

Section 14

Areas, Closes, enclosure ditches and banks, streams

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Cross-references to Digital Supplement in red
Cross-references to Printed Synthesis in brown

Cut Features: principal boundaries, major water technology, and management, quarrying

The excavation of a whole monastic/manorial site and its immediate environs has necessarily included thoroughfares, bank and ditch boundaries, and their enclosed spaces. They are best studied as groups in their own right. Roads and tracks (Route) that facilitated access within the study area, through the fields or within built up zones, are described separately [15].

Closes

[1.02, 14.01]

The seventeen Closes, A-Q, are used in both the printed synthesis and technical descriptions to aid understanding of the overall site. References to the post-excavation 'Areas' of the excavation are included below to facilitate reference to the site archive. These are shown in [14.03].

Close	Cut date	Location
A	4.1	South-western corner of site
B	4.1	Western side of site north of Close A
C	4.1	East of Close B, bounded by CF31, CF45, CF34
D	4.1	Bounded by CF29, Close L, Rt L, and Close G to south
E	5.1	Extension to Close K to east
F	5.1	Extension to Close L, south of Close N
G	4.1	Between Cocklake stream and Closes D, L, F, and I
H	4.1	On the north-eastern edge of the site
I	4.1	Altered c phase 5.1; on the eastern edge of the site
J		West of Close H and north of CF34
K	4.1	West of Close E, predates S25
L	4.1	East of Close D, west of Close F
M		On western edge of site adjacent to the Ouzel
N		West of Close I and north of Closes F and L
O	5.1	Close containing S24, west of Close K
P		Originally the southern part of Close K
Q		North of Close N and west of Close I

14.01 Table of closes A-Q including cut date and location (Baker)

The site has been divided into broad zones and groups of features within them. Each zone has been treated in chronological order so that the development of parts of the site can be discussed. The general description by period is followed by more detailed descriptions of the features they contain. Forty-one major features have been distinguished; banks (13), ditches and watercourses (28), all acting as boundaries. Some form the seventeen Closes A-Q [1.01-1.04, 14.01].

'Cut features' (CF) are divided into two groups sharing a single numbering system: quarries and major boundary divisions, and (usually) smaller features such as drains, latrines, pits, and gullies within the zones defined by the major boundaries. The thirteen major earthworks or banks associated with ditches

and boundaries are prefixed **B** where labelling assists description. The principal boundaries, major ditches, and banks are summarised in [14.02].

Cut Features		
CF26	Phase 1.2	River Ouzel, modern western limit of site
CF27	Period 1	Cocklake stream, southern limit of site
CF33.1	Phase 1.1	Previous tributary route of the river Ouzel
	Pre early phase 4.1	Western boundary, possibly Iron Age; east of Close M
Natural features altered		
CF33.2	Post phase 4.1	River Ouzel, then fishpond
Major ditches		
CF28	Period 2	Roman western boundary, cuts eastern edge of fishpond CF33.1; within Closes J and B, extending into Close A
CF29	Phase 4.1? or Late Period 3	Northern and eastern boundary of southern court (Close A)
CF30	Phase 4.2?	Annexe ditch north of CF29
	Phase 5.3	Recut with S27
CF31	Phase 4.2?	Annexe ditch north of CF29, east Close B
CF32	Phase 4.2	Annexe ditch north of CF29
CF34	Phase 4.1? or Late Period 3	Major east-west boundary north of CF35
CF35.1 ¹	Phase 5.2	Boundary, pre CF35.2 fishpond
CF35.2 ¹	Phase 5.4	Enlargement into fishpond, Close B
CF36	Period 2	Between Closes J & H
CF37	Period 2	Between Closes J & H
CF38	Late phase 5.1	Major boundary ditch perpendicular to CF34; divides Close I from Closes E, F, N, & Q
CF39	?Phase 6.1	Fishpond parallel to CF26, south of CF40; Close J
CF40	Phase 5.2 ²	Ditch, cuts CF36, CF37
CF41	Phase 6.1	Ditch parallel to CF42 in south-western corner of the site cuts CF27; Close A
CF42	Phase 6.1	Ditch parallel to CF41 in south-western corner of the site; cuts CF27; Close A
CF43	Phase 4.1? or Late Period 3	Major boundary ditch perpendicular to and contemporary with CF34; between Closes K & E
CF44	Phase 5.2-5.3	Ditch enclosing Yard 5 to north of S19, illustrated with building
CF45	Phase 4.1?	Perpendicular to CF34, west side of Close K
CF46 ³	Phase 4.1? ⁴	Off CF43, boundary to S25 [21.09]
CF47 ⁵	Phase 4.1	Off CF43, extension of CF48; original boundary to Close K
CF48	Phase 5.1	Between original Closes E & F, extension of CF47
CF49	Phase 5.1	To south-west, west, and north of S24 [21.09]
CF64	Period 2	Ditch running east from the eastern edge of CF28 in T8, to the top of the field, not quite on same alignment as CF34

¹ Editor's note: the distinction of two phases of CF35 shown in this table has not been followed through in the text below. Throughout the publication, CF35 is described as a fishpond, and no change in size is indicated in phase plans 16.01-16.16.

