14	6	1	.
DOVER, Kent	3	5	5	11	10	13	4	1	3
DUNBAR, Scotland	.	.	.	.	1	.	2	.	2
DUNDEE, Scotland	.	.	.	.	2	1	1	.	1
DUNWICH, Suffolk	1	.	.	.	.	.	.	.	.
EASTBOURNE, Sussex	.	.	.	.	.	4	3	1	3
EXETER, Devon	.	38	2	6	6	22	17	16	15
FALMOUTH, Cornwall	.	.	.	.	.	.	3	1	.
FAVERSHAM, Kent	1	10	7	20	10	17	18	12	22
FILEY, Yorks	1	.	.	.	.	.	.	.	.
FLEET, Lincolnshire	2	.	.	.	.	.	.	.	.
FOLKESTONE, Kent	.	1	.	3	.	.	.	.	.
FOWEY, Cornwall	.	.	.	.	.	.	1	.	.
GREAT YARMOUTH, Norfolk	52	340	143	106	68	175	261	135	78
GRIMSBY, Lincolnshire	22	10	5	10	2	4	10	4	1

	1562	1683	1691	1703	1710	1722	1730	1738	1749
HARTLEPOOL, Durham	1	.	3	2	.	.	1	.	.
HARWICH, Essex	.	.	.	8	7	8	4	17	10
HASTINGS, Sussex	2	3	1	.	.	8	8	19	7
HULL, Yorks	59	95	63	54	29	63	131	71	43
INVERNESS, Scotland	.	.	.	.	1	2	2	6	10
IPSWICH, Suffolk	11	59	39	27	20	46	41	57	40
KINGS LYNN, Norfolk	157	413	236	160	91	254	267	182	186
KIRKWALL, Orkneys	.	.	.	.	.	.	.	1	.
LEIGH, Essex	1	1	.	.	.	1	1	1	2
LEITH, Scotland	.	.	.	.	1	.	1	.	.
LONDON	133	1340	1810	1279	1231	1660	1523	1546	1516
LOWESTOFT, Suffolk	1	.	.	.	.	.	.	.	.
LYMINGTON, Hants	.	.	.	.	.	.	14	20	22
MALDON, Essex	.	11	8	3	5	7	9	11	4
MILTON, Kent	.	9	5	5	3	7	12	8	4
MONTROSE, Scotland	.	.	.	.	1	1	3	6	5
NEWHAVEN, Sussex	.	15	4	7	2	9	8	9	5
PENZANCE, Cornwall	.	.	.	.	.	.	.	.	1
PERTH, Scotland	.	.	.	.	.	.	1	1	.
PEVENSEY, Sussex	.	1	.	.	.	.	.	.	.
PLYMOUTH, Devon	.	6	1	2	2	9	10	7	12
POOLE, Dorset	.	25	2	3	9	34*	29	40	25
PORTSMOUTH, Hants	.	64	50	55	73	47	47	53	65
PENRHYN, Cornwall	.	.	.	.	.	1	.	.	.
QUEENBOROUGH, Kent	.	.	.	.	.	.	.	5	.
ROCHESTER, Kent	4	57	54	33	34	62	72	53	31
RYE, Sussex	.	6	1	.	1	2	7	7	5
SALTFLEET, Lincs	1	.	.	.	.	.	.	2	.
SANDWICH, Kent	2	57	41	70	66	94	70	57	33
SCARBOROUGH, Yorks	5	3	3	2	4	6	37	24	22
SELBY, Yorks	1	.	.	.	.	.	.	.	.
SHOREHAM, Sussex	.	6	1	.	4	23	15	19	6
SOUTHAMPTON, Hants	.	149	40	40	36	68	36	44	50
SOUTHWOLD, Suffolk	3	1	.	5	2	8	15	3	.
SPALDING, Lincs	.	2	.	.	.	.	.	.	.
STOCKTON, Durham	.	15	1	.	.	7	12	1	.
THEDDLETHORPE, Lincs	.	.	.	.	.	1	.	.	.
TRURO, Cornwall	.	.	.	1	.	.	.	.	.

	1562	1683	1691	1703	1710	1722	1730	1738	1749
WAINFLEET, Lincs	2	.	.	1	1	1	.	.	.
WALBERSWICK, Suffolk	5	.	.	.	.	.	.	.	.
WELLS, Norfolk	10	97	93	71	63	78	75	48	72
WEYMOUTH, Dorset	1	16	5	6	3	13	14	32	19
WHITBY, Yorks	1	6	5	15	5	1	18	18	5
WHITEHAVEN, Cumberland	.	.	.	.	.	.	.	.	3
WINCHELSEA, Sussex	1	.	.	.	.	.	.	.	.
WISBECH, Cambs	.	2	15	5	2	3	13	10	11
WOODBRIDGE, Suffolk	1	18	18	5	10	8	14	15	13
UNSPECIFIED									
Destination unclear or not stated	27	64	75	36	70	32	58	32	44
Lost at sea	.	5	1	33	12	4	8	.	2
Taken/captured	.	.	.	4	3	.	.	.	.
TOTALS (minus losses and captures)	574	3166	2858	2154	1926	2915	3048	2716	2492
GRAND TOTALS (with losses and captures)	574	3171	2859	2191	1941	2919	3056	2716	2494

Notes: + Includes one entry for Flamborough.
* Includes small but unspecified number to Cowes, Isle of Wight.

Sources: Moller 1933, 724-32; with additional information from port books at PRO E122 111/4 (Michaelmas 1561-2); E190 200/15 (Christmas 1682-3); 203/1 (Christmas 1690-1); 209/1 (Christmas 1702-3); 215/1 (Christmas 1709-10); 227/6 (Christmas 1721-2); 234/10 (Christmas 1729-30); 242/4 (Christmas 1737-8); 249/10 (Christmas 1748-9).

b. NUMBER OF SHIPS LEAVING THE WEAR FOR NAMED COASTAL DESTINATIONS

	1683	1691	1703	1710	1722	1730	1738	1749
ABERDEEN, Scotland	.	.	.	.	1	2	1	5
ALDEBURGH, Suffolk	.	11	13	17	19	15	24	21
ARUNDEL, Sussex	.	.	.	2	10	5	3	4
BERWICK, Berwickshire	.	.	.	.	1	.	.	.
BLAKENEY, Norfolk	26	9	6	6	14	14	65	.
BLYTH, Northumberland	1	.	.	.	.	.	.	.
BOSTON, Lincolnshire	205	166	123	150	220	198	171	149
BRIDLINGTON, Yorks	82	79	38	47	76	64	55	59

	1683	1691	1703	1710	1722	1730	1738	1749
BRIGHTON, Sussex	4	2	1	.	.	.	.	.
BURNHAM, Norfolk	.	2	.	.	.	.	.	.
CHICHESTER, Sussex	12	5	1	4	11	8	8	12
CLEY, Norfolk	.	.	.	15	.	.	.	72+
COLCHESTER, Essex	55	57	44	59	80	59	71	81
COWES, Isle of Wight	3	1	1	3	5	.	3	.
DARTMOUTH, Devon	.	.	.	1	1	4	11	6
DEAL, Kent	5	19	4	15	10	9	17	16
DOVER, Kent	27	26	13	18	27	35	54	39
DUNBAR, Scotland	.	.	.	.	.	.	1	1
DUNDEE, Scotland	.	.	.	.	.	.	1	2
EASTBOURNE, Sussex	.	.	.	.	.	3	2	1
EXETER, Devon	3	.	.	6	19	21	34	27
FAVERSHAM, Kent	22	19	4	21	27	35	49	63
FOLKESTONE, Kent	5	.	2	12	10	8	.	.
FOWEY, Cornwall	.	.	.	.	.	1	.	.
GREAT YARMOUTH, Norfolk	135	455	318	286	249	82	282	646
GRIMSBY, Lincolnshire	35	22	16	17	32	26	18	6
HARTLEPOOL, Durham	4	3	2	1	.	9	2	.
HARWICH, Essex	.	.	25	48	69	57	57	76
HASTINGS, Sussex	2	.	.	.	.	.	.	1
HULL, Yorks	252	189	68	82	161	113	124	29
HYTHE, Kent	1	.	.	.	.	.	.	.
INVERNESS, Scotland	.	.	.	.	2	.	.	.
IPSWICH, Suffolk	29	79	21	32	36	29	43	42
KINGS LYNN, Norfolk	104	142	77	191	192	132	132	180
KIRKWALL, Orkneys	.	.	.	.	.	.	.	1
LEIGH, Essex	12	8	8	8	17	20	26	25
LONDON	310	659	411	627	383	307	308	240
LYMINGTON, Hants	.	.	.	.	.	5	6	3
MABLETHORPE, Lincs	2	1	.	.	.	5	10	9
MALDON, Essex	50	36	41	48	75	65	52	62
MARGATE, Kent	.	.	.	.	.	.	.	2
MILTON, Kent	10	4	11	17	18	23	14	14
MONTROSE, Scotland	.	.	.	.	.	1	.	.
NEWHAVEN, Sussex	1	2	3	1	8	6	10	11

	1683	1691	1703	1710	1722	1730	1738	1749
PEVENSEY, Sussex	1	.	.	.	.	.	.	.
PLYMOUTH, Devon	.	.	1	4	3	20	17	23
POOLE, Dorset	1	.	1	3	3	.	3	9
PORTSMOUTH, Hants	5	6	6	22	26	17	24	32
QUEENBOROUGH, Kent	.	.	.	.	.	.	4	7
ROCHESTER, Kent	8	25	34	60	43	30	70	92
RYE, Sussex	5	.	1	1	4	5	1	4
SALTFLEET, Lincs	3	8	6	.	.	16	15	21
SANDWICH, Kent	31	82	10	26	17	26	56	52
SCARBOROUGH, Yorks	80	63	68	74	88	66	78	141
SCILLY ISLES	.	.	.	.	.	1	1	1
SHOREHAM, Susses	.	3	1	1	7	6	7	11
SOUTHAMPTON, Hants	15	8	6	8	20	20	21	9
SOUTHWOLD, Suffolk	31	19	16	22	29	28	34	31
SPALDING, Lincs	1	.	.	.	.	.	.	.
STOCKTON, Durham	72	4	15	4	29	42	6	13
THEDDLETHORPE, Lincs	13	10	6	.	28	1	1	3
WAINFLEET, Lincs	20	12	13	2	41	14	32	35
WELLS, Norfolk	3	6	14	14	24	20	61	88
WEYMOUTH, Dorset	7	5	3	7	10	4	4	11
WHITBY, Yorks	124	47	146	146	166	274	242	245
WISBECH, Cambs	45	32	32	23	48	48	53	41
WOODBRIDGE, Suffolk	13	13	18	20	36	16	29	40
UNSPECIFIED								
Destination unclear or not stated	41	37	17	67	105*	202	108	236
Lost at sea	7	.	11	13	2	3	.	4
Taken/captured	.	.	6	2	.	.	.	.
TOTALS (minus losses and captures)	1916	2376	1665	2238	2500	2211	2521	3050
GRAND TOTALS (includes losses and captures)	1923	2376	1682	2253	2502	2214	2521	3054

Notes: + Recorded as Blay and Cley.
* Includes small but unspecified number to Cowes, I.O.W.

Sources: Moller 1933, 733-40; with additional information from port books at PRO E190 200/15 (Christmas 1682-3); 203/1 (Christmas 1690-1); 209/1 (Christmas 1702-3); 215/1 (Christmas 1709-10); 227/6 (Christmas 1721-2); 234/10 (Christmas 1729-30); 242/4 (Christmas 1737-8); 249/10 (Christmas 1748-9).

c. NUMBER OF SHIPS LEAVING THE TYNE FOR NAMED OVERSEAS DESTINATIONS

	1661	1666	1673	1682	1699	1710	1721	1730	1737	1750
ABBEVILLE	.	.	.	1	.	.	.	.	.	.
AMSTERDAM	74	.	1	311	246	56	32	54	31	16
APENRADE	.	1	.	.	.	1	.	1	.	.
ARENDAL	.	.	.	.	.	.	.	.	.	1
BARBADOES	.	2	.	.	1	.	.	.	.	.
BERGEN	.	.	1	.	.	.	.	.	3	.
BILBAO	.	2	.	.	1	.	.	.	1	.
BOLOGNE	.	.	.	1	.	.	.	1	3	.
BORDEAUX	3	.	2	.	2	.	3	3	3	9
BOSTON, N. America	.	.	.	.	.	.	.	.	1	.
BREMEN	.	2	7	.	10	.	3	2	4	.
BRUGES	.	5	5	.	.	.	.	.	.	.
CAEN	2	.	.	.	.	.	7	3	4	1
CALAIS	.	.	5	.	.	.	1	11	.	.
CHERBOURG	.	.	.	.	.	.	.	1	.	.
CHRISTIANIA (Oslo)	1	.	.	.	.	.	.	.	.	.
COPENHAGEN	4	.	8	4	4	.	7	.	5	4
DANZIG	.	1	.	.	6	1	2	2	2	1
Denmark~	4	.	3	1	.	.	.	.	.	.
DIEPPE	1	6	4	3	3	.	3	10	8	6
DORDRECHT	1	.	.	.	4	.	13	.	6	8
DUNKIRK	7	.	5	5	1	.	1	17	6	22
EMDEN	7	.	.	.	5	.	5	5	.	.
ETAPLES	.	.	.	.	.	.	.	5	.	.
FECAMP	1	.	.	.	.	.	7	11	4	3
FLUSHING	3	.	.	.	.	.	.	.	.	.
FLENSBURG	.	.	.	.	.	.	.	1	.	.
FREDRICKSTAD	.	1	1	.	.	3	.	.	1	4
France~	2	.	2	.	.	.	.	.	.	.
GIBRALTAR	.	.	.	.	.	.	.	11	5	1
GOTHENBERG	1	3	5	2	4	.	.	1	3	2
GRAVELINES	.	.	.	.	.	.	.	.	.	2
GUERNSEY	.	.	.	3	10	4	1	9	7	5
HAMBURG	28	12	28	28	63	13	50	71	74	50
HARLINGEN	.	.	.	1	1	.	.	.	.	.
HELSINGOR	6	.	3	2	.	.	.	.	.	.
Holland~	.	.	2	.	.	.	.	.	.	.
HOLMESTRAND	.	.	.	.	.	.	.	.	1	.

	1661	1666	1673	1682	1699	1710	1721	1730	1737	1750
HONFLEUR	.	.	.	.	.	.	3	2	3	1
HUSUM	.	2	.	.	.	6	2	.	.	.
JERSEY	.	.	.	1	3	1	1	6	4	1
KONIGSBERG	.	.	.	.	4	1	.	1	.	1
KRISTIANSAND	.	.	.	.	.	1	.	.	1	.
LA ROCHELLE	.	1	6	2	.	.	6	2	.	1
LE HAVRE	.	.	.	.	1	.	15	49	38	13
LISBON	.	3	.	.	3	5	11	22	6	5
LORIENT	.	.	.	.	.	.	.	.	3	2
LUBECK	5	6	3	1	.	.	1	1	3	.
MAHON	.	.	.	.	.	.	.	1	.	.
MARSEILLES	.	.	.	.	.	.	.	2	.	.
MARSTRAND	.	.	2	.	.	.	.	.	.	.
MORLAIX	.	.	2	.	.	.	.	.	2	2
MIDDELBURG	.	2	.	.	.	.	.	.	2	2
NANTES	.	.	2	.	.	.	.	.	.	2
NEW ENGLAND, N. Am.	.	.	.	.	.	.	1	7	1	.
NEW HAVEN, N. Amer.	.	1	11	.	.	.	.	.	.	.
NEW YORK, N. Amer.	.	.	.	.	.	.	.	.	.	1
NIEUWPOORT	.	.	30	2	.	.	2	.	.	7
Norway~	1	.	.	1	24	2	11	16	4	.
OPORTO	.	.	.	1	1	.	.	.	1	1
OSTEND	1	6	41	.	1	1	1	3	1	2
RIGA	.	.	4	.	.	.	.	2	1	.
ROCHEFORT	.	.	.	.	.	.	.	.	.	2
ROSTOCK	.	.	.	.	.	.	.	.	2	.
ROTTERDAM	25	.	2	9	10	59	25	44	33	20
ROUEN	10	1	13	31	3	.	.	23	2	.
ST MARTIN	.	.	.	1	.	.	.	.	2	1
ST MALO	.	.	.	.	.	.	.	.	.	1
ST PETERSBURG	.	.	.	.	.	.	1	7	2	.
ST VALERY	1	.	4	.	4	.	21	34	12	7
SAN SEBASTIAN	.	.	3	.	.	.	.	.	.	.
SKEEDAM	.	.	.	.	.	.	.	.	3	.
STADE	.	.	3	.	1	4	.	.	.	.
STAVENGER	.	.	.	.	.	.	.	.	1	1
STETTIN	.	.	.	.	.	2	.	.	.	.
STRALSUND	2	2	1	1	2	7	2	.	.	.
STOCKHOLM	7	5	8	.	2	3	1	.	1	.
SONDERBORG	.	.	.	.	.	.	.	1	.	.
SOUND, The ^	.	.	.	5	38	21	40	39	39	56

	1661	1666	1673	1682	1699	1710	1721	1730	1737	1750
TEXEL	.	.	.	.	.	9	.	.	.	.
TONNING	.	13	4	1	2	9	3	1	2	1
TRONDHEIM	.	.	.	.	.	.	.	.	1	.
UDDEVALLA	.	.	.	.	.	.	.	.	.	1
WISMAR	.	1	3	.	2	.	.	.	.	.
WOLGAST	.	.	.	.	.	.	.	.	.	1
SCOTTISH PORTS*										
ABERDEEN	.	3	.	.	.	.	.	.	.	.
DUNBAR	3	.	.	.	.	.	.	.	.	.
INVERNESS	1	.	.	.	.	.	.	.	.	.
LEITH	2	.	.	.	.	.	.	.	.	.
KIRKWALL	.	1	.	.	.	.	.	.	.	.
UNSPECIFIED										
Destination unclear or not stated	6	5	7	9	7	8	11	3	3	12
GRAND TOTALS	209	87	231	427	469	217	293	485	346	279

Notes: ~ Destination not further differentiated.
^ The strait between Denmark and Sweden connecting the Cattegat with the Baltic Sea. Ships passed through for unstated destinations.
* Shipments to Scottish ports were recorded as part of 'Foreign trade' prior to the Act of Union of 1707.

Sources: Moller 1933, 746-55; with additional information from port books at PRO E190 193/1 (Christmas 1660-1); 193/6 (Christmas 1665-6); 195/11 (Christmas 1672-3); 199/9 (Christmas 1681-2); 207/4,6 (Christmas 1698-9); 216/7 (Christmas 1709-10); 225/7 (Christmas 1720-1); 235/6,11 (Christmas 1729-30); 241/3,7 (Christmas 1736-7); 250/4,8 (Christmas 1749-50).

d. NUMBER OF SHIPS LEAVING THE WEAR FOR NAMED OVERSEAS DESTINATIONS

	1661	1667	1673	1682	1699	1710	1721	1730	1737	1750
AMSTERDAM	6	1	.	93	220	186	157	189	185	67
ANTWERP	.	.	1	.	.	.	.	.	.	.
ARENDAL	.	.	.	.	.	2	3	1	.	1

	1661	1667	1673	1682	1699	1710	1721	1730	1737	1750
BERGEN	.	.	.	.	.	.	.	.	4	2
BOLOGNE	2	.	2	3	.	.	.	.	.	1
BORDEAUX	.	.	.	.	.	.	.	.	1	1
BREMEN	.	.	.	.	1	.	1	.	.	1
BRUGES	.	.	4	3	2	.	.	.	.	5
CAEN	1	.	.	.	.	.	.	.	.	.
CALAIS	9	4	4	1	1	.	1	.	.	1
CHRISTIANIA (Oslo)	.	.	.	.	.	.	.	1	1	2
COPENHAGEN	.	.	.	.	1	.	1	1	6	4
DANZIG	.	.	.	.	.	.	.	.	.	1
DELFTSHAVEN	.	.	.	.	.	.	.	.	.	8
DIEPPE	1	.	.	.	.	.	.	.	.	.
DORDRECHT	.	.	.	.	.	.	.	1	12	70
DRAMMEN	.	.	.	.	.	.	.	.	1	.
DUNKIRK	4	1	.	3	1	.	3	1	21	17
EMDEN	3	.	.	31	.	.	4	9	11	.
ENKHUIZEN	.	.	.	.	.	.	2	.	.	.
ETAPLES	.	.	.	.	1	.	.	.	.	.
FLUSHING	1	.	.	1	.	.	.	.	.	1
FREDRIKSTAD	1	.	.	.	1	.	1	1	3	2
France~	1	.	.	.	.	1	.	.	.	.
GOTHENBERG	.	.	.	.	.	.	.	1	1	2
GUERNSEY	.	.	.	.	.	1	.	.	.	.
HAARLEM	.	.	.	.	1	.	.	.	.	.
HAMBURG	.	4	.	4	6	2	24	11	31	5
HARLINGEN	.	.	.	12	.	1	.	.	.	2
HARDERWYK	3	.	.	.	.	.	.	.	.	.
HELSINGOR	.	.	.	.	1	.	1	.	.	.
Holland ^	2	.	2	.	.	.	.	3	.	.
HONFLEUR	.	.	.	.	.	.	.	.	1	.
HUSUM	.	.	.	.	.	4	.	.	.	.
JERSEY	.	.	.	.	.	.	.	1	.	.
KONIGSBERG	.	.	.	.	.	.	.	.	2	2
KRISTIANSAND	.	.	.	.	.	.	.	.	2	.
LA ROCHELLE	.	5	.	1	.	.	.	.	1	.
LE HAVRE	.	.	.	.	.	.	.	1	2	.
LE TREPORT	1	.	.	.	.	.	.	.	.	.
LISBON	.	.	.	.	.	.	3	.	1	.
LUBECK	.	.	.	.	.	.	.	.	.	1

	1661	1667	1673	1682	1699	1710	1721	1730	1737	1750
MOSS	.	.	.	.	.	.	.	.	.	2
MIDDELBURG	1	.	.	.	.	.	2	.	18	17
NIEUWPOORT	.	1	7	.	.	.	3	1	5	3
Norway~	.	.	.	.	.	.	1	.	2	.
OSTEND	.	2	6	1	2	.	14	1	1	13
RIGA	.	.	.	.	1	.	.	.	.	.
ROTTERDAM	22	.	.	6	3	5	97	195	129	74
ST PETERSBURG	.	.	.	.	.	.	.	.	1	.
ST VALERY	3	.	.	.	3	.	3	.	.	.
SKEEDAM	.	.	.	.	.	.	.	.	13	22
STOCKHOLM	.	.	.	.	.	.	.	.	.	1
TANG(I)ER	.	1	.	.	.	.	.	.	.	.
TEXEL	.	.	.	.	.	34	.	.	.	.
TONNING	5	12	.	.	3	.	.	.	.	.
UNSPECIFIED Destination unclear or not stated	3	2	3	.	2	.	1	.	1	13
GRAND TOTALS	69	33	29	159	250	236	322	418	456	341

Notes: ~ Destination not further differentiated.
^ Destination not further differentaited except in 1730 when recorded as 'Zuyder Zee'.

Sources: Moller 1936, 756-8; with additional information from port books at PRO E190 193/1 (Christmas 1660-1); 194/1 (Christmas 1666-7); 195/11 (Christmas 1672-3); 199/8 (Christmas 1681-2); 207/4,6 (Christmas 1698-9); 216/7 (Christmas 1709-10); 225/7 (Christmas 1720-1); 235/6,11 (Christmas 1729-30); 241/3,7 (Christmas 1736-7); 250/4,8 (Christmas 1749-50).

e. DESTINATIONS OF COAL SHIPMENTS FROM TYNE AND WEAR: SUMMARY OF NUMBERS OF SHIPMENTS AND MARKET (PERCENTAGE) SHARES

		From Newcastle					From Sunderland				
Year		London	Other coastal	All coastal	Overseas	All Newc. shpmts	London	Other coastal	All coastal	Overseas	All Sund. shpmts
1562	a	133	414	(547)							
	b	139	435	(574)							
	c	*(24.2)*	*(75.8)*	*(100)*							
1661	a				203					66	
	b				209					69	
1666/7	a				82					31	
					87					33	
1673	a				224					26	
	b				231					29	
1682/3	a	1340	1762	(3102)	418	3522	310	1565	(1875)	159	2034
	b	1369	1802	(3171)	427	3598	318	1605	(1923)	159	2082
	c	*(43.2)*	*(56.8)*	*(100)*			*(16.5)*	*(83.5)*	*(100)*		
	d	*38.0*	*50.1*		*11.9*	*100*	*15.3*	*77.1*		*7.6*	*100*
1691	a	1810	973	(2787)			659	1680	(2339)		
	b	1859	1000	(2859)			669	1707	(2376)		
	c	*(65.0)*	*(35.0)*	*(100)*			*(28.2)*	*(71.8)*	*(100)*		
1699/	a	1279	839	(2118)	462	2580	411	1237	(1648)	248	1896
1703	b	1323	868	(2191)	469	2658	419	1263	(1682)	250	1932
	c	*(60.4)*	*(39.6)*	*(100)*			*(24.9)*	*(75.1)*	*(100)*		
	d	*49.7*	*32.6*		*17.6*	*99.9*	*21.7*	*65.4*		*12.9*	*100*
1710	a	1231	625	(1856)	209	2065	627	1544	(2171)	236	2407
	b	1287	654	(1941)	217	2158	650	1603	(2253)	236	2489
	c	*(66.3)*	*(33.7)*	*(100)*			*(28.9)*	*(71.1)*	*(100)*		
	d	*59.6*	*30.3*		*10.1*	*100*	*26.1*	*64.4*		*9.5*	*100*
1721/2	a	1660	1223	(2883)	282	3165	383	2012	(2395)	321	2716
	b	1680	1239	(2919)	293	3212	400	2102	(2502)	322	2824
	c	*(57.6)*	*(42.4)*	*(100)*			*(16.0)*	*(84.0)*	*(100)*		
	d	*52.3*	*38.6*		*9.1*	*100*	*14.2*	*74.4*		*11.4*	*100*
1730	a	1523	1467	(2990)	482	3472	307	1702	(2009)	418	2427
	b	1557	1499	(3056)	485	3541	338	1876	(2214)	418	2632
	c	*(50.9)*	*(49.1)*	*(100)*			*(15.3)*	*(84.7)*	*(100)*		
	d	*44.0*	*42.3*		*13.7*	*100*	*12.8*	*71.3*		*15.9*	*100*

1737/8	a	1546	1138	(2684)	343	3027	308	2105	(2413)	455	2868
	b	1564	1152	(2716)	346	3062	321	2200	(2521)	456	2977
	c	*(57.6)*	*(42.4)*	*(100)*			*(12.7)*	*(87.3)*	*(100)*		
	d	*51.1*	*37.6*		*11.3*	*100*	*10.8*	*73.9*		*15.3*	*100*
1749/	a	1516	932	(2448)	267	2715	240	2574	(2814)	328	3152
1750	b	1544	950	(2494)	279	2773	260	2794	(3054)	341	3395
	c	*(61.9)*	*(38.1)*	*(100)*			*(8.5)*	*(91.5)*	*(100)*		
	d	*55.7*	*34.3*		*10.0*	*100*	*7.7*	*82.3*		*10.0*	*100*

a = Known values.
b = Adjusted values (includes additions from 'unspecified' totals, which in case of coastal shipments are assigned *pro rata* to London and 'other coastal').
c = Percentage shares of all coastal shipment numbers, according to values in row b.
d = Percentage share of all shipment numbers (all coastal + overseas), according to values in row b.

