

SURVEY AND EXCAVATION AT FORT DUNDAS,
MELVILLE ISLAND, NORTHERN TERRITORY,
1975

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HISTORICAL INTRODUCTION

Fort Dundas was a military settlement established in 1824 in the north-west of Australia (Map 1) and abandoned in 1829. While the intention of this paper is to describe the results of survey and excavation work in 1975, some account of the settlement's brief history is necessary to set the scene. Further details may be extracted from historical sources such as Campbell (1834), Searcy (1905), Lewis (1916), Morris (1964), Hart and Pilling (1968), Spillett (1972), and Spillett (in preparation).

In 1824 the Nineteenth Century pattern of European trade and settlement in South-east Asia was just becoming established. The British, following the successful founding of Singapore a few years earlier, had largely fixed their interest in the western areas; the Dutch were extending control over greater parts of the Indonesian area; the French over Indochina; while the Portuguese were being constrained to curtail their trading activities and settle in a restricted number of areas. Against this background, considering that the major sailing route from India to Sydney was via Torres Strait, and following Philip King's coastal survey of parts of the northern and western coasts of the Australian continent in 1817-1818, a preemptive garrison, hopefully to develop into an active trading settlement was urged on, and accepted by, the British authorities.

The Colonial Office thus deciding that an outpost should be placed on the north-west coast of Australia, sent Captain J G G Bremer, RN in HMS 'Tamar' to Sydney to outfit and direct the expedition. Three ships under Bremer's command, the 'Tamar', the 'Countess of Harcourt', and the 'Lady Nelson' with detachments of the 3rd Regiment, and Marines, with about 40 convicts and some civilian officers, left Sydney in the third week of August, 1824 (HRA, Series I, Vol XI:227-9). A settlement was thus established in what is now the Northern Territory just before the Moreton Bay penal settlement was founded (HRA, Series I, Vol XI:338).

After preliminary investigation of Port Essington and the Aspley Strait area between Melville and Bathurst Islands (Map 1), the expedition anchored in King Cove on the last day of September, 1824. To the south was a low sandstone point, named Point Barlow in honour of

the first commandant, Captain Barlow of the 3rd Regiment, while to the north lay a sandy point having an unfailing freshwater lagoon just behind the low foredune. This was called Garden Point and was destined to become, with varying success, the vegetable growing centre for the settlement, placed on Point Barlow where the elevation of about 5 m provided some defensive aid. Aspley Strait widens at this point to about 3 km and the island in the strait, Harris Island, could be turned into a useful battery commanding both north and south along the strait.

Unfortunately, Point Barlow (Plate 1), though perhaps one of the best protected situations in the area, is also one of the least accessible. Very strong tides flow through the strait which is narrow, tortuous, and often blocked by sand banks. The southern entrance is rather more difficult than the northern, but even this has winding channels and difficult shoals for a distance of 24 km, well beyond the northern most point of land.

As was later discovered the Melville and Bathurst Islanders, known to be hostile to trepangers from the Indonesian area, kept up a discontinuous campaign of harrassment against the settlers.

Nevertheless, the discovery of the lagoon and other freshwater creeks determined the choice of site and a start was made clearing the point with the help of the prospective settlers and the crews of the three ships. By 21 October, 1824 work was far enough advanced on the stockade for the flag to be ceremoniously raised and the site named Fort Dundas.

By the time the 'Tamar' and the 'Countess of Harcourt' left on 13 November there had been completed: the wharf, store, stockade, well, several officer's houses, and 20 cottages outside the rear, that is to the east, of the stockade. In addition at least one cottage was built in the gardens established on the northern point by this date.

All settlers continued construction work into December, but after this time heavy tasks of clearing and preparing for cultivation were restricted to the convicts, for, as a subsequent commandant wrote, "every other individual (had) abundant occupation to make himself by

any means comfortable and secure" (Campbell, 1834:132). Nearly half of the settlers were convicts, though throughout its four and a half year existence the population was never much over 100 people, including the army and marine detachments, various civilian employees, several wives and children, and the crews of the various ships attached to the settlement from time to time.

