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A406 North Circular Road

Improvement between Silver Street & Hall Lane

London Boroughs of Enfield & Waltham Forest

Archaeological Watching Brief Report

OXFORD ARCHAEOLOGICAL UNIT

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A406 NORTH CIRCULAR ROAD
LONDON BOROUGH OF ENFIELD AND WALTHAM FOREST
TQ 334925 TO TQ365917

MOL code: NCC94 from 334/923 to TQ 360/922

Pasmore Edwards code: LDPEM/ACCF/CF-LV 263 (TQ 362/922)
LDPEM/ACCF/CF-CT 264 (TQ 363/921)
LDPEM/ACCF/CF-WE 265 (TQ 364/922)
LDPEM/ACCF/CF-AQ 266 (TQ 362/921 to 363/917)
LDPEM/ACCF/CF-GP 267 (TQ 363/917)
LDPEM/ACCF/CF-HT 268 (TQ 359/921 to TQ 362/917)
LDPEM/ACCF/CF-FL 269 (TQ 364/917)
LDPEM/ACCF/CF-HA 270 (TQ 360/923)
LDPEM/ACCF/CF-LL 271 (TQ 361/922)

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ABSTRACT

The ground works associated with the construction of a new road and widening the existing A406 North Circular Road (figure 1) were monitored in a watching brief. The work was divided into three contract areas.

Contract A Fore Street Underpass Section figure 2

A new dual carriageway underpass and alterations to junctions was carried out. Observations of the advance works and the archaeological trenches have failed to detect archaeological deposits. It is likely that there are none in the area of the road works.

Contract B Angel Road Viaduct Section figure 3

The existing carriageway was widened and a dual carriageway flyover and a new culvert for Pymmes Brook was built. Observations of Contract B have failed to locate archaeological deposits other than one slight feature next to Tesco's (TQ353/919). Pymmes Brook may have been sighted at Albany Road (the course is now filled in with clay).

Contract C Lea Valley Viaduct Section figure 4

A new interchange and dual carriageway flyover with a second roundabout will join the new A406 North Circular Road to the existing local road network. The excavation of the (pre 1767) braided course of the River Lea was carried out but a clear picture of the hydrology of the river was not obtained.

The W side of the Lea has been truncated by building works. No course of Pymmes Brook was clearly seen.

All the works for the roadbeds and foundations for the elevated roadway have been monitored. The absence of any archaeological remains other than a small amount of prehistoric and Roman finds probably indicates the non-domestic use of this area in the past. There were no traces of either the Crannog or the medieval manorial centre supposed to be in the area.

On the E of the Lea valley is a low terrace of gravel which appears to have been too low-lying and wet to have been used in the past. There were no indications of ploughing and only one high spot on the gravel terrace produced artefacts.

INTRODUCTION

This report has been commissioned by Sir Frederick Snow and Partners Consulting Engineers, on behalf of The Highways Agency, in respect of a 3.3 km improvement scheme for the A406 North Circular Road in the London Boroughs of Enfield and Waltham Forest. The watching brief carried out in accordance with an English Heritage brief related to an Archaeological Impact Assessment produced by the Museum of London (Miller and Seeley undated report). Originally English Heritage called for a series of evaluation trenches to locate and define any archaeological activity which it was thought would be present. However, the Highways Agency did not allow work on the scale indicated in the impact assessment and so only a watching brief was carried out.

ARCHAEOLOGICAL BACKGROUND

The principal reason for archaeological work was to investigate the survival of a range of sites of all dates across the terraces and valley floor of the River Lea. The background is dealt with in detail in the Impact Assessment (Miller and Seeley) and is only summarised here.

Arctic beds of peat which contain early prehistoric material have been excavated in the area to the N of the road scheme (Bedwin 1990 and Jacobi undated). Several Palaeolithic finds have been found in the vicinity of the scheme; hand-axes, animal bones and a waterchannel as well as human remains. There are no Mesolithic finds recorded around the roadline. Neolithic and Bronze Age finds include struck flints, bronze axes, shields and swords. Iron Age finds include coins, pottery and a sword and scabbard. A dug-out canoe has also been found. An Iron Age settlement was excavated at Chingford Hall in 1988. 'Crannog' or pile dwelling sites were identified in the area during the late 19th century.

Ermine Street, the Roman road from London to Lincoln, is aligned through Silver Street British Rail Station. Pottery, coins and lamps have been found in the area.

There is little direct evidence of Saxon activity in the area. Lower Edmonton is thought to be the location of Saxon Edmonton. A number of Saxon finds including swords and spearheads were found in Lockwood reservoir. The River Lea was the boundary established by King Alfred the Great between England and the Viking Danelaw and remained the borough boundary until the 16th century; the present borough boundary roughly follows this old river course.

There are several moated manors around the site; Chingford St Paul's, Chingford Earl's Manor (thought to be 400 yards S of Chingford St Paul's) and Willoughby Manor. Folly Lane at the E of the route is first mentioned in 1274 leading from Chingford Hall to Higham. Fore Street is a medieval route, and a mill lay further W along Pymmes Brook.

Pymmes Manor was a post-medieval building; the home of Lord Burghley Elizabeth I's minister. Cook's Ferry, a post-medieval site, is crossed by the A406 North Circular Road.

Extensive work has been carried out since the 16th century culminating in the late 19th-century diversion of the River Lea into the River Lea Aqueduct feeding

Banbury Reservoir, the River Lea Navigation and River Lea Diversion. Chingford Mill is now Greaves Pumping Station.

ARCHAEOLOGICAL METHODOLOGY

In total 34 visits were made to monitor the groundworks. It had been proposed that two archaeologists would closely monitor each mechanical excavator working on the road scheme. After a series of initial visits to assess the practicalities of the monitoring programme eight archaeologists were assigned to the site. However, it rapidly became obvious that there was limited archaeological potential and subsequently with the approval of English Heritage a new strategy was implemented; the excavated areas of groundworks were monitored closely but in order to use the limited resources allocated to the project by the Highways Agency effectively the machinery was not monitored 100% of the time.

Oxford Archaeological Unit standard recording was used with the proviso that only one section was drawn as the faces of the other excavations were either inaccessible or impractical to draw. Locations of observed excavations were noted with reference to large scale plans of the road improvements. Engineering details of the improvements were consulted with reference to Contract C Lea Valley Viaduct Section but were not included in the site archive.

DESCRIPTION OF RESULTS

Since there were no archaeological deposits recorded all the details of contract area, grid reference, compulsory purchase order numbers (CPO nos), location with rationale for archaeological work and details of such non-archaeological deposits as were recorded are contained in Table 2. (See also figures 2, 3 and 4, for locations of figures 5-18)

(also see pottery, environmental and flint reports in appendices)

DEPOSIT SURVEY

This section of the A406 North Circular Road lies on the London Clay with areas of later (in chronological order) Flood Plain Gravel, Brickearth and Alluvium. The Gravels relate to the courses of the Pymmes and Salmon's Brooks which run E into the River Lea and the River Lea itself. Much of Contracts A and B follow the course of Pymmes Brook and hence over areas of Clay and overlying gravels. Most of Contract C lies on areas of alluvium from the Rivers Lea and Ching.

At the W of the scheme, to the W of Pymmes' Park, the height of the road is 16 m OD. The ground dips slightly at Silver Street Station to 13 m OD then rises slightly and dips to 10 m OD at the base of the Lea valley. At the E of the route the ground rises on to the terrace at the E of the La and Ching.

Contract C Lea Valley Viaduct Section

All the works for the roadbeds and foundations for the elevated roadway have been monitored. The absence of any archaeological remains other than a small

amount of Roman and prehistoric finds probably indicates the non-domestic use of this area in the past. There was no evidence for an old ploughsoil so perhaps the area was too lowlying and wet for agriculture. There were no traces of either the Crannog or the medieval manorial centre supposed to be in the area. Otherwise the works associated with the diversions of the River Lea in the late 19th century seem to have drastically affected the river silts in the immediate area of the road.

Contract B Angel Road Viaduct Section

Observations of Contract B have failed to locate archaeological deposits other than one slight recent feature next to Tesco's. The previous course of Pymmes Brook was not seen apart from, perhaps, at the end of Albany Road.

Contract A Fore Street Underpass Section

Observations of the advance works and the archaeological trenches have failed to detect archaeological deposits. It is likely that there are none in the area of the road works.

CONCLUSIONS

Within the road corridor any significant archaeological remains have been badly affected either by the construction of the road and attendant works, such as the diverting of Pymmes' Brook, or of neighbouring housing or of the re-routeing of the River Lea. The tunnel under Fore Street and the Silver Street British Rail Station is unlikely to reveal archaeological remains as it is not a 'cut and cover'.

APPENDICES

Bibliography

Bedwin O (collator) 1990 Archaeological Investigations at the former Royal Ordnance Factory, Enfield Lock.

Jacobi R M, undated, Archaeological work at Broxbourne

Miller P and Seeley D undated A406 North Circular Road improvement between Silver Street and Hall Lane, London Boroughs of Enfield and Waltham Forest An Archaeological Impact Assessment Museum of London

Pottery by Lucy Whittingham

Eighteen sherds of either Roman or Post-medieval date were available for analysis. Six sherds came from the watching brief on the road in the London Borough of Enfield and 12 sherds came from the watching brief on the road in the London Borough of Waltham Forest. The sherds from Enfield were post-medieval, either Fine Redware (PMFR) or Transfer Printed Ware (TPW). The sherds from Waltham Forest include four Roman greyware sherds, one possibly from a 2nd-century small jar and eight post-medieval shreds from late 18th-century or early 19th-century stoneware (ENGS), jars and ginger beer bottles, creamware (CREA), Pearlware (PEAR) and Transfer Printed Ware (TPW). The Roman sherds came exclusively from LDPEM\ACCF\CF-HA 4 and LDPEM\ACCF\CF-LV 2 and 2a.

Environmental by Dr Mark Robinson

Two samples taken were both from a probable early course of the River Lea, one from Context NCC94 3 (Sample 2) and one from NCC 94 7 (Sample 3). The samples were floated on to a 0.2 mm mesh to recover waterlogged remains, which were assessed by Dr Mark Robinson of English Heritage's Environmental Archaeology Unit, University Museum, Oxford.

Preservation by waterlogging in context 7 is poor. The majority of the waterlogged remains are decayed roots, mostly from herbaceous plants, which grew into the deposit following its being laid down. A bud of Willow (*Salix*) and seeds of Sedge (*Carex*) and true Bullrush (*Schoenoplectus lacustris*) are characteristic of reed-swamp conditions, as are the identifiable beetles observed (*Donacia/Plateumaris* sp. and *Agonum* sp.). Further analysis could make it clear whether the reed-swamp was formed in slow-moving or stagnant water.

Preservation by waterlogging is poor in Context 3. Virtually all the preserved plant tissue is decayed roots, from a mixture of woody and herbaceous plants, which grew into the deposit following its being laid down. The only other material observed was a single piece of wood charcoal and a piece of coal. There is little potential for further information to be retrieved from this sample.

The worked flint by Philippa Bradley

A small assemblage of ten pieces of worked flint and three pieces of burnt unworked flint was recovered from the excavations. The material is summarised by site in Table 1. The flint is brown or black in colour with brown or grey cortex. The flint is generally abraded and edge damaged. The assemblage is dominated by hard-hammer struck flakes, several of which have hinge fractures. The only retouched piece is a minimally retouched piercer. A single flakes core fragment was recovered. The burnt unworked flint is heavily calcined. Dating this material is difficult given the lack of diagnostic pieces, the size of the assemblage and its sparse distribution along the route of the road. However, given the predominance of relatively small hard-hammer struck flakes a Bronze Age date may not be out of place.

Table 1: Assemblage Composition

Site	Flakes	Chip	Core fragment	Retouched	Total	Burnt unworked flint
LDPEM/ACCF/CF-HA 270	-	-	-	1 Piercer	1	1
LDPEM/ACCF/CF-LV 263	4	1	-	-	5	-
LDPEM/ACCF/CF-AQ 266	1	-	1	-	2	2
NCC94	2	-	-	-	2	-
Total	7	1	1	1	10	3

TABLE 2; A406 London North Circular Road: Improvements between Silver Street and Hall Lane.