² Editor's note: ?P6.1 in text below.

³ Editor's note: two instances of CF46 were described. The other was a gully leading to a sump, see [21] and [32].

⁴ Editor's note: text below describes this as 'new' in Late phase 5.1.

⁵ Editor's note: two instances of CF47 were described. One was this boundary; the other was a cut feature in barn S38. The latter is mentioned in [7]. See also footnote 10, text on S38 in [22], and on CF47 in [32].

CF70	Period 2	By spatial analysis; hollow-way from Rt L, at an angle matching the Romano-British field layout
Banks		
B1	Phase 4.1–6.1	CF2 Pond upthrow; Close A
B2	Phase 4.1–6.1	Bank to west of CF29 under S10 & S40; Close A
B3	Phase 5.2–6.1	Upthrow to north of CF35; Close B
B4	Phase 4.1–6.1	Upthrow to east of CF29, S37 & S38; Close D
B5	Phase 5.2–6.1	Right-angled bank on south & east sides of Yard 7, administrative core buildings; Close A
B6 ⁶	Phase 5.3–6.1	Right-angled bank from S36 to S35, to south & east of Yard 12; Close D
B7	Phase 4.1–6.1	Bank running parallel to the Cocklake, south & south-west of the southern court; Close A.
B8	Period 2 & 3	Bank to south of CF37; Close H
B9	Period 3	Bank to east of CF36; between Closes H and J
B10	Phase 5.1	Bank west of S7; Close A, not illustrated
B11	Period 2 & 3	Bank at right angles to B9 to the north of CF64, west of CF36
B12	Period 2 & 3	Bank parallel with and to the west of B9 and CF36
B13	Period 2 & 3	Bank on same line as B12, further north along west edge of CF36

14.02 Table of principal boundaries: natural features, major ditches, banks (Baker)

The boundary divisions are the bones of the site; they include natural, altered, and constructed watercourses. Finds and stratigraphic relationships contribute to phasing and the overall development of the site, confirmed by information from spatial analysis which has allowed a more detailed and refined sequence and resolved anomalies identified in earlier post excavation analysis. An explanation of the method and results are to be found in [6].

Ditches and banks were constructed to define zones of activity. The way the site was used, by pedestrians, horses, carts, and cattle is highly relevant to the overall layout, and is described with the Routes descriptions [15]. Some boundaries were examined while excavating the principal occupied areas. Other boundaries, field systems, and hollow-ways lying outside these areas were investigated by linear trenches and small area investigations to determine their nature, sequence, and date. Due to their longevity, the date of construction for many could sometimes only be established by relative stratigraphy. Date of abandonment could usually be ascertained from artefact assemblages, but some may have been left open for long periods.

F G Gurney observed that the river level in the medieval period was constantly two feet nine inches (0.84m) higher than in 1920, for all the ponds except one, which had been deepened, were quite dry, except when the stream flooded to that height. During the 1970s and 80s the quarry lowered the water table still further, and even the deepest ponds only filled during floods when flood water reached as far up the slope as the malting kiln north of S23. There were other indications of floodwater problems: building on natural or artificial mounds, iron panning, drainage gullies, and a dam.

⁶ Editor's note: Another B6 is also referred to in this section as the base of the wall S44.

Natural and prehistoric features

Period 1 CF26, 27, 33.1, 33.2

[1.01, 2.02, 2.06 14.02, 14.03]

The core of the site was confined to the west by the early channel of the River Ouzel CF33.1 and by the Cocklake stream CF27 to the south; together they formed a confluent 'apex' at the bottom of a hill which sloped from north-east to south-west. Over the centuries the course of the river moved slightly to the west but not to the south; the stream was regularly scoured out. Both stream and river caused, or contributed to, intermittent flooding, against which various measures were taken through the centuries.

The early channel of the Ouzel, CF33.1, had largely silted up, with a gentle slope still extant to the east at the edge of excavation in Trenches 8, 13, and 23. It would have still held water further west. The (mostly) dry slope to the east was pockmarked with small features associated with Bronze Age and Neolithic lithics.

The early line of the river was seen on the western edge of Trenches 8, 23, and 13. The fishpond CF33.2, forming the western edge of the built area, was a recut in phase 5.1 of the silted-up natural watercourse CF33.1. Two part-sections showed a feature at least 30m wide with a wide flat bottom at a depth of about 2m. The eastern edge sloped up at a gentle angle of between 10° and 20° from the horizontal. The chief fill was grey silty clay containing freshwater mussels; in Trench 23 alluviation was seen over this and spreading over the bank, and was cut by a number of features also containing flint.