Most of the rest of this section will be devoted to consideration of the physical development of the site, evidence of which should be picked up in the survey. It would appear that clearing progressed in two major stages, the first mainly for housing and the redoubt, the second for agricultural and protective purposes, with subsequent minor changes up to abandonment in early 1829.

The first stage can be considered to have been substantially complete by Christmas, 1824. To attempt to calculate the extent of this clearing, I have utilised remarks by Campbell (1834:132) that "as the huts were unavoidably erected close to the standing timber, the natives, who constantly hovered through the forest, were extremely troublesome, frequently throwing their spears into the huts and the hospital". If the hospital was on its present site, then the first major clearance covered a roughly triangular area from the junction of the rocky shore of Point Barlow and the mud beach of King Cove, to the small mangrove gully to the south, about 450 m away, an area of about 7.5 ha.

The 3rd Regiment detachment under Captain Maurice Barlow were relieved by a detachment of the 57th Regiment under Major John Campbell in September, 1826 after a two year tour of duty. By this time 21 ha (52 acres) were cleared and another 34.3 ha (95 acres) were felled, but not cleared.

One of Campbell's first tasks was to repair the dearth of information about Melville Island for at the time of his appointment, none of Captain Barlow's despatches had reached Sydney (NSW Archives, Copies of letters to Melville Island : 15, 4/3792, Col. Sec. to Barlow, 22 April, 1826). In this letter Barlow was requested to "prepare and transmit as correct a plan or sketch as you can procure of the Town and neighbouring Country showing the lines and situation of

the several Roads, Streets and Buildings finished or proposed" (ibid:19). Campbell included in his first despatches to Sydney "a plan of the Settlement taken before my arrival by order of Captain Barlow" (NSW Archives No 8054, Campbell to Col. Sec., 10 October, 1826). Campbell also noted that "the box in which the plan of the Settlement and my returns are made of the Teak wood - it works up well but is scarce in the vicinity of the Settlement" (NSW Archives No 8055, Campbell to Col. Sec., 10 October, 1826). This box, the returns and the plan have not been located.

Even as Campbell was appointed the suitability of the location of Fort Dundas was being questioned and the reply to Campbell's October despatches contained instructions for the commandant to assist Captain Sterling who was sent to make a further survey of the coast. It is worth quoting the passage in full for it throws interesting light on the question of the evolution of Fort Dundas settlement (NSW Archives, Copies of Letters to Melville Island: 38-9, Col. Sec. to Campbell, 11 January, 1827):

Captain Sterling, after surveying the Country and Harbours between Melville Island and the Gulf of Carpentaria, will consult with you as to the expediency of removing the present Settlement or forming a second: and until this be determined it is unnecessary to bestow any expense or labours on altering the present Settlement, but from the plan you sent it appears that very great alterations are required. There appears to be no regularity of system whatsoever in laying down the buildings, and unless there be some regular plan adopted in the first formation of a town the attempt at regularity and commerce afterwards must always be difficult. For this reason the Government recommends that whether the present site be continued or a new one preferred, you will cause the Streets and Avenues so to be lined out and marked that the utmost possible regularity may be observed in laying down all Buildings whether public or private.

The only extant map of Fort Dundas during its settlement is dated 24 April, 1827 (Map 2). Comparison of the lettering on this map and the hand of Campbell's despatches, particularly the Roman numerals, suggests that the map was prepared at Fort Dundas. Thus it should incorporate the planning requests made in January of that year, and perhaps note any proposed alterations. That Campbell made suggestions along such lines is evident in a despatch sent from Sydney (NSW Archives, Copies of Letters to Melville Island: 48, Col. Sec. to Campbell, 7 August, 1827): "respecting the Buildings and the other improvements it is not thought advisable to give any men instructions until the expected report of Captain Sterling's Survey of the Coast and the establishment of the new Settlement under Captain Smyth is received". It seems clear from this that the authorities had become thoroughly convinced of the commercial non-viability of Fort Dundas, probably from Captain Barlow, before Sterling began his survey.