It will be noted that in some instances (e.g., 1682/3, 1699/1703) calculations have had to be based upon information relating to one year in the case of coastal shipments and to the next or preceding year, or a nearby year, in the case of overseas shipments.

Sources: As for append. 7a,b,c,d above.

Appendix 8

COAL VEND ANALYSIS: TABLES AND FIGURES

a. MARKET SHARES, as a percentage of shipments (S) and quantities (Q)

		<----- from NEWCASTLE ---->				<---- from SUNDERLAND ---->					ANNUAL TOTALS OF SHIPMENT
Year*		London	Other coastal	Over -seas	Sub total	London	Other coastal	Over -seas	Sub total	Grand total	NUMBERS OR QUANTITIES IN TONS
1682/3	S	23.6	32.2	7.4	(63.3)	5.5	28.4	2.8	(36.7)	100	5680
	Q	52.5	23.1	5.7	(81.3)	3.9	13.0	1.8	(18.7)	100	724445
1699/ 1703	S	27.9	19.9	10.1	(57.9)	9.0	27.7	5.4	(42.1)	100	4592
	Q	58.1	13.2	6.7	(78.0)	7.1	11.9	3.0	(22.0)	100	574567
1710	S	26.5	15.4	4.6	(46.5)	13.5	35.0	5.0	(53.6)	100	4647
	Q	53.6	10.5	4.2	(68.3)	12.0	15.5	4.2	(31.7)	100	645102
1721/2	S	27.5	20.9	4.9	(53.3)	6.3	35.1	5.3	(47.7)	100	6036
	Q	53.8	13.0	3.7	(70.5)	7.6	18.0	3.9	(29.5)	100	973504
1730	S	24.7	24.8	7.8	(57.3)	5.0	30.9	6.8	(42.7)	100	6173
	Q	50.1	15.6	6.2	(71.9)	7.4	15.8	4.9	(28.1)	100	1022200
1737/8	S	25.6	19.4	5.7	(50.7)	5.1	36.7	7.5	(49.3)	100	6039
	Q	51.6	11.5	4.8	(67.9)	8.0	18.6	5.5	(32.1)	100	1060377
1749/50	S	24.6	15.9	4.5	(45.0)	3.9	45.6	5.5	(55.0)	100	6164
	Q	50.9	10.9	4.2	(66.0)	6.4	23.1	4.5	(34.0)	100	1212410
1789	S	21.6	17.8	8.1	(47.5)	4.5	38.8	9.2	(52.5)	100	11616
	Q	43.0	13.9	5.4	(62.3)	6.0	26.0	5.7	(37.7)	100	2071914

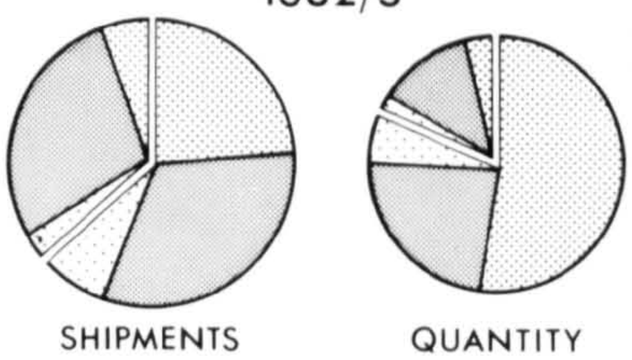
Notes: * It will be noted that in some instances (e.g., 1682/83) calculations have had to be based upon information relating to one year in the case of coastal shipments and to the next or preceding year in the case of overseas shipments. Calculations for c.1700 are based upon overseas shipments for 1699, coastal for 1703.
Unspecified losses recorded for coastal destinations have been assigned to London or 'other coastal' markets in proportion to their identified quantities.

Sources (for the above, and figure A8.1 opposite): PRO E190 289/1 and 4; otherwise, as for appendices 4 and 7.

COAL VEND ANALYSIS

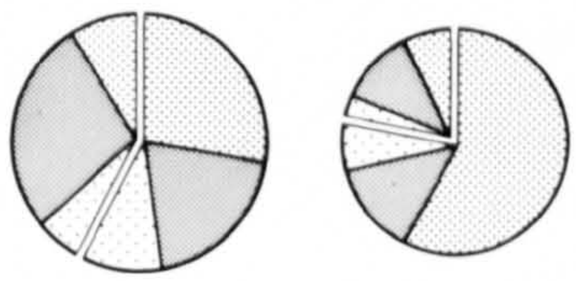
MARKET SHARES

1682/3

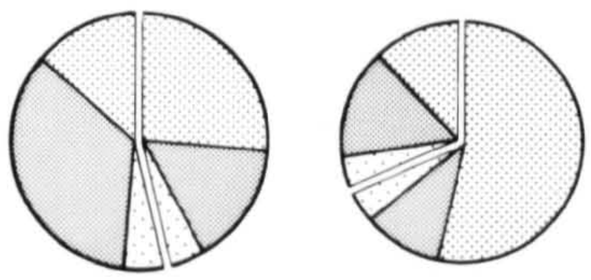


SHIPMENTS QUANTITY

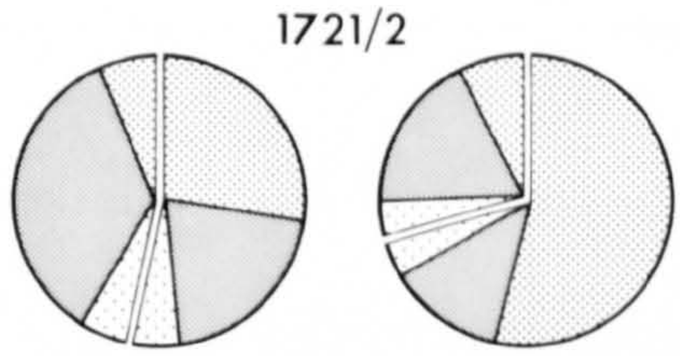
1699/1703



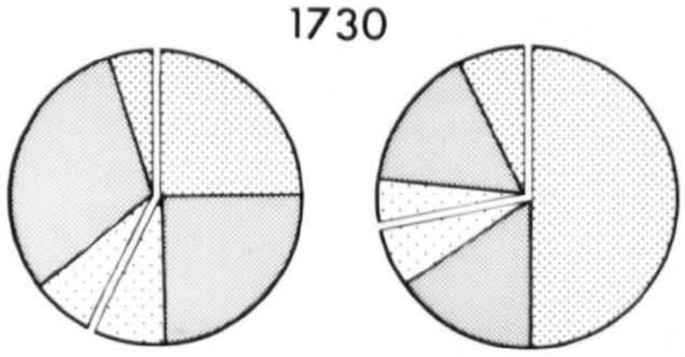
1710



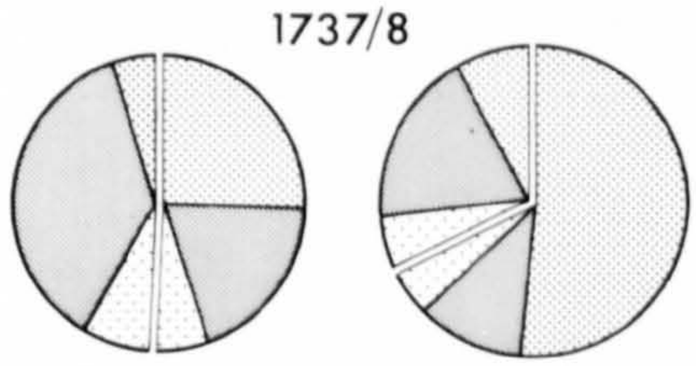
1721/2



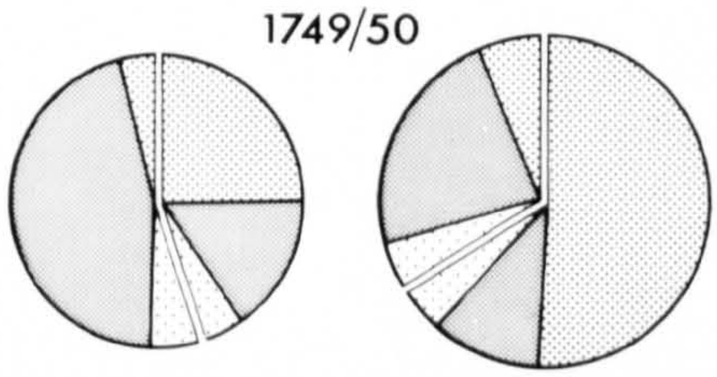
1730



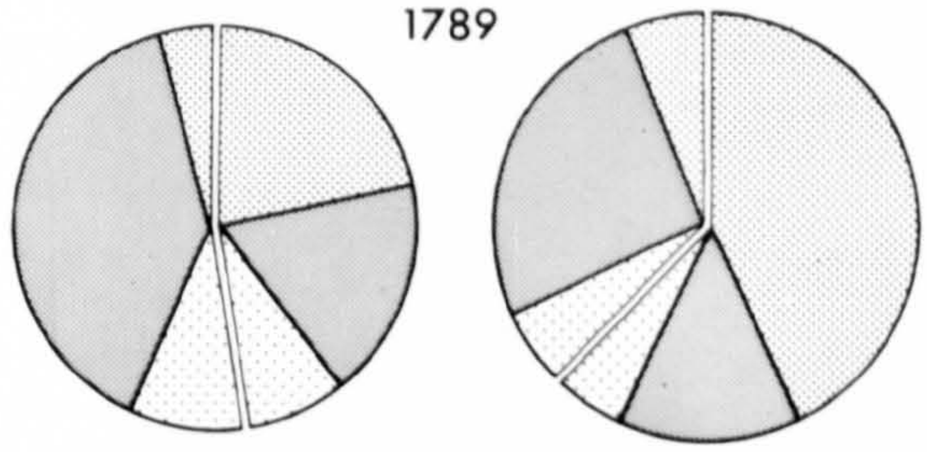
1737/8



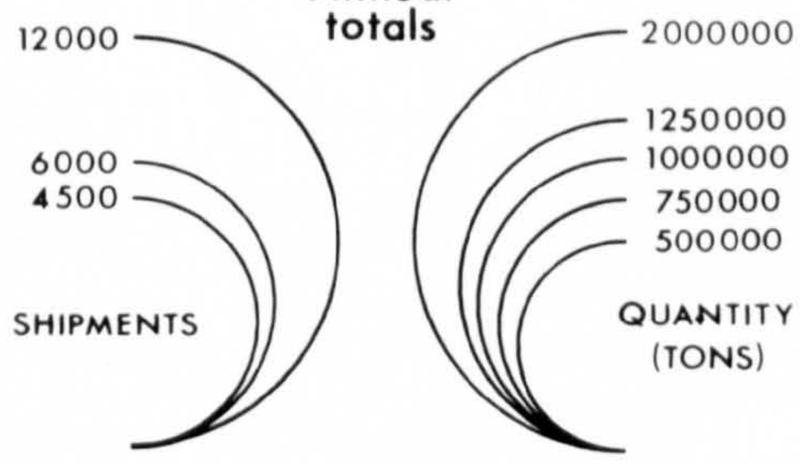
1749/50



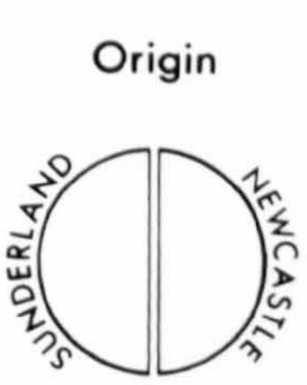
1789



Annual totals



Origin



Destination

LONDON

OTHER COASTAL MARKETS

OVERSEAS

b. TRENDS IN MEAN SIZE OF SHIP'S CARGO (in tons)

	<-----N E W C A S T L E ------->					<-----S U N D E R L A N D ----->					
Year*	London bound	Other Coast	All Coast	Over-seas	All N/c	London bound	Other Coast	All Coast	Over-seas	All Sund.	ALL New/c & Sund
1506				23.3							
1513				17.8							
1562	47.4	53.1	*51.8*								
1594				43.2							
1606									43.3		
1615/6				?50.0							
1618/9				49.7					36.3		
1633				60.5					34.2		
1640				89.7					54.7		
1661				126.9					56.3		
1666/7				89.3					39.2		
1673				139.1					60.6		
1682/3	283.8	91.3	*172.5*	97.4	163.7	90.5	58.6	63.7	81.3	65.1	*127.5*
1691	208.6	80.7	*161.5*			81.4	48.6	57.7			
c1700	260.9	82.6	*186.5*	82.6	168.3	99.6	53.8	*65.0*	70.0	65.7	*125.1*
1710	281.0	94.2	*212.3*	125.7	203.8	123.8	61.6	*78.9*	113.9	82.2	*138.7*
1721/2	315.4	100.3	*222.6*	122.5	213.5	193.6	83.0	*99.9*	117.5	101.9	*161.3*
1730	336.5	103.7	*219.7*	128.8	207.6	246.1	84.6	*107.0*	119.8	109.1	*165.6*
1737/8	353.9	103.9	*246.2*	147.7	235.1	275.8	88.9	*111.8*	129.1	114.4	*175.6*
1749/50	406.7	134.4	*299.6*	181.7	288.7	321.3	099.9	*117.3*	160.2	121.5	*196.6*
1789	355.0	138.8	*257.3*	118.3	233.5	238.5	120.0	*132.2*	110.5	128.4	*178.4*

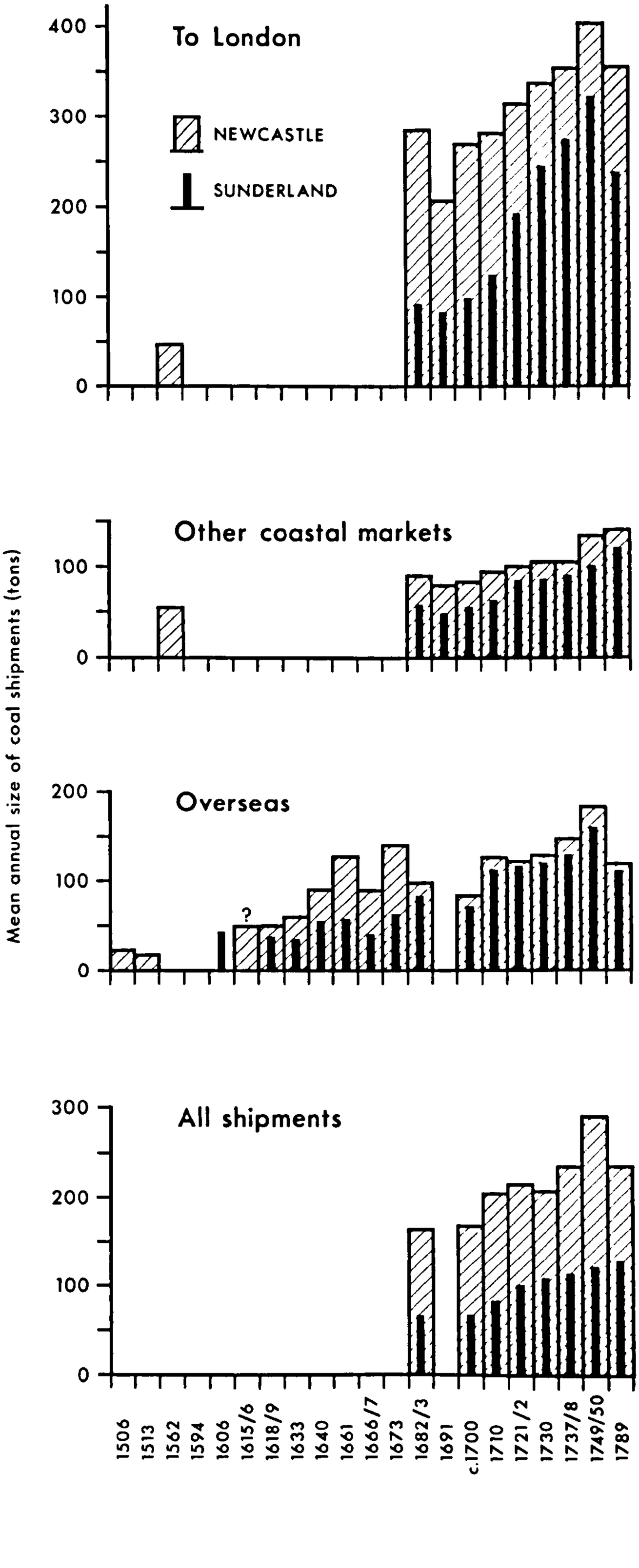
Notes: With the exception of those in italics, the above values are plotted in figure A8.2 opposite.

* See appendix 8a regarding year entries whose calculation is in fact based upon information relating to two years.

Sources: As for appendix 8a, with additional information for 1506 and 1513 from Moller 1933, 360.

COAL VEND ANALYSIS

TRENDS IN MEAN SIZE OF SHIP'S CARGO



Appendix 9

MARKET SHARES (FOR PIE-GRAPHS) c.1636, c.1728 and c.1804

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a. MARKETS FOR OUTPUT OF SEASALE COLLIERIES c.1636

No shipping data survive for 1636 as such, but an almost complete return for 1634 provides a foundation upon which to make further calculations:

		Recorded vend 1634	Assumed vend (plus other output) c1636		Approx percentage coast shares	all vend shares	all output (pie-graph)
		Tons		Tons			
Newcastle vend			London*	135000	40.0		23.7
			Other coastal	202000	60.0		35.4
	All coastal	337050	All coastal	(337000)	100.0		
	Overseas	35700	Overseas	36000			6.3
		372750		373000		86.7	(65.4)
Sunderland vend			London*	20200	40.0		?3.5
			Other coastal	30300	60.0		?5.3
	All coastal	50488	All coastal	(50500)	100.0		
	Overseas	6445	Overseas	6500			1.1
		56933		57000		13.3	(10.0)
TYNE & WEAR VEND TOTAL		429683		430000		100.0	

Tyne local consumption (usable output)~	
Salt industry (on output c14-15000 weighs)	75500
Other industries (glass, shipbuildg etc)	15500
Miner's allowance (c5% of seasale)	18750
Colliery equipment etc (c3% of seasale)	11250
	121000
Wear local consumption (usable output)~	
Salt industry (on output c1200 weighs)	6500
Other industries (including alum)	8000
Miner's allowance (c5% of seasale)	2800
Colliery equipment, etc. (c3% of seasale)	1700
	19000

TYNE & WEAR LOCAL CONSUMPTION (usable output of seasale collieries)	140000	(24.5)
GRAND TOTAL (VEND + LOCAL CONSUMPTION)	570000	(100.0)

OTHER OUTPUT of Tyne & Wear seasale collieries^	
Small coal 'waste'(c20% seasale)	86500
Gift coal/over-measure (c10% of seasale)	43500
	130000
ESTIMATED GRAND TOTAL OUTPUT OF TYNE & WEAR SEASALE COLLIERIES	700000

Notes:

* In 1638 London took about 40% of the coastal vend of the Tyne (Hall 1933, 108), so we can assume the same amount for c.1636. More tentatively, and in the absence of specific evidence, we can assign the same percentage share to the Wear. Later shipment data (see table 3.1 in main text) suggest that London often took well below 40% of the Wear's coastal trade, but for c.1636 40% appears acceptable; indeed, it may even represent an underestimate bearing in mind that Londoners had a particular liking for Wear coals at this time (especially those from the Lumley and Lambton mines) and that several London financiers had invested in the Wear district.

^ For purposes of this study, local consumption is meant to relate to coals supplied from and consumed within the seasale colliery districts, or consumed within neighbouring parts of Northumberland and Durham. According to Sir Lionel Maddison, writing in 1644-5 (CalSPD 1644-5, 98-9), the Tyne and Wear salt industry on the eve of the Civil War consumed c.3,900 tens of coal (c. 82,000 tons) with all but 8% or so (used at Bishop Wearmouth) consumed on the Tyne, mainly at South Shields. Maddison also suggests (ibid.) that various alum works along the coasts of Durham and Northumberland consumed upward of 7,000 tons of Sunderland coal a year during the decade preceding the Civil War (I have assigned a figure of 8,000 tons). The Lambtons supplied the works at Hartlepool from quite early times (Nef 1932, I, 209-10). It is likely that Tyne coals also went to alum works. About three tons of coal were required to produce one ton of alum. Some coal was also used in the glass industry which was located exclusively on the Tyne at this stage. Other local uses of coal were for shipbuilding, some types of iron-working, lime-burning, possibly brick-making, and almost certainly for domestic heating in the homes of the non-mining population. An additional amount (equivalent to c.5% of the seasale vend, we may assume) was allowed to miners

and others employed in the coal industry while a further quantity (perhaps the equivalent of c.3% seasale vend, we can suppose) was consumed by colliery equipment, especially that used for ventilation purposes as described in chapter 3. And see also the notes to chapter 3 for further comment and a listing of sources used in making estimates.

^ In reaching these estimates for c.1636, I have taken into account supposed quantities for c.1728 and c.1804, which have been arrived at on the basis of more certain, though far from totally reliable, evidence.

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b. MARKETS FOR OUTPUT OF SEASALE COLLIERIES c.1728

	Recorded vend 1728	Estimated vend (and other output) c1728*		Percentages coast shares	all vend shares	all output (pie-graph)
Newcastle vend		London	525000	76.1		34.3
		Oth. coastal	165000	23.9		10.8
	All coastal 611898	All coastal	(690000)	100.0		
	Overseas 40211	Overseas	50000			3.2
	Total vend 652109		740000		69.4	(48.3)
Sunderland vend		London	86000	31.85		5.6
		Oth. coastal	184000	68.15		12.1
	All coastal ?	All coastal	(270000)	100.0		
	Overseas ?	Overseas	57000			3.7
	Total vend 345364		327000		30.6	(21.4)
TYNE & WEAR VEND TOTAL	997473		1067000		100.0	
Tyne local consumption (usable output)~						
Salt industry			100000			
Other industries			160000			
Miner's allowance (c5% seasale)			38000			
Colliery equipment (c5% seasale)			37000			
			335000			
Wear local consumption (usable output)~						
Salt industry			20000			
Other industries			75000			

Miner's allowance (c5% seasale)	17000	
Colliery equipment (c5% seasale)	16000	
	128000	
TYNE & WEAR LOCAL CONSUMPTION (usable output of seasale collieries)	463000	(30.3)
GRAND TOTAL (VEND + LOCAL COMSUMPTION)	1530000	(100.0)
OTHER OUTPUT of Seasale collieries ^		
Small coal 'waste' (c20% of seasale)	213400	
Gift coal/over-measure: c11% Tyne seasale	81400	
c14% Wear seasale	45800	
	340600	
TOTAL OUTPUT OF TYNE & WEAR SEASALE COLLS	1870600	

Notes:

* 1728 was a somewhat abnormal year with a lower quantity vended than was usual at about that time for the Tyne, but a larger share than was normal for the Wear. So as to make the pie-graph as representative as possible and to apportion suitable shares between the different seasale markets, I have used mean values of such data as survive for the years 1725-33 (appendix 4).

^ An estimate of 1752 (Simpson 1930-1, 88), made at a time when the North East salt industry was in decline, suggests that salt pans at South Shields were then producing 4-5,000 tons per annum for export while those at Sunderland/Bishop Wearmouth contributed perhaps another 1,000 tons. Consumption of coal in the industry was then said to be about 20,000 chaldrons or 53,000 tons. So in c.1728, when the industry was still producing from 10 to 12,000 tons for export from Shields, and perhaps another 2,000 or 3,000 tons at the mouth of the Wear, the consumption of coal must have been in the region of 130,000 tons. We know from other sources (see chapter 3, note 30) that it took at least 6 to 8 tons of coal to make one of salt. Other industrial users in and around Newcastle in 1752 (including glass houses and the Derwent valley iron industry) were said to consume 80,000 chaldrons or 212,000 tons. Something approaching this figure was probably consumed in c.1728, and when allowance is made for Sunderland and the Wear valley (and some domestic consumption other than in miner's hearths) a total of 235,000 tons (160,000 on the Tyne, 75,000 on the Wear) seems appropriate. It is especially difficult to assess the amount of coal used by colliery machinery or burned to assist ventilation, but with the uptake of the Newcomen engine at this time, and widespread use of other drainage, winding

and ventilation equipment, a figure equivalent to c.5% of the seasale, compared with c.3% for c.1636, seems reasonable. A same quantity, or slightly more, also seems appropriate for fire coals given, or sold at cheap rate, to the mining and associated labour force.