In Trench 8 the old course of the river showed as a broad silted-up feature, with an irregular profile (CF33.1). It was aligned north-south and cut through natural clays and sands. A series of six main fills indicated gradual silting up. The upper fill and one of the lower fills produced some 1st century Iron Age pottery indicating the probable date of final fill of this section of the course. In Area 10 Trench 23 a series of silty deposits were seen as fills defined against firmer deposits of natural sands and clays on the edge of the former river course, pockmarked with small cut features. Flint tools and waste material dating to the Neolithic and Bronze Age were found on the east bank.

Roman

Areas 4, 10, 11; [2.01, 2.02, 2.06]

Period 2 CF28

[1.01, 2.02]

The ditch CF28 was seen mainly in Closes J and B, running north to south, cutting the silted-up eastern edge of CF33.1, along the edge of Trenches 8, 23, and 13, but not Trench 30. In Trench 8 the feature was observed for over 20m, cutting into the edge of the infilled river, running parallel with and to the east of the modern course of CF26. Here it was 1.40m wide and up to 0.75m deep, with steep sides. The bottom was uneven, as if it had been recut, but this was not detectable in the fills. A mass of dumped charcoal, pot, and scorched pebbles was noted close to the bottom. The top of the ditch was scored by Period 3 ploughing. In all, it was traced for about 110m, starting 20m north of Trench 8 (8A) and heading south. For much of its length the ditch coincided with or was near to the edge of excavation and limit of the threatened area. Often in the

1980s land was not available due to flooding which suggests the purpose of the ditch was to absorb overflow [14.04].

Three sections were cut in Trench 13, in which CF28 was seen as flat-bottomed with near-vertical sides. Greyish-brown clean clay located on the edge and base of the ditch in one section was probably the remains of lining. The primary fill was yellow-brown sandy clay. The ditch was recut and later infilled. CF28 continued south into Close A, and before its line was lost was cut by phase 4.1 ditch CF29. It is possible that the line was still visible when S1, S2, and S3, and the fence line belonging to S3, were constructed. CF28 and CF64 were cut by the western end of the Saxo-Norman boundary CF34. It is possible that CF28 ran through the whole of Closes J, B, and A, an indication of a relict planned landscape covering the whole field.

A Romano-British planned landscape reused in the Anglo-Saxon period

Area 4, Trenches 8B, 8C, 8D [1.03]

Periods 2 and 3 CF36, CF37, CF70, B7, B8, B9

[2.02, 2.06, 6.07]

There is the strong probability that these features were the continuation in the Anglo-Saxon period of an earlier, separate system beyond the newly laid out settlement (see Period 2 above). Ditches CF36, CF37, and CF64 together with Banks 7, 8, and 11 were laid out to an alignment which was skewed at an angle of 5° when compared to the later Saxo-Norman grid. Ditches CF37 and CF36 with Banks 9 and 12 lay to the north of the phase 4.1 CF34 while a major Period 2 ditch CF64 and Bank 11 ran east-north-east/west-south-west up the site for at least 200m, at right angles to CF36 and CF37, going up to and beyond the limit of the field, where they continued as a hedge line. CF64 enclosed a large flat area, Close H, with no distinguishing marks except ploughed out medieval ridge and furrow; it was probably ploughland. Beneath Bank 9, to the east of ditch CF36, were several post pits along the same alignment as the ploughing. These probably formed a Period 3 and earlier boundary.

Excavation showed that CF36 was cut by the later ditches CF34 and CF40 which led to the fishponds⁷. Ditch CF36 was a major feature at least 7m across and cut to 2.70m below modern ground surface. Its base was 3.60m below the height of the bank on the west side created by its upthrow. It marked the edge of the zone of ridge and furrow to the east and a long plateau of probable water meadow between it and the fishponds aligned north-south. Trench 8e examined the western end of CF64 which started at CF28 in the south-western corner of Trench 8 and continued eastwards up to and beyond the modern field boundary; this leaves open the strong probability that CF64 was contemporary with Period 2 CF28 but the evidence was mostly removed by CF34. The upper surface in Trench 8 was scored by north-south plough marks, and later by east-west plough furrows. A number of parallel plough marks ran over S1, the Roman ditch CF28, and CF33.1, both now silted up. There was more than a single episode of cultivation and it is presumed that the river edge was further back and flooding did not prevent ploughing for at least two to three seasons.