But, however convinced Barlow may have been of the bad placement of the settlement he had in fact made very good progress with establishing public buildings, setting the Military Barracks half a mile from the fort and so setting a basis for quite a large settlement. Campbell, following proposals of Barlow's had suggested the erection of a settlement store, a blacksmith's forge and new officers quarters near the new barrack. This new barrack was almost completed when Campbell arrived for the 57th Regiment detachment which accompanied him were quartered there on arrival. The barrack was situated a quarter of a mile from the fort, and thus must be the Convicts Barrack shown on Map 2 (NSW Archives, No 8054, Campbell to Col. Sec., 10 October, 1826). Campbell's map of April 1827 also showed three oblong areas marked by red dashes and the note beside these indicate them to be proposed town blocks. None of these plans was to come to fruition.

One alteration which Campbell did make, however, was the provision of "long roomy sheds, under which the buffaloes were allowed to shelter themselves from the sun" (Campbell, 1834:160). In view of their subsequent successful feral adaptation to north Australian conditions it is of interest to determine when the first breeding herd of buffalo was established. According to Campbell both the 'Lady Nelson' in February 1825, and the 'Stedcomb' in February, 1826 were sent for buffalo and

failed to return. But in September, 1826, just a day before Campbell's arrival, the 'Mermaid' arrived with either 16 or 18 buffalo aboard (Campbell gives two differing figures, 18 in his despatch of 10 October, 1826; 16 in 1834:134). As these are the total numbers of buffalo noted in his census of people and livestock, it may be presumed that the buffalo received in an earlier shipment on the 'Lady Nelson' in November 1824 had not survived. It appears probable, then, that buffalo were first successfully bred at Fort Dundas during Campbell's commandancy.

Apart from alterations to the stockyards and perhaps some essential small building works, the site seems to have been laid out in essentials by Barlow and little altered under subsequent commandants Campbell and Hartley. The 1827 map is therefore established as an acceptable standard of comparison with later surveys.

We may conclude this Introduction with comments on the abandonment of the site. It seems fair to say, as Campbell did (1834: 161-2), that the almost total absence of commercial visitors, largely a result of the extreme awkwardness of the access to Aspley Strait, together with periodic harrassment by the Melville and Bathurst Islanders and their well-known hostility to trepang fishermen from the Indonesian area, combined as causes for moving the settlement.

In early 1829 all useful equipment was taken from Fort Dundas to Fort Wellington at Raffles Bay. This settlement was established in 1827 but was subject to early reports of unsuitability and though some commercial success was anticipated by the contact with trepang fishermen this site too was abandoned later in 1827, the end of attempts to settle the north until Victoria was founded 15 miles up Port Essington in 1838.

THE 1975 PROGRAMME

The field season was financed by a grant made under the national estate policy to the Garden Point Council and administered by the council in consultation with the Department of Aboriginal Affairs, the Museums and Art Galleries Board, and the Historical Society of the Northern Territory. The author was directed to supervise the

work by the Museums and Art Galleries Board.

The main aim of the 1975 programme was to produce a map of the site. Location, recording and surveying extant structures revealed by an extensive clearing programme were major tasks. Surface collections were made during all these procedures. Small archaeological investigations were to be made as time allowed. It was hoped that the well might be excavated but lack of equipment and the dangerous condition of the sides led to this being deferred. Instead, a problem suggested by the existence of two sketches showing different rampart constructions for the redoubt was investigated by excavating a trench across the ditch and bank.

Clearing and Identification of Structures

There are considerable problems in relating the 1827 map to the 1975 survey, and some of these may be due to changes effected during the last two years of occupancy, though it is probable that more of the inconsistencies result from the obscuring of evidence by one and a half centuries of exposure to natural factors.

The greater part of the period of Melville Island was spent with a labour crew averaging three men clearing the area of most habitation with chain saw, axe, root cutters and fire. The clearing was complicated by excessive windfall resulting from Cyclone Tracy and by the unavailability of saw chains in Darwin. Efforts were concentrated on clearing sufficient to allow surveying, and, as much of the undergrowth resisted the original attempt at burning off in late June, large areas were cleared with axes and long handled root cutters (Plate 2).

Labour was available for 41 of the 43 working days spent on the island. During this time a total of 180 man days was worked, 110 of them in clearing alone. The archaeologist worked 49 man days.

Most attention was directed to areas having larger numbers of surface remains as revealed by systematic exploration of the site during which all structures located were labelled and photographed. The initial identification of probably artificial remains was based in the first

instance on archaeological criteria alone, though the 1827 map was consulted when trying to interpret them.