^ 'Gift coals', or over-measure, could be given all along the marketing chain, that is, to fitters, to shipmasters and to the London dealers, and it seems that Custom's officials must have colluded in the practice, in return for suitable recompense. The frequency and scale of 'gifting' is, unfortunately, impossible to gauge, but as a general rule it seems that shipmasters loading at Newcastle might expect one free chaldron in every ten or so (but note the variations cited in chapter 4, note 9) while on the Wear he might expect more generous treatment: one free chaldron in every eight. This extra bonus gave rise to the expression 'Sunderland measure' (as explained in chapter 2, note 40). The amount of small coal or 'waste' in c.1728, and indeed in c.1636 and c.1804, is estimated at 20% of the seasale vend on the basis of information contained in viewer's reports (such as those cited in appendix 6a: nos. 60, 80, 89, 117, 126, 135, 137, 145, 180) and Buddle's evidence to a parliamentary select committee of 1830 (RepCCT 1830, 39).

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c: MARKETS FOR OUTPUT OF SEASALE COLLIERIES c.1804

		Recorded vend 1804	Estimated vend (& other output) c1804*		Percentages coast. shares (as for 1811-3)	all vend shares	all output (pie-graph)
Newcastle vend			London	1110000	78.5		30.0
			Other coastal	304000	21.5		8.2
	All coastal	1536812	All coastal	(1414000)	100.0		3.4
	Overseas	139361	Overseas	126000			
		1676173		1540000		65.4	(41.6)
Sunderland vend			London	107000	13.5		2.9
			Other coastal	686000	86.5		18.5
	All coastal	793812	All coastal	793000	100.0		0.6
	Overseas	11030	Overseas	21000			.
		804842		814000		34.6	(22.0)
TYNE & WEAR VEND TOTAL		2481015		2354000		100.0	

Tyne local consumption (usable output)^^		
Landsales/riversales (c23% seasale vend)	354000	
Miner's allowances (c5.2% of seasale)	80000	
Colliery equipment (c11% of seasale)	170000	
	604000	
Wear local consumption (usable output)^^		
Landsales/riversales (c23% seasale vend)	187200	
Miner's allowances (c5.2% of seasale)	42300	
Colliery equipment (c11% of seasale)	89500	
	319000	
Additional saleable/usable output based on/modified from Casson's calculations	423000	
TYNE & WEAR LOCAL CONSUMPTION (usable output)	1346000	(36.4)
GRAND TOTAL (VEND + LOCAL CONSUMPTION)	3700000	(100.0)
OTHER OUTPUT of Seasale collieries ^		
Small coal 'waste' (c20% of seasale)	470800	
Gift coal/over-measure: c11% Tyne seasale	169300	
c14% Wear seasale	113900	
	754000	
TOTAL OUTPUT OF TYNE & WEAR SEASALE COLLS	4454000	

Notes:

* As for c.1728, an attempt is made to calculate and incorporate in the pie-graphs, an 'average' of market shares by using mean values for a number of years. In the case of the coastal vend of both rivers, data from the years 1800-8 have been used. For Newcastle's overseas vend the years 1800-6 were chosen so as to prevent a distortion caused by the sudden drop in exports for 1807 and 1808. Overseas figures for Sunderland are extremely erratic -owing to the trade disruptions of the Napoleonic wars- but since they fluctuate as wildly before as after 1804, I have used data for all nine years, 1800-8, in deriving an 'average'. In estimating the relative strength of London and the other coastal markets, no direct information is available in or about the year 1804. However, we know from one source (NRO 263/minute book 1805-15, 243) that between October 1811 and October 1813, London imported 87.6% of its total requirements from Newcastle and only 7.6% from Sunderland. By assuming similar percentages for c.1804 (London imports as such are known for 1800-8, but not the relative shares for the Tyne and Wear;

see Mitchell and Deane 1962, 122; NEIM Watson 5/9/10), we find that Newcastle would account for about 1,110,000 tons coal reaching London, which is equivalent to about 78.5% of the assumed coastal vend for Newcastle of 1,414,000 tons. I think we can have some confidence in the near accuracy of this estimate: over a long period of time, certainly for much of the eighteenth century, something in the region of 75% of Newcastle's coastal vend was regularly destined for the London market. A similar procedure has been followed in determining that 13.5% (107,000 tons) of Sunderland's vend in c.1804 would be shipped to London.

~ Calculation of local consumption is problematic, even by the early nineteenth century. From a scatter of data whose representativeness cannot be properly estimated, it is possible, by applying similar reasoning to that applied by Flinn (1984, 29-35), to suggest a figure for the Tyne and Wear combined of 923,000 tons (604,000 + 319,000 in the table above). However, this greatly falls short of the estimates of a comtemporary and experienced colliery viewer, W. Casson, who in or about 1800 (see appendix 6a, reference 92) estimated 'the consumption Coastwise & Oversea, by Landsale, Manufactories, Steam Engines, Machines, fire Coals to Workmen &c' but with 'allowance being made for what Coal is lost', at 'about 1500000 Newcastle Chaldrons' for the Tyne and Wear plus Hartley and Blyth on the Northumberland coast. If we discount 50,000 chaldrons for the last two named places then a remaining output of c.1,450,000 chaldrons or 3,842,000 tons is suggested for a time near to 1804 when the combined seasale totals for the Tyne and Wear were, according to our nine-year mean (1800-8), 2,354,000 tons. Assuming the figures 3,842,000 tons and 2,354,000 tons to be correct, we are left with a difference of 1,488,000 tons. Of this last total, 142,000 tons can be accounted for by the usable output of landsale collieries both within and beyond the seasale districts (equivalent to 6% of the Tyne and Wear vends combined, or 2,354,000 tons) thus leaving 1,346,000 tons, as listed above, as the most acceptable figure for local consumption.

Appendix 10

CONTINGENCIES AFFECTING COALWORKING AND THE COAL TRADE

a. LABOUR DISPUTES IN COALMINING AND RELATED OCCUPATIONS

Date	*Groups involved, and other detail where known*
1654	Keelmen in pursuit of wage increase.
1660	Keelmen.
1670?-71	Keelmen.
1708	Keelmen.
1709?-10	Pitmen, keelmen and waggonmen. Shortage of corn, prices up and higher wages demanded.
1719	Keelmen (especially?) at Sunderland
1730?-31	Pitmen and other groups. Meetings held at Ravensworth and much destruction at Earl of Scarborough's engine house at Newbottle colliery.
1738	Keelmen.
1740	Pitmen, keelmen and waggonmen (the 'Newcastle mob'). Shortage of corn and price rises.
1746	Keelmen.
1749?	?Pitmen and ?keelmen.
1750	Keelmen.
1751	Keelmen.
1765	Pitmen and other groups. A large strike with much violence when owners made demands on labour beyond limits of miners' bond. Miners achieved measure of success.
1771	Keelmen.
1780 & 81	Pitmen, (especially?) at Lumley colliery.
1784	Pitmen and others. Eighty foot-soldiers quartered on Wear and at Birtley.
1789	Pitmen, keelmen and waggonmen. Shortage of corn, prices up
1790	Keelmen.
1791	Pitmen (and other groups?).
1792	Pitmen and others including seamen at Shields. Strike widespread across coalfields
1809	Pitmen on Tyneside, in October especially.
1810	Pitmen on Wearside.

Sources: PRO SP34/13/24; 12/126; SP36/51/50; BL Add 40748/81; NEIM Brown 16/1/4; Buddle 22/154; Clavering Corres., 226; Hostmen's Records, 17, 137, 203; Ashton and Sykes 1964 edn., 89-91, 116-9; Beastall 1975, 32-3; Brand 1789, II, 293; Fewster 1957, 33; Flinn 1984, 399-400; E. Hughes 1952, 249-50; Lewis 1970, 210-11; Moller 1933, 299-300, 558-64; Nef 1932, II, 178-9.

b. ADVERSE WEATHER

1672 Great flood and colliers sunk in Tyne.
1703 Hurricanes in November and ships lost.
1709, 1715, 1739, 1763, > Severe frosts, Thames frozen and coal
1767, 1777-8, 1788-9. > supplies cut off.

Sources: CalSPD 1672-3, 310-11; 1703-4, *passim*; Ashton and Sykes 1964 edn., 223; and see losses at sea for 1703 in appendix 7a above.

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c. WARS

1624-29/30	War with Spain and France.
1640-44	Civil War.
1652-4	First Dutch War.
1655-60	War with Spain.
1664-7	Second Dutch War.
1672-4	Third Dutch War.
1689-97	War League of Augsburg (Anglo-Dutch v. France as result of downfall of James II and replacement by William of Orange).
1702-12	War Spanish Succession.
1739-48	War Austrian Succession.
1756-63	Seven Years War.
1776-83	War American Independence.
1793-1815	Napoleonic Wars.

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d. ACCIDENTS: SOME MAJOR EXPLOSIONS AND INUNDATIONS

Date	*Colliery (incl. code)*	*Lives lost*	*Cause(s)*
early 17C	Gateshead (S29?)	?	E(xplosion)
1643	Benwell (N9)	?	E. On fire many yrs
c1648	Harraton (W3)	c50	E + Inundation
1658	Elswick (Gallow Flatt) (N10)	?	Inundation
1704	Gateshead (S29?)	3	E?
1705	Gateshead (Stony Flatt) (S67?)	30+	E
1708	Fatfield (W13)	69	E
c1710	Bensham (S67)	70 to 80	Explosion
1743	North Biddick (W4)	17	E
1756	Chartershaugh (W12)	4	E
1757	Ravensworth (S22)	16	E
1760	Long Benton (N23)	1	E
1765	Walker (N12)	8	E
1766	Walker (N12)	10	E
1766	South Biddick (W16)	'several'	E

1766	Lambton (W8)	6	E	
1767	Fatfield (W13)	39	E	
1773	'A colliery near Wear'	'several'	E	
1778	Chartershaugh (W12)	24	E	
1780	Birtley (north side) (W30?)	3	?	
1782	A colliery in Chester parish	11?	?	
1782	Gateshead (E side High St)	4	E	
1782	Wallsend (N49)	1	E	(Then drowned)
1783	Washington (W14 or W31)	2	E	
c1783	Washington (W14 or W31)	2	E	
1784	Wallsend (N49)	3	E	(from a steel mill
1784	Wallsend (N49)	2	E	spark)
1785	Wallsend (N49)	1	E	
1785	Wallsend (N49)	2	E	
1786	Wallsend (N49)	6	E	
1787	Long Benton (N42)	3	E	
1790	Wallsend (N49)	7	E	
1794	Picktree (W28?)	30	E	
1794	Harraton (W3)	28	E	
1796	'New' Washington (W14 or W31)	7	E	
1799	Lumley (W9)	39	E	
1803	Wallsend (N49)	13	E	
1805	Hebburn (S82)	35	E	
1806	Killingworth (N43)	10	E	
1808	Harraton (W3)	4	E	
1809	Killingworth (N43)	12	E	

Note: The above probably covers most if not all of the major incidents which seriously affected coalworking, and in some instances caused considerable loss of life.

Main sources: Parish registers; Beastall 1975, 42; Galloway 1898, *passim*; Nef 1932, II, 171; Sykes 1829, 93-6.

Appendix 11

ATMOSPHERIC AND STEAM ENGINES

a. ADOPTIONS (IN CHRONOLOGICAL ORDER) 1715-1803

No.	*Date at or by which adopted*	*Location as given (and likely colliery code, if identifiable)*
1	1715	Tanfield Leigh (S52/76)
2	1717	Oxclose (near Washington) No.1 (W14)
3	1717	Byker No.1 (N25)
4	1718	Elswick No.1 (N10)
5	1718	Gateshead Park No.1 (S29)
6	1718	Norwood (near Ravensworth) No.1 (S21? S22?)
7	1718/9	Gateshead Park No.2 (S29)
8	1719	Biddick (W4 or W16)
9	1719	Farnacres (S21)
10	1722	Byker No.2 (N25)
11	1722	Walker No.1 (N12)
12	1724	Benwell (N9)
13	1725	Allan's Flatts (Chester-le-Street) No.1 (W1/2)
14	1727	Houghton-le-Spring (L16 or W18)
15	1727	Lumley No.1 (W9)
16	1729	Heaton No.1 (N24)
17	1730	Bushblades No.1 (S51)
18	1731	Allan's Flatts No.2 (W1/2)
19	1731	Heaton No.2 (N24)
20	1731	Heaton No.3 (N24)
21	1731	Heaton No.4 (N24)
22	1731	Jesmond No.1 (N22)
23	1731	Jesmond No.2 (N22)
24	1733	Heaton No.5/Ridley No.1 (N22)
25	1733	Houghton Burn No.1 (?)
26	1733	Lumley No.2 (N9)
27	1733/4	Newbottle No.1 (W17/18)
28	1735	Newbottle No.2 (W17/18)
29	1738	Ridley's Newcastle No.2 (?)
30	1738	Ridley's Newcastle No.3 (?)
31	1739	Newbottle No.3 (W17/18)
32	1740	Elswick No.2 (N10)
33	1740	Elswick No.3 (N10)
34	1740	Gateshead Park No.3 (S29)
35	1740	Gateshead Park No.4 (S29)
36	1741	Heaton No.6 (N24)
37	1742	Jarrow (Heworth?) (S32)
38	1744	Walbottle (N3)

39	1745	Dent's Hole No.1 (?)
40	1745	Dent's Hole No.2 (?)
41	1745	Long Benton No.1 (N23)
42	1746	Byker No.3 (N25)
43	1746	Byker No.4 (N25)
44	1746	Gateshead Park No.5 (S29)
45	1746	Long Benton No.2 (N23)
46	1746	Newbottle No.4 (W17/18)
47	1747	Byker No.5 (N25)
48	1747	Byker No.6 (N25)
49	1748	Long Benton (South Gosforth) No.3 (N23?)
50	1749	Friar's Goose No.1 (S81)
51	1749	Friar's Goose No.2 (S81)
52	1749	Long Benton No.4 (N23)
53	1749	Newburn (Moor) No.1 (N5?)
54	1749	Pelton Moor (W21/S78? or W24?)
55	?1750	Billy Mill (?)
56	1750	Lambton No. 1 (W8)
57	1750	Ravensworth (S22)
58	1750	Tanfield Moor (S10)
59	1751	Chirton (N54)
60	1752	Throckley Moor (N2)
61	1753	Long Benton No.5 (N23)
62	1754	Saltwellside (S26)
63	1755	Tanfield Leigh No.2 (S52 or S76)
64	1756	Throckley No.2? (N2?)
65	1757	? near Byker (?)
66	1757	Lambton No.2 (W8)
67	1758	Bell's Close (?)
68	1758	Denton, Old (N6)
69	1758	Denton, New (N31 or N33)
70	1758	Walker No.2 (N12)
71	1758	Walker No.3 (N13)
72	1759	Heworth No.1 or 2? (S32)
73	1760	Gateshead (S29 or S70)
74	1760	Shiremoor No.1 (N52)
75	1760	Shiremoor No.2 (N52)
76	1761	Norwood (near Ravensworth) No.2 (S21 or S22)
77	1762	Beamish No.1 (S62/W22)
78	1762	Benwell No.2 (N9)
79	1762	Killingworth No.1 (N43 or ?N42)
80	1762	Killingworth No.2 (N43 or ?N42)
81	1762	Oxclose (near Washington) No.2 (W14)
82	1763	Throckley No.2 (N2)
83	1763	Walker No.4 (N12)
84	1764	East Denton (N33)
85	1764	Low Fell (S70?)
86	1764	North Biddick (W4)
87	1765	Long Benton No.6 (N42)
88	1765	Long Benton No.7 (N42)
89	1765	Washington No.1 (?W31/S85)
90	1766	Benwell No.3 (N9)

91	1766		Fenham (N8)
92	1766		Houghton Burn No.2 (?W17/18)
93	1766		Lambton No.3 (W8)
94	1766		New Benton (=East Benton) (N44 or N45)
95	1766		Gateshead Fell (S70)
96	1767		? Killingworth (?N43)
97	1767		North Biddick No.2 (W4)
98	1768		Black Close [where is it?] (?)
99	1768		Black Fell (W30/S30)
100	1768		Bushblades No.2 (S51)
101	1768		Chartershaugh (W12)
102	1768		Chester Burn (?W1/2)
103	1769		Fatfield No.1 (W13)
104	1769		Fatfield No.2 (W13)
105	1769		Gosforth (?N22)
106	1769		Heworth (S73)
107	1769		Jesmond No.3 (N22)
108	1769		Jesmond No.4 (N22)
109	1769		Lemington (N30)
110	1769		Morton Hill No.1 (?W19)
111	1769		Morton Hill No.2 (?W19)
112	1769		Newburn No.2 (N5)
113	1769		Ouston (W26)
114	1769		Penshaw Tempest No.1 (W6)
115	1769		Penshaw Tempest No.2 (W6)
116	1769		Ravensworth (S22)
117	1769		Ravensworth (S22)
118	1769		Rise Moor (S1n)
119	1769		Salt Meadows (?S29 or S81)
120	1769		South Biddick No.1 (W16)
121	1769		South Biddick No.2 (W16)
122	1769		South Moor (S49 or S50)
123	1769		Throckley No.3 (N2)
124	1769		Tynemouth Moor No.1 (N17)
125	1769		Tynemouth Moor No.2 (N17)
126	1769		Tynemouth Moor No.3 (N17)
127	1769		Tynemouth Moor No.4 (N17)
128	1769		Washington No.2 (W14 or W31/S85)
129	1769		Washington No.3 (W14 or W31/S85)
130	1769		West Denton No.1 (N31)
131	1769		West Denton No.2 (N31)
132	1769		Wylam No.1 (N1)
133	1769		Wylam No.2 (N1)
143	1772		Fatfield No.3 (W13)
135	1772		Long Benton No.8 (N42)
136	1775		Washington No.4 (W14 or W31/S85)
137	1775		Willington No.1 (N50)
138	1775		Willington No.2 (N50)
139	1776		Felling (S31)
140	1776/7		Long Benton No.9 (N42)
141	1778	w	Byker No.10 (N25)
142	1778		Gateshead Park No.5 (S29)

143	1778		Lumley No.3 (W9)
144	1778		Wallsend No.1 (N49)
145	1778		Wallsend No.2 (N49)
146	1778		Willington No.3 (N50)
147	1780		Lumley No.4 (W9)
148	1780		Killingworth Moor No.3 (N43)
149	1780		Killingworth Moor No.4 (N43)
150	1782		Chopwell (S2)
151	1782		Stella Grand Lease (S4)
152	1782		Walker No.5 (N12 or ?N47)
153	1782		Wallsend No.3 (N49)
154	1783		Bourn Moor (W36)
155	1784		Walker No.6 (N12)
156	1785		Long Benton No.10 (N42)
157	1786		Mount Moor No.1 (W30/S30)
158	1786		Wallsend No.4 (N49)
159	1789		Tyneside No.1 (?)
160	1789		Tyneside No.2 (?)
161	1789		Tyneside No.3 (?)
162	1789		Tyneside No.4 (?)
163	1794		Beamish No.2 (W22/S62)
164	1794		East Benton (N44)
165	1794		Gateshead Park No.6 (S29)
166	1794		Gateshead Park No.7 (S29)
167	1794		Gateshead Park No.8 (S29)
168	1794	w	Gateshead Park No.9 (S29)
169	1794		Mount Moor No.2 (W30/S30)
170	1794		Mount Moor No.3 (W30/S30)
171	1794		Pontop Pike No.1 (?S46)
172	c1795		Baker's Main (N6)
173	c1795	w	Benwell (N9)
174	c1795		Hebburn No.1 (S82)
175	c1795		Hebburn No.2 (S82)
176	c1795		Pontop Pike (?S46)
177	c1795		Pontop Pike (S46)
178	1795	w	Walker No.7 (N12)
179	1795		Walker No.8 (N12)
180	1796		Heaton No.7 (N12)
181	1796	w	East Rainton (W7)
182	1796	w	Heaton No.8 (N24)
183	1796		Newbottle No.5 (W17/18)
184	1796	w	Pontop Pike (?S46)
185	1796	w	Sherrif Hill (S70)
186	1796		Shield Row (?S71)
187	1796	w	Walker No.9 (N12)
188	1796	w	Wallsend No.5 (N49)
189	1796	w	Willington No.4 (N50)
190	1797?	w	Hebburn No.2 (S82)
191	1797	w	Walker No.10 (N12 or ?N47)
192	1798		Hebburn 'B' (S82)
193	1798	w	Kenton (N34 or N35)
194	1799		Burnmoor (W36)

195	1799		Walker No.11 (N12 or N47)
196	1799		Wylam No.3 (N1)
197	1800	w	Gateshead Park/Tyne Main (S29)
198	1800		Leefield (W27 or W28)
199	1801		Kenton (N34 or N35)
200	1801		Murton (N13)
201	1803		Heaton (N24)

w = used for winding rather than pumping

Sources: BRL BW/catalogue of old engines; BW/box 3L/letters; BW/boxes 3'S', 3'P'; and parcel F'G'; NEIM Watson 34/25; 18/73; NRO ZCR 54/1/'Plan of the River Wear ... by Burleigh and Thompson, 1737; Allen 1969-70; Farey 1827, 233-4; Rolt 1963, 120; Raistrick 1936-7, 131-63; Kanefsky 1979; Galloway 1898.

b. ADOPTIONS, 1715-1803: A SUMMARY

Decade	Adoptions per decade: Newcomen Atmospheric	Other Newcomen Types	Boulton & Watt	Other Types	Grand Total All types	Cumulative Adoptions
1711-20 (1715-20)	9	-	-	-	9	9
1721-30	8	-	-	-	8	17
1731-3^ (10)						
1734-40 (8)	>18	-	-	-	18	35
1741-50	23	-	-	-	23	58
1751-60	17	-	-	-	17	75
1761-70	58	-	-	-	58	133
1771-80	15	-	[1]	-	15+[1]	148+[1]
1781-90	7	5	1	-	13	162
1791-1803	5	5	9+[14]	6	24+[14]	187+[14]
	160	10	10+[15]	6	187+[15]	201

Notes: ^ 1733 marked the end of Newcomen's patent.
Winding engines are identified in square brackets [ ]

c. A NOTE ON IMPROVEMENTS TO THE NEWCOMEN PRINCIPLE

Until the late 1760s, the chief advances to the Newcomen were in the substitution of cheap cast iron for brass in cylinder construction, and the development of an optimum-size diameter of around 60" for cylinder efficiency. However, the Newcomen principle reached its fullest development by the late 1770s under Smeaton's guidance. By first of all identifying and then attempting to rectify basic design weaknesses of the engine, such as, for instance, its wrongly balanced beams, ill-fitting pistons and too short a stroke, he was able to raise its 'duty' from around 5.5 or 5.7 to 9.5 million lbs of water lifted per foot for the consumption of a bushel of coal. Even greater attention was given to the twin problems of thermal efficiency and smoothness of operation by James Watt and his contemporaries, some of whom were undoubtedly plagiarists. Watt's steam engine differed from the pressure engine in two ways: it used a separate condenser and steam jacket, and developed a more satisfactory method of boring the cylinder. Watt's further development of the crank, and of the sun and planet gears to provide rotary motion, improved smoothness of operations. Even more impressive technical developments came along in the late 1780s, in the form of the double-acting principle, parallel motion and the application of the governor to control speed. It has been argued, of course, that thermal efficiency was not a crucial factor on the coalfields where fuel was cheap; and similarly, smoothness of operation was less vital than, say, in the textile industry where an erratic performance could be disastrous. Be that as it may, it is clear that after 1780 some existing Newcomens were adapted for rotary motion as well as Smeaton's fuel economy measures; and by 1803 there were at least twenty-two Watt engines on the coalfield and several other pirated or closely similar versions. Moreover, while thermal efficiency and smoothness of operation may have been a mere bonus for engines used in pumping, for those in winding (the small 35" diameter cylinder engines) rotary motion was more or less obligatory.

Sources: For the above note, I have drawn upon the secondary sources cited in appendix 11a, especially Rolt 1963.