The western part of the site showed a complex of interlocking watercourses of different periods, mainly medieval. These were mostly outside the area of mineral extraction and were not investigated. However, the area at risk was

⁷ Editor's note: this is the opposite of what is stated below, see footnote 12. The dating and stratigraphic relationship between CF34 and CF36 is significant in relation to the interpretation of this area of the site.

sampled and a salvage operation carried out that showed a grid arrangement of boundary trenches CF68, 69, 65, 36, and 37 associated with two sunken-floored buildings and a fence line CF59⁸.

Further east was an undated ditch CF70 that was on the earlier alignment and headed for Trenches 1–5 where it would have joined Period 3 structures. This may be an indication that the pre-Saxo Norman planning went across the whole field.

The designed Saxo-Norman landscape

Precinct boundary

Areas 3, 4, 5 [1.01, 2.06, 11.04, 6.07=33.02]
Trenches 8, 8A–C, 10, 11, 12, 20 [1.03]

See [3] for a discussion on Scandinavian activity and the Appendix to [11] for the discussion on a middle Saxon period

First cut in phase 4.1? CF27, 29, 31, 34, 43, 45, 47

[3.10=16.05]

A large enclosure was formed by two watercourses CF26 and CF27 and two ditches CF34 and CF43 running perpendicular to each other. CF43 originally ran north from the Cocklake stream CF27 for 220m; CF34 ran west for 140m before it cut CF28 (Period 2 ditch) and CF33.1, the edge of the course of the River Ouzel in prehistoric times.

Set within this large enclosure was a smaller and exactly parallel right-angled ditch system, CF29 [3.13, 14.05], at 60m from CF34 and 70m from CF43. There is inferential evidence that ditch CF29 was used as the main survey line for the expanded planned layout [6]. An intermediary ditch CF31 ran south from CF34 to form an enclosure with CF33, CF34, and CF29 but was not physically joined with CF29 (see CF31 below). This divided S14 from an agricultural area later occupied in phase 5.1 by S24 and S25. These buildings formed a separate subset of the settlement between the CF29 complex and the wider enclosure formed by CF34 and CF43. The northern arm of boundary ditch CF29 drained into the east side of CF33, cutting through the Period 2 ditch CF28.

Subsequent dating of mixed quartz ware A16, and the quantities of this fabric in association, raised the possibility of the enclosure CF29 and ditch CF34 being middle Saxon. See [11].

Later, a reorganisation of the area of the main buildings (S7 and S13) saw a new orientation based on the phase 4.2 ditch lines CF30 and CF32.

Saxo-Norman northern annexes

Areas 10, 11

Phase 4.1 CF29, 31, 33, 34

[3.10=16.05, 14.02, 14.03]

⁸ Editor's note: there are two CF59s. The fence line is referred to in [2], but this number is also used for a deep sand-filled pit, see footnote 9 below.

A north-south length of ditch CF31 was not attached to CF29, but appeared to be associated as part of the controlled pattern of land divisions relating to S14. Only a small part of the ditch was excavated, but its length was traced during the watching brief. It was 3m to 4m wide and 2.50m deep. The ditch was designed with CF34 and CF29 to enclose S14, with CF33 defining the western edge of Yard 1. A track (Route AA) crossed CF34 running parallel to CF31 for about 30m. CF33 ran close to the western end of S14. The enclosure had a wide entrance in its south-east corner, allowing access to the area later occupied by the phase 5.1 court of buildings to the east (S24 and S25).

Major boundaries

Areas 3, 4

Phase 4.1 CF34, 43

[3.10=16.05, 14.02, 14.03]

CF34 ran along the southern limit of Trench 8 for 45m before continuing east for another 95m as a pronounced hollow. This formed part of an early northern perimeter around the principal buildings and agricultural complex to the south, separating Closes J and H from Closes B, C, and K. It was at least 6.50m wide and varied in form, being U-shaped and 1.35m-1.85m deep in the east where it cut unstable sandy deposits, to V-shaped and 2.20m-2.30m deep at the west where it was cutting the stiffer clay silts of the filled river bed CF33.1. A number of stakes had been pushed into both sides of the recut ditch at an angle. Sufficient were seen to suggest rows on either side holding a timber or wattle revetment which had rotted *in situ*. There was a second recut. The ditch cut a deep sand-filled pit CF59⁹ with two articulated animal skeletons within it; CF34 ran for 140m east before it turned south at right angles as CF43.

Ditch CF43 was contiguous with CF34, though perpendicular to it, and formed the eastern boundary around the principal buildings. At 220m long, it was the original southward and contemporary right-angled turn from the east end of CF34, and probably the original major eastern boundary going down to the Cocklake stream. Uplift from cleaning out the stream confused the junction between the two.