It is clear that the 1827 map is distorted when compared with the shape of the point revealed by aerial photography (cf Map 1 with Map 2), and it soon became obvious that the ground surface is not always easy to interpret.

Bedrock at Fort Dundas is a much fractured, surficially hard, but internally soft, coarse grained sandstone with some concretionary ferruginous shale (Brown, 1906). This comes close to the surface over much of the site and many structures are marked by stones, either piled up along the edges of walls or used to build up small terraces on the downward slope. Other structures are marked by a stone paving or platform, perhaps used to support a floor, yet others are benched into the slope with or without a terrace at the lower side, while a few structures reveal the foundations of properly built walls. Where stone outcrops immediately below a structure or where it was not used in foundations on an earthy patch, the chances of remains of such flimsy structures as were commonly built at Fort Dundas being detected without excavation among the generally loose, leafy surface debris are very small. Except for the fort, and a few oval hollows tentatively labelled rubbish pits, no structures appear to have been excavated except where necessary to level the surface.

Apart from difficulties of interpretation arising from bedrock irregularities, termites and trees caused a number of problems of identification of structures. I distinguished at least five varieties of ground disturbance attributable to these latter causes and labelled at least four piles of earth and stone as structures before later deciding that they were natural. The most common earth disturbance is caused when a tree is uprooted, raising earth in its roots. Subsequent burning or decay can leave a very large mound, often with a give-away hollow to one side. Resulting from the continual, though not necessarily annual, burning off activities of Aborigines in North Australia, many trees become charred through at the base and fall, leaving a small, round hollow in the ground.

Termites attack living trees, eating the core out of many trees, though attacking only the outer wood of ironwood. If a tree has termites in its central core and is subsequently burned, particularly while lying on the ground, a row of quite regularly fractured clay 'bricks' may be formed, often looking like wall bases. Termite nests may also form considerable sized mounds, usually around trees in this area, and thus having a central hollow when the tree finally decays. In general former termite nest mounds are irregularly shaped, distinguishing them from the more symmetrically laid out Fort Dundas remains.

Each area of the site was thus subject to careful scrutiny and identified structures were marked with ranging poles, numbered and photographed. Quite early in this process it became clear that certain undeniable structures were not locatable on the 1827 map, and that on the other handsome features marked on the 1827 map were not appearing in the survey.

Survey

The survey was made in two stages. Once clearing had advanced to such a stage that line of sight surveying could begin, a main datum was established by placing a concrete block with a cross marked on the top 45.9 m from the centre of the bank forming the gate to the fort and 41.7 m from the south-east outer corner of the ditch. As the survey proceeded the level was moved to other natural rock outcrops, each of which was also marked with a cross. These subsidiary datums are so placed that it is possible to locate one and probably two from almost any chosen point on the main part of the site, the exceptions being west of the stockade and on the steeper coastal scarps. Any section of the survey in the area between the hospital and the end of the path below S56 can thus be repeated in future if desired.

The detailed survey was undertaken using a Zeiss automatic level. All points to be marked were discussed with the helpers, marked by ranging poles and the elevation, distance and angles were recorded. The position of the instrument was accurately determined by triangulation to previously surveyed points including the main or such subsidiary datums as were visible.

Structures beyond the main body of buildings were positioned by chaining. A line was set east of the hospital, its origination surveyed in relation to the main datum and D3, and using ranging poles to mark the alignment, the distances were measured by tape. A similar procedure was followed in marking a line east of the well, S11.

Structures

In the following discussion the site is divided into several areas within which the structures are discussed. The numbers are those given in Map 3.

Not all structures are equally clearly delineated, though it is possible that clearance of 10 cm or so of surface debris and humus would enable greater confidence in the outlines observed on the currently uncleared surface.

Structures in the Wharf and Stockade Area:

S1, the wharf. Very little remains of this structure as it was largely removed to Garden Point during the 1940's to form the jetty there. It was originally built from large stones and timbers but was swept away at least once by a cyclone during the settlement's existence (HRA, Series III, Vol V: 772, 803). A hollow (S24) in the scarp edge south of the Commandant's House (S22), is a possible quarry for the wharf stone.