Contract	Grid Reference	figure no	CPO nos.	Location	details
London Borough of Enfield (NCC94)					
A		5	1, 1A, 3, 3A, 3B, 7 and 7A	Dickens Road to Silver Street This covers the most western area of the improvements scheme to a new pedestrian subway to be constructed at the Silver Street/A406 North Circular Road junction. This area is sensitive due to the close proximity to the Post-medieval Pymmes Park Manor, an archaeological priority zone in the Borough of Enfield.	CPO 1, 3, 3A and 3B (Short's Transport Cafe) were inspected on 11 and 12/5/95. There were no archaeological deposits.
A		6	3, 3A, and 4-19 and 21, 22 and 24	Silver Street to Silver Street British Rail Station The area from Silver Street to Silver Street British Rail Station is of high archaeological priority due to the proximity of Ermine Street, a Roman Road, possible associated Roman settlement and Post-medieval Pymmes Park Manor.	CPO nos 4, 5, 5A9, 9A, 16, 18, 19, 21 and 24 were part of the advance works conducted by British Rail and as such these areas were not investigated by the watching brief. In CPO nos 3 and 3A three archaeological trenches were excavated on 12/5/95 in Pymmes Park in advance of construction. All the trenches showed landscaping from the construction of the park, the diversion of Pymmes' Brook, the excavation of the duckpond or the insertion of a large pipe parallel to Silver Street. In CPO no 22, on 22/7/94, pipe laying was observed S of Pymmes Park. The natural topography had been truncated by modern deposits probably associated with road construction.
A	Tr 1 TQ 33610/92340 Tr 2 TQ 33700/92350 Tr 3 TQ 33810/92350 and 336/923			NB the trenches in Pymmes' Park were double numbered as contexts 60-, 70- and 80-. Tr 1 (4.1x2.1 m). An old ploughsoil (63) containing 2 struck flints (flakes) and one modern brick/tile with a sherd of Transfer Printed Ware was seen in the trench next to Silver Street but no other archaeological deposits were present. Tr 2 (4.1x2.1 m). No archaeological deposits were present. Context 70, modern topsoil and dumping overlay 71 the natural gravel. Tr 3 (4.8x2.1 m). No archaeological deposits were present. Context 80 th modern topsoil and dump overlay the truncated natural 81. Pipe laying was observed S of Pymmes Park. The natural topography had been truncated by modern deposits (70) probably associated with road construction. Gravel (71) was seen at a depth of 0.8 m.	
A		7	121, 27-38, 39, 55 and 25-53 (on the S of the A406 North Circular	Silver Street British Rail Station to Cross Street This area covers the eastern end of the underpass, general road widening and the continuation of the Pymmes Brook	During the watching brief it became apparent that the properties on the S of the A406 North Circular Road (CPO nos 25-53) were not to be disturbed by the construction. On 22/7/94 observations of advance works on the traffic island W of the junction of Fore

Contract	Grid Reference	figure no	CPO nos.	Location	details
			Road)	<p>The area is an archaeological priority zone because of the projected line of Ermine Street, the medieval Fore Street and the possibility of associated Roman and/or medieval settlement.</p> <p>The properties on the N of the A406 North Circular Road, (CPO nos 27, 27A32, 32A, 33, 33A, 34, 34A, 37, 37A and 39) were part of the advance works conducted by British Rail and as such these areas were not investigated by the watching brief.</p>	Street and the A406 North Circular Road noted deep modern cellars. Observation of advance works on the SE corner of the junction between A406 North Circular Road and Fore Street and to the E (CPO nos 55 and 12) recorded no archaeological deposits.
	339/923 341/923		Advance works on the traffic island W of the junction of Fore Street and the A406 noted deep modern cellars (60) overlying gravel (61) at a depth of 2 m.		
A		8	19, 62, and 67	<p>Cross Street to Glasgow Road</p> <p>This area covers the widening of the A406 North Circular Road and the continuation of the Pymmes Brook culvert. Prehistoric finds are scattered over the area of the Pymmes Brook floodplain.</p>	On 27/5/94 advance works off the end of Contract B Angel Road Viaduct Section and N of the Angel Community Centre were monitored (CPO no 19A). The area seems to have been landscaped, probably as a part of the construction of the A406 North Circular Road; no archaeological deposits were seen.
	351/921		Advance works off the end of Contract B and N of the Angel Community Centre were monitored. No archaeological deposits were seen.		
B		9	72-92 and 95, 96D	<p>Glasgow Road to Montagu Road</p> <p>This area includes the general widening of the A406 North Circular Road and the continuation of the Pymmes Brook culvert. Willoughby Moat (an archaeological priority zone lies to the SE and land use associated with this site may be encountered.</p>	Up to the 27/5/95 the excavation of Pymmes Brook culvert (CPO nos 72-92) was monitored. On 27/5/94, 17/11/94, 1/12/94 the works for the diversion of Pymmes Brook were observed N of M.K. Electrics (CPO 95 and 96); made ground was recorded. As far as could be determined the previous construction of the A406 North Circular Road has truncated and hence removed all likely archaeological deposits.
			The works for the diversion of Pymmes Brook were observed; made ground was recorded. The gravel (32) was overlain by brickearth (31) which was truncated and sealed by made ground and demolition (30).		
B		10	26, 134 and 135A	<p>Montagu Road to Angel Street British Rail Station including Albany Road Gasworks</p> <p>The work in this area involves general road widening of the A406 North Circular Road, the continuation of Pymmes Brook culvert, the extension of Albany Road and the start of the flyover. Prehistoric finds are scattered over the area of the Pymmes Brook floodplain. Willoughby Moat (an archaeological priority) zone lies to the SE and land use associated with this site may be</p>	On 11/7/94, 17/8/95 and 1/12/94 CPO nos 134 and 135A were monitored; made ground was recorded. On 25 and 27/5/94 advance works at the end of Albany Road were monitored and revealed a sequence of clay deposits. Excavations next to the scrapyard (CPO 21) were monitored; made ground was observed. Works in CPO 26 also revealed modern deposits.

Contract	Grid Reference	figure no	CPO nos.	Location	details
	350/922 to 351/922, 351/921 350/922			Location encountered.	
B		11	29A-B, 30A-E, 148C	<p>Angel Road British Rail Station to Nathan Furniture Store.</p> <p>This involves the selective widening of the A406 North Circular Road, the end of the flyover, the construction of a new service road and a new subway. Prehistoric finds spots and an arctic bed lie in the area.</p>	<p>Pipe work trenches adjacent to White Arrow couriers were monitored. Advance works off the end of Albany Road have revealed a sequence of clay deposits. A dark grey clay (42) was overlain by buff clay (41) and capped by made ground (40).</p> <p>Excavations next to the scrapyard were monitored; made ground was observed.</p> <p>Over several visits the excavation of the retaining wall and part of the culvert of Pymmes Brook N of Gothic Works (now Tesco's-CPO 30A-E) were monitored. The sequence of deposits was gravel overlain by brickearth with modern dumping on top. Excavation E of Pymmes Brook and E of Tesco's was monitored. Made ground was observed. Flints and sherds of medieval pottery were found in a slight feature, c 1m wide and c0.25 m deep. Observed in the side of the Pymmes Brook diversion (These finds have been lost in the OAU finds department). On 11/7/94 excavation of the road bed adjacent to White Arrow couriers (CPO 29A and 29B) were monitored. The sequence of deposits was gravel overlain by concrete (the industrial estate roadway and parking) the absence of brickearth suggests truncation of the ground by previous development. Pipe work trenches adjacent to White Arrow couriers (CPO 148C) were monitored</p>
	353/919				
C		12	39, 158A-B 159A-B, 162,164- 176	<p>Nathan furniture Store to River Lea Navigation.</p> <p>The improvements involves widening the A406 North Circular Road, the construction of a new foot-bridge and the start of a viaduct over the Lea valley. The edge of the Lea valley is an archaeological priority zone and peat deposits were identified in borehole surveys.</p>	<p>Excavation of the retaining wall and part of the culvert of Pymmes Brook N of Gothic Works were monitored. The sequence of deposits was gravel (22) overlain by brickearth (21) with modern dumping (20) on top. Excavation E of Pymmes Brook and E of Tesco's was monitored. Flints and sherds of pottery were found in a feature (23) observed in the side of the Pymmes Brook diversion.</p> <p>Excavation of the road bed adjacent to White Arrow couriers were monitored. The sequence of deposits was gravel (51) overlain by concrete (50- the industrial estate roadway and parking) the absence of brickearth suggests truncation of the ground by previous development.</p> <p>On 15/7/94 and 19/94 the N end of the footbridge (CPO nos 158, 158A and 158B with 159 B) were monitored and gravel was seen at a depth of 1.5 m; no archaeological deposits were recorded. On 22/7/94 the S side of the footbridge was monitored; a peat deposit was seen at a depth of c2 m. However, due to the nature of the construction work access for full recording/palaeoenvironmental sampling was not possible. On 30/6/95 CPO 39 was monitored alluvial clays were noted. The excavation under CPO nos 164-176 were monitored up to 11/7/94 and alluvial clays were recorded. On 15/7/95 the excavation of the roadbed for the sliproad N of the flyover (CPO</p>

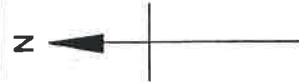
Contract	Grid Reference	figure no	CPO nos.	Location	details
	357/921				162) was observed; alluvial clays were recorded.
C		13	40, 43, 43A, 181, 182, 198	Lea Valley Interchange This area is in an archaeological priority zone for the London Boroughs of Enfield and Waltham Forest (River Lea alluvial deposits).	Up to the end of July 1994 the excavation of the roadbed of the N part of the Lea Valley interchange was monitored. This part of the road follows the borough boundary which follows an old course of the Lea which was replaced by a new straight cut in 1767. Bulk environmental samples were taken. Sample 3 from the centre of the channel is indicative of reed-swamp. However, most of the waterlogged material is from plants growing into the peat deposit. The retaining wall of the access road to the W of the River Lea diversion was monitored. The other pile cappings showed modern material from construction of the River Lea Diversion and Aqueduct.
	358S/9223 358/921				The excavation of the roadbed of the N part of the Lea Valley interchange was monitored. Bulk environmental samples were taken. Roadbed excavations W of the River Lea Diversion were monitored. Recent deposits from the construction of the aqueduct and made ground were observed. Roadbed excavations for the S part of the roundabout at the N end of Harbet Road were monitored. Recent deposits suggesting landscaping were seen. The sequence of deposits was gravel overlain by peat (4) with grey clay (river silts-3 and 5) overlying them. Topsoil (2) had been capped by modern dumping (1). Peats and clays indicating an old river channel were seen and one sherd of pottery was recovered. A soil sample was taken but the peat appeared to have degraded after drying out.
					The retaining wall of the access road to the W of the River Lea diversion was monitored. Contexts NCC 94, (1-4).
C		14	191-193, 199	southern and eastern areas of the Lea Valley interchange. The improvements involve the new Lea Valley interchange leading to Harbet Road and the carriageways leading off to the E. This area is in an archaeological priority zone for the London Boroughs of Enfield and Waltham Forest (River Lea alluvial deposits).	Up to 24/8/94 the excavation of the roadbed of the S part of the Lea Valley interchange was monitored (CPO 50, 191-193). This part of the road follows the borough boundary which follows an old course of the Lea which was replaced by a new straight cut in 1767. Bulk environmental samples were not taken due to the poor quality of the peat which has probably not been waterlogged since the River Lea Diversion and Aqueduct were built. Advance works along the line of Harbet Road were monitored. A sequence of river deposits were observed. Roadbed excavations W of the River Lea Diversion were monitored. Recent deposits from the construction of the aqueduct and made ground were observed.