Inner enclosure ditch system; Areas 1, 8, 9, 10, 11

Overview, phases 4.1-4.3 CF27, 29, 30, 31, 32, 33

[1.01, 3.10=16.05, 3.18=16.06, 3.22=16.07]

The south-western corner of the site was bounded by watercourses CF33 and CF27, originally natural, though later channelled and maintained. A quadrangular enclosure was formed by cutting a major water-bearing ditch CF29 which turned at right angles across the site. The two lengths of CF29 ran parallel with CF34 and CF43 which were contemporary. As described above, ditch CF31 was aligned north-south, extending south from CF34 but not as far as CF29. This was superseded by ditches CF30 and CF32 which sprang from the east-west stretch of CF29 to form enclosures to the north. The east-west length was deliberately backfilled to allow redesigning of the core area.

⁹ Editor's note: two different features were identified as CF59. See description of fence line and footnote 8 above.

Phase 4.1 CF29, 31

[1.01, 3.10=16.05, 14.05, 14.06, 14.07]

The site, already defined to the west and south by natural watercourses, was enclosed on the east and north by a continuous major ditch CF29. This ran north from the Cocklake Stream CF27 for 125m, and up the eastern side of the site before turning west for upwards of 70m to demarcate the northern boundary. It cut the line of the infilled Roman ditch CF28, joining CF33. During the excavation a series of sections were cut across its north-south arm and a series of larger open areas and sections across its east-west arm. It showed signs of clay lining, collapse, relining, and recutting up to the early part of phase 5.1. There was one identifiable crossing point at S15, a timber bridge spanning the west end of the east-west arm.

The land to the east of CF29 (Bank 4) was generally about 2m higher than within the enclosure, and apparently a natural sandbank formation rather than upthrow from its excavation. The bank to the west of the north-south stretch, Bank 2 also proved to be natural. Combined, they made an impressive ditch which was a major survival into the 1980s. There was evidence of a flattened bank running inside the east-west length.

With the site naturally rising to the north-east, the construction of a major ditch intended to hold a permanent level of water had to accommodate changes in level. Sections cut across the east-west stretch showed a flat, level bottom, capable of holding a substantial quantity of water. Deeper sections towards the east end of the east-west stretch showed a steeper profile than the west, which were much shallower, and flat-bottomed with either a rounded profile or a vertical side. The east-west arm had an irregular shape, varying in width from 2m to 4m, but averaging about 2.50m. At its deepest, eastern part it was 2.80m deep, with its shallowest, western, part only 0.50m deep. The top surface of the natural Bank 2 contained the remains of a Mesolithic flint working area similar to the Bronze Age and Neolithic area found to the north in the northern part of Trench 30.

Seventeen sections were cut across the east-west line of the ditch to investigate why its nature varied, and to ascertain date and function [14.05]. Seventy-three fills were recorded, each section showing a broadly similar sequence. The ditch was clay lined; the original lining, comprising clean green clay some 0.15-0.20m thick, was preserved in only a few places. At some subsequent stage, probably soon after original excavation, the sides slipped into the ditch, depositing sand in the base. These sand slippages were sealed by a series of silty boulder clays and sandy clays that appeared to have been accidentally deposited rather than deliberately and rapidly backfilled. Among these clays were several lenses of sand which represented slippage from the edge of the feature; the sandy lenses and general sandy nature of the fills was characteristic of the early deposits.

No such variation in profile was discerned in the three sections taken across the north-south arm of the ditch [14.06], though these were larger excavations. Here the ditch was seven or more metres wide, narrowing when it neared the turn west. It was more uniform, the ditch being 2m deep with a further 1 to 2m height added to its east side where the land rose (Bank 4), matched in the west where the height of Bank 2 added to its depth. There were indications of at least two recuts.

Ditch CF31 is described above.

Phase 4.2 CF29, 30, 32

[3.18=16.06]

After a period of natural infilling CF29 stabilised, or at least was maintained without obvious recutting. In several places a horizontal deposit of clay may indicate that the ditch bottom was relined rather than cleared out to the original base. Eventually a recut was necessary. The new profile was not generally as deep or as broad. As with the initial fills of the primary feature, this recut silted up, accumulating sandy deposits from the edge and redeposited silty boulder clays from natural processes.

At least one timber bridge S15 afforded access to the northern set of enclosures from the southern courtyard.

CF31 was backfilled and in its place two broad linear ditches CF30 and CF32 were attached to the main boundary ditch CF29. Together they formed two equal-sized enclosures containing S12 and S14, Yards 1 and 2. The junction between the main boundary ditch and its northern offshoot CF30 was obscured and partly destroyed by the stone-lined drain connected with Phase 5.3 S27, which reused the same line. Only short lengths of the ditches were excavated, but more were exposed during later stripping.

Phase 4.3 CF29

[3.22=16.07]

A second recut of CF29, much narrower and shallower, represented the final stage of the east-west section. The general mixed character of the fills, boulder clays with loams and coarser inclusions, indicate that this late rejuvenation was deliberately filled in the late 12th century.