Appendix 12

COAL PRICE DATA

a. PRICES OF COAL DELIVERED AT KING'S COLLEGE, CAMBRIDGE, 1590-1702, WESTMINSTER SCHOOL, LONDON, 1590-1809, AND AT GREENWICH HOSPITAL, 1716-1810

(in shillings per ton)

	King's Coll.	Westminster		King's Coll.	Westminster
1590	11.30	11.57	1620	11.76	12.88
1591	9.92	10.25	1621	11.11	12.16
1592	9.93	10.00	1622	12.51	12.16
1593	11.76	11.96	1623	11.31	
1594	10.06	10.66	1624	10.45	
1595	10.59	13.27	1625	10.64	
1596	11.69	12.49	1626	13.66	15.53
1597	10.42	11.18	1627	12.17	16.90
1598	10.42	10.96	1628	12.27	14.17
1599	10.59		1629	15.29	16.80
1600	9.80	10.85	1630	14.64	17.45
1601	11.12	10.98	1631	10.88	17.45
1602	11.63	10.86	1632	11.96	16.31
1603	11.96	10.53	1633	12.97	16.30
1604	10.35	9.80	1634	13.85	15.94
1605	10.38	12.16	1635	12.76	17.22
1606	13.66	13.48	1636	13.07	17.39
1607	11.78	14.64	1637	13.85	15.95
1608	14.71	14.62	1638	14.02	
1609	11.96	12.48	1639	15.26	17.36
1610	11.57	12.42	1640	13.04	
1611	11.16	12.29			
1612	10.71	12.71			
1613	10.78	14.51			
1614	11.90	14.53			
1615	11.19	15.10			
1616	10.33	14.99			
1617	10.59	12.24			
1618	10.20	12.16			
1619	10.20	13.22			

	King's Coll.	Westminster
1641	19.41	
1642	18.30	
1643	23.07	
1644	33.65	
1645	20.32	
1646	13.50	
1647	14.12	
1648	13.20	
1649	16.67	
1650	13.73	
1651	16.02	
1652	16.99	
1653	20.06	
1654	16.47	
1655	16.46	
1656	17.44	
1657	14.90	
1658	15.69	
1659	15.55	
1660	14.25	
1661	14.12	
1662	14.12	
1663	14.12	
1664	14.12	23.00
1665	16.78	
1666	14.90	37.01
1667	19.87	25.52
1668	16.99	18.29
1669	15.23	
1670	14.12	
1671	14.12	
1672	16.86	47.95
1673	23.59	
1674	15.10	21.55
1675	15.29	
1676	15.29	20.39
1677	15.29	19.11
1678	15.29	20.71
1679	14.90	17.89
1680	14.71	
1681	14.71	
1682	14.90	16.47
1683	14.51	
1684	15.29	
1685	14.90	16.10
1686	14.51	
1687	14.12	
1688	14.12	
1689	15.69	
1690	18.43	
1691	18.56	28.45
1692	18.82	25.04
1693	20.13	25.95
1694	19.61	22.42
1695	20.26	26.98
1696	20.78	21.45
1697	20.39	21.73
1698	16.47	17.29
1699	16.47	19.61
1700	17.25	19.06
1701	19.25	21.78
1702	23.53	26.05
1703		27.32
1704		30.61
1705		23.83
1706		
1707		21.73
1708		26.45
1709		25.55
1710		24.06

	Greenwich	Westminster		Greenwich	Westminster
1711		25.12	1746	22.00	25.74
1712		23.95	1747	21.67	24.36
1713		24.76	1748	22.44	25.19
1714		23.83	1749	21.41	24.92
1715		22.71	1750	20.50	23.45
1716	24.02	23.16	1751	22.10	24.42
1717	18.67	25.12	1752	21.66	25.13
1718	23.40	25.51	1753	21.62	25.18
1719	22.38	25.16	1754	24.61	27.12
1720	21.06	21.98	1755	27.37	31.84
1721	20.85	23.00	1756	28.00	29.99
1722	20.16	22.42	1757	28.31	30.11
1723	20.47	22.02	1758	27.46	28.85
1724	20.47	22.27	1759	25.20	26.96
1725	21.33	24.34	1760	27.01	28.54
1726	20.16	22.45	1761	29.02	29.25
1727	20.82	22.31	1762	24.68	26.64
1728	22.54	24.00	1763	26.21	28.18
1729	19.61	22.33	1764	26.16	28.25
1730	22.57	28.49	1765	24.45	27.11
1731	20.28	22.89	1766	23.54	25.92
1732	20.71	21.95	1767	24.15	25.92
1733	21.00	22.62	1768	23.68	25.15
1734	21.41	22.75	1769	23.68	25.52
1735	21.32		1770	25.80	26.57
1736	21.37	23.13	1771	25.80	28.67
1737	22.25	23.62	1772	24.38	27.10
1738		24.07	1773	24.65	26.97
1739	24.80	26.41	1774	25.51	28.96
1740	20.78	24.13	1775	27.91	30.53
1741	21.87	24.13	1776	28.73	30.15
1742	20.97	24.81	1777	30.05	30.15
1743	25.61	26.57	1778	31.34	30.53
1744	23.56	27.45	1779	31.44	31.29
1745	23.10	26.77	1780	32.61	31.29

	Greenwich	Westminster		Greenwich	Westminster
1781	33.47	33.59	1796	31.07	
1782	28.04	27.47	1797	31.66	31.66
1783	26.83	27.39	1798	39.85	46.09
1784	28.05	29.00	1799	42.61	44.47
1785	27.40	28.54	1800	37.46	39.55
1786	27.29	28.93	1801	36.69	40.27
1787	27.09	30.21	1802	41.47	46.02
1788	27.79	29.44	1803	42.55	49.49
1789		30.59	1804	42.86	51.14
1790	29.20	30.22	1805	44.03	
1791	28.13	30.21	1806	45.09	51.14
1792	32.31	32.53	1807	46.09	51.14
1793	32.96	36.45	1808	51.18	55.22
1794	32.71	37.92	1809	50.67	56.89
1795	31.24	27.50	1810	50.28	

Sources: Based upon data in Mitchell and Deane 1962, 479-81, Nef 1932, II, 404-5.

b. OTHER PRICES QUOTED FOR LONDON

	Price per ton^
1557-8	*9s. 5d.(W) in winter
1559	8s. 8d.(W)
1562	8s. 3d.(W); 8s. 8d. to 8s. 10d.(R)
1569-70	10s. 5d.(R)
1574	15s. 8d.(R)
1580	4s. 9d.(W?); 9s. 11d. & 11s. 9d.(R)
1589	9s. 10d.(W)
1591	11s. 0d.(W)
1600	23s. 6d.(R)
1606	14s. 11d.
1606-7	10s. 9d. & 11s. 6d.(W); 23s. 6d.(R)
1608	12s. 7d.(W); 17s. 3d.(R)
1609	16s. 10d.(R)
1618	17s. 3d.
1621	20s. 6d. to 21s. 0d.
1626-9	23s. 6d. to 62s. 9d.(R)
1626	25s. 11d.(R)
1627	13s. 10d.(W)
1628	15s. 8d.; 62s. 9d.

1628-9	*23s. 6d.(W)*
1638	13s. 6d. & 14s. 11d.(W);*17s. & 20s. 5d.(W);18s. or more (R)*
1640	*17s. 3d. & 23s. 6d.(R); above 16s. 6d.(W)*
1643-4	*30s. 0d. and 40s. 0d.*
1652	*23s. 6d.(R)*
1653	*94s. 1d.(R)*
1665	23s. 6d; *54s. 11d.(R)*
1666	*49s. 5d.(R)*
1666-7	*32s. 2d. to 36s. 10d.(W); 54s. 11d. to 62s. 9d.(R)*
1667	23s. 6d.; *18s. 0d. to 86s. 3d.(R)*
1668	*20s. 8d.*
1674	15s. 8d; *18s. 10d.(R)*
1675	*16s. 6d.(R)*
1683	14s. 11d. & 15s. 8d.
1687	14s. 2d.
1691	*18s. 10d. to 21s. 2d.(W)*
1699	32s. 11d. to 34s. 6d.
1700-01	*14s. 2d. to 14s. 4d.*
1701	14s. 4d.
1702	*31s. 4d.(W)*
1703	31s. 4d. (and more)
1729	22s. 0d. and 25s. 1d.
1731	17s. 3d., 22s. 4d., 18s. 5d.
1732	16s. 6d. & 22s. 0d.
1733	18s. 10d. & 22s. 9d.
1734	16s. 6d. & 23s. 6d.
1735	18s. 10d. & 21s. 2d.
1738	19s. 7d. & 22s. 0d.
1739	22s. 0d. & 28s. 3d.
1740	28s. 3d. to 54s. 11d.
1744	22s. 9d.
1746	20s. 5d. & 23s. 6d.
1747	23s. 6d. & 25s. 11d.
1749	25s. 11d.
1750	25s. 11d; 22s. 9d. & 23s. 6d.
1761	?28s. 3d.
1763	43s. 2d.
1771	32s. 2d. to 36s. 10d.
1772	24s. 4d., 32s. 2d., 65s. 11d.
1773	28s. 3d.
1774	30s. 7d.
1775	32s. 2d.
1776	32s. 11d.
1778	30s. 4d.
1779	32s. 11d.
1780	34s. 6d.
1781	34s. 6d.
1785	24s. 4d.
1786	29s. 0d.
1787	25s. 1d. and 28s. 3d.
1788	23s. 6d.
1789	23s. 6d.

1790	25s. 8d.
1791	24s. 11d. & 27s. 10d.
1792	24s. 1d.
1793	27s. 5d.
1794	34s. 6d.
1795	39s. 3d.
1796	35s. 10d.
1797	33s. 9d.
1798	34s. 11d.
1799	44s. 9d. & 57s. 8d.
1800	47s. 1d. & 54s. 11d.

Notes: ^ Original prices relate to the London chaldron which ranged from 25.5 to 28 cwt.
* Prices shown in italics are those thought to be less reliable or representative and are not plotted in figure 4.2.
R Quoted as retail price
W Quoted as wholesale price.
(Most of remainder are thought to be wholesale)

Sources: Mainly from data in Ashton and Sykes 1964 edn., 252-3; Dunn 1844, 20-2; Moller 1933, 800; Nef 1932, II, 400-4

c. PRICES TO SHIPMASTERS AT NEWCASTLE

	Price per ton^
c.1580	2s. 10d.
1581	*2s. 5d.* [cf. 2s. 0d. at pithead]
1582	*2s. 10d.*
1585	*4s. 3d.*
1590	*2s. 10d. to 3s. 4d.*
1595	4s. 3d.
1607	4s. 9d.
1618-21	*5s. 0d. to 5s. 3d.*
1624	5s. 0d.
1626	3s. 7d.
1629-30	*2s. 2d., 2s. 3d., & 3s. 2d.*
1633	4s. 3d.
1635	3s. 4d. & 4s. 9d.
1637	4s. 0d. & 4s. 2d; *6s. 6d. & 7s. 3d.*
1637-8	3s. 10d. to 4s. 2d.
1644	7s. 8d.
1645	7s. 8d.
1651	4s. 2d.
1653	3s. 10d.

1656	4s. 7d.
1665	4s. 11d.
1672	2s. 8d. to 3s. 10d.
1673	*2s. 5d. to 2s. 7d.*
1674	5s. 6d.
1696	3s. 4d.; *3s. 9d. & 5s. 3d.*
1699	3s. 9d.
1701	3s. 11d.; *6s. 11d.*
1702	*4s. 4d.*
1703	3s. 9d. & 4s. 4d.; *4s. 2d.*
1729	4s. 6d.; *?2s. 3d.*
1730	5s. 8d. (and less)
1731	3s. 7d.
1739	4s. 11d.; *4s. 6d.*
1740	4s. 11d.
1744	4s. 2d.
1750	4s. 4d.
1761	5s. 8d.
1771	4s. 6d. to 5s. 8d.
1781	7s. 9d.
1786	6s. 5d.
1787	6s. 5d. *(to 7s. 0d.)*
1789	6s. 3d. *(to 7s. 0d.)*
1793	*6s. 10d.*
1794	7s. 2d.
1800	10s. 0d.

Notes: ^ Original prices relate to Newcastle chaldrons whose weight varied from 42 cwt. to 53 cwt., as explained in appendix 3.
* Prices shown in italics are those thought to be less reliable or representative and so are not plotted in figure 4.2.

Sources: Ashton & Sykes 1964 edn., 252-3; Dunn 1844, 21-2; Moller 1933, 799; Nef 1932, II, 396-7.

Appendix 13

COLLIERY PERFORMANCE INDICATORS

a. NORTHBANKS COLLIERY: LEADINGS AND RENTS, 1692-1723

YEAR	QUANTITIES LED^ Tens	Fothers or Bolls~	TENTALE RENT £s*	YEAR	QUANTITIES LED Tens	Bolls	TENTALE RENT £s*
				1711	1262	324	884
1692	533	27	373	1712	1870	172	1309
1693	696	34	488	1713	1965	153	1376
1694	663	23	464	1714	2044	113	1431
1695	684	11	479	1715	2401	46	1681
1696	682	38	478	1716	2492	245	1745
1697	712	21	499	1717	2419	129	1694
1698	726	13	508	1718	2514	300	1760
1699	310	21	217	1719	2438	224	1707
1700	941	210	659	1720	2688	317	1882
1701	1721	303	1205	1721	2891	112	2024
1702	2541	216	1779	1722	3295	20	2307
1703	1589	87	1112	1723	3067	286	2148
1704	1486	238	1041				
1705	2205	164	1544				
1706	2114	288	1480				
1707	1890	288	1324				
1708	1430	212	1001				
1709	1885	86	1320				
1710	2639	184	1848				

Notes: ^ Led to Dunston staiths

~ Fothers to 1699, bolls thereafter. 42 fothers or 330 bolls equalled one ten. One leading ten at Northbanks (as above) was the equivalent of about 36 tons; though only about 24 tons when vended. See appendix 3 regarding the variable size of the ten.

* Figures rounded to nearest £.

Source: DRO/St v36/'An Account of ye Severall Years Leadings & Rents during ye Term of Mr Montagu's Lease'.

b. BENWELL COLLIERY PROFITS AND LOSSES, 1709-22

To nearest £			£		£
		1713	1387	1718	-317
1709	2228	1714	1852	1719	686
1710	2721	1715	1489	1720	168
1711	2594	1716	949	1721	916
1712	1784	1717	609	1722	-152

Source: NRO MBE IV/5; and also cited by Flinn 1984, 318.

c. LUMLEY COLLIERY: WORKINGS, LEADINGS AND RENTS, 1784-1810^

YEAR	COALS WROUGHT Tens	COALS WROUGHT Bolls~	COALS LED Tens	COALS LED Bolls~	RENT TO LORD SCARBORO' IN £s*	SEAMS WORKED & RENT PER TEN (where stated)
1784	599	404	510	357	483	! 5-Quarter (17s.) + Low
1785	881	241	793	59	793	! Main & Hutton (20s.)
1786	990	75	906	215	904	Hutton only (20s.)
1787	1015	61.25	845	33	845	.. .. ..
1788	1023	378.75	928	370.5	929	.. .. ..
1789	1138	5	1068	378.5	1069	.. .. ..
1790	1059	367.5	1058	105	1058	.. .. ..
1791	998	382.5	969	23	969	.. .. ..
1792	807	322.5	770	182	770	.. .. ..
1793	720	417.5	653	41	693	Hutton + Upper Main
1794	1144	297	1087	369	1167	.. .. ..
1795	1415	152	1286	175	1426	Hutton + U M (25s.)
1796	1631	17	1364	103	1563	.. .. ..
1797	198	215	389	134	565	All Upper Main
1798+	61	63	61	63	408	Mostly Upper Main
1799	1001	409.5	956	287	962	(17s. & 20s.) Seams?
1800	716	111	624	411	635	All seams at 17s.
1801	671	280.5	453	203	463	[Mostly 20s. Seams?]
1802	501	392	474	1	467	One pit 17s., two 20s.
1803	1248	38.5	1218	253	1213	[20s.] [Hutton seam?]
1804	861	220	839	81	839	.. .. ..
1805	1417	415	1244	321	1245	.. .. ..

1806	2078	47.5	1903	47.5	1903	..	..	..
1807	1107	350	1773	348.5	1774	..	..	..
1808	2580	352	2102	299	2105	..	..	..
1809	2808	313.5	2688	112	2688	..	..	..
1810	2588	242.5	2565	349	2577	?	?	?

Notes:

^ The colliery was leased to the Lambtons (of Lambton) throughout the period.

~ 420 bolls = 1 ten. The ten was approximately 46 tons at Lumley.

* Figures taken to nearest £.

+ Amount wrought includes 27 tens 153 bolls for landsale; rent includes £200 for 'certain rent' and rest is for 'shorts'

Source: SPLum BA/16/1.

d. TANFIELD MOOR COLLIERY: VEND AND SELLING PRICES, 1792-1810

	Vend in Tons	Vend in Chaldrons (as recorded)	Selling Price at Newcastle per ton (approx.)	per chaldron (as recorded)
1792	52099	19660	5s.8d. & 6s.	15s. & 16s.
1793	50952	19227	6s.	16s.
1794	50991	19242	4s.11d., 5s 8d., & 6s.0d.	13s., 15s., 16s.
1795	34964	13194	4s.6d., 4s.11d., 5s.3d., & 6s.0d.	12s., 13s., 14s., & 16s.
1796	42792	16148	.. ..	.. ..
1797	56776	21425	.. ..	.. ..
1798	50422	19027	6s.0d., 6s.5d., & 6.10d.	16s., 17s., 18s.
1799	50350	19000	6s.10d., 7s.7d., 7s.11d., 8s.4d.	18s., 20s., 21s., & 22s.
1800	48908	18456	7s.11d., 8s.4d.	21s., & 22s.
1801	48969	18479	7s.11d.	21s.
1802	45424	17141	.. ..	..
1803	45471	17159	.. ..	..
1804	46913	17703	8s.8d.	23s.
1805	45532	17182	.. ..	..
1806	52104	19662	.. ..	..
1807	47162	17797	.. ..	..
1808	49772	18782	.. ..	..
1809	50718	19139	9s.5d.	25s.
1810	51370	19385	.. ..	..

Source: NEIM Buddle 51/335.

e. ESTIMATED TYNE VEND AND COLLIERY PROFITS, 1767

		Supposed vend in tons	chaldrons	Total profit £s	Cost per chaldron	Selling price	Percentage gain
N1	Wylam	12000	31800	1500	9s.6d	12s.	20.83
N2	Throckley	18000	47700	3600	8s.	12s.	33.33
N6	Denton	5000	13250	1000	8s.	12s.	33.33
N8	Beaumonts	18000	47700	3375	8s.3d.	12s.	31.25
N12	Walker	15000	39750	1125	10s.6d.	12s.	12.50
N17	Tynemouth Moor	15000	39750	3000	8s.	12s.	33.33
N25	Byker	12000	31800	1200	10s.	12s.	16.67
N42	Benton	26000	68900	5200	9s.	13s.	30.77
N54	Chirton	12000	31800	?	8s.6d.	?	?
S1n	Rise Moor	6000	15900	?	9s.6d.	?	?
S10	Tanfield Moor	17000	45000	3400	9s.	13s.	30.77
S45	Pontop	5000	13250	750	9s.	12s.	25.00
S49/50	South Moor	39000	103350	4390	9s.9d.	12s.	18.75
S51	Bushblades	17000	45000	Nil	11s.	11s.	Nil
S57	Hutton Main	8000	21200	800	8s.	10s.	20.00
S58	Andrew's House	6000	15900	900	9s.	12s.	25.00
S68	Claxtons	6000	15900	?	9s. 'any price they can get'		
S71	Team	26000	68900	4550	8s.6d.	12s.	29.17
S73	Heworth	8000	21200	600	9s.6d.	11s.	13.64
S74	Whitefield	12000	31800	600	8s.	9s.	11.11
S76	Tanfield Moor Edge	10000	26500	1160	9s.8d.	12s.	19.44
S77	Tanfield Townhead	5000	13250	750	9s.	12s.	25.00

Sources: NEIM Watson 10/*passim*; with additional information from Galloway 1898, 271; RepRCC 1871, III, app. 3; Cromar 1976, app. 6.1.

f. ESTIMATED TYNE VEND, INVESTMENT AND COLLIERY PROFITS, 1788

		Vend in tons	Vend in chaldrons	Likely capital 'sunk' £s	Likely total profit £s	Likely percentage profit on capital sunk	Likely percent profit per chald sold*
N1	Wylam	14000	37100	8000	788	9.85	7.44
N3	Walbottle	13000	34450	7000	1408	20.11	15.48
N6	Denton	20000	53000	12000	4708	39.23	29.43
N12	Walker	30000	79500	25000	6063	24.25	23.77
N27	Heddon Main	10000	26500	6000	1188	19.80	16.96
N28	Greenwich Moor	14000	37100	6000	1663	27.72	16.96
N29	Holywell Main	14000	37100	6000	1750	29.17	16.67
N31	West Denton	8000	21200	4000	?	?	?
N42	Longbenton	26000	68900	25000	3304	13.22	14.95
N44	Bigges Main	30000	79500	12000	7188	59.90	28.19
N48	St Anthony	17000	45050	10000	2798	27.98	19.36
N49	Wallsend	30000	79500	22000	5688	25.85	22.30
N50	Willington	30000	79500	28000	3938	14.06	15.44
N51	Shiremoor	14000	37100	10000	1079	10.79	11.01
S8	Blaydon Main	8000	21200	10000	883	8.83	14.73
S10	Tanfield Moor	17000	45050	9000	3081	34.23	24.17
S29	Gateshead Park	17000	45050	10000	4569	45.69	31.62
S31	Brandling Main	16700	44255	25000	567	2.27	4.43
?	'Near Pontop'	10000	26500	8000	-188	-2.35	-2.88
S45/46	Pontop Pike	37000	98050	25000	5319	21.28	19.17
S49/50	South Moor	22000	58300	20000	1329	6.65	8.63
S70	Sherrif Hill	14000	37100	14000	1721	12.29	16.39
S71	Team	26000	68900	18000	4389	24.38	22.50
S72/80	Eighton & Low Moor	14000	37100	10000	1792	17.92	25.60
S74	Whitefield	18000	47700	9000	2288	25.42	21.18

Note:
* Figures represent the percentage difference between recorded cost price and selling price at Newcastle. Costs ranged from as little as just over 9s. 5d. per chaldron at Whitefield to just over 13s. 8d. at St. Anthony's colliery. For the range of selling prices, see figure 4.5.
Sources: NEIM Watson 8/11; Cromar 1976, app. 7.1.

Appendix 14

FUTURE GRAND ALLIES' ACQUISITIONS: ABSTRACTS OF LEASES AND OTHER TRANSACTIONS, 1714-26

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1. *Date of treaty:* 18 December 1714.
   Lessor(s) & lessee(s): William Liddell of Middleton, Yorkshire, Henry Liddell of Durham City & Thomas Liddell of Lastingham, Yorkshire TO Henry & George Liddell of Ravensworth Castle.
   Property/rights: Farnacres colliery.
   Term: 21 years.
   Rent (& any special provisions): £112 10s. p.a. certain for 150 tens of good merchantable ship coal (30 waggon loads to a ten as used at Ravensworth) & 15s. for every ten over 150 & 8s. for every ten of pan coal or glasshouse coal. To spend £200 winning.

2. *Date of treaty:* 22 April 1715.
   Lessor(s) & lessee(s): William Ramsay TO George Liddell of Ravensworth, Francis Baker of Whickham, William Cotesworth of Gateshead, and Richard & Stonier Parrott.
   Property/rights: Gateshead Park colliery.
   Term: From May Day 1715 (for part) for 18 years and from Martinmas 1722 (for the rest *alias* East side) for 11 years 6 months.
   Rent (& any special provisions): £200 p.a. certain (from May Day 1720 if not sooner won), 15s. for all tens above 266 tens 14 waggons (22 waggons to a ten) and 20s. for each keelbirth or staith to be built. To spend £1000 in 5 years winning. 1 April 1725: Stonier Parrot's quitclaim (to be from 24 June 1725) after many attempts to win 'at great expense'. 26 May 1725: Parrotts sell part of their interest to Richard Dobson of Ravensworth for 10s. each.

3. *Date of treaty:* 9 November 1716.
   Lessor(s) & lessee(s): Ann Grey of Backworth TO Charles Atkinson of Newcastle, hostman [agent to the Wortleys].
   Property/rights: Shares in Stella Grand Lease (1/60th), Blackburn (3/24), Fawdon Field (1/4), Riding Field (1/8) & Gells Field (1/8) [collieries] & 2 keelbirths on the Team.
   Term: From 11 November 1716 for 21 years.
   Rent (& any special provisions): £109 8s. 4d. p.a. for Blackburn share and 16s. 10d. for every ten above 130; £60 p.a. for shares in Fawdon, Riding and Gells Fields with 10s. for every ten above 120; 23s. for every ten led from Stella Grand Lease share. Lessee to pay 6s. 10d. per ten for all coals led from Blackburn to supply deficiency of Fawdon Field.

4. *Date of treaty:* 10 May 1718.
Lessor(s) & lessee(s): Ann & Philip Babington TO George Liddell and William Cotesworth.
Property/rights: Shares in Heaton colliery [most of coal].
Term: From May Day 1718 for 25 years.
Rent (& any special provisions): £375 p.a. certain for 600 tens (once colliery won & leading begun), 12s. 6d. for every ten above 600 (22 waggons to a ten); 12s. 6d. foe every ten before May 1721 if total p.a. does not amount to 600 tens.

5. *Date of treaty:* 20 December 1719.
Lessor(s) & lessee(s): Wm Cotesworth TO the Wortleys (Hon. Sydney Wortley alias Montagu of Wortley Hall, Yorkshire, Edward his son & heir and James Wortley of Easington Grange, Northumberland).
Property/rights: 16 keelrooms at Dunston Staiths in manor of Whickham and waggonways in the waste grounds, commons & moors of said manor.
Term: From 1 May 1720 for 19 years.
Rent (& any special provisions): 5s. for every ten led from Blackburn, Fawdon Field, Gells Field, Riding Field & all other of their collieries (22 waggons to a ten) except coals led from Gibside before 1 May 1724 which to be had for a peppercorn. 5s. to be paid even if coals not led through wastes of Whickham.

6. *Date of treaty:* 29 April 1721.
Lessor(s) & lessee(s): William Davison of Beamish TO Williamm Blakiston Bowes of Gibside.
Property/rights: Estate, rights, title & interest in moors & wastes in Beamish manor/lordship.
Term: To transfer within space of 7 years for £1650. Must take up within 7 years and some rights of Davison and others on fell not to be prejudiced.

7. *Date of treaty:* 26 March 1722.
Lessor(s) & lessee(s): Ralph Clavering TO Charles Atkinson of Newcastle, hostman [acting on behalf of the Wortleys].
Property/rights: North and Middle Causey colliery/coals.
Term: From May Day next (1722) for 31 years.
Rent (& any special provisions): In first two years ?£100 p.a. certain & 12s. for every ten above 166 and two-thirds; for rest of term £150 p.a. certain and 12s. for every ten above 250. Provisions varied by deed of 16 Oct 1724: allows for further rent of £150 p.a. for leadings from additional collieries.

8. *Date of treaty:* 17 November 1722.
Parties: Sir Henry Liddell, the Worltleys, William Cotesworth.
Property/rights: Safeguarding of their mutual interests re. working of Blackburn Fell colliery and leadings. Includes permission to Wortleys for waggonways and wayleaves over Fell. By various conveyances Wortleys now held 15/24ths of colliery there & Liddell held remaining 9/24ths
Term: From 11 Nov 1722 for 21 years.
Rent (& any special provisions): Quite complex arrangements but, *inter alia*, William Cotesworth restricts carriage of coals through Whickham manor to Liddell and Wortleys only.

9. *Date of treaty:* 4 January 1723.
Lessor(s) & lessee(s): William Davison TO the Wortleys.
Property/rights: (1) All moors, wastes, fells and commons in dispute between Davison and Liddell in Beamish area; (2) Enclosed grounds at Beamish (Park), South Causey & Tanfield; (3) Collieries under waste south of Beamish Burn.
Term: For 41 years; from 11 November 1723 in case of (3).
Rent (& any special provision): For (1): £2000 consideration; for (2): £100 certain p.a. plus 14s. for every ten above 143 at Beamish (Park) and South Causey and 15s. for every ten above 133 at Tanfield; for (3): £50 certain p.a. for 72 tens then 14s. for every ten above this.