Contract	Grid Reference	figure no	CPO nos.	Location	details
	362/922 360/923 359/921 361/922				<p>In the area of CPO 199 pipe work adjacent to the Aqueduct was monitored on 16/5/94, 23/6/94 and 11/7/94. Five struck flints and sherds of prehistoric and Roman pottery were recovered from the silt subsoil. This seemed to be a slightly higher island of gravel overlooking the course of the River Lea. One of the pile cappings of Pier 2 of the viaduct, between the River Lea diversion and the aqueduct, was monitored. This was similar to the pipe work monitored but no finds were recovered.</p>
					<p>(LDPEM acc no 263) Pipe work adjacent to the Aqueduct was monitored. Five 5 struck flints (4 flakes and one chip, possibly of Bronze Age date) and 4 sherds of Roman pottery (one dated to the 2nd-century) were recovered from the silt subsoil (CTX 2 and 2a) which overlay a heavily iron-stained undisturbed subsoil (CTX 3). The fill of a possible tree-throw pit (CTX4 was also seen under 3 and over the gravel (CTX 5). Modern material (CTX 1 and 6) covered this area and tipped into foundation/construction trenches for the River Lea Aqueduct and Diversion (CTX 7) seen in Piers 1 and 3). The area seemed to be a slightly higher island of gravel overlooking the course of the River Lea. One of the pile cappings of Pier 2 of the viaduct, between the River Lea diversion and the aqueduct, was monitored. This was similar to the pipe work monitored but no finds were recovered.</p> <p>(LDPEM acc no 270) The retaining wall and roadbed of the access road to the W of the River Lea diversion was monitored. Modern dumped gravel (1) was noted over 1 M of made ground (2=NCC 94 10/11) over river silts (3=NCC 94 12). Blue clay (4=NCC 94 13) overlay a peaty gravel (5=NCC94 14) from which one struck flint, a piercer, and six 19th century sherds with one possibly Roman sherd were recovered.</p> <p>(NCC 94N, next to LDPEM acc no 268) The excavation of the roadbed of the Lea Valley interchange was monitored. This part of the road follows the borough boundary which follows an old course of the Lea which was replaced by a new straight cut in 1767. Bulk environmental samples were taken. The sequence of deposits was gravel (NCC 94, 4, 8 and 16) overlain by peat (NCC 94, 3, 7, 14 and 15) with grey clay (river silts- NCC 94, 2, 6, 13 and 12) overlying them. This had been capped by modern dumping (NCC 94, 1, 5, 10 and 11). The peat was badly preserved but indicated reed-swamp or slow moving stagnant water.)</p> <p>(LDPEM acc no 271) Pipe work and pile caps were monitored. No archaeological deposits were observed. Made ground was observed.</p>
C		15	51A, 53, 204,	<p>River Lea Aqueduct to E of Hall Lane including a new service road to the rear of Shadbolts and sons Ltd</p> <p>The improvements involve widening the A406 North Circular Road, the end of the viaduct, the construction of a pedestrian subway and a new service road. Iron Age occupation, Chingford Hall (a medieval manor) and the possible location of Chingford Earls Manor lie nearby. This area is in an archaeological priority zone for the London Boroughs of Enfield and Waltham Forest (River Lea alluvial deposits).</p>	<p>On 27/5/94 and 11/7/94 the excavation of the N end of the Hall Lane subway was observed (CPO 51A). Close to the road were deposits suggesting recent landscaping and these were dated by modern pottery. The retaining wall for the N side of the carriage way to the E of the Aqueduct was monitored. The other pile cappings for the viaduct over the River Lea diversion and the aqueduct were monitored. Recent deposits from the construction of the Lea diversion and aqueduct were observed. The N side of the carriage way to the E of the Aqueduct was monitored. Recent deposits suggesting landscaping were seen.</p> <p>In the areas of CPO 204 observations of British Gas pipeline and British Telecom work on the E line of the route has shown extensive truncation and landscaping associated with both the construction of the road and with gravel works.</p> <p>In the area of CPO 53 the excavation of the River Ching culvert and part of the roadbed leading into the Folly Lane</p>

Contract	Grid Reference	figure no	CPO nos.	Location	details
					<p>roundabout revealed a shallow sequence of deposits. Topsoil overlay undisturbed silt subsoil which capped the gravel. The surface of the silt subsoil exposed in the roadbed was subject to a walkover to locate artefacts but none were found. The new access road to the industrial estate was monitored. Two struck flints and 5 pieces of burnt flint were recovered from the top of the gravel subsoil. No archaeological features were observed cut into the gravel. An old river course which may well be the River Ching was seen at the S end of the roadbed. This had been constrained in a pipe inserted into the old channel. The old channel was dated by 19th-century pottery. Bulk samples were taken from the (modern) channel but were discarded. No linear features were observed cut into the gravel in either the roadbed or the culvert.</p>
	363/921 362/921		(LDPEM acc no 264)	<p>The excavation of the N end of the Hall Lane subway was observed. Close to the road were deposits suggesting recent landscaping and these were dated by modern pottery (CTX 1 up to 1.5 m deep). The retaining wall for the N side of the carriage way to the E of the Aqueduct was monitored. The other pile cappings for the viaduct over the River Lea diversion and the aqueduct were monitored. Recent deposits from the construction of the Lea diversion and aqueduct were observed. The N side of the carriage way to the E of the Aqueduct was monitored. Recent deposits suggesting landscaping were seen. Undisturbed red silts (CTX 2 0.3 m deep) on the gravel terrace (CTX 3) were seen.</p> <p>(LDPEM acc no 266) The excavation of the River Ching culvert and part of the roadbed leading into the Folly Lane roundabout revealed a shallow sequence of deposits. Topsoil (CTX 2) overlay undisturbed silt subsoil which capped the gravel (CTX 3). The surface of the gravel or silt subsoil exposed in the roadbed was subject to a walkover to locate artefacts but none were found. The new access road to the industrial estate was monitored. Two struck flints (flakes) and 2 pieces of burnt flint were recovered from the top of the gravel subsoil. No archaeological features were observed cut into the gravel. An old river course which may well be the River Ching was seen at the S end of the roadbed. This had been constrained in a pipe in a trench (CTX 4) inserted into the old channel and covered in modern dump (CTX 1 0.5 m deep). The old channel was dated by a 19th-century pottery marmalade jar. Bulk samples were taken from the (modern) channel. No linear features were observed cut into the gravel in either the roadbed or the culvert.</p>	
C		16	54, 210	<p>Westward Road to Folly Lane</p> <p>The improvements in this area involve widening the A406 North Circular Road. The edge of the Lea valley is an archaeological priority zone. Iron Age occupation (a crannog) and the possible location of Chingford Earls Manor lie nearby.</p>	<p>CPOs 54 and 210 are dealt with as a part of CPO 53 (above).</p>
	364/922		(LDPEM acc no 265)	<p>Observations of British Gas pipeline and British Telecom work on the E line of the route has shown extensive truncation and landscaping (CTX 1 which is 1.2 m deep) associated with both the construction of the road and with gravel works.</p>	<p>In CPO 56, 57 and 58 observations of roadbed excavations at the Folly Lane roundabout noted undisturbed deposits over the gravel terrace. A possible course of the Ching was seen to the N of the line of Folly Lane. The W end of the aqueduct was monitored; no</p>
C		17	56, 57 and 58	<p>Folly Lane roundabout and the completion of the improvements along Waltham Avenue</p> <p>The improvements in this are the construction of a</p>	

Contract	Grid Reference	figure no	CPO nos.	Location	details
				roundabout and upgrading Folly Lane. The edge of the Lea valley is an archaeological priority zone. Iron Age occupation (a crannog) and the possible location of Chingford Earls Manor lie nearby.	archaeological deposits were seen.
	364/917			(LDPEM acc no 269) Observations of roadbed excavations at the Folly Lane roundabout noted undisturbed deposits over the gravel terrace. Topsoil (1) overlay undisturbed subsoil (2) which was 'fieldwalked'. A layer of mixed gravelly material (3) was under 2 and over (4 and 5) the gravels. A possible course of the Ching was seen to the N of the line of Folly Lane. The W end of the aqueduct was monitored; no archaeological deposits were seen.	
C		18	219, 220 221, 223, 224, 225, 226, 227, 228, 229, 230 and 232	West of Folly lane roundabout to Rover Lea Diversion A new road is to be built across the River Lea diversion and Aqueduct. The edge of the Lea valley is an archaeological priority zone. Iron Age occupation (a crannog) and the possible location of Chingford Earls Manor lie nearby.	Pile work on either side of the Harbet Road bridge over the River Lea diversion were monitored. Recent deposits from the construction of the Lea diversion were observed. Pile capping next to the aqueduct was monitored. There were recent deposits from the construction of the aqueduct. Roadbed excavations N of the pumping station were monitored. Made ground was observed.
	363/917			(LDPEM acc no 267) Pite work on either side of the Harbet Road bridge over the River Lea diversion were monitored. Recent deposits from the construction of the Lea diversion were observed. Pile capping next to the aqueduct was monitored. There were recent deposits from the construction of the aqueduct. Roadbed excavations N of the pumping station were monitored. Made ground was observed. Made ground (1) overlay buff clay (2) which in turn was over blue clay (4) and the gravel (3)	
C				A new road is to built but this area is of low archaeological priority. Advance works were monitored along Harbet Road and alluvial deposits were seen. These will be largely unaffected by the new road.	
				(LDPEM acc no 268) Advance works along the line of Harbet Road were monitored. A sequence of river deposits were observed.	