Phase 5.1 CF1, 29, 30

[4.01=16.08]

A complex of gullies CF1 was cut to the south of S15, draining into the ditch CF29.

CF29 remained open. Bank 10 was constructed to the west of S7. Only 0.40m wide and now 0.25-0.30m high, it was placed to protect the building since iron panning and gravel had accumulated on its western side indicating episodes of flooding.

Phase 5.1-5.2 CF29, 30, 44

[4.01=16.08, 4.10=16.09, 4.14=16.10]

Late phase 5.1 saw a partial, deliberate backfilling and consolidation of the ditch CF29, a key feature of general remodelling of the main buildings area, allowing construction of the north-west corner of S17. By phase 5.2 the east-west part of CF29 was largely backfilled, though the eastern part north of S16 was probably a visible drainage problem. Only CF30 of the two annexe ditches remained. Access across the north-south stretch of CF29 from the fields was a stone and timber bridge Route Z. CF29 remained a significant feature in the landscape until modern times.

The north-south length of CF29 remained open and functioning, though its northernmost section was sealed by the enclosure Bank 5 to the east of S16. With the construction of S19 came the formation of a courtyard Yard 5 to its north. This comprised a right-angled ditch CF44, starting from the centre of the building's north wall. It drained into CF30. There were traces of a bridge S91 across CF30 giving access into the enclosure from S23 in Yard 1 on the western edge of the complex.

At this time the southern enclosure Yard 3 was empty with the exception of S48, and buildings were concentrated in the north, in Yards 1 and 2. The northern area was divided by CF30, into which the ditch to the north of S19 drained. The whole of the southern and eastern sides were enclosed by a substantial (0.50 to 1m high) right-angled earthwork Bank 5. On this bank's south run was a double row of post pits forming an enclosed track. The bank turned north to protect the eastern side of the settlement, and to the south funnelled in to form an entrance Route H to S17.

Phase 5.3 CF29, CF44

[4.24=16.11, 14.03, 14.07]

CF44, the ditch belonging to S19, was recut. The north-south arm of CF29 was bridged by a dam east of S40 to allow the construction of Route L to the eastern fields. To the south of Route L CF29 was dug out and widened to form a pond at about this time. A further bridge was constructed at the northern head of Bank 2 to allow access into S38 (Route R). The northern end of CF29 terminated in S34 and the northern line was continued as wall S77; here, the water draining from the north was conducted through a well-made stone-lined and capped drain forming the east wall of S34/77.

Phase 5.4 CF29, CF44

[4.49=16.12, 20.20]

S55 was built upon Route L, the dammed portion of the north-south stretch of CF29, and the southernmost part of CF29 was widened into a pond.

The S19 boundary ditch CF44 was backfilled and the ditch replaced by a stone wall set in a construction trench.

Phase 5.5 CF29

[4.75=16.13]

Though the east-west line of CF29 had virtually disappeared, having been deliberately backfilled, it caused continuing drainage problems. The northern part of S54 had an unusually deep foundation within the ditch itself, and the area north of S16, through which the ditch ran, was constantly patched and resurfaced. The north-south length of CF29 remained visible as a considerable constraint to development with Bank 4 along its eastern side, later occupied by a terrace of agricultural buildings (S36, S37, S38). Access to the main southern courtyard was by means of several bridges, Routes R, L, and Z.

Phase 5.6 CF29

[5.01=16.14]

Further north, the former line of CF29 was crossed by S62.

Phase 6.1 CF29, 33.2

[5.03=16.15]

The bridge, S53, across CF33.2 was dismantled and replaced by a ford or dam created by dumps of loams and clay mixed with tile and carstone, probably derived from dismantling buildings. This blocked the watercourse completely. A sealing layer comprised gravel, carstone cobble, and roof tile covered bank and wall, and spread mainly to the south over the site of the enclosure.

The north-south line of ditch CF29 continued to silt up. Filling was aided by debris from demolishing the line of buildings along its east bank.

Late 12th-century remodelling of the outlying area to the east

Expansion, Areas 3, 7

?Phase 5.1 CF34, 38 & Route S

[4.01=16.08, 4.10=16.09]

The outer enclosure was expanded further by cutting CF38 40m further east, and parallel to CF43. Route S, which was probably contemporary, was cut another 60m further east; the hedgeline beside Route S may also have been contemporary.

To enable the expansion, the east end of CF34 was recut and extended by 40m, then it turned at right angles as CF38, running parallel to the original boundary line CF43. CF38 lay west of ridge and furrow and east of S51. CF38 was at least 4.50m wide and 1.50m deep. There was no stratigraphic relationship between it and S51 since they were separated by a berm. Soil conditions were particularly difficult in this eastern part of the site, as ditch fills were similar to the surrounding boulder clay subsoil, and the area had been disturbed by second world war ploughing (F Kinsey, pers comm). Little dating evidence was recovered, all from upper fills. CF38 had a contemporary junction CF48 that turned perpendicular to the west, heading for phase 4.1 CF43, and forming Close Q, south of Close E; CF48 abutted CF47¹⁰ that formed the southern edge of Close P, the southern part of Close K.