10. *Date of treaty:* 6 January 1723.
Lessor(s) & lessee(s): Thomas Dawson of Tanfield TO the Worlteys.
Property/rights: Collieries and wayleaves at Tanfield and Beckley.
Term: From Martinmas 1723 for 31 years.
Rent (& any special provisions): £600 p.a. certain (whether won or not) & 17s. 6d. for every ten above 685 and five-sevenths (22 waggons to a ten). Tentale arrangements to vary after ten years have elapsed. No outstrokes without consent. Dawson to have free fire coals and his tenants to have free coals for burning lime and making bricks Indenture of 20 Nov 1725 shows Dawson borrowed £1800 from the Wortleys (and a further £1800 from them or someone else) and repayments with interest could be deducted from the above colliery rents.

11. *Date of treaty:* 24 March 1723. [Elsewhere says 7 March].
Lessor(s) & lessee(s): Rev. Robert Thomlinson TO the Wortleys.
Property/rights: Waggonway & wayleave through lands at Whickham for leading of coals from Blackburn, Dawson's Tanfield or Beckley, North and Middle Causey collieries.
Term: From 1 April 1724 for 32 years.
Rent (& any special provisions): £42 p.a. for above collieries and extra £8 p.a. in case 44 waggons or more led from any other of their collieries. Also '15 gallons of good Canary' and 40 fothers of best coal as fire coal p.a.. Not to use lands for carriage of coals out of Whickham manor unless pay 5s. per ten for same. Farmers of Glebe not to be prevented from carriage of hay, corn, manure or lime to or from Glebe lands with wains, carts or horses.

12. *Date of treaty:* 1 June 1723.
Lessor(s) & lessee(s): Edward Surtees of Mainsforth in County Durham TO the Worlteys.
Property/rights: Closes in Easter Southfield, The Rigg and Coleway Haugh and wayleave over same.
Term: From 1 May next (1724) for 32 years.
Rent (& any special provisions): £27 p.a.

13. *Date of treaty:* 12 June 1723.
Parties: Sir Henry Liddell and the Wortleys.
Property/rights: Mutual granting of collieries and wayleaves.
Term: Duration not specified.
Provisions: *Inter alia*, all collieries to be wrought jointly but coals to be divided at pits and vended separately; some coals to be led down a jointly financed 'New Way' if same built; wayleaves near staiths (at Dunston and Team) to be taken at joint expense.

14. *Date of treaty:* 1 August 1723.
Lessor(s) & lessee(s): Michael Crawforth of St Margaret's parish, Westminster TO the Wortleys (Hon. Sydney Wortley, Edward his son & James Montague of Newbold Verdon in Leicestershire).
Property/rights: Messuages, tenements & hereditaments in parish of Whickham plus wayleave and permission to erect waggonways.
Term: From Lady Day [next?] for 32 years.
Rent (& any special provisions): £50 p.a. and additional £10 p.a. for any new waggonway. Sum of £100 to be paid in lieu of first two years rent before lease becomes operable. Lands to be kept in best and most usual course of husbandry.

15. *Date of treaty:* 3 December 1723.
Lessor(s) & lessee(s): Anthony Meaburn of Pontop TO the Wortleys.
Property/rights: Parcel of Coleway Haugh in Whickham with wayleave and also wayleave for leading through Easter Southfield close to coal staiths.
Term: From May Day next (1724) for 32 years.
Rent (& any special provisions): £16 p.a. & £5 p.a. for actual leadings from Blackburn, Tanfield Dawsons and Causey collieries and a further £1 for any additional ones.

16. *Date of treaty:* 8 December 1723.
Lessor(s) & lessee(s): John Carr of Gateshead TO the Wortleys.
Property/rights: All the waggonway laid and used along his lands of Easter Southfield, Dunston Hall and Coleway Haugh in Whickham parish.
Term: From May Day 1724 for 32 years.
Rent (& any special provisions): £50 p.a. & further £30 p.a. when actually lead 22 or more waggon loads along the way from any colliery except Blackburn. Lease renewed and extended on 1 Jan 1727/8 to cover coals from other collieries which Wortleys held with other Grand Allies; and rent increased to £80 p.a.

17. *Date of treaty:* 1 January 1724.
Lessor(s) & lessee(s): William Davison TO the Wortleys.
Property/rights: Beamish Moor coal & wayleave (coal for landsale excepted).
Term: From Martinmas 1723 for 41 years.
Rent (& any special provisions): £50 p.a. certain and 14s. for every ten above 72.

18. *Date of treaty:* 1 January 1724.
Lessor(s) & lessee(s): William Davison TO the Wortleys.
Property/rights: Colliery/coals in Beamish inclosed grounds.
Term: From Martinmas last (1723) for 41 years.
Rent (& any special provisions): £100 p.a. certain and 14s. for every ten above 143.

19. *Date of treaty:* 1 January 1724.
Lessor(s) & lessee(s): William Davison TO the Wortleys.
Property/rights: South Causey and Tanfield coals/collieries.
Term: From Martinmas 1723 for 41 years.
Rent (& any special provisions): 14s. for every ten from S. Causey; 15s. for every ten from Tanfield.

20. *Date of treaty:* 7 January 1724.
Lessor(s) & lessee(s): (1) Thomas Smith of Dunston & Chas. Atkinson of Newcastle TO (2) the Wortleys.
Property/rights: Their one-sixth and one-eighth parts in Blackburn colliery.
Term: From May Day next (1724) for 29 years.
Rent (& any special provisions): £102 17s. 2d. p.a. certain to each of Smith & Atkinson for the 1/6 part & 8s. to each for every ten over 257 & one-seventh; £77. 2s. 10d. p.a. certain to each for the one-eighth part & 8s. to each for every ten over 192 and six-sevenths during the first 11 years and for the residue £154. 5s. 8d. certain to Smith only & 16s. to him only for every ten over 192 and six-sevenths.

21. *Date of treaty:* 14 January 1724.
Lessor(s) & lessee(s): Henry Shafto of Symonds Inn, Middlesex (with permission of William Cotesworth) TO the Wortleys.
Property/rights: Wayleave through closes or parcels called Coleway Haugh alias Catchup Hill in townfields and territories of Whickham plus dwelling called Staithman's House.
Term: From 1 May 1724 for 32 years.
Rent (& any special provisions): £56 p.a. certain and £44 from time Wortleys lead 44 waggons [per day?] from Blackburn Colliery. Husbandry in closes to be safeguarded.

22. *Date of treaty:* 11 April 1724.
Lessor(s) & lessee(s): Thomas Denham of Dunston TO the Wortleys.
Property/rights: Permisson for making one or more waggonways in four closes called Corn Moor and The Leigh in Whickham lordship with wayleave through same.
Term: From Martinmas last (1723) for 32 years.
Rent (& any special provisions): £10 p.a.

23. *Date of treaty:* 1 September 1724.
Lessor(s) & lessee(s): Chris. Mitford of Newcastle TO Wm Cotesworth of Gateshead.
Property/rights: 1/4 share in Heaton lands including colliery.
Term: From 19 June 1725.
Rent (& any special provisions): £187 p.a. & 12s. 6d. for every ten above 300.

24. *Date of treaty:* 8 October 1724.
Lessor(s) & lessee(s): Bishop of Durham TO George Liddell & Nicholas Fenwick, alderman.
Property/rights: Blackburn Fell coalmine(s).
Term: For three lives [probably from 30 October 1724].
Rent (& any special provisions): £20 for every working pit [2 pits working in 1724].

25. *Date of treaty:* 16 October 1724.
Lessor(s) & lessee(s): Ralph Clavering TO the Wortleys.
Property/rights: Watercourses and wayleaves re. North and Middle Causey coals which already taken.
Term: From May Day [?1724 or '25] for 31 years.
Rent (& any special provisions): £150 p.a. & additional £150 p.a. from time of using waggonway or driving drift for Tanfield and Causey collieries.

26. *Date of treaty:* 31 October 1724.
Lessor(s) & lessee(s): Ralph Clavering, the younger of North Causey TO Chas. Atkinson of Newcastle, hostman [acting on behalf of the Wortleys].
Property/rights: Middle Causey coals plus wayleave for coals from other collieries of the Wortleys.
Term: From 1 May 1724 for 30 years [Actually given up 1 May 1734].
Rent (& any special provisions): £20 p.a. certain & 12s. for every ten above 33 and one-third. Penalty of 40s. per ten for all coals led from collieries not covered by this agreement.

27. *Date of treaty:* 4 November 1724.
Lessor(s) & lessee(s): Ulrick Whitfield of Newcastle & wife TO the Wortleys.
Property/rights: Their rights to 1/12 part Blackburn colliery, 3/24 part of Stella Grand Lease colliery, 3/16 part Fawdon Field colliery and 1/12 part Riding Field colliery.
Term: From 11 Nov 1724 for 21 years.
Rent (& any special provisions): £341 13s. 4d. p.a., two and a half keelloads of coal as fire coal for Whitfield, and some rents to be paid to Ryton copyholders.

28. *Date of treaty:* 29 December 1724.
Lessor(s) & lessee(s): George Liddell and Nicholas Fenwick.
Property/rights: Re. Blackburn Colliery which they hold from Bishop.
Term: On death of either no benefit or advantage of survivorship (i.e. land goes to descendants of either).

29. *Date of treaty:* 12 January 1725.
Lessor(s) & lessee(s): Robert Bonner of High Callerton, Northumberland TO Francis Nicholls.
Property/rights: His 2/12th part of Collierley.
Term: From 1 Jan 1725 for 19 years.
Rent (& any special provisions): £93 6s. 8d. for 133 and one-third tens.

30. *Date of treaty:* 25 January 1725.
Lessor(s) & lessee(s): Francis Nicholls of Lintz Green TO George Bowes and Dame Jane Clavering.
Property/rights: 9/12th parts of Collierley colliery [7/12th demised to Nicholls in 1722 and other 2/12ths on 12 Jan. 1725 as above no. 29].
Term: From 1 Jan 1724/5 for 18 years.
Rent (& any special provisions): £420 p.a. certain and 14s. for every ten above 600. If no coal wrought before 1 Jan. 1726, a dead rent of £200 p.a. to be paid. Fence coal to be 20 yards wide. No pillars to be worked under houses. 'Top coal seam lies between ye Main Coal Seam and Brass Thill Seam.'

31. *Date of treaty:* 25 January 1725.
Lessor(s) & lessee(s): Francis Nicholls of Lintz Green TO George Bowes and Dame Jane Clavering.
Property/rights: 1/12th part and a moiety [half] of 1/12th part of Collierley colliery.
Term: From 1 Jan. 1725 for 18 years.
Rent (& any special provisions): £70 p.a. for 100 tens and 14s. for overs.

32. *Date of treaty:* 22 February 1725.
Lessor(s) & lessee(s): Hon. Lady Radcliffe & Henry Fenwich of Hexham TO George Liddell of Ravensworth Castle.
Property/rights: Coal staith of 95 yards length and 26 yards breadth at Redheugh & liberty to erect trunks.
Term: From 1 May 1715 for 31 years.
Rent (& any special provisions): £100 p.a. and additional £50 if G.L. uses two or more 'Main' waggonways. Lease void if G.L. or successors go into partnership with William Cotesworth.

33. *Date of treaty:* 12 April 1725.
Lessor(s) & lessee(s): Robert Mitford of London TO William Cotesworth of Gateshead Park.
Property/rights: 'Full quarter' of lands in Heaton [following a dispute in Chancery because of W.C.'s failure to win and work colliery].
Term: From 1 May 1720.
Rent (& any special provisions): £187 10s. p.a. certain & 12s. 6d. for every ten above 300 (32 waggons to a ten).

34. *Date of treaty:* 20 April 1725.
Lessor(s) & lessee(s): Robert Mitford TO William Cotesworth.
Property/rights: A moiety [i.e. half] Heaton colliery [following dispute as referred to above, no. 33].
Term: From 1720.
Rent (& any special provisions): £375 p.a. certain for up to 600 tens.

35. *Date of treaty:* 16 April 1725.
Lessor(s) & lessee(s): Ralph Carr TO George Liddell.
Property/rights: Messuage and ground near Redheugh Staith.
Term: 32 years.
Rent (& any special provisions): £50 as one payment.

36. *Date of treaty:* 17 June 1725.
Lessor(s) & lessee(s): Elizabeth Emerson of Newcastle, widow TO George Bowes and Dame Jane Clavering.
Property/rights: Ewhurthead colliery & permission to build waggonway.
Term: From Midsummer next (1725) for 18 years.
Rent (& any special provisions): £350 p.a. certain & 17s. 6d. for every ten above 400. To work 'top *alias* best coal' seam till exhausted and can then remove pillars.

37. *Date of treaty:* 17 June 1725.
Lessor(s) & lessee(s): Elizabeth Emerson TO George Bowes and Dame Jane Clavering.
Property/rights: Wayleave for passage of Collierley coals through Ewhursthead.
Term: From May Day last past (1725) for 19 years.
Rent (& any special provisions): £50 p.a.

38. *Date of treaty:* 23 December 1725.
Lessor(s) & lessee(s): Robert Johnson & wife TO George Liddell.
Property/rights: All the manor or lordship of Kibblesworth including claims in manors of Beamish & Tanfield.
Consideration: £9600.

39. *Date of treaty:* 10 March 1726.
Lessor(s) & lessee(s): Richard Ridley, owner of lands in Heaton TO George Liddell & William Cotesworth who farm all coals in Heaton.
Property/rights: To put an end to disputes between parties G.L. & W.C. to have wayleave and waggonway in Heaton & permission to erect fire engines.
Term: From 9 March 1726 for 31 years.
Rent (& any special provisions): £25 twice a year for liberty to erect fire engine and £50 twice a year for spoil of ground.

40. *Date of treaty:* 10 March 1726.
Lessor(s) & lessee(s): William Cotesworth TO Richard Ridley.
Property/rights: Waggonway and wayleave through his lands at Whickham for leading Dipton or one other colliery's coals
Term: Promises to grant 'within space of ten years' & will run 21 years.
Rent (& any special provisions): 5s. for every ten up to 1000 and 40s. for every ten above 1000.

Sources: NRO 725/F1-8/enrolment books of leases and agreements.

Appendix 15

COLLIERY PROPRIETORS' SHARES OF WEAR ANNUAL VENDS, 1772-1809

Proprietors/operators	1772 Tons vended	% share	1773 Tons vended	% share	1774 Tons vended	% share	1775 Tons vended	% share	1776 Tons vended	% share	1777 Tons vended	% share
Nesham	24833	3.64	22695	3.55	23977	3.66	25207	3.83	25408	3.56	26240	3.80
Milbanke	58478	8.58	52703	8.24	57349	8.76	50480	7.67	57892	8.12	56490	8.18
Liddell/Ravensworth	54736	8.03	56718	8.86	58205	8.89	58305	8.85	60224	8.45	58617	8.52
Eden	67522	9.90	61358	9.59	61554	9.41	56143	8.53	59169	8.30	54399	7.88
Washington Owners	65497	9.61	51119	7.99	58920	9.00	58666	8.91	59679	8.37	54913	7.95
Russell												
N. & M. Lambton	46902	6.88	48545	7.59	45257	6.92	43219	6.56	48609	6.82	48562	7.03
Peareth	83507	12.25	75822	11.85	87071	13.31	72451	11.00	88539	12.42	81450	11.80
Tempest/Vane-Tempest	92186	13.52	102319	15.99	100697	15.39	107924	16.39	111300	15.62	108112	15.66
W.H. & J. Lambton	57192	8.39	54153	8.46	49576	7.58	77173	11.72	88367	12.40	89965	13.03
Flatts Owners	73286	10.75	58658	9.17	59755	9.13	58997	8.96	59347	8.33	58692	8.50
Lord Scarborough												
Jolliffe												
North Biddick Owners	379	0.06										
Humbles & Partners	31220	4.58	33867	5.29	28458	4.35	26500	4.02	32542	5.57	52811	7.66
Twizzell Owners												
Toft Moor	26039	3.82	22027	3.44	23549	3.60	23463	3.59	21666	3.04		

Proprietors/operators	1778 Tons vended	% share	1779 Tons vended	% share	1780 Tons vended	% share	1781 Tons vended	% share	1782 Tons vended	% share	1783 Tons vended	% share
Nesham	29306	4.63	35680	6.63	33827	5.89	37111	7.03	37368	7.06	34477	5.46
Milbanke	52038	8.22	42472	7.90	44825	7.80	34954	6.63	35682	6.74	44662	7.07
Liddell/Ravensworth	54325	8.58	39890	7.42	48802	8.50	37935	7.19	34988	6.61	42193	6.68
Eden	50392	7.96	38118	7.09	31864	5.55	37630	7.13	39737	7.51	39376	6.23
Washington Owners	52928	8.36	49205	9.15	45723	7.96	43012	8.15	43595	8.24	49574	7.84
Russell	19305	3.05	32672	6.08	37325	6.50	37333	7.44	44912	8.49	26038	4.12
N. & M. Lambton	44342	7.00									39893	6.31
Peareth	52552	8.30	39546	7.35	45771	7.97	35123	6.66	40031	7.56	55327	8.75
Tempest/Vane-Tempest	94210	14.88	90760	16.88	87800	15.29	82256	15.59	80213	15.15	81442	12.89
W.H. & J.Lambton	84270	13.30	76725	14.27	81299	14.15	67570	12.81	71709	13.55	96351	15.25
Flatts Owners	52319	8.26	41979	7.81	45964	8.00	43802	8.30	34890	6.59	42949	6.80
Lord Scarborough			7250	1.35	15683	2.73	18739	3.55	14162	2.68	17652	2.79
Jolliffe			742	0.14	13245	2.31	13327	2.53	21110	3.99	31304	4.95
North Biddick Owners												
Humbles & Partners	47215	7.46	42745	7.94	42262	7.36	36819	6.98	30888	5.84	30711	4.86
Twizzell Owners												
Toft Moor												

Proprietors/operators	1784 Tons vended	% share	1785 Tons vended	% share	1786 Tons vended	% share	1787 Tons vended	% share	1788 Tons vended	% share	1789 Tons vended	% share
Nesham	37092	5.73	39898	5.62	32256	4.70	41123	5.63	38944	5.27	43810	5.60
Milbanke	46462	7.17	48646	6.89	43065	6.28	45320	6.21	45164	6.11	49128	6.28
Liddell/Ravensworth	50981	7.87	43121	6.11	40134	5.85	39056	5.35	35825	4.85	41783	5.34
Eden	42718	6.59	35955	5.09	42379	6.18	42294	5.80	40789	5.52	46831	5.99
Washington Owners	45124	6.96	47027	6.66	47181	6.88	43699	5.99	40908	5.54	49448	6.32
Russell	38711	5.97	52841	7.49	43203	6.30	43579	5.97	50538	6.84	53867	6.89
N. & M. Lambton	40360	5.52	38960	5.52	31042	4.52	35706	4.89	34037	4.61	40980	5.24
Peareth	57627	8.89	55552	7.87	63136	9.20	63786	8.74	72864	9.86	104503	13.36
Tempest/Vane-Tempest	82153	12.68	87394	12.38	87103	12.69	91740	12.57	87254	11.81	99356	12.70
W.H. & J. Lambton	109310	16.87	175753	24.90	177404	25.86	188616	25.85	194624	26.35	209901	26.83
Flatts Owners	35984	5.55										
ord Scarborough												
Jolliffe	32243	4.98	30584	4.33	36461	5.31	37360	5.12	32131	4.35	5128	0.66
North Biddick Owners	2369	0.37	17750	2.51	15961	2.33	24022	3.29	28668	3.88	36122	4.62
Humbles & Partners	26757	4.13	32453	4.60	26799	3.91	33493	4.59	36968	5.00	1489	0.19
Twizzell Owners												
Toft Moor												

Proprietors/operators	1790 Tons vended	% share	1791 Tons vended	% share	1792 Tons vended	% share	1793 Tons vended	% share	1794 Tons vended	% share	1795 Tons vended	% share
Nesham	41292	5.41	42888	5.41	42527	5.01	38393	4.74	28821	3.81	36247	4.74
Milbanke	47236	6.19	45498	5.73	46346	5.46	41626	5.14	44271	5.85	50051	6.54
Liddell/Ravensworth	38963	5.11	42763	5.39	46349	5.46	43979	5.43	43055	5.69	40182	5.25
Eden	44244	5.80	49587	6.25	50265	5.92	48188	5.95	42294	5.59	49608	6.48
Washington Owners	61167	8.02	68039	8.58	71709	8.44	62129	7.67	62386	8.24	55684	7.28
Russell	53875	7.06	54246	6.84	51235	6.03	55743	6.97	55743	7.37	49038	6.41
N. & M. Lambton	35287	4.62	44059	5.55	46110	5.43	36067	4.45	36676	4.84	32712	4.28
Peareth	94449	12.38	98546	12.42	104198	12.27	97928	12.09	91849	12.13	101434	13.26
Tempest/Vane-Tempest	87996	11.53	96322	12.14	97923	11.53	90021	11.12	73202	9.67	79039	10.33
W.H & J. Lambton	229193	30.04	221892	27.97	239666	28.22	244205	30.15	247931	32.75	239420	31.29
Flatts Owners												
Lord Scarborough												
Jolliffe												
North Biddick Owners	29282	3.84	29601	3.73	28249	3.33	17519	2.16	12566	1.66	9368	1.22
Humbles & Partners												
Twizzell Owners	24740	2.91	33385	4.12	18253	2.41	22329	2.92				
Toft Moor												

Proprietors/operators	1796 Tons vended	% share	1797 Tons vended	% share	1798 Tons vended	% share	1799 Tons vended	% share	1800 Tons vended	% share	1801 Tons vended	% share
Neshaa	36634	5.46	38171	5.46	43492	5.95	35391	4.50	47870	5.96	28668	4.75
Milbanke	40524	6.04	40333	5.43	42469	5.81	45593	5.80	44557	5.55	29023	4.81
Liddell/Ravensworth	31575	4.71	32863	4.42	34625	4.73	36509	4.65	36104	4.50	28874	4.79
Eden	36909	5.50	34068	4.59	39220	5.36	49544	6.31	58003	7.22	46258	7.67
Washington Owners	45145	6.73	55149	7.42	52263	7.15	60383	7.69	54624	6.80	45471	7.54
Russell	41401	6.17	49870	6.71	55382	7.57	68055	8.66	70045	8.72	46110	7.64
N. & M. Lambton	31811	4.74	32881	4.43	28175	3.85	27942	3.56	33602	4.18	22133	3.67
Peareth	83751	12.49	83210	11.20	84151	11.50	77277	9.84	80149	9.98	53808	8.92
Tempest/Vane-Tempest	69352	10.34	99300	13.37	96791	13.23	101278	12.89	97080	12.09	79452	13.98
W.H. & J. Lambton	217867	32.49	245483	33.04	219103	29.95	249501	31.75	244489	30.44	192984	31.98
Flatts Owners												
Lumley												
Jolliffe												
North Biddick Owners	2123	0.32										
Humbles & Partners												
Twizzell Owners	33414	4.98	31593	4.25	35780	4.89	34243	4.36	36581	4.55	30592	5.07
Toft Moor												

Proprietors/operators	1802 Tons vended	% share	1803 Tons vended	% share	1804 Tons vended	% share	1805 Tons vended	% share	1806 Tons vended	% share	1807 Tons vended	% share
Neshaa	55549	6.26	42485	5.25	37288	4.73	41594	5.03	35743	4.53	39146	5.20
Milbanke	46529	5.24	45302	5.60	33472	4.25	31678	3.83	36392	4.62	49454	6.58
Liddell/Ravensworth	49857	5.62	45114	5.57	45326	5.75	41382	5.00	31930	4.05	30226	4.02
Eden	62201	7.00	56328	6.96	61183	7.76	56138	6.78	56519	7.17	55332	7.36
Washington Owners	64726	7.29	53133	6.57	43892	5.57	35213	4.15	36467	4.63	41300	5.49
Russell	71868	8.10	57290	7.08	43953	5.57	58403	7.06	62437	7.92	47395	6.30
N. & M. Lambton	40047	4.51	32076	3.96	33984	4.31	49926	6.03	33570	4.26	25991	3.46
Peareth	62217	7.01	44279	5.47	80952	10.27	71910	8.69	46290	5.87	59811	7.95
Tempest/Vane-Tempest	130298	14.68	101999	12.60	105849	13.42	151962	18.36	155319	19.70	160336	21.32
W.H. & J. Lambton	248676	28.02	252966	31.26	230563	29.24	234983	29.39	231157	29.32	180545	24.00
Flatts Owners												
Lord Scarborough												
Jolliffe												
North Biddick Owners												
Humbles & Partners			14967	1.85	12142	1.54	18160	2.19	34315	4.35	39363	5.23
Twizzell Owners	34651	3.90	38067	4.70	32531	4.13	27209	3.29	?10650	1.35		
Toft Moor												
Watkin & Partners	20909	2.36	25310	3.13	27369	3.47	7030	0.85	17524	2.22	20916	2.78
Wade							2006	0.24			2311	0.31

Proprietors/operators	1808 Tons vended	% share	1809 Tons vended	% share
Nesham	44605	5.10	42146	5.24
Milbanke	58342	6.67	46054	5.73
Liddell/Ravensworth	38698	4.42	46645	5.80
Eden	60401	6.90	48747	6.06
Washington Owners	36339	4.15	45198	5.62
Russell	73267	8.37	50528	6.28
N. & M. Lambton	24656	2.82	27730	3.45
Peareth	59506	6.80	35627	4.43
Tempest/Vane-Tempest	182672	20.88	163335	20.31
W.H. & J. Lambton	215609	24.64	200586	24.94
Flatts Owners				
Lord Scarborough				
Jolliffe				
North Biddick Owners				
Humbles & Partners	40854	4.67	47522	5.19
Twizzell Owners				
Toft Moor				
Watkin & Partners	15810	1.80		
Wade	23990	2.74	29781	3.70
Hudson (?with Milbanke)			20455	2.54

Source: NEIM Watson 8/20.