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0 10 km

● area of proposed road improvements

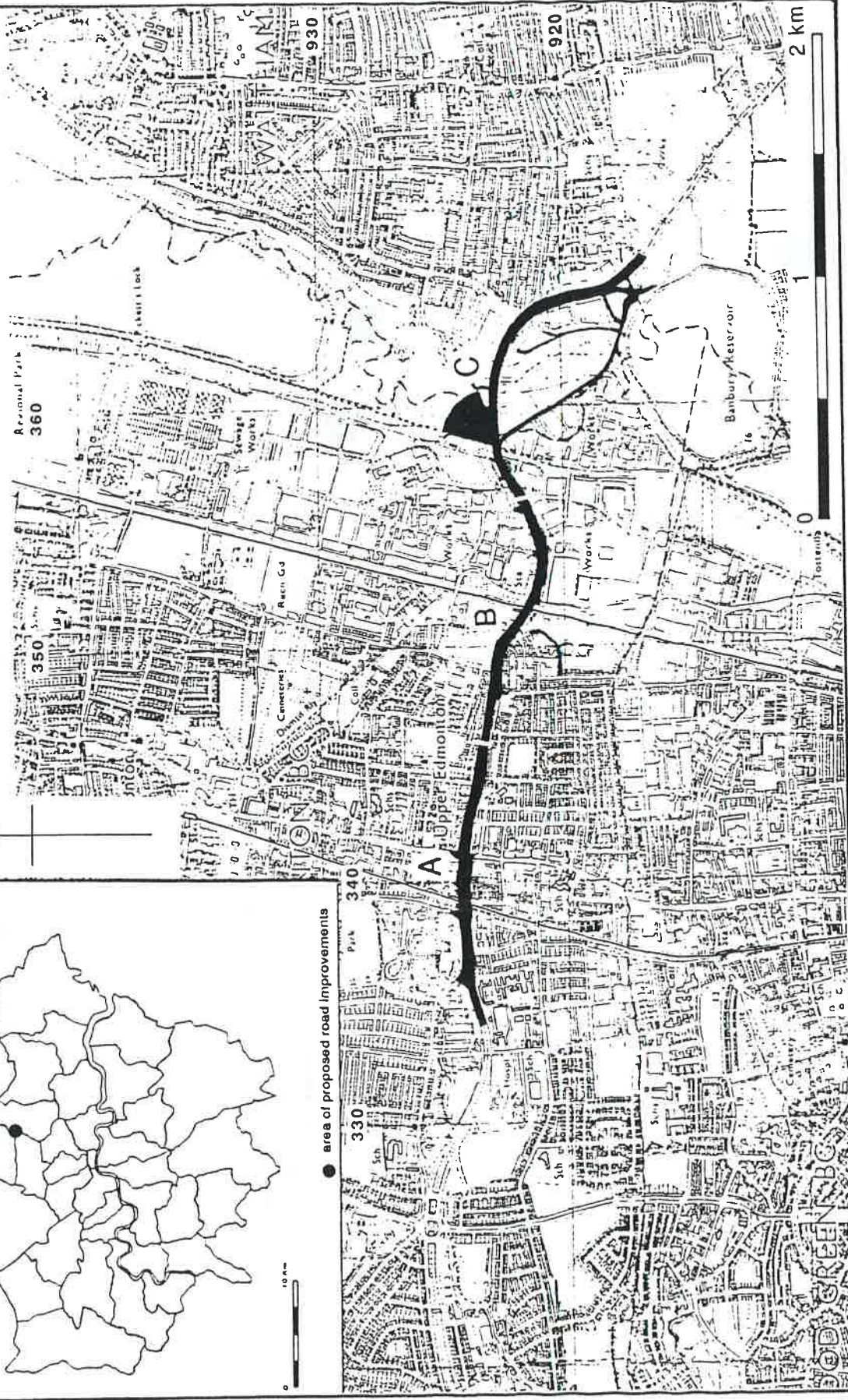


figure 1

CONTRACT A
FORE STREET UNDERPASS SECTION

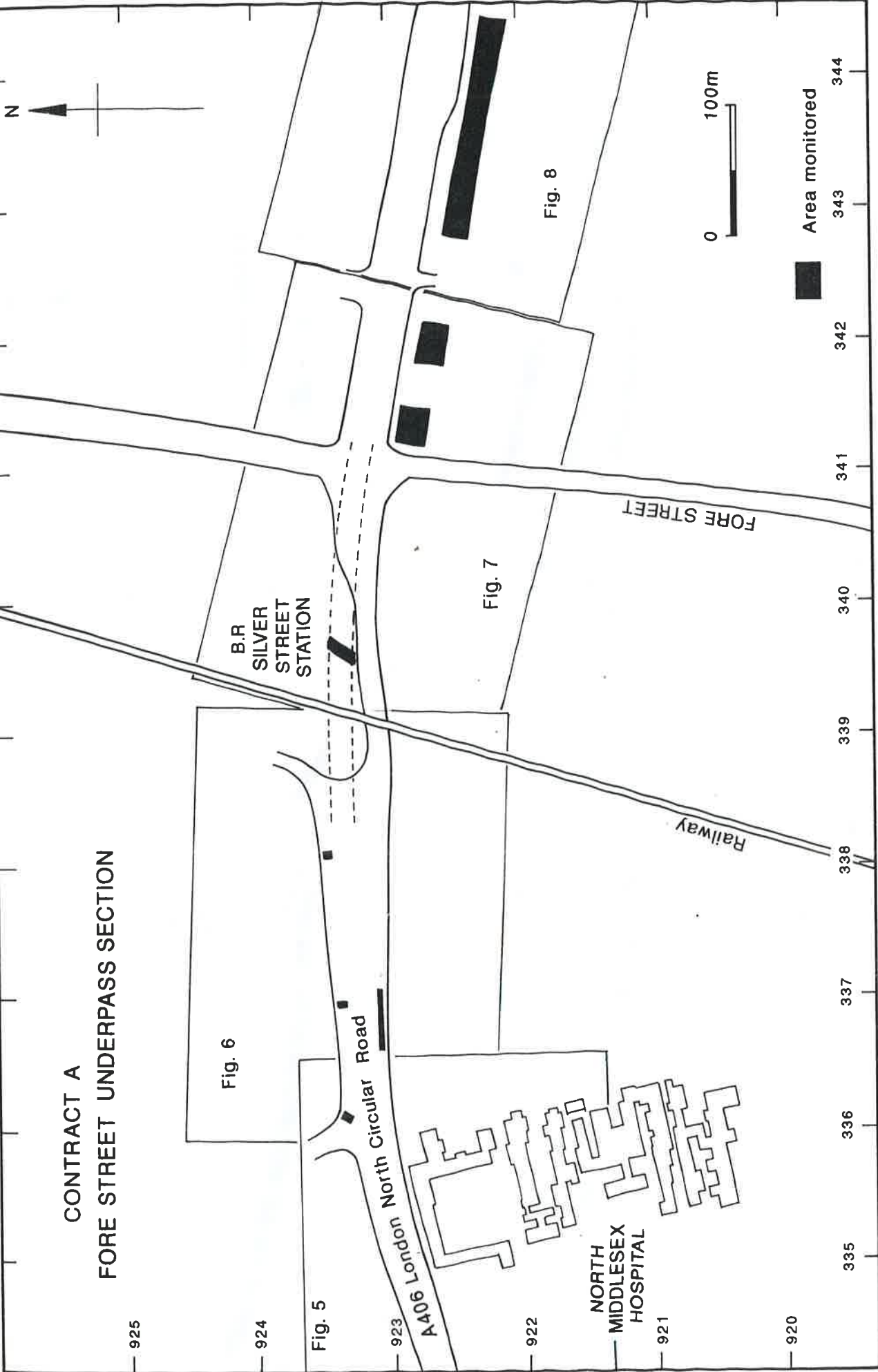


figure 2

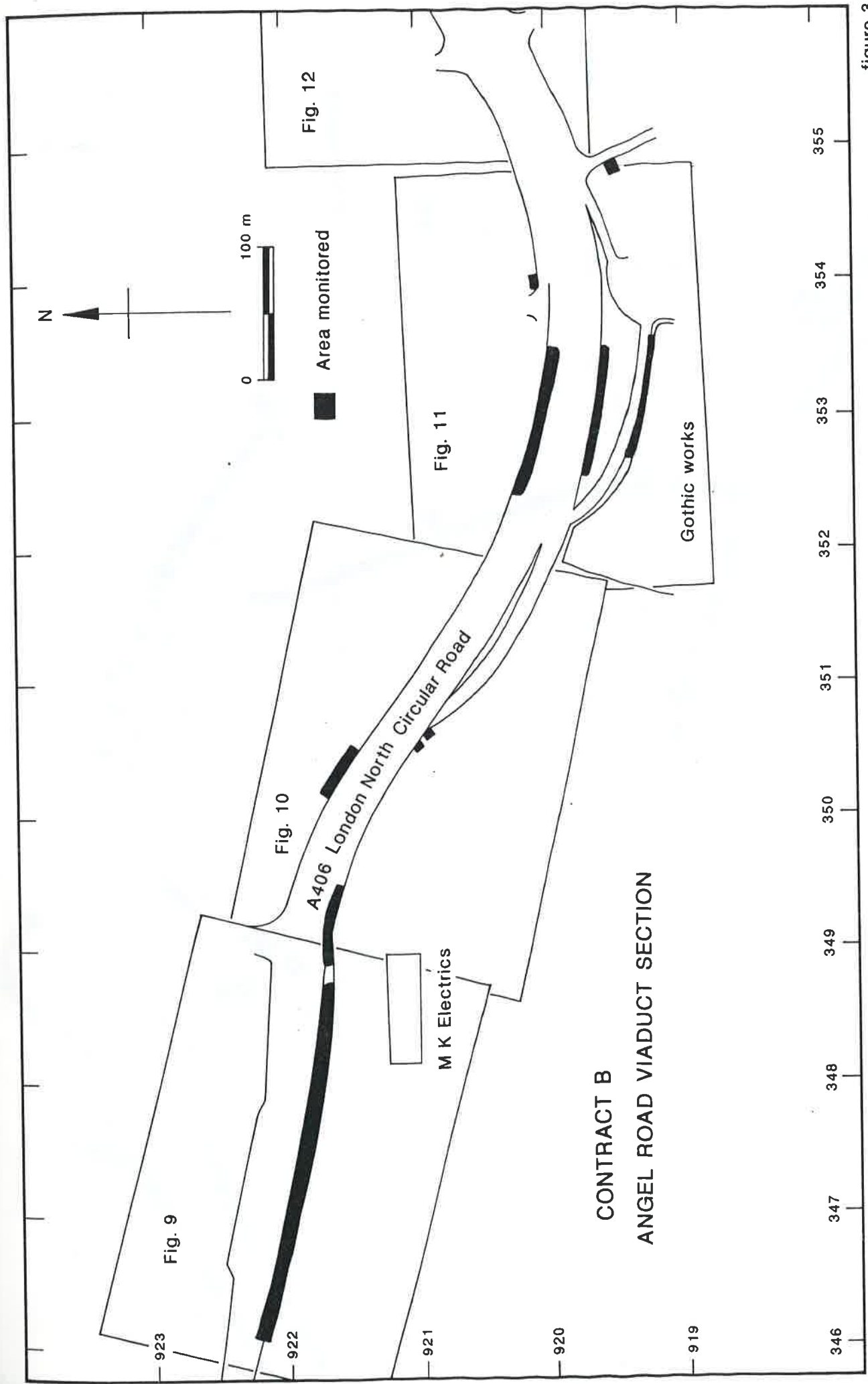
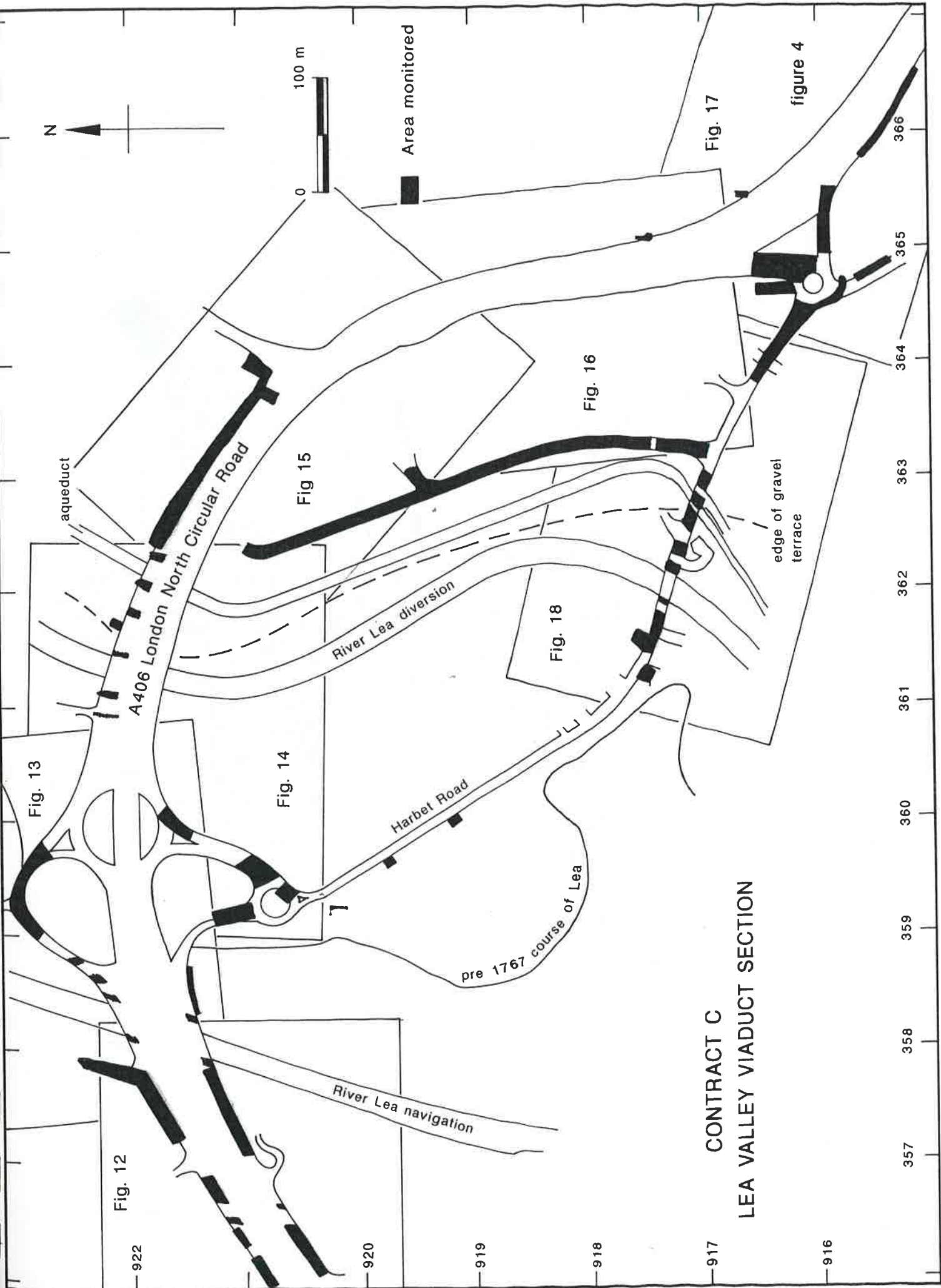