Late phase 5.1

[4.10=16.09]

CF47 seems to have been abandoned together with CF45, the ditch separating Closes C and K. A new enclosure, Close O, was created between Closes C and K, with a new ditch CF46¹¹ that ran perpendicular from CF43, heading for the base of the earlier ditch CF31 (now filled in) and parallel to CF34. Another, narrower ditch was cut four poles (20.12m) south of CF34 to join a western boundary to S25 [21.09].

Phases 5.2-5.6 CF34

[4.14=16.10, 4.24=16.11, 4.49=16.12, 4.75=16.13, 5.01=16.14]

Two recuts were restricted to the western sector of CF34. Later deposits in the west part contained quantities of carstone, clunch, tile, and mortar, indicating building or demolition activity to the south, immediately adjacent to the core buildings. CF34 was cut by a new bank and ditch sequence, CF36, Bank 8, and Bank 9, which ran nearly perpendicular to it¹².

New western boundary

Areas 4, 10, 11

Phase 5.2 CF33.2

[4.14=16.10, 14.04]

A new course, CF33.2, to the west of the main buildings was cut through the silts of CF33 to form a linear fishpond linked with the Ouzel CF26 and the

¹⁰ Editor's note: there were two CF47s. One is this boundary; the other is a cut feature in barn S38. The latter is mentioned in [7]. See also footnote 5.

¹¹ Editor's note: CF46 is described as phase 4.1 in table 14.02. There were two CF46s, that described here, and another, a gully leading to a sump, see [21] and [32].

¹² Editor's note: this is the opposite of what is described above, see footnote 7. CF36 is described as Period 3 above, contemporary with CF37 and CF64, or Period 2 in 14.02. The dating and stratigraphic relationship between CF34 and CF36 is significant in relation to the interpretation of this area of the site.

Cocklake Stream **CF27**. This was part of a complex and major remodelling of the water system, including the creation of a parallel pond and tank further west, and a (then probably straight) ditch **CF35** which formed a new boundary to the northern courtyard. **CF35** was a straight-cut ditch running parallel to **CF34**, with **Bank 3** on its north side;¹³ it terminated at Route AA to the east.

CF33.2, the new channel of **CF33.1**, was largely outside the threatened area, and a complete profile was not achieved. The most intricate works appeared to be associated with the area of main buildings rather than further north where there was apparently only cleaning out. On the western limits of Trenches 13 and 23 the slope of the sides was much more acute, with a near vertical face. There was evidence for clay lining against the eastern edge: stakes were driven into the sides at intermittent intervals. Sufficient evidence survived later scouring to suggest that the sides were revetted with timber and held in place by posts driven into the base and sides of the channel. Posts for a timber bridge **S26** were recorded at the south end of the main buildings area, associated with Routes A and C [21.11].

Phase 5.3

[4.24=16.11]

S23 was built partly into the edge of the watercourse **CF33.2** with its west wall constructed into the east side, and the base of the footing below water level. The pond began to silt up. To the north-east, ditch **CF45** was reused as Route T/W.

Phase 5.4

[4.49=16.12]

Steps led down to the edge of the water in **CF35** from an annexe attached to the north of **S23**. **S26** was replaced by a stone bridge over **CF33.2**, **S53**. This comprised an H-shaped carstone-rubble footing constructed on the partially built-up and consolidated east bank. There was probably a mirror image foundation on the other bank, and at least one pier, to take a wood platform.

Phase 5.2–5.6 **CF33.2**

[4.14=16.10, 4.24=16.11, 4.49=16.12, 4.75=16.13, 5.01=16.14]

Considerable deposits of black ash were seen within **CF33.2** and its bank, derived from hearth debris associated with **S23**.

Phase 6.1

[5.03=16.15]

The ditch **CF33.2** received quantities of demolition material from **S23**, **S28**, and **S53**. On the site of **S53**, the width of the ditch was backfilled with more debris to form a dam that provided access from the west. Contributing to the dam was the contents of a quarry to the south of **S53**; this removed the northern end of **S43**, some of which must still have been viable since a path was constructed on the floor of the quarry leading to **SS43**.

¹³ Editor's note: as described in 14.02 above, there were two phases of **CF35**, the first a boundary, and the second a fishpond.