Appendix 16

DEMOGRAPHIC SOURCES: THEIR RELIABILITY AND COMPREHENSIVENESS

Population counts for County Durham

The census of 1563 was taken in all the dioceses of England at the request of the Privy Council. It was to list the number of families or households within each ecclesiatical parish and chapelry. The census formed part of a general report on the state of the church in every parish, and several diocesans, including the Bishop of Lincoln, seem to have taken pains to base their answers upon a sytematic investigation. Others stated that they had not had enough time to prepare lists of the number of households but would do so and submit them separately; there is no indication in the sources of their promises being kept. The Durham returns appear to be conscientious estimates, similar to those made for Leicestershire.[1] Although the Durham census omits household totals for the parishes of Lanchester, Bishop Middleham and Middleton St. George, and gives a figure for Bishop Auckland which probably represents an enumeration of the entire population, it appears generally sound and almost certainly provides the most accurate estimate available of the population in the sixteenth century.[2]

Between 1662 and 1689 attempts were made to supplement the inadequate financial settlement of the Restoration by levying taxes on hearths, chimneys and ovens. Hearth-tax returns, dated between 1662 and 1674, have survived for most counties, and several scholars have described in some detail the methods of collection and assessment.[3] Usually collected on a township basis, the hearth-tax records are considered to provide a reasonably reliable survey of the number of households, some of which paid the tax while others were exempt on the grounds of poverty. For this reason the tax listings can be of additional value in studying the distribution of wealth.[4] The Durham returns seem to have suffered more than most from the vagaries of time and, of five surviving accounts for the county, only those for 1666 and 1674 are anything like complete. Of these two, the returns for 1674 appear to be the more accurate in so far as the constables or collectors making the returns were not misdirected and probably knew the whereabouts of each village or settlement.[5] In this study most use is made of the 1674 assessment but supplementary information has been taken from the 1666 return where obvious gaps occur at the later date. Maximum totals are taken as correct ones since households are unlikely to have been invented but might well have been missed. Since earlier scholars have persuasively argued that the 'households' of the hearth-tax returns imply families rather than houses, they can be compared with the numbers of households recorded in the 1563 ecclesiastical census.[6]

The first modern census, that of 1801, attempted to answer three questions: the size and distribution of the population; the number of houses inhabited and uninhabited, and the number of families they contained; and the number of persons engaged in the three broad categories of agriculture, commerce and manufacture or handicraft. The return under the third heading suffered from a confusion as to whether heads of families or all members should be counted. However, the return under the second heading, relating to families, and which is of special relevance to this study, was probably accurate to within five per cent. It would be comforting to know that the returns of households or families in 1563 and 1801 were similarly subject to such slight error.[7]

Anglican parish registers for Northern Durham

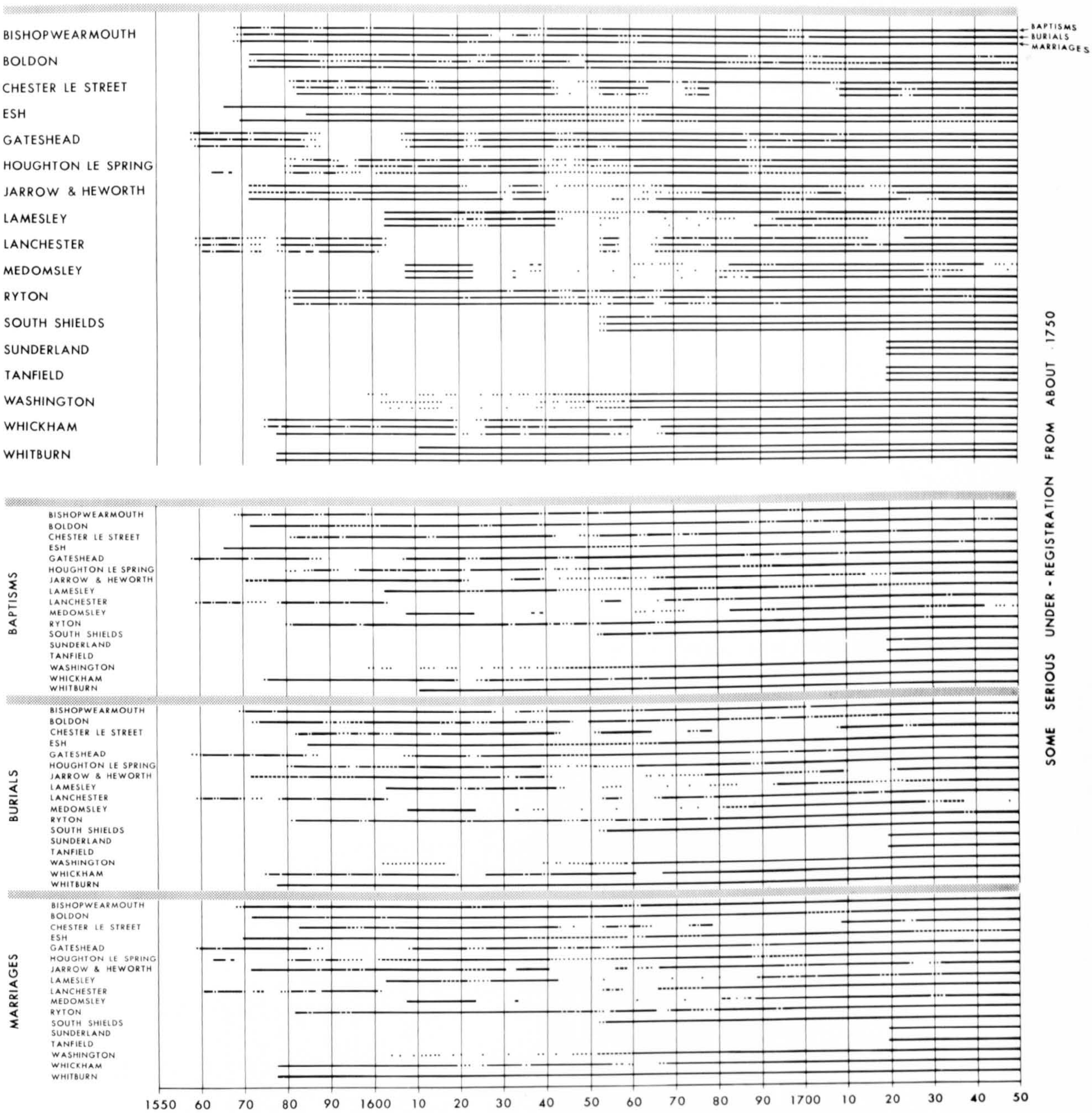
Continuity problems

Parish registration was instituted in England in 1538, but the earliest surviving Northern Durham registers did not commence until 1559 (Gateshead) and 1560 (Lanchester).[8] There are no records for Ryton before 1582, for Chester-le-Street before 1583, nor for Washington before 1600. Those for Monkwearmouth, stretching back to what is now an indeterminable date, were destroyed by fire in the late eighteenth century. In the case of South Shields, no separate records survive before 1654, although there was a considerable community of 115 households there in 1563; some entries, however, were made in the books of the mother church at Jarrow. In the case of Tanfield, it is clear that entries before 1719 were made in the registers of Lanchester or Chester-le-Street. Once begun, the registers seldom formed an unbroken sequence: many gaps appear (figure 16A.1 on next page). In some instances this affected only the baptisms (for example, at Jarrow with Heworth in the 1620s) or only the burials (for example, Boldon, 1646-51) or perhaps only marriages and burials (for example, Chester-le-Street, 1679-1709), but in certain cases it affected all three (for instance, at Gateshead, 1589-1608, and Lanchester, 1604-53).

Under-registration

Potentially more misleading than non-existent data are those which under-register the number of demographic events. Sometimes, this can be detected easily, as, for instance, where events of national importance like the Civil War impinge upon effective record-keeping.[9] Some North Durham registers, such as those for Houghton-le-Spring from 1640 and Chester-le-Street from 1642, were particularly affected. Under-registration may follow an outbreak of plague which claimed parish officials as its victims as appears to have happened in Gateshead from 1584 and Boldon from 1597.[10] It may be suspected of resulting from the inefficiency of an ageing clerk as revealed by his rapidly deteriorating handwriting (as, for example, at Houghton-le-Spring in 1602) or from the sudden flight of a clergyman

RELIABILITY OF NORTHERN DURHAM ANGLICAN REGISTERS



Evaluation according to completeness and legibility of data

like William Adey, curate of Lanchester, who discovered in 1746 that the widow he had married in 1745 was not a widow after all! In some cases the parish clerk is singularly helpful in reporting the suspected omissions of his predecessors. The Washington register, for instance, includes a comment by an eighteenth-century clerk:

> In consulting this Register, it is nercessary to observe that the entries during a long period, 1603-1660, are transposed and interpolated .... and many of them are not original entries at all but copies from other documents now lost .... nomina sequestia ex laceris transcripta chartis.

As a last resort, there are times when the researcher, purely on the basis of personal experience and judgement, suspects and identifies omissions for which the registers (or other documents) yield no apparent explanation.

A most difficult problem is to detect the scale of under-registration due to nonconformity. Before c.1750, with the first generation of dissenters -Congregationalists, Quakers, Unitarians, Independents and Baptists- there would appear to be little need for concern. Such groups did not necessarily have separate places of worship, and even where they did, records were not always kept.[11] A return of nonconformist indulgencies in Durham for 1672, and one of practising dissenters for 1715, suggest that the county probably had fewer nonconformists than any other in England save Westmorland.[12] Even Rutland had more than Durham. Although Catholic recusants were politically active in County Durham during the sixteenth and seventeenth centuries, and the streets of Gateshead had to be "purged" of Quakers as early as 1652, the power of the Anglican Church in the Bishopric was supreme.[13] There seems little doubt that nonconformists represented less than ten per cent of the total population -a percentage value which Eversley regards as the maximum acceptable limit if the use of Anglican registers is not to be vitiated for purposes of studying demographic trends.[14]

It is, of course, most important to know the distribution of dissenting groups; for, while their overall totals may not have been great, they may have been highly localised, especially after the 1740s, with the rapid growth of the new Evangelical movement, Methodism. John Wesley visited Durham and Northumberland on many occasions between 1742 and 1777 and his Journal gives the impression that he acquired a vigorously active following, particularly among the urban and industrial population.[15] The evidence of a diocesan survey of 1793 suggests that at that date as many as thirty to fifty per cent of families were dissenters in Sunderland and Bishopwearmouth, Monkwearmouth, Gateshead, Ryton and Jarrow; ten to twenty-nine per cent in Chester-le-Street, Lanchester, Whickham and Heworth; and less than ten per cent in Houghton-le-Spring, Washington, Boldon and Whitburn. While this survey allows a crude measure of the likely scale of under-registration for different Anglican registers towards the close of the eighteenth century, it does not permit, for any particular section of the community, a comparison of the number of baptisms with

its marriages and burials.[16] And since it is the young who marry, have children and follow new religions, and the old who remain to contribute a large proportion of burials, the Anglican registers are likely to exaggerate the number of burials within a community. The eighteenth-century registers for Gateshead, Sunderland and Bishopwearmouth seem particularly prone to this phenomenon (figures 5.4b, n and q). A partial solution to such a difficulty should lie in the evaluation of nonconformist registers but this is not possible for Northern Durham where nonconformist records prior to 1810 are scattered, fragmentary and, though valuable for other purposes, of little value in measuring population trends.[17]

Finally, it is important to realise that even the best kept registers of a purely Anglican community are unlikely to give a completely accurate record of population change, simply because baptisms cannot be equated with births or burials with deaths. In parishes such as Lanchester and Chester-le-Street, where farmsteads might lie several miles from the parish church, the practice of christian baptism, in particular, may well have been neglected: a brief investigation of Durham wills reveals the existence of sons and daughters whose baptisms are not traceable in the registers of the parish in which they lived.[18] No attempt is made in this study to convert baptisms to births or burials to deaths using corrections factors of fifteen per cent and ten per cent respectively, as suggested by Brownlee and Griffith.[19] The Northern Durham parishes vary greatly in areal extent and population size, their inhabitants pursued contrasting occupations, and their registers are at times so suspect that the application of correction factors would simply add a further imponderable to our investigation.

While the likelihood of under-registration looms large in a consideration of all registers examined, it is important to note a contrary circumstance: entries, in some registers at least, may duplicate those occuring in another. Only where such circumstances are overtly identified in the registers themselves, or detectable by making cross-comparisons of names, can the risk of double-counting be eliminated. For instance, in the seventeenth century, certain baptisms, marriages and burials are clearly recorded in the registers of both Lamesley and Whickham, while by the eighteenth century most registers contain a few obvious duplicate entries. It seems likely that a small number of others remain undetected.

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1. Smith 1955, 139-75

2. All the returns that have ever been found are in the British Library manuscripts room in Harleian 594, 595 and 618 (see Thirsk 1959). The Durham returns (BL Harl 594/189-91) are accompanied by an incomplete return for the archdeaconery of Northumberland. On the method by which estimates have been made for omissions, see footnotes in appendix 17.

3. For work on the hearth taxes, see Meeking 1940, Howell 1964, Patten 1971, Arkell 1982; and Unwin 1985 (and the references therein).

4. I have undertaken such a study for Northern Durham. An interesting account of the distribution of wealth in Newcastle upon Tyne is given in Welford 1910.

5. The Durham hearth-tax returns include: PRO E179/106/21/Lady Day 1663; 106/27/Lady Day 1664; 106/28/Lady Day 1666; 106/25/Lady Day 1674; 245/27/Michaelmas 1665. There also survive (E179/106/22 and 24) some returns of arrears owing for 1664 and 1666 respectively. It is clear from the mis-spellings, odd township groupings and frequent omissions in the early returns (PRO E179/106/21,27), that the collecting officials, known as 'Chimney Men', gained little help from the local constables and sherrifs who had already been suspected of gross inefficiency in 1662 and 1663. The greater success of the levy in 1666 and 1674 coincided with the years in which the tax was farmed. The farm of 1674 is generally regarded as the most reliable (see, for instance, Howell 1964). For something of the procedure involved, but without any returns, see DRO Lo/F382/*Dedimus potestatum* to the Mayor of Durham and others to take the oath of hearth tax officers, 1685.

6. Smith 1955; Howell 1964; Arkell 1982 (and personal communication) It should be noted with regard to the problem of family size that the hearth tax figures might require a multiplier as low as 4 or as high as 8 if the total population is be estimated, though something between 4 and 5 seems most likely. For discussion on the use of multipliers, see Glass and Eversley 1965, 159-220; and Wrigley and Schofield 1981, 35-7. On the problems of distinguishing between 'family', 'household' and 'houseful', see volume one of this study, chapter 5, note 4.

7. Taylor 1959, 715-20. Use of the 1811 census would have given a more accurate picture, but it would also have meant comparing two 'fair approximations' (the 1563 and 1674 data) with something rather too accurate! In any case , the census of 1811 is outside the period of this study.

8. On the introduction of registration, see Cox 1910. The generally poor state of churches and their registers in County Durham was noted in a Royal Visitation of 1559 (see Surtees Society, vol. 187). In this study, all available and potentially useful Anglican registers were consulted: at Durham County Record Office, the manuscript registers for Boldon, Bishop Wearmouth, Houghton-le-Spring, Heworth, Lanchester and Esh, Tanfield, Whickham and Whitburn; at Newcastle Central Library (in typescript form) and at parish churches (in manuscript), the registers for Chester-le-Street, Jarrow with Heworth, Ryton, South Shields and Washington (not further referenced); and at Gateshead Public Library, the registers for Gateshead (not further referenced).

Registers at DRO are now normally available only on microfilm.

9. For discussion of these events in national terms and how they might be allowed for in our calculations, see Wrigley and Schofield 1981, 19-20, 24-7, 31-2.

10. At Egglescliffe in 1645, twenty-one people died who 'were not buried in the churchyard, and are not in the register'. Richardson 1852, 38.

11. Eversley 1966, 49-53.

12. CalSPD 1673; BL Add 32057; VCH Durham, II, 58.

13. VCH Durham, II, 53.

14. Eversley 1966, 49-53.

15. VCH Durham, II, 64-7.

16. DUPD DR/XVII/1. The Tanfield Anglican registers contain a record of 'births of all dissenters, 1752-91'. There is no comparable record for marriages and burials.

17. I am indebted to the late Mr Neat of Sunderland (compiler of data for the Society of Genealogists' National Index of Parish Registers) for information on this matter.

18. DUPD/probate records. Dr David Reid, Extra-mural Department, University of Durham, has experienced this difficulty when studying some south Durham registers. I thank him for his helful comments.

19. Eversley 1966, 83-5.

Appendix 17

POPULATION CHANGE BY HOUSEHOLDS, 1563 - 1801

1	2	3	4	5	6	7^	8^
Parishes	Households or Families in			Percentage change (to nearest whole number) % increase		1563 as a % of	1674 as a % of
	1563	1674	1801	1563-1674	1674-1801	1674	1801
a. Northern Durham							
BISHOPWEARMOUTH	207	662	5484	220	728	31	12
BOLDON	128	90	129	-30	43	142	70
CHESTER-LE-STREET*	293	898	2661	234	206	33	34
EBCHESTER ++	63	60	209	-5	248	105	29
GATESHEAD	307	759	2099	147	177	40	36
HEWORTH	25	151	673	504	346	17	22
HOUGHTON-LE-SPRING	286	475	1272	66	168	60	37
JARROW	30	71	306	137	331	42	23
LANCHESTER +*	(240)	372	688	(55)	88	(65)	54
MONKWEARMOUTH	90	179	1549	99	765	50	12
RYTON	250	463	1206	85	160	54	38
SOUTH SHIELDS	115	567	3035	393	435	20	19
WASHINGTON	104	111	503	7	353	94	22
WHICKHAM	95	393	863	312	120	24	46
WHITBURN	77	97	160	26	65	79	61
Sub-totals	2310	5169	20837				
b. Rest of County							
AYCLIFFE	90	192	243	113	27	47	79
BARNARD CASTLE	304	391	822	29	110	78	48
BILLINGHAM	203	234	239	15	2	87	98
BISHOP AUCKLAND+	(409)	689	877	(68)	21	(59)	79
BISHOP MIDDLEHAM	91	96	175	5	82	95	55
BISHOPTON	52	82	107	58	30	63	77
BRANCEPETH	218	393	348	80	-11	55	113
CASTLE EDEN	30	33	74	10	124	91	45
COATHAM	28	21	25	-25	19	133	84
COCKFIELD	34	65	126	91	94	52	52
CONISCLIFFE	55	81	84	47	4	68	96
DALTON	43	54	35	21	-35	80	154
DARLINGTON	366	431	1278	20	197	85	34
DENTON	32	59	59	84	0	54	100

DURHAM CITY	846	1077	2066	27	92	79	52
EASINGTON	167	220	215	32	-2	76	102
EDMUNDBYERS & MUGGLESWICK	67	52	88	-22	69	129	59
EGGLESCLIFFE	81	100	100	23	0	81	100
ELTON	21	15	18	-29	20	140	83
ELWICK	17	c20	22	18	5	85	91
GAINFORD	208	269	268	30	0	77	100
GREATHAM	62	93	119	50	28	67	78
GRINDON	41	72	70	76	-3	57	103
HAMSTERLEY	64	186	300	19	61	34	62
HART	118	156	126	32	-19	76	124
HARTLEPOOL	68	89	246	31	176	76	36
HAUGHTON-LE-SKERNE	80	103	134	29	30	78	77
HEIGHINGTON	108	207	274	91	32	52	76
HESELDON (,MONK)	120	104	98	-13	-6	115	106
HUNSTANWORTH	12	26	42	117	62	46	62
HURWORTH	142	127	197	-11	55	112	64
KELLOE	56	115	117	105	2	49	98
KIRK MERRINGTON	[150]	171	260	[14]	52	[88]	66
LONG NEWTON	83	79	53	-5	-33	105	149
MIDDLETON IN TEESDALE	192	203	364	12	79	95	56
MIDDLETON ST GEORGE	[45]	47	50	[4]	6	[96]	94
NORTON	92	133	245	45	84	69	54
PITTINGTON	69	113	235	64	108	61	48
REDMARSHALL	55	69	48	25	-30	80	144
SADBERGE	33	53	87	70	61	62	61
ST HELEN AUCKLAND	182	265	455	46	72	69	58
SEAHAM	46	49	45	7	-8	94	109
SEDGEFIELD **	238	287	412	21	44	83	70
SOCKBURN	22	23	30	5	30	96	77
STAINDROP	294	320	441	9	38	92	73
STAINTON-LE-STREET	40	32	27	-20	-16	125	119
STANHOPE	306	335	972	9	190	91	34
STOCKTON	132	235	986	78	320	56	24
STRANTON	102	158	142	55	-10	65	111
TRIMDON	48	60	72	25	20	80	83
WHITWORTH	43	33	29	-23	-12	130	114
WHORLTON	30	40	52	33	30	75	77
WINSTON	30	65	65	116	0	46	100
WITTON GILBERT ***	38	76	91	100	20	50	84
WITTON-LE-WEAR	60	140	141	133	1	43	99
WOLSINGHAM	164	275	436	68	59	60	63
Sub-totals	6727	9292	14730				
COUNTY TOTALS (a+b)	9037~	14461	35567				

~ Of this number, estimates account for 884

Notes:

^ The figures in columns 7 and 8 are the percentage values mapped as the unshaded sectors of the proportional circles in figures 5.2 and 5.3 respectively.

Bracketted figures are estimates based upon an examination of parochial records. Figures in rounded brackets () are believed to be good estimates, those in squared brackets [] are less certain estimates.

* The figure for 1563 includes 33 for Tanfield but it is not clear whether the total for Lamesley, which alone must have been about 30, is also included.

++ Includes returns for Medomsley which cannot be separately distinguished in 1674, though the dependent relationship for ecclesiastical purposes was with Lanchester as shown by the broken line in figures 5.1-5.3.

+* Includes figures for Satley which, though in Lanchester parish, owed obligations and tithes to the Master of Kepier within St Giles, Durham, in 1563. This dependent relationship is shown by a broken line in figures 5.1-5-3.

+ The census of 1563 gives a figure of 3,818 for the parish (with chapelries) of Auckland. This cannot possibly represent the number of households but it could refer to the entire population. A return of 1549 (see Surtees Society, vol. 22, 1850) refers to 2,500 'howsling people' (people over the age of fourteen) being in the parish. There is some evident rounding of numbers here and for the several other Durham parishes for which such information survives, but by comparing the sum of all the 1549 returns with their equivalents in 1563 (10789 and 3045 respectively) a mean ratio of 'howsling people' to households of 3.5 : 1 results. The application of such a ratio to Auckland parish gives 715 households for 1563. Since 306 households are actually recorded for the chapelries of St Helen Auckland, Hamsterley and Witton-le-Wear in 1563, the remaining 409 may be assumed to be the figure for Bishop Auckland (with Escomb). Assuming that the figure of 3,818 does record the entire population, our estimate of 715 would give a mean household size of around 5.3. Another possibility, though not here applied, is that the first digit (3) as recorded in the 1563 survey is a transcription error and that the total number of households should be 818.

** Includes returns for Fishburn and Elmdon whose separate totals are mapped only for 1563 (figure 5.1) when they were 35 and 8 respectively.

*** Includes returns for Kimblesworth whose location is shown for 1563 (figure 5.1) with its total (10 households compared to Witton Gilbert's 28) separately distinguished. In 1563 Witton Gilbert was a dependent chapelry of St Oswald's, Durham, while Kimblesworth was an independent parish.

Sources:

Column 1: BL Harl 594/187-91.
Column 2: PRO E179/106/24/Lady Day 1674; PRO E179/106/28/Lady Day 1666. The 1674 hearth-tax returns are the most complete and reliable for Northern Durham townships in particular, and so are the main source used. But for purposes of cross-checking entries and filling obvious gaps in the 1674 returns those of 1666 have been used.
Column 3: 1801 Census (Abstract of Answers and Returns to the Population Act, 41 Geo.III. 1800).

Appendix 21

COUNTY DURHAM ENCLOSURES, 1551-1810 (and to 1870)

Enclosures are arranged alphabetically within the time-periods mapped in figures 6.1a & b, 6.2, 6.3a & b; i.e., 1551-1620 and 1621-80; 1681-1740; 1741-90 and 1790-1810 (but with 1811-70 enclosures given for sake of completeness). CAPITAL LETTERS are used for those locations where the enclosure was entirely, or partly, in Northern Durham.

Ai 1551-1620

	1 LOCATION	2 DESCRIPTION	3 DATE	4 ACREAGE	5 METHOD	6 SOURCES AND NOTES
1	Aislaby (60,TL)	Moor?	by 1593	-	Depop?	VCH Durham, III, 226 (by inference rather than direct evidence and cited by Tate 1943, 136).
2	Billingham (49,TL)	Lands at Bellasis(?)	1618	-	Agr	Surtees 1816-40, III, 145; VCH Durham, III, 196; Mickleton 97; Tate (1943, 136) suggests may relate to hamlet of Bellasis in Billingham parish.
3	Carlton (51,TL)	Townfields, meadows and pastures	c.1606	1425	Agr	DUPD HC book 83; Tate (1943, 136) citing HC rolls/presentments, May 1606 & surrenders 1653 & 1663.
4	Castle Eden (16,EDP)	-	by 1584	-	Depop	PRO SP15/28/'An Abstract of the Certificates of the tenancies and forces decaied upon the borders' (1584); PRO SP15/32/83(1)/presentment by a Durham jury (1593).
5	CLEADON (10,EDP)	-	late 17C	-	-	DUPD CC/box 209/245012.
6		Hallfield	1615	-	-	DUPD HC book 68.
7	Coatham Stob (56,TL)	-	by 1570	-	Depop	PRO E164/37-8/Hoaberston's surveys (1570).