figure 3



CONTRACT C
LEA VALLEY VIADUCT SECTION

Fig. 12

Fig. 13

Fig. 14

Fig. 15

Fig. 18

Fig. 16

Fig. 17

figure 4

922

920

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918

917

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Area monitored

edge of gravel terrace

A406 London North Circular Road

River Lea diversion

Harbet Road

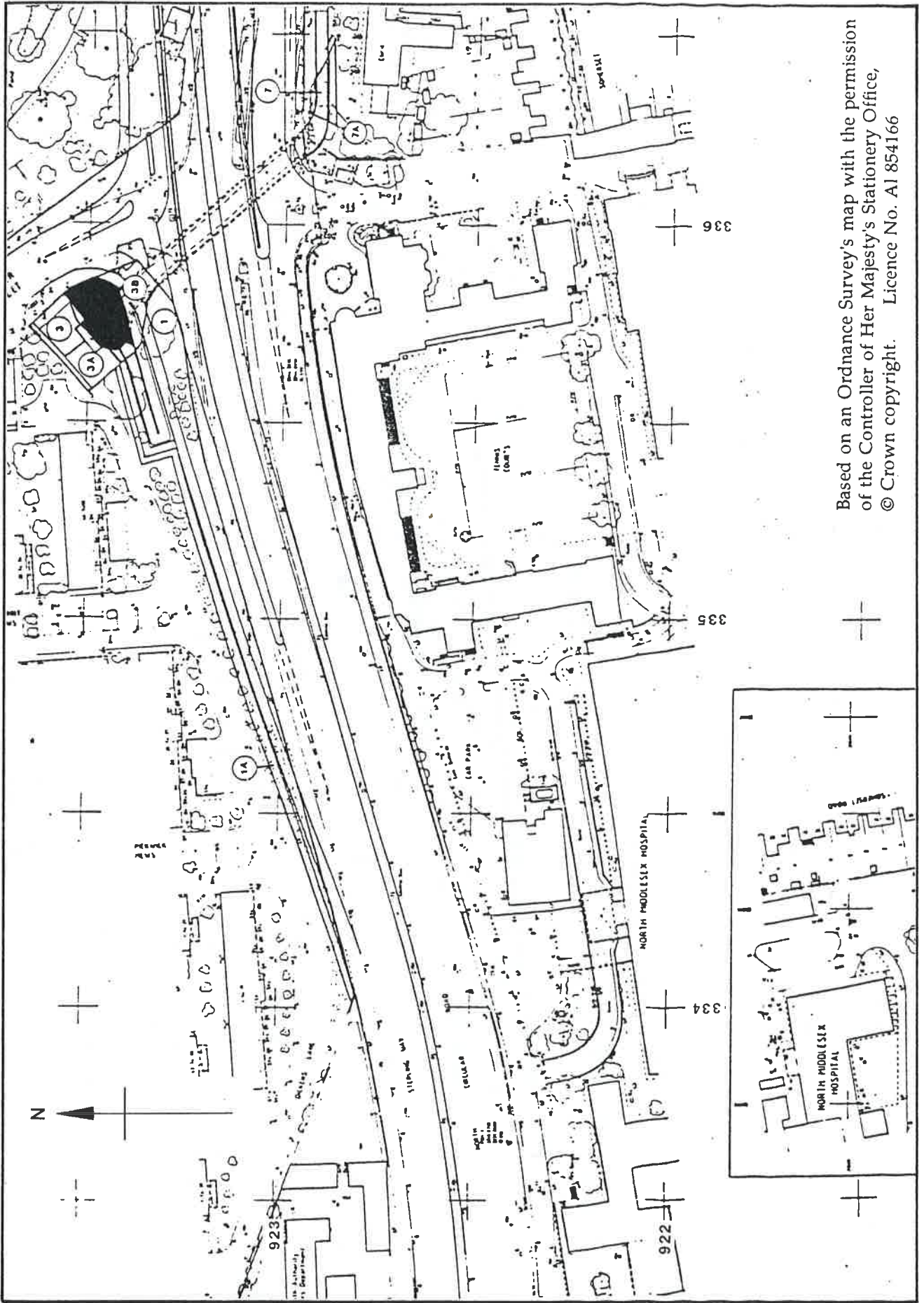
pre 1767 course of Lea

aqueduct

N

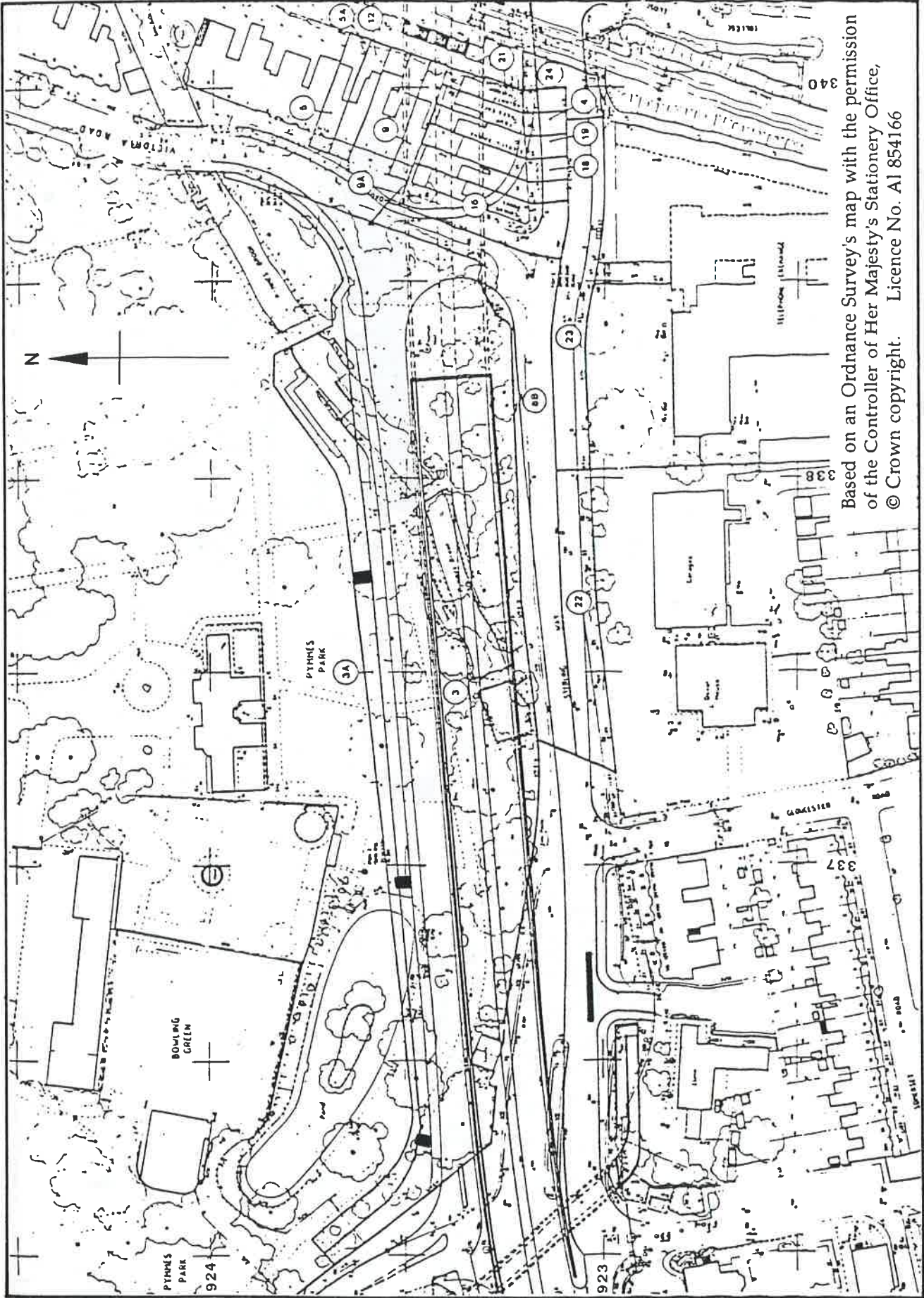
100 m

0



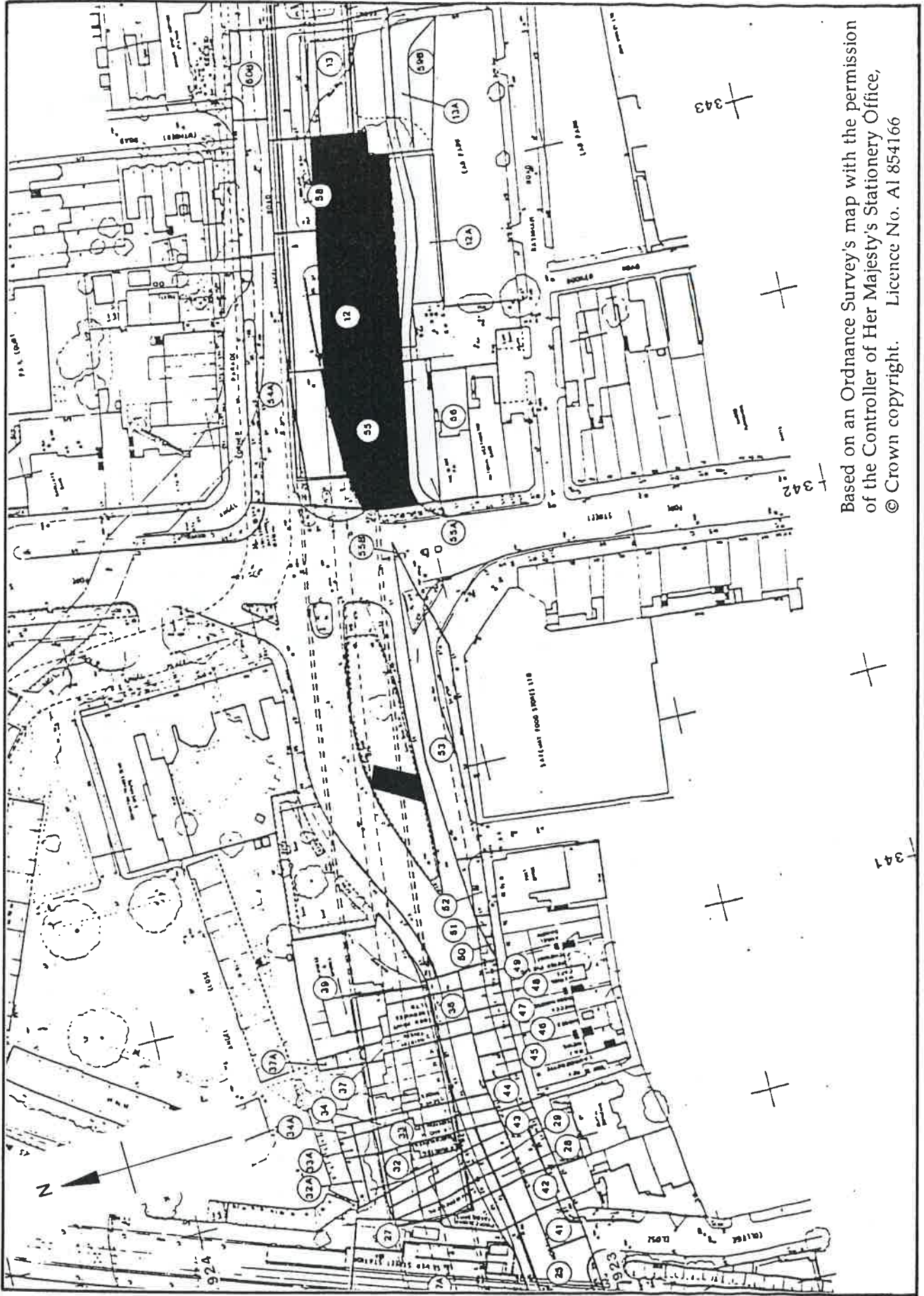
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figure 5



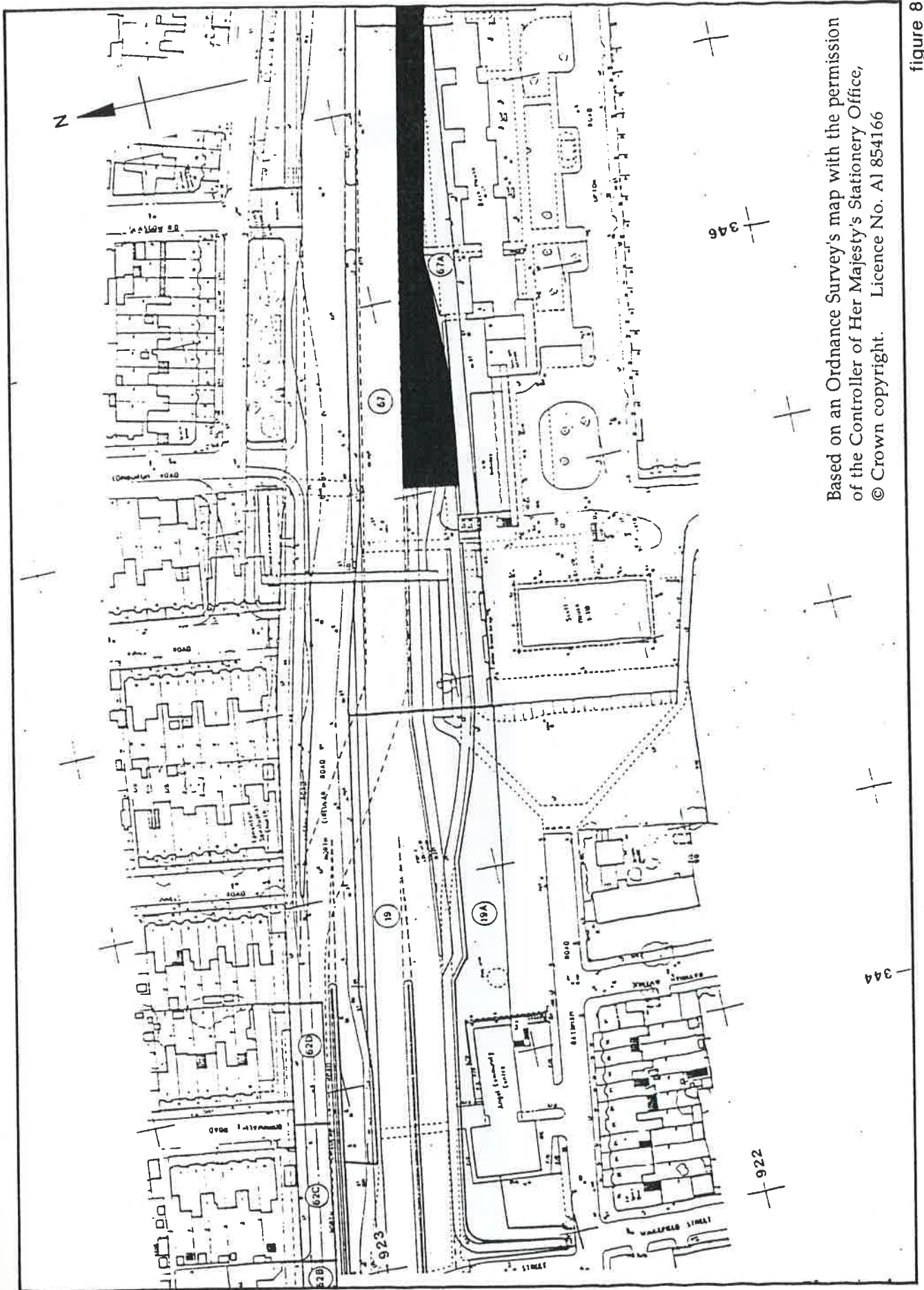
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figure 6