Flood barrier S44

Phase 5.3 S44

[4.24=16.11, 23.07, 23.08]

S44 was constructed diagonally across the western part of the southern courtyard, Close A. It was designed to be on the same alignment as Bank 1 and together they would have held back flooding from the Ouzel and Cocklake. The structure was similar in construction to a contemporary earthwork Bank 6 enclosing the farm buildings north of S36. Several cut features ascribed to Periods 3, 4, and 5, possibly acting as drainage gullies, were overlain by substantial deposits of loamy silts. These were cut into and sealed by a substantial structure, S44, which comprised a bank of gravel faced on its north part by puddled clay, and with timber strengthening in the form of pointed stakes driven into the underlying ground surface. This was surmounted by a mortar-free carstone wall, of which two courses remained. The wall in turn was cut by a number of posts carrying a timber superstructure, though it was not possible to say whether this was original or some form of subsequent strengthening. Demolition debris included clay roof tile, indicating the possibility of a tile capping. The wall and bank curved to form an arc at least 20m long, 1.60m wide, with more than 0.80m height surviving. The height of the timber superstructure could have added at least another metre. This may have conjoined with substantial Bank 1 to form a barrier between the Cocklake to the south and the main courtyard.

Southern bank and ditch systems

Areas 2, 8, 10

Phase 4.1 CF27, 33

[3.10=16.05, 14.03]

Bank 7 ran around the western and southern parts of the southern enclosure, inside CF27 Cocklake and CF33, constructed from clearing out the existing water channels and dumping material on the inside of the ditch. The relationship with the southern end of CF29 was not established; it is presumed to have flowed downhill into CF27.

Phase 5.2 B7

[4.14=16.10]

Bank 7 was strengthened and a carstone wall was cut into its crest, similar to S44. It was partially sealed by phase 5.3 S43 and phase 5.4 S41. The bank and wall appeared to run all around the southern Yard 3, possibly from S26 to the point where CF29 fed into the Cocklake.

Phase 6.1? CF41, 42

[5.03=16.15, 14.03]

CF41 and CF42 were a pair of parallel gullies about 40m long which drained into the western portion of the Cocklake. Their southern extremities were sealed by later material from cleaning out the stream, which formed an external bank.

CF42 was excavated as part of the work in Trench 30; CF41 was surveyed as a negative earthwork feature.

North-eastern enclosure

Area 6

Phase 5.3 B6

[4.24=16.11]

Another right-angled bank (**Bank 6**) was constructed between the north-eastern corner of **S36** and the south-eastern part of **S35**, making an enclosed Yard 12. The bank was substantial: 4.50m wide, it survived to a height of 1.20m and ran for 30m before turning north for a further 20m, enclosing the land south of **S35** and **S52**. The bank comprised layers of clay loam mixed with gravel, cobbles, and carstone lumps. There was sufficient carstone blocks and debris on the upper surface to indicate that it had held a stone wall, slightly inset into the crest of the bank. Its construction was similar to that of **S44**.

North-western enclosures

Area 4

Phase ?6.1 CF40¹⁴

[1.01]

CF40 was an irregular channel running through **CF36**, **CF37**, and **Banks 8** and **9** which it cut; it ran downslope to the west where it kinked to run into the north-western part of the main fishponds. Both features cut an earlier quarry pit filled with natural sand. Where **CF40** cut **CF36** the remnant clay base of the earlier ditch was corrugated as if **CF36** had been dug with a mattock.

Northern fishpond

Areas 10, 11

Phase 5.2 CF35

[4.14=16.10]

CF35 was observed during top stripping for mineral extraction and the sequence of later fills appeared similar to that in **CF33.2**. **CF35** was a pond running east from **CF33.2**, constructed to the north of the main buildings complex at a point south of **CF34**. It measured 26m by 11m at its widest point, and had **Bank 3** on its northern edge; this respected the early track Route AA that crossed its eastern terminal. It would have fed ditch **CF30** and, thereby, **CF44** to the north of **S19**; it drained into the backfilled northern arm of **CF29**.

Phase 5.3 CF30

[4.24=16.11]

The stone-lined drain **CF30** for **S27** had been robbed at its northern point but was heading directly for the northern pond. The levels recorded on the drain floor both within and outside the building gave a fall of between 0.04m and 0.06m only, draining to the south rather than flowing into the pond.

Phase 5.6 CF21

[5.01=16.14]

Part of the southern edge of the pond **CF35** was quarried away by **CF21**. This activity truncated **CF30** which had been to the north of **S27**. The fishpond **CF35**

¹⁴ Editor's note: in table 14.02 CF40 is described as being cut in phase 5.2.

appeared to have been modified on its northern limit also, forming a bank on the southern edge of Trench 8.

Period 6.1-6.2 CF21

[5.03=16.15, 5.17=16.16, 25.02]

Massive deposits of carstone and clunch rubble and tile derived from the destruction of S23 and S61 were tipped into the pond/quarry CF35/CF21 from the south-eastern edge and into CF33.2 from the east. These were followed by the final fills of rubble and topsoil.