8	Darlington Bondgate	Arable, meadow and pasture (part of townfields)	1577-87	-	(T)	DUPD CC/enrolment book 184957B; and HC book 67.
9		Blackwell	1616	-	Agr	DUPD HC book 70; PRO Durham 5/6; DUL Mickleton 97.
10	Denton (36c,TL)	-	by 1600	-	Depop	DCL Hunter 44(b)/'Certaine Observations Touching the Estate of the Commonwealth...' (1634).
11	Dinsdale (59,TL)	-	1616	-	Agr	PRO Durham 5/2; Leonard 1905, 113.
12	Easington (15,EDP)	-	by 1601	-	-	DUPD HC book 51; and CC/box 208/ 244754/bounds of E. & Thorpe to be ridden, 1602.
13	Egglescliffe (55,TL)	Moor	by c.1610	c.450	Agr	NYRO ZIQ/deeds in Cal. A, 441-55 (cited by Harrison 1978, 6).
14	Eggleston (32a,HP)	Part of Townfields	by 1614	-	Agr?	DRO D/Bo/A945/Richard Danes' plan of Egglestone manor.
15	Elton (53,TL)	Lands and Grounds (Townfields)	1609	1298	Agr	DRO D/Lo/F 239(3)/copy agreement.
16	Escomb (27a,TWL)	Townfields (East Hurst)	c.1615	702	Agr	Tate (1943, 136) citing HC rolls, 1616; DUPD HC book 70.
17	Hardwick Hall (44,TL)	-	by 1570	-	Depop	PRO E164/37-8/Homberston's surveys (1570).
18.	HETTON-LE-HOLE (7,TWL)	-	1617	-	Agr	PRO Durham 5/3; Leonard 1905, 111.
19	LUMLEY, GREAT (6,TWL)	-	1584-5	-	Agr	PRO Durham 4/I/633; Leonard 1905, 111.
20	Mordon (44,TL)	-	by 1619	-	Agr	DUPD/diocesan records.
21	Murton (14,EDP)	Townfields	c.1585	-	Agr	(See entry for 1640 under Enclosures, 1621-80).
22	Owton (53,TL)	-	by 1570	-	Depop	PRO E164/37-8/Hoaberston's surveys (1570).
23	Seaham (13,EDP)	-	by 1584	-	Depop	PRO SP15/28/'An Abstract of the Certificates...' (1584); SP15/ 32/83(1)/presentment by a Durham jury, 1593.

24	Seaton Carew (47,TL)	-	by 1584	-	Depop	PRO SP15/28/'An Abstract of the Certificates...' (1584); SP15/32/83(1)/presentment by a Durham Jury, 1593.
25	Sedgefield (44,TL)	Townfields	1579-80	?231	Agr	DUPD Baker/Baker 72/249/memo. of award.
26	Sheraton (17,EDP)	Moor & some tillage	c.1593	-	Part Agr, part Depop	DRO D/Ch/L 2/depositions of witnesses re. common rights prior to enclosure; DUPD/Surveyor's deposit 88a; PRO SP15/32/83(1)/presentment of a Durham jury, 1593. Possibly two separate enclosures.
27	Stainton-le-Street (43,TL)	Townfields	1586	-	Agr	DRO D/Ch/C860 and Ch/E207; Hutchinson 1787, 205; Tate (1943, 135) citing Havelock Allan MSS.
28	Stranton (47,TL)	-	by 1584	-	Depop	PRO SP15/28/'An Abstract of the Certificates...' (1584); SP15/32/83(1)/presentment of a Durham jury, 1593.
29	Thornley (18, EDP)	-	by 1607	-	Agr	PRO E178/3748 (4 James I); Leonard 1905, 113.
30	Thorpe Bulmer (46,EDP)	-	by 1584	-	Depop	PRO SP15/28/'An Abstract of the Certificates...' (1584); SP15/32/83(1)/presentment by a Durham jury, 1593.
31	Thorpe Thewles (50,TL)	Common fields	c.1600/03	-	Agr?	PRO E178/3745; VCH Durham, III, 250; Tate 1943, 135.
32	Tunstall (12,EDP)	A moiety of T.	c.1591	380	Agr	PRO Durham 4/III/70; Leonard 1905, 112. See also 1670-1 ChD enclosure (no. 124 below).
33	Ulnaby (38,TL)	-	by 1593	-	Depop	DCL Hunter 44(b)/'Certaine Observations...', (1634); PRO SP15/32/83(1)/presentment by a Durham jury, 1593.
34	WALDRIDGE (6,TWL)	-	by 1603	-	Agr	DUPD/Chester Deanery manor, court book 1630. Apparently a division but some common rights to 'eatage' continued.

35	Walworth (37,TL)	Walworth and Heighington Moor	1551	-	Depop	DUPD Mickleton 97; VCH Durham, III, 260; DCL Hunter 44(b)/ 'Certaine Observations..' (1634).
36	WASHINGTON (8,TWL)	-	by 1584	-	Depop?	PRO SP15/28/'An Abstract of the Certificates...' (1584).
37	West Layton (44,TL)	-	by 1570	-	Depop	PRO E164/37-8/Homberston's surveys (1570).
38	Whessoe (40,TL)	-	by 1601	-	Depop	DRO D/Ch/L89; DUPD HC/misc. box 12/18; PRO Maps/MR 396.
39	Whitton (52,TL)	-	by 1617	-	Agr	VCH Durham, III, 251 [by inference rather than direct, and cited by Tate 1943, 136]

The following cases of enclosure and/or conversion of tillage to pasture were taken to the Durham Quarter Sessions between 1607 and 1615. Since such enclosures were regarded as illegal, it seems reasonable to assume that some at least were merely temporary.

40 - 54	Bishop Auckland (27,TWL)	1608 & 1611	Kelloe (18,EDP)	1612
	BOLDON, WEST (9,TWL)	1612	Mainsforth (19,EDP)	1607
	Brafferton (41,TWL)	1612	Middleton East Row (56,TL)	1612
	Cornforth (19,EDP)	1610 & 1612	Newton Cap (27,TWL)	1608 & 1609
	CRAWCROOK (4,TWL/PS)	1612	Preston (54,TL)	1612
	Darlington (39,TWL)	1612	Thorpe Thewles (50,TL)	1608
	Harbour House (20,TWL)	1612	Wingate (18,EDP)	1611
	Hutton Henry (17,EDP)	1615		

Source: DRO Q/S/I/1-4

In addition to the above cases, the Quarter Sessions records suggest some enclosure activity at Gainford (1600) and encroachments or enclosures upon the King's Highway at Newton and Harbour House (1598), Kelloe (1600) and Boldon (1601). It is quite likely that many such minor infringements occurred from time to time.

A.ii 1621-80

55	Aycliffe (40,TL)	Townfields in Great	c.1652	-	Agr	DUPD HC/copy award 1; PRO Durham 4/III/726; Leonard 1905, 112; Tate 1943, 113.
56		Woodham in Great A.	1655	-	Agr	DUL Mickleton 97.
		Moor	1654-86	(For further details, see Enclosures, 1681-1740)		
57	Bishop Auckland	Etherley Moor Close	1643-5	166	Agr	Tate (1943, 137) citing HC rolls for 1635, 1636, 1637; PRO Durham 4/II/464; Leonard 1905,113.

58	Bishop Auckland	-	1640	-	Agr?	PRO Durham 4/II/464; Leonard 1905, 113.
59		Townfields (High, Middle & Far) and Bondgate	1651-73	247	ChD	DUPD HC/copy awards 6,7,8,9 (P*); and HC book 85; PRO Durham 4/III/43 & 91 and II/464; Leonard 1905, 112. Smaller tenants exempt from enclosure costs.
60	BISHOP WEARMOUTH (12,EDP)	Townfields	c.1649	c.1350	Agr	DUPD HC books 81 & 87; Tate 1943, 137) citing HC rolls.
61	Bolam (36,EDP)	Common Pastures	1633-8	c.300	Agr	NYRO ZJB 2/6/4, 2/8/5, 3/1/5-6, 6/1/1-6, 11/5/2-3 & 8. Chapman 1970.
62	BOLDON, EAST & WEST (9,TWL/EDP)	Townfields (Mill, Toft, Downhill and Corn Pool fields)	c.1658	-	Agr	Tate (1943, 137) citing HC rolls, 17 June, 1658.
63		West Pasture and South Moor (in the Townfields)	c.1651-67	175	ChD	DUPD HC/copy award 12; and HC book 81; PRO Durham 4/II/389; Leonard 1905, 113.
64		Brockley Whins, White Lea & Middle Sheal in	c.1675	285	Agr	DUPD HC book 86; Tate (1943, 138) citing HC rolls, 1675, f.66.
65	(9,EDP/TWL)	North (alias Night) Pasture & Scrubs	c.1676	312	Agr	DUPD HC book 86; Tate (1943, 138) cites HC rolls, 1676(?), f.232.
66	CHESTER-LE-STREET (6,TWL)	Copyhold Townfields	1635-6	632	Agr	DRO D/Ph 1/6; DUPD HC/copy awards, vols. M.8a & M.17; Shafto 1448; Diocesan records/box 1023; PRO Durham 4/I/648; Leonard 1905, 113.
67	CLEADON (10,EDP)	Leazards Moor, Pastures, North Closes, Little Meadows	1676	c.1600	ChD	DRO D/No Box 2/copy award; Tate (1943, 138) citing HC rolls 1677; DUL Mickleton 97.
68	Cleatlam (36,PS)	Moor & Townfields	1635-6	631	ChD	DRO D/Ph 1/3/copy enrolled award; DUPD HC/original awards & related documents; and HC/copy award 13; PRO Durham 4/I/300-04; Leonard 1905, 112, who suggests 956 acres affected.
69	Cockerton (39/40,TL)	Grange Close or Field in Townfields and Territories	1625	60	Agr(T)	DUPD HC/copy award 19. A temporary enclosure only: the 'inhabitants of Cockerton pulled down the fences.'

70	Cockerton	-	1662	50	ChD	DUPD HC/copy award 19.
71		-	1668-9	245	ChD	DUPD HC/original award & related documents, 1662-8; HC/copy awards 18, 19 & 20; and HC book 84; PRO Durham 4/II/408; Leonard 1905, 112.
72	Cornforth (19,EDP)	Part of the Moor	1621-6	-	ChD	DUL Mickleton 97; PRO Durham 5/3/17; Leonard 1905, 111; Tate 1943, 132.
73	Coundon (27,EDP)	Townfields & Pastures	1637-57	-	Agr	DUPD CC/box 211/221344; DUL Mickleton 97.
74	Croxdale & Sunderland Bridge (20,TWL)	Ox Close & New Close	1634	97	Agr	DRO D/Sa/E567-8; and D/Sa/L85 (legal papers).
75		Townfields	1669	-	Agr	DRO D/Sa/E569-70/copy award; D/Sa/E567-8; and D/Sa/L85 (legal papers).
76	Darlington (39,TL)	Blackwell Holme Close (Bondgate?)	by 1633 -1665/6	93	ChD	DUPD HC/copy award 11; PRO Durham 4/II/308b; and Durham 5/6; Leonard 1905, 112.
77		Bronkmoor	c.1669	-	Agr	DUL Mickleton 97.
78	Easington (15,EDP)	Part of Easington Moor	1655-6	109	ChD	DUPD HC/original award; and HC/copy award 14; PRO Durham 4/III/91b; Leonard 1905, 112.
79		Townfields in Little Thorpe	1658-9	610	ChD	DUPD HC/original award; PRO Durham 4/III/91b.
80		Part of Easington Moor	1660-1	599	ChD	DUPD HC/original award; and HC/copy award 15; PRO Durham 4/III/91b.
81		Easington Thorpe Lea & Cow Close	1664-5	629	ChD	DUPD HC/original award; HC/copy award 16 & copy PLAN 3; PRO Durham 4/III/91b.
82		All the above [nos. 78-82] plus Northmost Ling Close (40 acres)	1672	(1987)	ChD	DUPD HC/original award; and HC/copy award 17; PRO Durham 4/III/91b.

83	Egglescliffe (55,TL)	Open Fields (Low, Annan & West)	1629	c.700	Agr	NYRO ZIQ/Cal.2 Egglescliffe: award of 2 Feb 1628-9 (cited by Harrison 1978, 6).
84	Eldon (27,EDP)	-	by 1625	-	Agr	DUPD DR/V/11/deposition of Thomas Simpson, 8 October 1625.
85	Ferryhill (26,EDP)	-	1637	-	Agr	DUL Nickleton 97.
86	Frosterley (31,HP)	Frosterley Common	1647-57	-	Agr	DRO D/Lo/F 188 and 189. In two stages.
87	Greatham (48,TL)	Townfields	1650-63	1737	ChD	DRO D/Ph/1/9/copy enrolled award; PRO Durham 4/II/118-123; Leonard 1905, 112.
88	Haughton-le-Skerne (40,TL)	Ling and/or Westfield in Little Haughton	by 1638	-	Agr?	DRO D/Ch/E 203.
89		Townfields	1665-6	545	ChD	DUPD HC/original award; HC/copy awards 21, 22 & 24; and HC book 84; PRO Durham 4/II/318; Leonard 1905, 112.
90	Heightington (37,EDP/TL)	Arable Townfields & Meadows of H. [and Walworth?]	1634-7	-	Agr	DUPD CC 184962/register of leases, p.49; Tate (1943, 137) citing HC rolls, presentments, 15 Charles I; NRO H. award, 1636; DUL Nickleton 97.
91	HERRINGTON (7,EDP/TWL)	Townfields in Middle and West Herrington	1638-40	-	ChD	PRO Durham 4/I/631-2; DRO D/Ph/1/7 (legal papers); Leonard 1905, 112.
92		Haining Pasture in Middle and East H.	by 1652	100	Agr	Tate (1943, 137) citing HC rolls, 1652; PRO Durham 4/I/631-2.
93	Hett (26,TWL/EDP)	Lands in the Common Fields	1668	340	ChD	DUPD HC/copy award 25; PRO Durham 4/II/416; Leonard 1905, 112.
94	Hartburn (54,TL)	Townfields	c.1639	c.1000	Agr	Tate (1943, 137) citing HC rolls, 14 Charles I, f. 403; DUPD HC book 78.
95	HOUGHTON-LE-SPRING (7,TWL/EDP)	Townfields	1631-5	-	Agr	DUPD HC books 76 & 77; Tate 1943, 137) citing HC rolls, 3 Oct., 11 Charles I, f. 427.
96	Ingleton (36,TL)	Commons	1623	-	ChD(W)	PRO C78/493/7/Chancery decree roll, 20 James I.

97	Kelloe (18,EDP)	Townfields	by 1636	-	Agr?	DUPD/Glebe terrier. 1636. A partial enclosure only.
98	Long Newton (56,TL)	Townfields	1659-62	3035	ChD(W)	DRO D/Lo/F 193(1-7); and see also D/Lo/F 190(3,6,8,9,13), 191 & 192 and D/Lo/L 3; PRO C33/1662B/252; Leonard 1905, 112.
99	Middleton one Row (57,TL)	-	c.1632	-	Agr	PRO Durham 5/15/122; Leonard 1905, 111.
100	Middridge (28,EDP)	Arable Townfields and pastures (North, South & East Townfields plus Ox Close)	1634-8	590	ChD	DRO UD/Sh 122/copy award & legal papers; and D/Ph/1/5; DUPD HC/ original award; HC/copy awards 29a & 29b; and CC/boxes 204, 206, 211 (includes dispute details); PRO Durham 4/I/374-5, 426-8, 507-11, 525-6 & 757.
101	Murton (14,EDP)	Townfields	c.1585-1640	-	ChD	PRO Durham 4/I/631-3; DRO D/Ph/ 1/8/legal papers re. opposition; Leonard 1905, 111. Part enclosed c.1585, then in stages to 1640.
102		Morton (alias Murton) West Moor	1625	-	Agr	DUPD DR/V/11.
103	NEWBOTTLE	Townfields (Hall and Dubmire Moors, Intake, West North Field and East Close)	1669-71	487	ChD	DUPD HC/copy award 30; and HC book 85; and PRO copies/box 204/244063; PRO Durham 4/III/64; Leonard 1905, 112.
	Newsham (35,PS)	Moor	from 1679	(For further details, see Enclosures 1681-1740)		
104	Newton Bewley (49,TL)	Common Fields	1664	1038	Agr	DRO D/X/339/8-9.
105	Norton (51,TL)	Townfields	1672-4	1394	ChD	DUPD HC/original award; HC/copy awards 31-4, & vols. M.72, M.73; and HC book 86; DRO D/X/339/12; D/X/50/1/copy award; PRO Durham 4/III/230b; Leonard 1905, 112. DUL Mickleton 97 suggests a possible earlier division in 1631-7.
106	Quarrington (18,TWL/EDP)	Moor	by 1622	-	Agr	DUPD CC/184959/enrolment book of leases and patents IV.
107	RAINTON, EAST & WEST (7/21,TWL)	Townfields?	1628-38	-	Agr	DUL Mickleton 97; Tate 1943, 136.

108	Redworth (37,EDP)	Pasture, Moor and Sweeths	1662-7	186	ChD	DUPD HC/copy award 34a (with PLANS); Durham 4/II/351; Leonard 1905, 112.
109	RYHOPE (12,EDP)	Townfields	1658-80	1550	ChD	DUPD HC/copy award 35; PRO Durham 4/III/551b; PRO DURH/26/15/Bill of complaint; Leonard 1905, 112.
110	RYTON (4,PS/TWL)	Moor in Ryton Woodside	1634-8	1180	ChD	DUPD CC/notitia 54001/255 & 54002/281; NRO B16/1/1; PRO Durham 4/I/497; Leonard 1905, 112. Parl. Surveys II, 55, records it 'violently pulled down by a multitude of adjacent towns'
111	(4,TWL/PS)	Shorty Croft, Lacars, Crook and Broom Fields in R.	1668-9	166	Agr	DUPD HC books 84 & 85; DRO EP/RYT 24; Tate (1943, 138) citing HC rolls, 7 June, 20 Charles II, f. 1105.
112	Seaham (13,EDP)	-	1635	-	Agr	DUPD BRA/660/bundle A; and Glebe terrier, 1806.
113	Sedgefield (44,TL)	Townfields	1634-6	2226	ChD	PRO Durham 4/I/306-22; DRO D/Ph/1/4/copy enrolled award; DUPD HC copy award 39; HC/misc. papers/box 5/19; HC book 78; and CC/box 211; HC/misc. maps & plans 142 and HC/additional maps 133; Leonard 1905, 112.
114	Shadforth (21,EDP/TWL)	Townfields & Wastes	1634-5	1255	ChD	PRO Durham 4/I/273-7; DRO D/Ph/1/2/copy enrolled award; DUPD HC copy award 40; Leonard 1905, 112.
115	Sherburn (21,TWL/EDP)	Townfields & Moor	1634-5	1267	ChD	PRO Durham 4/I/262-8; DRO D/Ph/1/1/copy enrolled award; DUPD HC copy award 41; Leonard 1905, 112; DUL Mickleton 97 (re. likely preliminary activity in 1612 and 1617).
116	Shincliffe (20,TWL)	Moor	c.1629/31	-	Agr	DRO D/Ch/L 3 & 4; DUPD CC/184959/lease enrolment book IV (by inference).
117	Shotton (15,EDP)	Moor	1656-72	-	Agr	NRO (56) ZGB/3.
118		Townfields	1673-4	1229	ChD	PRO Durham 4/III/184 & 594; DUPD HC/original awards; HC/copy awards 42-9; and HC book 86; Leonard 1905, 112.

119	Spennymoor (2,TWL)	Spennymoor or Tudhoe Common in Whitworth Chapelry	1665-72	240	Agr	DRO D/Sa/E574-9; DUPD Whitworth Glebe terrier, 1792.
120		?? A possible further division of Spennymoor Waste	1676-7	282	ChD	PRO Durham 4/III/429; Leonard 1905, 112.
121	Stockton (54,TL)	Townfields	1658-62	1557	ChD	PRO Durham 4/II/86; DUPD HC/copy awards 52 & 53; and HC books 89 & 91; Leonard 1905, 112.
122	Thorpe Thewles (50,TL)	Townfields [probably]	1626-7	-	ChD(W)	PRO C78/502/5/Chancery decree roll, 2 Charles I.
123	Tudhoe (24/25,TWL)	Townfields	1639	453	Agr	DRO D/Sa/E571-9 (agreement & grant claims for common rights); and D/Sa/E 371/7/award.
124	TUNSTALL (12,EDP)	A Moiety of Tunstall	1670-1	380	ChD	PRO Durham 4/III/70-83; DRO D/Ph/1/10/copy enrolled award; DUPD HC/copy award 54; Leonard 1905, 112.
125	West Auckland (27c,TWL/PS)	Townfields	1637-40	1120	ChD	PRO Durham 4/I/632; DUPD HC/copy award 56; DUL Mickleton 97.
126	WHICKHAM (3,TWL/PS)	Townfields	1672-7	1735	ChD	PRO Durham 4/III/370; DRO D/St 25/107/articles of agreement, 1672; D/St/v1669/copy award; and D/St/box 25/misc. papers; DUPD HC/copy award M.6; NRO 404/214C; Leonard 1905, 112.
127	WHITBURN (10,EDP)	Moors & West Meadows	1680	479	ChD	DRO D/No Box 2/copy award; D/Ph/1/11-12/copies of awards; DUPD HC/copy award 57 (P*); HC book 88; NRO 404/214D. DUL Mickleton 97 suggests enclosed in 1677.
128	Whorlton (36,PS)	Town Pasture	1677	-	Agr	DRO D/X 573/copy award.
129	WINLATON, EAST & WEST (4,PS/TWL)	-	1632	-	Agr	NEIM 47a/26 & 27; DRO D/St/box 6 (10/3) (P*).

B 1681-1740

130	Aycliffe (41,TL)	Moor in Great	1654-86	306	ChD	DUPD HC/copy award 1; PRO Durham 4/III/726; Leonard 1905, 112; Tate 1943, 133.
131	Billingham (49,TL)	Common Fields alias the 'Open Fields'	1714-7	1138	ChD	DUPD HC/copy award 5; Tate (1943, 135) citings PRO without further detail.
132	BIRTLEY (6,TWL)	Lands at Birtley	1712	c.190	Agr	PRO DURH/26/1 & 2/Commission award.
133	Bishop Middleham (19,EDP)	Townfields & Commons	1693	625	ChD	DUPD HC/copy award 10; and HC book 91. For related documents, see DRO EP/BM 39(iv).
134	CHESTER-LE-STREET (6,TWL)	The Mains and North Field	1729-30	197	Agr	DUPD HC/copy awards, vol. M.17; Shafto 1448; and DR/box 1023.
135	CRAWCROOK (4,TWL/PS)	Crawcrook Moor	between 1704 & 1727	-	Agr	DUPD CC/notitia 54001.
136	Hardwick (51,TL)	Hardwick Field	c.1685	540	Agr	DUPD HC book 89. Tate 1943, 138, cites HC rolls, 15 Sept. 1 James II, f. 958.
137	LANCHESTER (5,PS)	Wallside & Bishop's Meadow	c.1693	48	Agr	DUPD HC book 90. Tate 1943, 138, cites HC rolls, 5 July, 5 Wm. & Mary, f. 1454.
138		Moor Leazes Meadow Closes	1735	-	Agr	DUPD HC/box 7/22.
139	Middridge (28,EDP)	Moor	1704-5	421	ChD	DUPD HC/original award; HC/copy awards 27 & 28; and CC/box 204/244156.
140	MONKTON (1,TWL)	Hebburn, Wardley, Monkton & Heworth Fells	1723	279	Agr	DUPD (PK) DC/register 26, 16-8; NRO ZMI/B8/1?/25/agreement re. fencing in 1740/41.
141	NEWBOTTLE (7,EDP/TWL)	Whitebread Flatt	1683	50	Agr	Tate (1943, 138) cites HC rolls, 16 Sept., 9 Wm. III, f. 1674.
142	(7,TWL/EDP)	East, North & West Townfields	1700	484	Agr	DUPD HC book 91. Tate 1943, 138, cites HC rolls, 14 Sept., 12 Wm. III, f. 1836.

143	Newsham (35,PS)	Moor	1679-1705/6	-	Agr	DUPD BRA 1260/55, 96 and 104. In two stages?
144	PELTON (6,TWL/PS)	East Field	1683	125	Agr	DUPD Shafto (18/37)/479.
145	RYTON (4,TWL/PS)	West Field & Croft, East Field & Croft, Hedge Field & Church Dean (the Townfields)	c.1690	384	Agr	DUPD HC book 96. Tate 1943, 138, cites HC rolls, 2 Nov., 3 Wm & Mary, f. 1343.
146	Seaton Carew (47,TL)	Townfields	1689-91	1789	ChD	DUPD HC/copy award 38; DRO D/Sa/E580-2/subsidiary award; DRO D/X 570; PRO Durham 4/III/699.
147	SIMONSIDE (1,TWL)	Lands & Tenements in Simonside Fields	1715-6	216	ChD	DUPD HC/Original award; and HC/copy award 50. Cited by Tate 1943, 135, without further detail.
148		Simonside Field Pasture	1740	-	Agr	NRO ZMB B8/1/25.
149	Westerton (28,EDP)	Moor	1698	-	Agr	DUPD Shafto (18/38)/482.
150	WESTOE (1,TWL)	Townfields	1716	484	Agr	Tate 1943, 138; Fordyce 1857, II, 731.
151	WHITBURN (10,EDP)	East, West & South Fields and Lizards	1718	1189	Agr	DUPD HC/copy award 58; Whitburn Glebe terrier, 1806; Surtees 1816-40, I, 52. Tate (1943, 138) cites copy with Boldon U.D.C.
152	Wolviston (49a,TL)	Tillage, meadow and pasture [Townfields]	1696-7	1102	Agr	DRO D/X/339/21/copy award.

C.i 1741-90

153	Barnard Castle (36b,PS)	Townfields	1783-5	800	Act	DRO D/X 15/1,2,3 & 6/letters re. division; D/Ch/F1015; D/Bo/C593-608; award & PLAN); and UD/BC 121.
154	Bolam (36,EDP)	North, West and Dunwell Fields	1782-6	660	Act	DRO Q/D/B5/113/enrolled award.