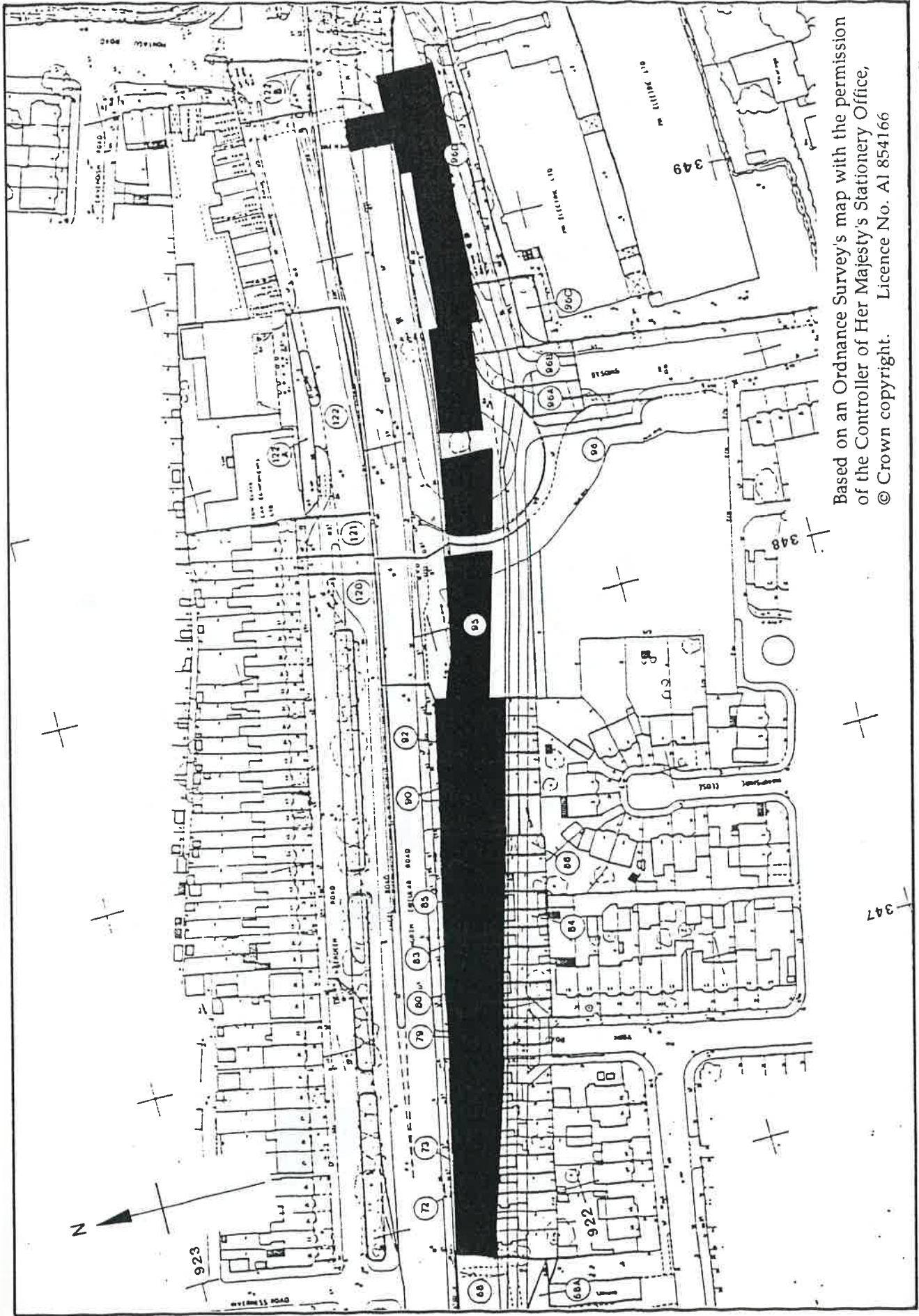
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figure 7



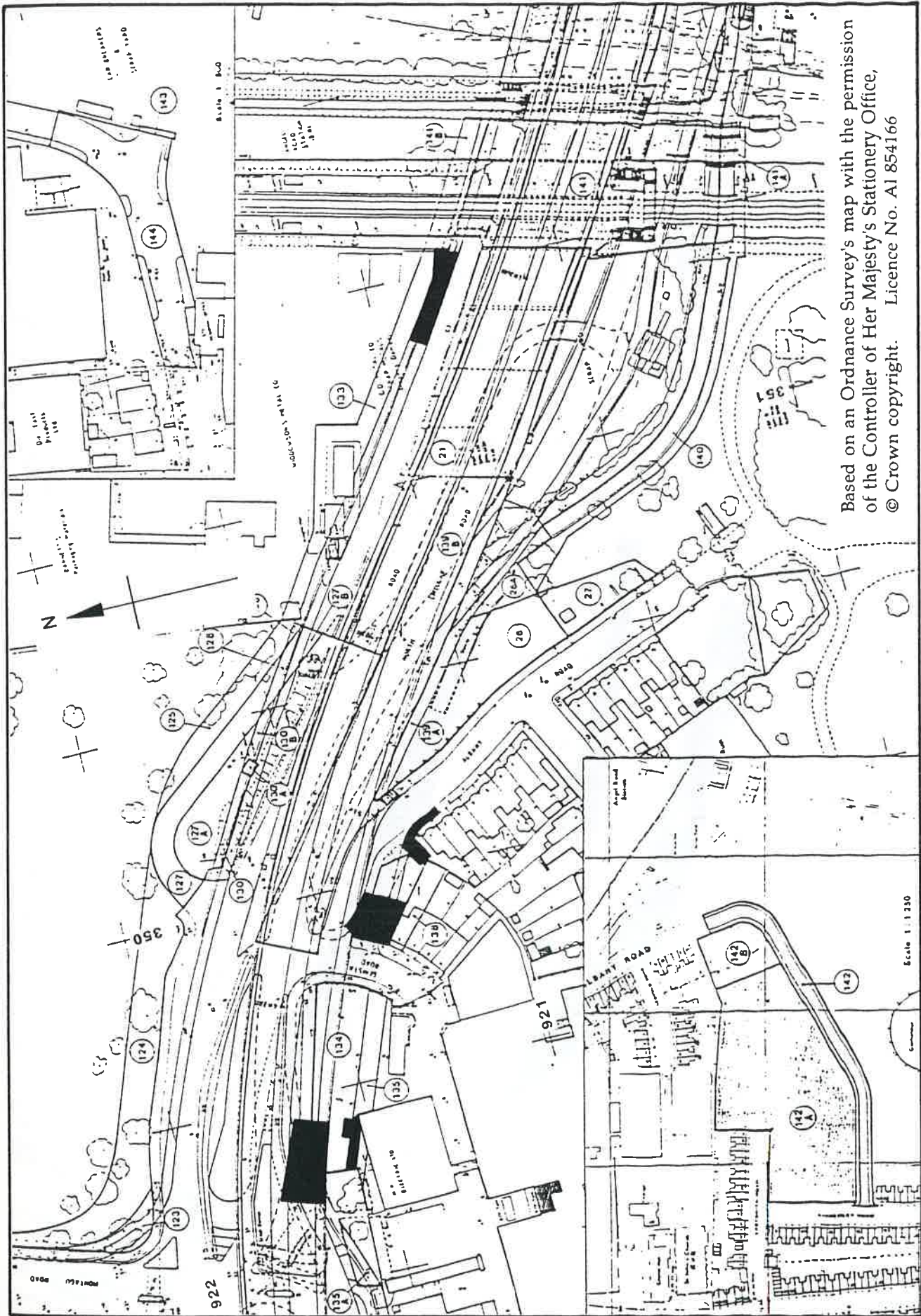
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figure 8



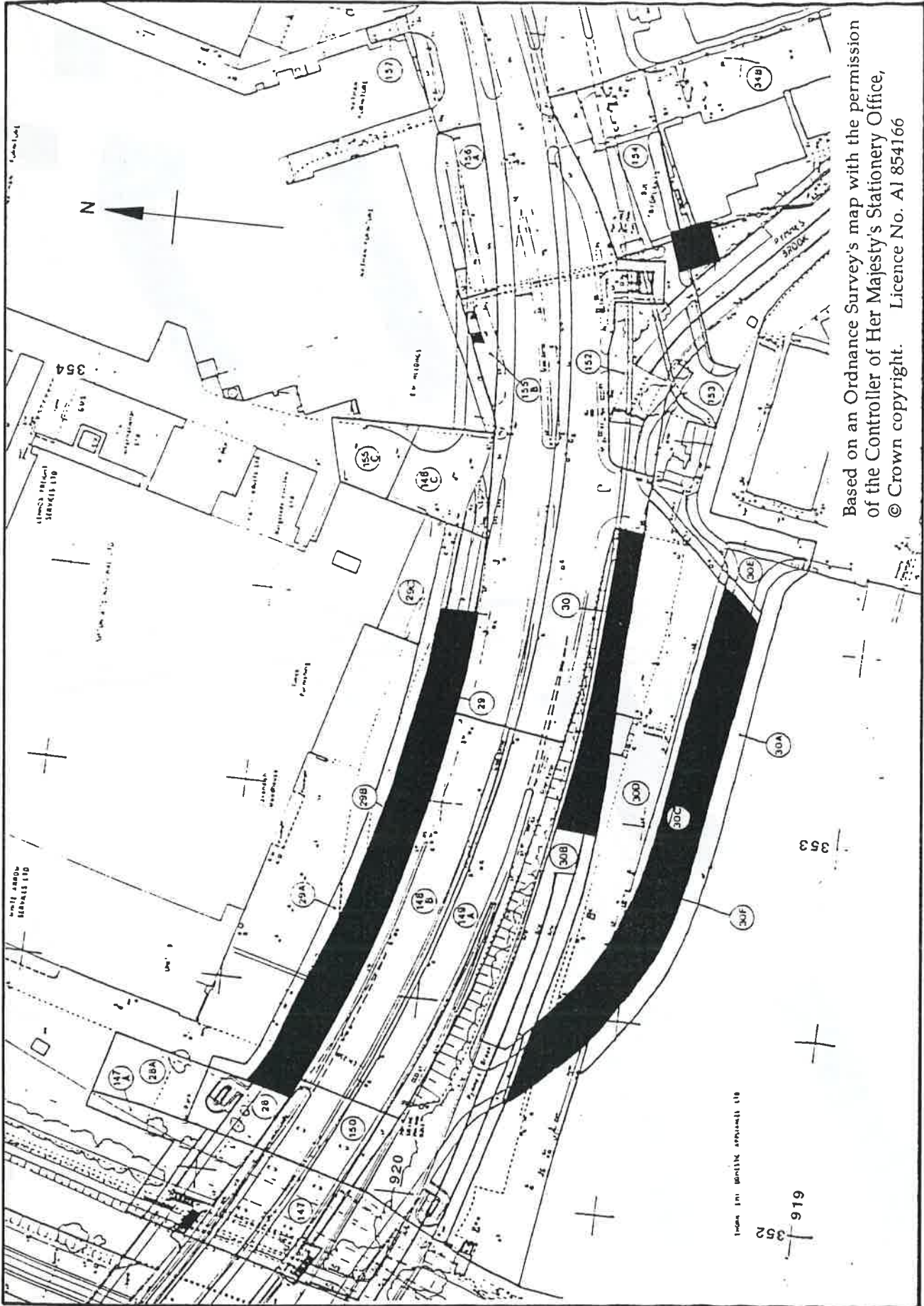
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figure 9



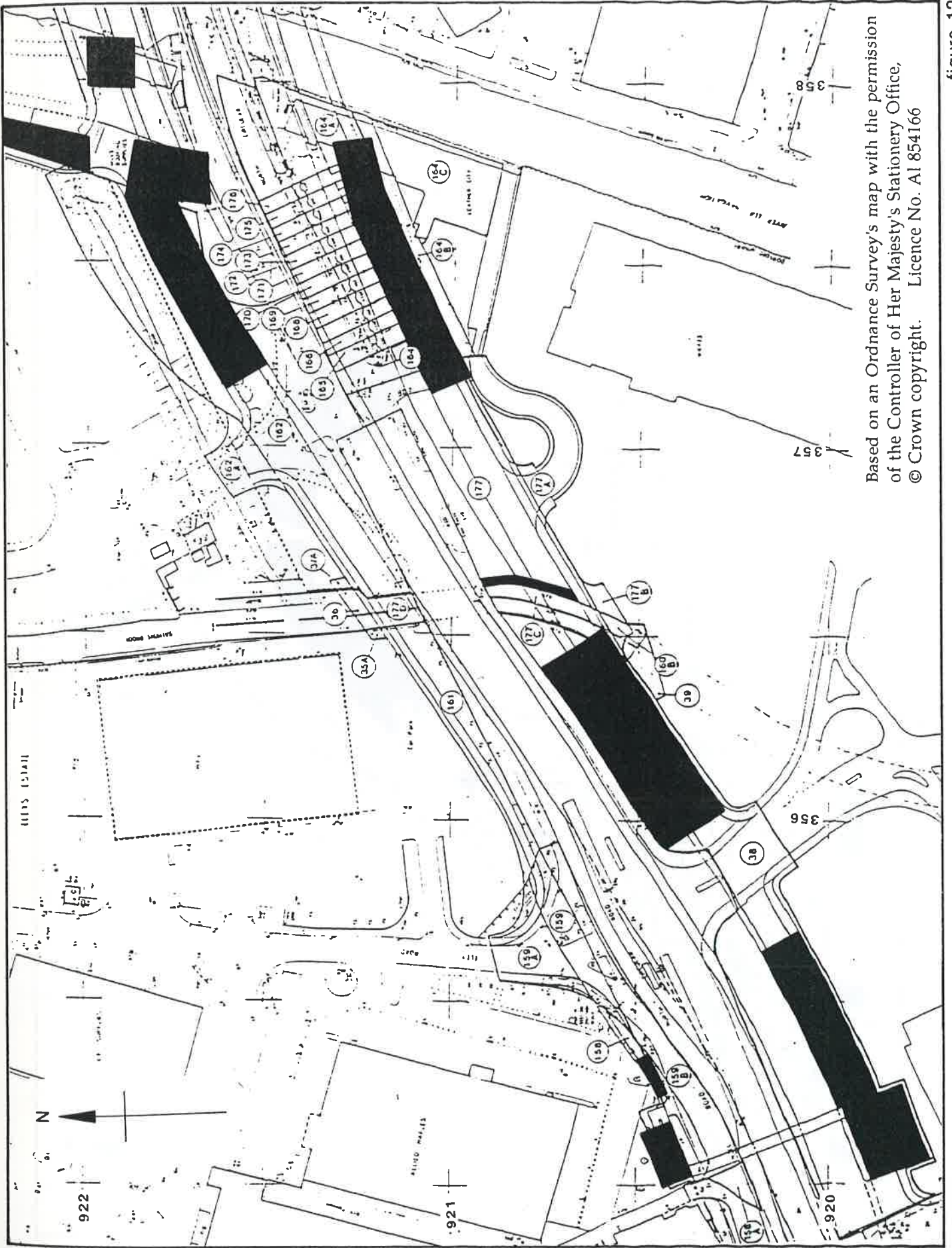
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figure 10

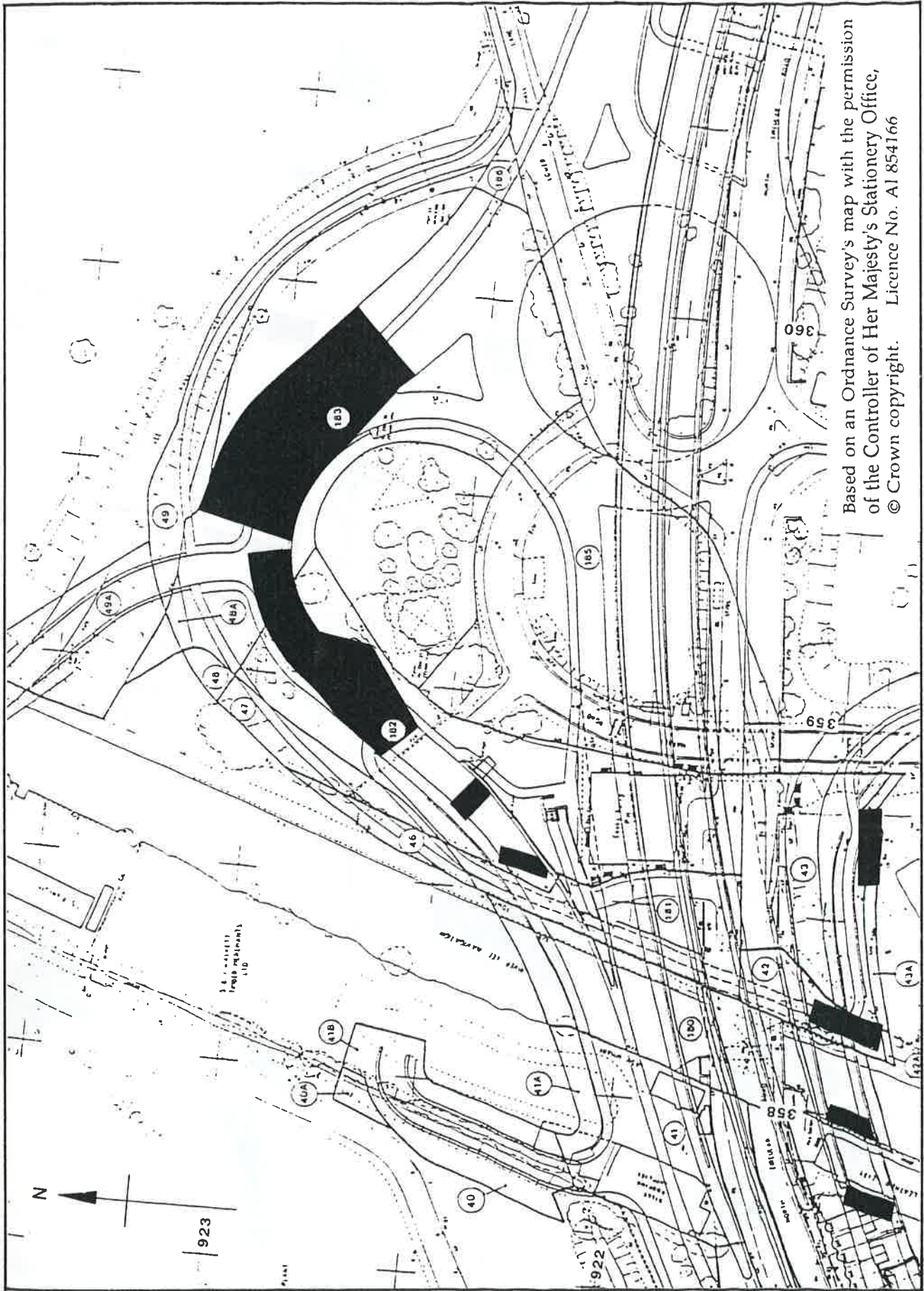


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figure 11

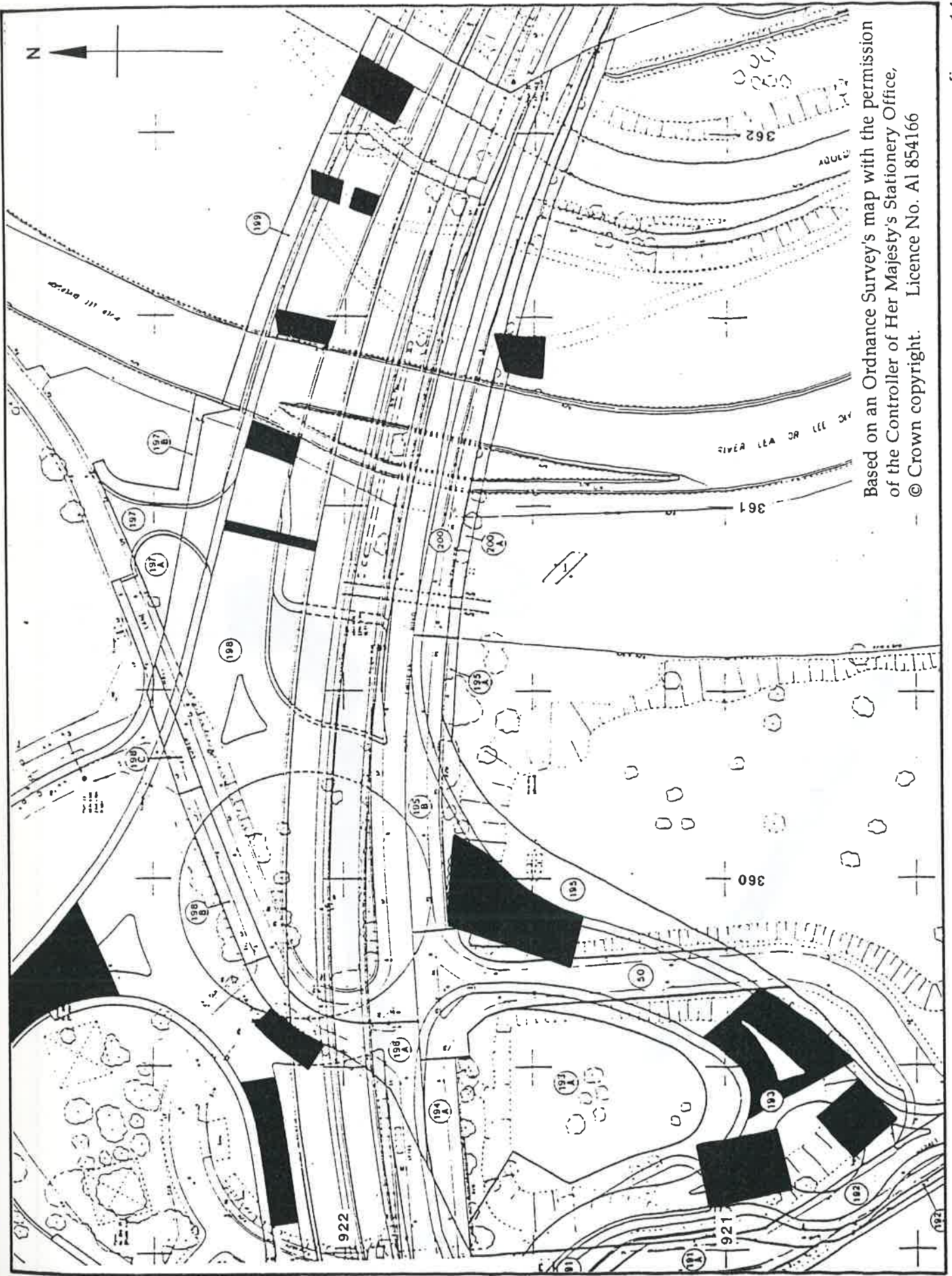


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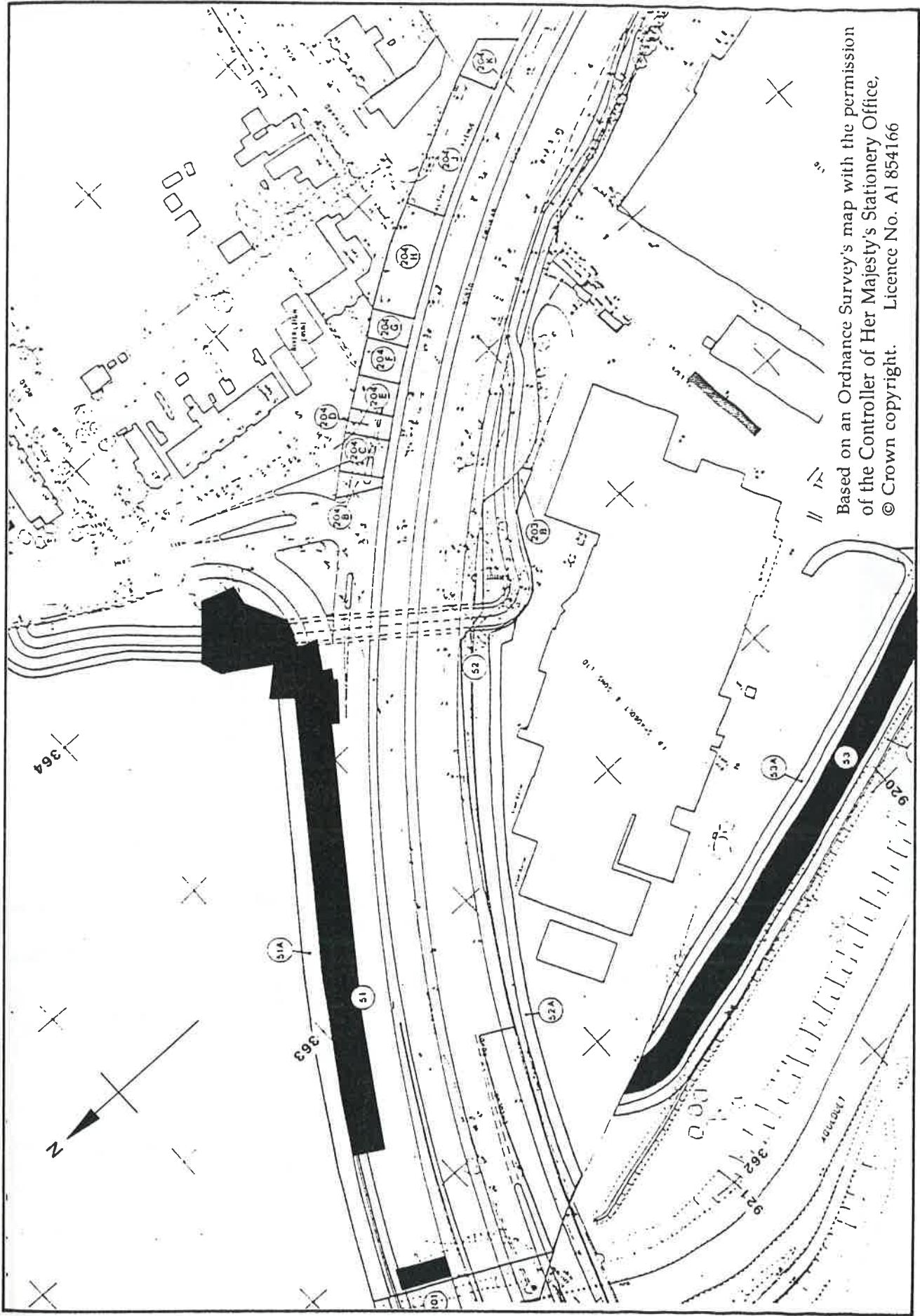
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figure 13