155	Brancepeth (24,PS/TWL)	Brancepeth Moor & Stockley Common	1758-9	1650	Act	DRO Q/D/E 1,4, & 5/award, PLANS and arbitrations; D/Br/E1 & E88; D/Br/EN1; D/Br(7)/PLAN; and D/Br/ P6, 168.
156	Byers Green (27,TWL)	High Side	1754	50	Agr	DUPD HC book for Auckland, 1748-63; HC/misc. maps & plans 44; Tate (1943, 138) citing HC rolls, surrender 25 Nov. 1843.
157	Crook (20,TWL)	Crook & Billy Row	1764-9	2179	Act	DUPD HC/original award & PLAN 3; DRO D/X 339/2/act; D/Br/E90/ extract award & PLAN; and NCB/ X 244/copy award.
158	Crossgate (20,TWL)	Moor	1769	200	Act	DRO D/X 339/3/act; EP/Du/SM 72; DUPD HC/copy PLAN; CC/box 177/ 34412; Small Gifts & Deposits 8/ Act; DUPD (PK) DC/award & PLAN.
159	Egglestone (32a,HP)	Fell	1785-90	c.1300	Act	HLRO/act, 25 Geo. III 13 (1785); Alexander 1972, 285. Apparently no formal award.
160	Elvet (20,TWL)	Moor	1771-3	400	Act	DUPD (PK) DC 1/original award & PLAN; DUPD CC Box 218/221291 & 221545; DRO D/X 339/7/act; & EP/Du/So 2/award extract.
161	HAMSTEELS (5,PS)	Moor	1772-4	1397	Act	DRO NCB/I/D93/award extract; EP/Esh 25 & 38/act & PLAN; DUPD HC/original award 7; HC/copy awards, vol. M.3 & copy PLAN 6.
162	Hamsterley (27d,HP/PS)	Hamsterley, South Bedburn, Lynesack & Softley Commons	1758-60	8928	Act	DUPD HC/original award 8; HC/copy awards, vol. M.1 & copy PLAN 7; CC/box 212/221032. DRO also has copy award.
163	HEBBURN (1,TWL)	Fell	1778	160	Act	DRO D/Bo/Bell plans & papers/a division between Dean & Chapter of Durham and Gen. Cuthbert Ellison (not rightly an enclosure). A 1871 print of this act is in NCL. Also cited by Tate 1943, 129.

164	HEWORTH (1b,TWL)	Upper & Nether Heworth 1766-7		466	Act	DUPD HC/original award; Grey/ misc. book 6/468; DUPD (PK) DC 4/ award & PLAN; DRO D/Lo/F 988(2); NRO 404 214D; JHC 30/676 and 37/830/proceedings incl. Lords' amendment.
165	Hunwick (27,PS)	Hunwick Edge Common in 1760-1 Newton Cap & Hunwick		1007	Act	DRO D/X 258/16 & 17/award extract & PLAN; DUPD HC/original award 10 & copy awards, vol. M.1; JHC 37/ 822/proceedings incl. Lords' amendment.
166	Ivesley (24,PS)	Ivesley or Street Moor	1758	300	Act	DRO Q/D/E 14/award; D/Br/EN 2 & 3/copy award extract & PLAN; D/Br/E 21 & 91/agreement for division; D/Br(7)/transcript of award; D/Br/P169-170/copy and award abstract.
167	LANCHESTER (5,PS)	Commons	1773-81	17356	Act	DUPD HC/original award 11; HC/ copy award M4; copy PLAN 9; arbitration awards box 1; HC VII box 14/70/explanation of 1754 PLAN; HC/misc. maps & plans 48 & 64; DRO D/X 339/9/act; D/X 58/ 1-5; NCB/I/D/92; D/X 487/3/1-80/ Greencroft & Langley disputes; Q/D/EC/1-12/mining damage to allotments (1881-1902); D/Bo/Bell plans & papers/Folders A-D; D/Br(7)/copies of plan of Lanchester Fell, 1754; NRO 404/ 215/act, & varying act of 1779; NRO ZCR box 6/deeds & corresp.
168	MEDOMSLEY (5,PS)	Village Waste	by 1776	c.10	Agr	DRO D/X/P 12. See also D/X/P 10 & 11.
169	Newbiggin (32,HP)	Common	1763-4	2490	Agr	Tate (1943, 139) citing award in Middleton in Teesdale parish chest; Bailey 1810, 88.
170	PLAWSWORTH (48,TWL)	Townfields	1769	261	Agr	Tate (1943, 139) citing Fordyce's History II, 618.
171	Railey (27c,PS)	Fell (in Evenwood & West Auckland)	1762-5	2011	Act	DUPD HC/original award 13; HC/ copy awards, vol. M.1; copy PLAN 10; CC/box 213; CC/map 512/PLAN of encroachments, 1753; JHC 37/ proceedings & Lords' amendment.

172	Staindrop (34,PS)	Moor	1764-5	500	Act	DRO Q/D/E 28-31/award & arbitration; D/Bo/F 68-87; D/St boxes 83-5/legal papers; D/Bo/C 584-92; D/SC box 48/misc. papers.
173	Thornley (28,PS/HP)	Moor	1769-72	600	Act	DRO Q/D/B 5/enrolled award; Q/D/E33/award & PLAN; D/Br/E22/award & PLAN.
174	USHAW (20,PS)	Ushaw Moor & Middlewood	1762-5	896	Act	DRO D/Ph 165/1/PLAN; DUPD HC/original award 15 (PLAN separate); HC/copy awards, vol. M.1.
175	WASHINGTON (8,TWL)	Moor	1762-3	226	Agr	DRO D/Sh/award PLAN; D/X 93/1/sketch of Common, 1747; NCB/P/4/PLAN of Birtley & W. Commons, c.1750.
176	Willington (24,PS)	Helmedon Row & Willington Moor Common	1756-7	1060	Act	DRO Q/D/E 35; D/Br/E 89; GPL Cotesworth (OR) box Z/2 [suggests agreement already reached by 1735].
177	Winston (35,PS)	Moor	1766-7	170	ChD	DUPD HC/original award; DRO EP/Wi 48/copy award.
178	Witton-le-Wear (27B,PS)	Witton-le-Wear and North Bedburn	1773-6	1380	Act	DRO D/X 339/18/act; D/Ch/E 242-6/West Witton Common & mines sinking; DUPD HC/original award 18; HC/copy awards, vol M.3; copy PLAN 14; and CC/maps 514 (PLAN of land before enclosure).
179	Wolsingham (28,HP/PS)	North & South Moors or Commons	1765-7	11128 (6106 not taken up)	Act	DRO D/X 339/19/act; D/X 487/12/19/award extract; D/Lo/F 920; DUPD HC/original award 19; HC/copy awards, vol. M.2, and copy PLAN 15; JHC 30/251-6/petition against & bill ordered.
180		East Townfield(s?)	1769-70	200	Act	DRO D/X 339/20/act; DUPD HC/original award 20; HC/copy awards, vol. M.2, and copy PLAN 16.
181		Hollin Hall Pasture	1775	262	Agr	DUPD HC/original award 9 (PLAN separate); and HC/copy awards, vol M.2.

182	Barnard Castle (36b,PS/HP)	Moors in Marwood, Eggleston, Langley Dale and Streatlam	1795-9	4644?	Act	DRO D/St/v1431/award & PLAN; D/St /boxes 83-5/legal Papers; D/St/ boxes 13,14,48,108 & 164; D/Bo/C 584-92/misc. papers; D/Ch/F 325-9 & 1015; UD/BC 122-7; Tate (1943, 129) citing award with BC U.D.C.; Fordyce 1857, II, 30.
183	BEAMISH (6,PS)	South Moor	1803-10	415?	Act	DRO Q/D/E 1/award & PLAN; Q/D/B 5/enrolled award; DUPD Shafto 588/1 & 2/copy award & PLAN extract; NRO 404/231.
	BLACKBURN (6aPS/TWL)	Blackburn, Hedley & Kibblesworth Fells, Ravensworth Townfields	1801-18	(For further details, see Enclosures, 1811-70)		
184	Byers Green (27,TWL)	Byers Green Moor and Old Park	1805-9	450	Act	DUPD HC/copy PLAN; DRO Q/D/E 6-7/ enrolled award & PLAN; D/Bo/Bell papers/arbitration, award & PLAN; NRO 404/210 (award), 214D & 253.
185	CHESTER-LE-STREET (6,TWL/PS)	Common	1794-1800	2726	Act	DUPD HC/original award 2; HC/copy awards, vol. M.5 & copy PLAN 2; arbitration awards box 1; DR/box 1023/award extract; DRO Bowes 2nd deposit/Bell plans & papers; NRO 404/195, 196.
186	CRAWCROOK (4,TWL,PS)	Open Fields	1794-1800	700	Act	DRO Q/D/E 9; Q/D/B 5/enrolled award; NCB/I/SC/734-8 & 743-82; NCB/I/JB/1960/correspondence re. ownership of coal after enclosure; D/X 6/1-6/deeds re. copyhold lands (1720-1829); D/Lo/ F 944/farm lease, 1740; D/St/box 260; D/XP 38/openfields before enclosure; DUPD HC/misc. box 11/ 18/re. corn tithes; NRO ZGR da. 13/copy plan of pre-enclosure townfields.
	Escomb (27a,PS/TWL)	West Mill Butts, Etherley Moor, Escomb Butts and Carr	1804-16	(For further details, see Enclosures, 1811-70)		

187	Framwellgate (20/23,TWL/PS)	Framwellgate & Witton Gilbert	1801-9	2380	Act	DUPD HC/original award 6; HC/copy awards, vol. M.5 & copy PLAN 5; arbitration awards box 4/claims; CC/boxes 184-6/claims, objections & sales; Witton Gilbert Glebe terrier; CC/box 218; DRO D/Br/EN4 & P71; D/Lo/P 84/award extract; D/X/487/1/47/opposition; D/Bo/ Bell plans & papers/folder C/plan of F. Moor, 1781; NRO 404/210, 218 & 226.
188	Frosterley (31,HP)	Pasture	1800	266	Agr	NRO ZGRa/award & PLAN.
	GATESHEAD (2,TWL)	Fell	1809-22	(For further details, see Enclosures, 1811-70)		
189	Greatham (48,TL)	Greatham Marsh	1807-9	140	Agr	DRO Q/D/B 5/enrolled award; Q/D/ E 13/award & PLAN.
	Middlehope (31a,HP)	Moor	1809-15	(For further details, see Enclosures, 1811-70)		
190	RYTON (4,TWL)	Ryton Haugh (Townfield)	1796-1800	155	Agr	DRO Q/D/E 25-7; D/X 35/11/PLAN; DUPD HC/copy awards 36 & 37; HC book for Chester, 1790-1806.
191	TANFIELD (6b,PS)	Moor	1800-7	1040	Act	DRO Q/D/B 5/enrolled award; Q/D/ E 32/award & PLAN; NRO 404/251-2; DUPD HC/copy PLAN 4.
192	URPETH (6,PS)	Common	1799	136	Agr	DUPD HC/original award 14; HC/ copy awards, vol. M.3 & copy PLAN 11; Shafto 558/indenture award; DRO D/TP Box 4/deeds & papers.
	Weardale (31/31a,HP)	Weardale Park & Forest	1799-1815	(For further details, see Enclosures, 1811-70)		

C.iii 1811-70

193	BLACKBURN (6a,PS/TWL)	Blackburn, Hedley & Kibblesworth Fells, Ravensworth Townfields	1801-18	2600	Act	DRO Q/D/E 15-20/arbitrations, award & PLAN; Q/D/B 6/enrolled award & abstract; D/St/box 218; D/St/v656/claims & accounts, 1801; NRO 404/256.
194	BOLDON (9,TWL)	Fell	1836-59	63	Act Wm IV	DRO Q/D/B 3/award & PLAN; D/X 35/ 33/commissioners' papers, 1843-8; Q/D/B 6/enrolled award.

195	Cockfield (33,PS)	Fell [Regulation of stints only]	1845-68	625	General Act	DRO Q/D/E 8/award & PLAN; D/Bo/A/ court rolls of 1830/sketch of encroachments.
196	CORNSAY (5,PS)	Common	1842	c.100	Agr	DRO D/Br/E 23 & 17 (includes agreement re. undivided common, 1730.
197	Eggleston (32a,HP)	Moors, Commons and	1785-1817	5987 of which 4687 as stinted pasture	Act	DRO Q/D/B 6/enrolled award; Q/D/E 10/award & PLAN; DUPD/Midddleton in Teesdale Glebe terrier, 1792, has reference to enclosure.
198	Escomb (27a,PS/TWL)	West Mill Butts, Etherley Moor, Escomb Butts and Carr	1804-16	365	Act	DUPD HC/original award 5; HC/copy award M.8 & copy PLAN 4; NRO 404/ 259.
199	GATESHEAD (2,TWL)	Fell	1809-22	631	Act	DUPD HC/original award & PLANS; DRO Q/D/B 6/enrolled award & PLAN; Q/D/E 11/award & PLAN; NRO 404/183-93, 203-8, 210/act, award & commissioners' papers.
200		Townfields	1814-8	158	Act	DRO Q/D/B 6 and Q/D/E 11/award & PLAN; NRO 404/209 & 210.
201	Gilesgate (22,TWL)	Moor & Townfields	1816-7	235	Act	DUPD HC/copy PLANS; NRO 404/255.
202	Middlehope (31a,HP)	Moor	1809-15	2343	Agr	Cited by Tate (1943, 130) without further detail. Bailey 1810, 95.
203	Middleton in Teesdale (32,HP)	Moor	1816	'Several thousand acres'	Agr?	DRO Q/D/E 22 and Q/D/B 6. Regulation of stints & division into Inner & Outer Pastures.
204		Moor	1834-41	9225 (some as stinted moor)	Act	DRO Q/D/E 21 & 22/award & PLAN; Q/D/B 6/enrolled award; D/St/box 75/draft award; and NRO 404/214D (speaks of 'enclosure of stinted pasture to give employment to the poor').
205	RAINTON (7,TWL)	Meadows	1821	160	Agr	NRO 578/321; DRO D/Lo/D 196, 197.
206	Ruffside (30,HP)	Common	1864-70	952	General Act	DRO Q/D/E 23/award & PLAN.

207	RYTON (4,PS)	Ryton Bar Moor & Barlow Fell in Ryton, Winlaton & Woodside	1823-9	521	Act	DRO Q/D/E 24/award & PLAN; D/X 621/1-4/Act; D/St/box 77/award extracts; EP/RYT 46; NRO 404/ 236-43.
208	Weardale (31/31a,HP)	Weardale Park and Forest (including Harthope Moor, Chapel Moor & Pasture)	1799-1815	15148	Act	DUPD HC/original award (& 11 PLANS); HC/copy awards, vol. M.7; copy PLAN 8; NRO 404/194, 210, 214D & 244-5/Act, stints & other commissioners' papers, 1799-1802.
209	WHICKHAM (3,PS/TWL)	Fell	1811-21	452	Act	DRO Q/D/B 6/enrolled award; Q/D/ E 32/award & PLAN; D/St/box 300/ copy award, and box 55/award extracts; DUPD HC/copy awards, vol. M.6; and copy PLAN 13; NRO 404/210, 307-12/act, award, PLANS & other papers.
210	Woodland (33a,HP)	Common	1814-25	2260	Act	DRO Q/D/B 6/enrolled award; D/XP 3/award & PLAN; and Q/D/E 36.

ABBREVIATIONS USED:

Column 1: LOCATION

TL	Tees Lowlands
EDP	East Durham Plateau and South West Limestone Ridge
TWL	Tyne and Wear Lowlands
PS	Pennine Spurs
HP	High Pennines

The above physiographic units or zones are shown in figure A18.2 (following p. 295). For the purpose of strict accuracy, some enclosures have been assigned to more than one physiographic unit. In such cases the unit in which the majority of the enclosed land lay is always given first. Since only parts of townships or parishes might be enclosed at a particular date, this locational designation is not necessarily appropriate for the township or parish taken as a whole. When constructing figure 6.4 (bottom part) only the first listed physiographic units were employed so as to avoid duplication of entries.

Parish numbers given in brackets (1-60) correspond with those in figure A18.1 (following p. 295).

Column 5: METHOD

Depop	Probably a depopulating enclosure and almost certainly some engrossing of holdings occurred.
Agr	Enclosure by agreement of majority of landholders and/or other interested parties (strongly implied if not certain).
ChD	Enclosure by agreement confirmed by decree in Bishop of Durham's Chancery Court.
ChD(W)	Enclosure by agreement confirmed by Chancery decree at Westminster.
Act	Enclosure by private act of Parliament.
Act Wm IV	Enclosure under act of 6 & 7 William IV.
General Act	Enclosure under General Acts, 1845.
?	Some doubt. Less certain evidence.
(T)	Temporary enclosure.

Column 6: SOURCES & NOTES

(P*) Denotes plan(s) of the enclosed land, or a part of it, but document(s) not contemporary with main enclosure document(s).

For all remaining abbreviations, see bibliography.

Following page:

Figure A18.1

County Durham: parishes and parochial districts, c.1800

Figure A18.2

County Durham: physiographic units

COUNTY DURHAM
Parishes and Parochial Districts
c1800

* Parishes of Durham City :-
ST. MARY-LE-BOW
ST. MARY THE LESS
ST. NICHOLAS

† includes former separate parish of KIMBLESWORTH

RYTON 4
WHICKHAM 3
GATESHEAD 2
HEWORTH 1b
1 JARROW
1a SOUTH SHIELDS
WHITBURN 10
BOLDON 9
11 MONKWEARMOUTH
SUNDERLAND 12A
8 WASHINGTON
6a LAMESLEY
EBCHESTER 5a
5b MEDOMSLEY
TANFIELD 6b
6 CHESTER-LE-STREET
PENSHAW 7a
7
BISHOPWEARMOUTH 12
13 SEAHAM
14 DALTON-LE-DALE
HOUGHTON -LE- SPRING
5 LANCHESTER
EDMUNDBYERS 30
HUNSTANWORTH 30a
29 MUGGLESWICK
23 †WITTON GILBERT
20b DURHAM ST. MARGARET
22 DURHAM ST. GILES
21
EASINGTON 15
5c SATLEY
5d ESH
31a ST. JOHN'S CHAPEL
STANHOPE 31
28 WOLSINGHAM
24 BRANCEPETH
DURHAM ST. OSWALD 20
20a
PITTINGTON
KELLOE 18
16 CASTLE EDEN
HARTLEPOOL 46a
MONK HESLEDEN 17
HART
TRIMDON 18a
BISHOP MIDDLEHAM 19
CROXDALE 25
WHITWORTH
WITTON -LE- WEAR
MERRINGTON 26
EMBLETON 44a
46
47 STRANTON GREATHAM
ELWICK HALL 45
48
44 SEDGEFIELD
MIDDLETON-IN-TEESDALE 32
HAMSTERLEY 27d
27b
ESCOMB
27a
AUCKLAND ST. ANNE
AUCKLAND ST. ANDREW 27
27c
AUCKLAND ST. HELEN
32a EGGLESTON
33
COCKFIELD
34
STAINDROP
HEIGHINGTON
DENTON
GT. STAINTON
50 GRINDON
49a WOLVISTON
49 BILLINGHAM
AYCLIFFE 41
43
52 REDMARSHALL
51 NORTON
BISHOPTON 42
53 STOCKTON
54
36b BARNARD CASTLE
WINSTON 35
WHORLTON 36a
36 GAINFORD
36a
37
HAUGHTON-LE-SKERNE 39
38 CONISCLIFFE
DARLINGTON
40 SADBERGE 40a
56 LONG NEWTON
ELTON
57
EGGLESCLIFFE 55
58 HURWORTH
59
60 SOCKBURN
MIDDLETON ST. GEORGE
DINSDALE

0 5 Miles
0 8 Km

Boundary of Northern Durham
Boundary of physiographic units
HART Parish
SATLEY Chapelry
Extra-parochial district

N

COUNTY DURHAM
Physiographic Units

Feet / Metres
2000 610
1000 305
400 122
0 0

R. Tyne
R. Team
R. Wear
R. Derwent
R. Skerne
R. Tees

HIGH PENNINES
PENNINE SPURS
TYNE AND WEAR LOWLANDS
EAST DURHAM PLATEAU
SOUTH WEST DURHAM LIMESTONE PLATEAU
TEES LOWLANDS

0 5 Miles
0 8 Km

Boundary of Northern Durham
Boundary of physiographic units

B I B L I O G R A P H Y

B I B L I O G R A P H Y

A. M A N U S C R I P T S O U R C E S

BL British Library, London
- Add Additional manuscripts
- Harl Harleian manuscripts
- Lans Lansdowne manuscripts
- Stowe Stowe manuscripts

BodL Bodleian Library, Oxford
- Rawl Rawlinson manuscripts

BRL Birmingham Reference Library
- BW Boulton and Watt papers

CLRO Corporation of London Record Office, Guildhall
- Reps Repertories of the Court of Aldermen
- RCE Royal Contract Estates records
- JCC Journals of the Common Council

DCL Durham Cathedral (Dean and Chapter) Library
- Hunter Hunter manuscripts
- Sharp Sharp manuscripts

DRO Durham County Record Office
- D/Br Brancepeth papers
- D/Lo Londonderry papers
- D/St Strathmore manuscripts
- D/CG Clayton and Gibson manuscripts
  - LWLB Lady Windsor's Letter Book
- NCB National Coal Board deposits
- Q/S/I Durham Quarter Sessions: Indictment Rolls
- Q/S/O Minutes of Orders
- Q/S/OB Order Books

DUL Durham University Library
- Mickleton Mickleton & Spearman manuscript volumes
- Clavering Clavering manuscripts (uncatalogued)

DUPD Durham University, Dept. of Palaeography & Diplomatic
- (PK) Records deposited in Prior's Kitchen
- HC Halmote Court records
  - ChD Chancery Decree enclosure
- CC Church Commission deposits
- DC Dean and Chapter muniments
- DR Diocesan records

Grey Earl Grey papers
Shafto Shafto papers
Baker-Baker Baker-Baker papers

GPL Gateshead Public Library
Bell Bell manuscripts
Cotesworth Cotesworth manuscripts
(OR) Old reference, as used in old catalogue
Ellison Ellison manuscripts
Oxberry Oxberry manuscripts

HLRO House of Lords Record Office
Enclosure acts and related documents

LPL Lambeth Palace Library, London
Comm Commonwealth records, Parliamentary surveys

NCA Newcastle-upon-Tyne City Archives
Common Council books

NCL Newcastle-upon-Tyne Central Library
L253/Chandler Bishop Chandler's Visitation Return, 1736

NEIM North of England Institute of Mining & Mechanical Engineers, Newcastle-upon-Tyne. Manuscript collections
Bell
Brown
Buddle
Buddle-Atkinson
Easton
Forster
Johnson
Unthank
Watson
(MP) Maps and plans
18/GAPB Grand Allies' Partnership Book 1727-38 (minutes & views)

NRO Northumberland County Record Office
263 Joint Northumberland and Durham Coalowners' Association manuscripts
404 Bell collection of Enclosure Commissioners' papers
725 Armstrong manuscripts
MBE Benwell Manor manuscripts
ZBG Brandling manuscripts
ZCE Carr-Ellison manuscripts
ZCO Cookson (Minsteracres) manuscripts
ZDE Delaval manuscripts
ZGR Griffiths manuscripts
ZRI Ridley (Blagdon) manuscripts
ZAN Society of Antiquaries manuscripts
ZSW Swinburne manuscripts
Q/S/OB Northumberland Quarter Sessions Order Books

NUL Newcastle University Library
SRMisc Strong Room Miscellaneous manuscripts
JCLB James Clavering's Letter Book, 30 May 1712 - 26 Aug 1734

NYRO North Yorkshire Record Office, Northallerton
ZJB Guisborough Grammar School papers

PRO Public Record Office

Chancery Judicial Proceedings
C2 Proceedings, series I (2240 bdls)
C3 Proceedings, series II (485 bdls)
C5-13 Proceedings, Six Clerks series
C21 Depositions by Commission (767 bdls)
C33 Entry Books of Decrees and Orders (1262 vols. in A and B series)
C78 Decree Rolls (2,257 rolls)

Exchequer Augmentation Office
E314 Miscellaneous Books
E317 Parliamentary Surveys
E321 Proceedings of the Court of Augmentation

Exchequer King's (or Queen's) Remembrancer
E123-E126 Entry Books of Decrees and Orders (vols)
E128, E129 Original Decrees and Orders (bdls and vols)
E131
E134 Depositions taken by Commission
E164 Misc. Books, Series I
E178 Special Commissions of Inquiry
E179 Hearth Tax Returns
E190 Port Books

FEC Forfeited Estates Commissioners' manuscripts

Home Office papers
HO/67 Crop Returns

StaCha Court of Star Chamber Proceedings (bundles)

Palatinate of Durham, Court of Chancery
Durham 2 Bills, Answers, etc (in 144 bundles)
Durham 3 Cursitor's Records (rolls, vols., bundles)
Durham 4 Entry Books of Decrees and Orders (in 7 volumes)
Durham 5 Decrees, Orders and Reports (Original bundles)
Durham 8 Miscellanea (Cursitor & Registrar) (83 bundles)

DURH26 Palatinate of Durham, Enclosure Awards

PC2 Privy Council Registers (445 vols)

State Papers, Domestic series
SP12 Elizabeth I, 1558-1603 (in 289 vols)

SP14 James I, 1603-25 (in 216 vols)
SP15 Addenda, Edward VI - James I, 1547-1625
SP16 Charles I, 1625-49 (542 vols & bdls)
SP34 Anne, 1702-14 (38 vols)
SP36 George II, 1727-60

T64 Treasury Papers, Various

SPLum Sandbeck Park, Rotherham.
Lumley colliery and estate papers

B. P R I N T E D S O U R C E S

This list includes all the printed works consulted in the preparation of this study which are referred to in the notes by author's surname, date of publication and page number(s) only, or, in the case of some printed contemporary manuscript sources, by abbreviated title and page number(s) only. Abbreviated titles are repeated below to assist identification. Place of publication for books is London unless stated otherwise.

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RepRCC 1871: Report of Royal Commission on Coal, 1871 (vol. 3: report of committee E).

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The following contractions are used for journals:

AA	Archaeologia Aeliana
AHR	Agricultural History Review
BDCLHS	Bulletin, Durham County Local History Society
DUJ	Durham University Journal
EcHR	Economic History Review
EEH	Explorations in Economic History
JHG	Journal of Historical Geography
LPS	Local Population Studies
NHist	Northern History
PGeo	Professional Geographer
TAAS	Transactions, Architectural and Archaeological Society of Durham and Northumberland
TIBG	Transactions, Institute of British Geographers
TNS	Transactions, Newcomen Society
TNEIME	Transactions, North of England Institute of Mining Engineers

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