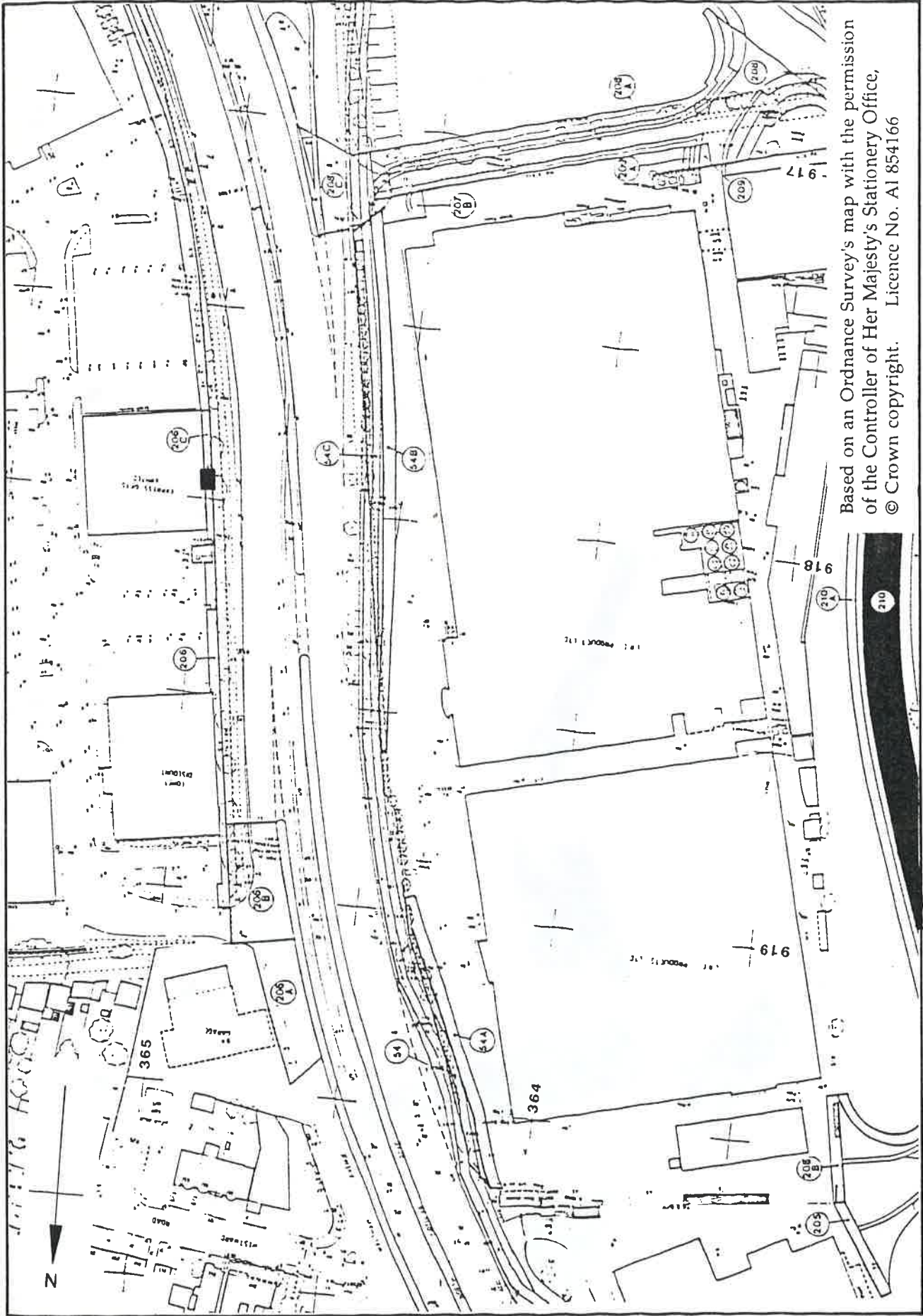
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figure 14



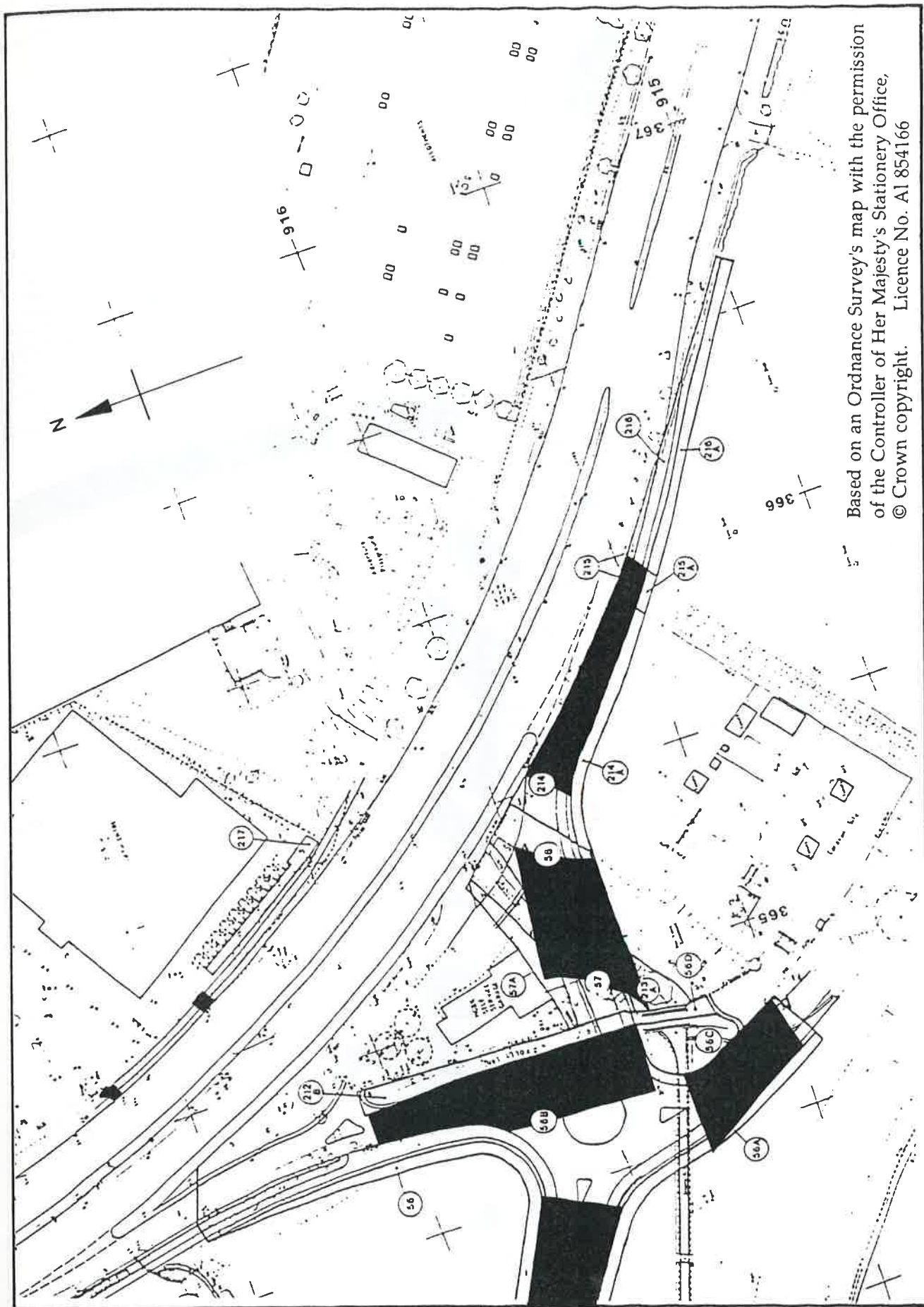
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figure 15



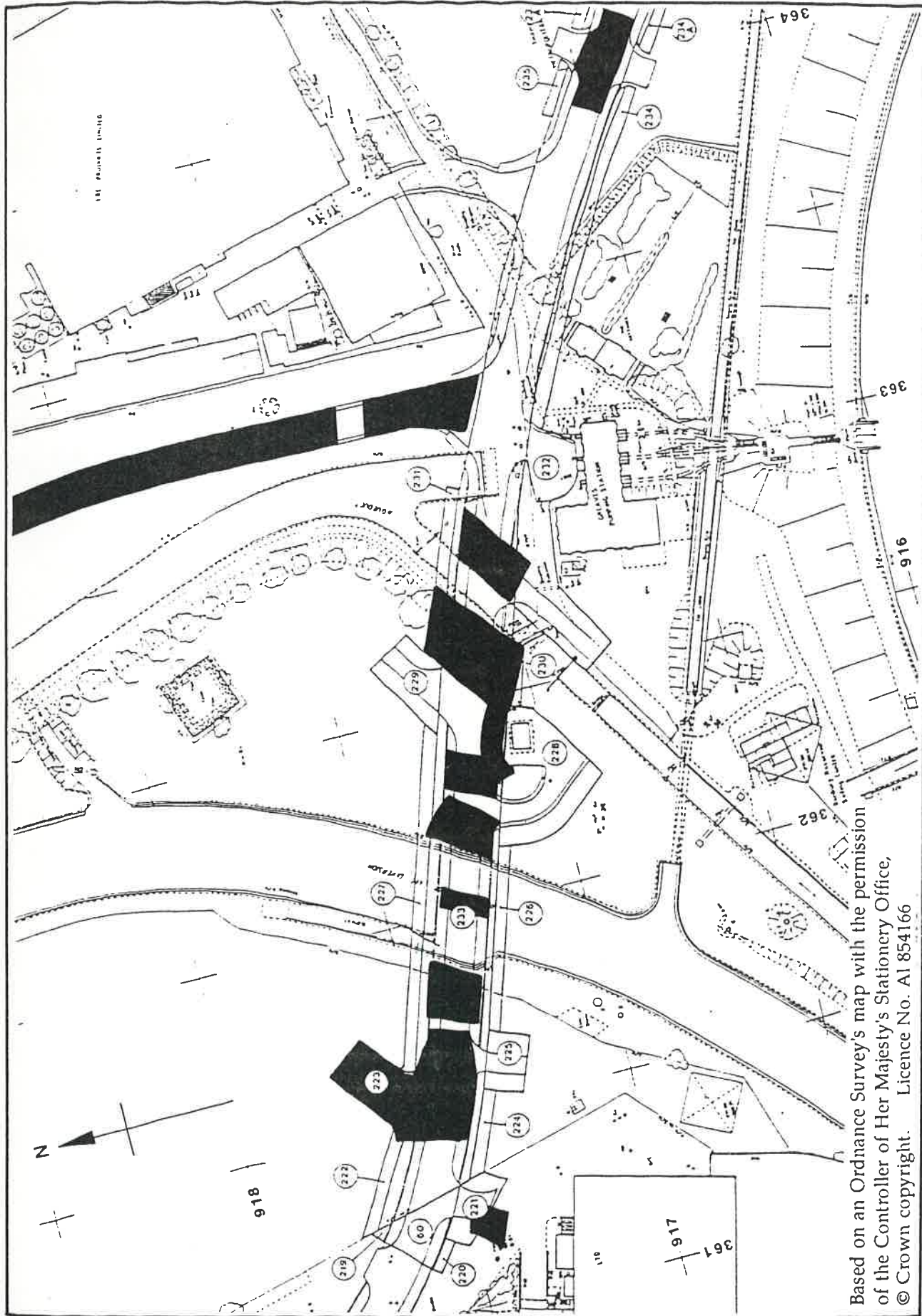
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figure 16



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figure 17



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figure 18



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