S2, the commissariat store. This is a large terrace immediately west of the wharf whose seaward edge is lapped by king tides. It was large enough to hold two years' provisions. Campbell mentions (1834:134) and the 1827 map shows, two stores - one inland of the other - but it is unlikely that the terrace S2 contained both of these, since it seems barely large enough for one store. The inland slope up to the stockade has not been terraced for a second flat area.

S3 is an excavated area just east of S1 and cut quite deeply into the scarp. It has a raised 'rim' on the coastal side just at king tide line. A small rectangular outline marked on the 1827 map beside the wharf may be this structure.

The 1827 map shows a small building on the edge of the scarp south of the stores, about halfway to the garden fence on the north-west corner of the fort. This was not located.

S4, the stockade (Plate 2). According to my measurements the stockade is 85 m along the west side from centre base of ditch to centre base of ditch across the bastions, but 72.5 m if measured from the intersections of the western ditch base with the extended north and south ditch base lines. The eastern side is 68 m long, the north 57 m, and the south 56 m. Thus the fort is not quite symmetrical, but how much of this asymmetry results from the erosion of one and a half centuries is not certain. The size may be slightly exaggerated as the existing ditch base is used. The excavation across the ditch and bank is discussed separately.

Five, possibly more structures were detected within the stockade. S4a and S4b are the two "houses in the Fort (which) are extremely small and uncomfortable, being only temporary and hasty erections" (NSW Archives, No 8054, Campbell to Col. Sec., 10 October 1826). Campbell suggested adding verandahs to these quarters which were placed at the southern end of the stockade, as indicated on the 1827 map. The small structures indicated in the south-eastern and south-western corners on the 1827 map are also visible as piles of stones, S4d and S4e. Structure S4c is a hollow with the remains of a brick wall on the north and east sides. A piece of slate was picked up within this structure. This building is not shown on the 1827 map though it is noted in an 1824 sketch map in the Mitchell Library, Sydney, although in this early sketch the buildings are mirror reversed. Towards the north centre of the stockade are two stony areas of indeterminate shape, S4f, and S4g. Like so many other structures at Fort Dundas their form would probably be revealed if the surface debris and humus were cleared away over large areas.

Structures in the Stockyards Area:

These are situated along the northern slopes of the site bordering the mangrove swamp.

S5 is about 4 m long and possibly represents a wall of a building.

S6, nearby, is clearly the platform foundation for a building.

S61 is an ill-defined stoney patch south-east of S6.

S60 is a long ridge reaching from near S6 south-east for 40 m, and then turning at a rightangle north-east for 20 m.

S7 is an enclosure with an elongated southern ridge which extends from S6 nearly due east for 50 m. The enclosure is four sided but not square and abuts the upper end of the S12 wall in its north-east corner.

S8 is a ridge parallel to the line of the long S7 ridge but only 18 m long. It juts out from the east ridge of S7, 14 m north of the S7 long ridge.

S12 is the foundation of a wall constructed with outer facings and rubble core, about 45 cm wide. At its upper end the ridge is rather bulkier and may represent the remains of a small building, or the parts of the wall not removed to Garden Point. A break in the coastal rocky rim just west of S12 (which reaches to the waterline) suggests a possible small boatlanding ramp.

Some or all of the above-mentioned structures may be those referred to so indignantly by Campbell (NSW Archives No 8054, Campbell to Col. Sec., 10 October 1826):

"The only private buildings as yet erected here (as in Return II No 1) belong to a Mr Barns. This gentleman has been absent for several months, and I understand has been very troublesome to Captain Barlow; he has enclosed an very extensive piece of ground round his house without any permission whatever, and he has occupied the very best place upon which a Wharf and Store Houses would be built in the Neighbourhood of the Cove, but as he has unceremoniously taken possession, I shall dispossess him as soon as the ground is required for Government or other use."

Earlier in the same despatch Campbell had noted that Mr Barns was master of the schooner 'Stedcomb' which had sailed for Timor on 23 February 1826, and had passed on an account that the 'Stedcomb'

had either been lost or taken by pirates. Campbell later accepted that she had been taken by pirates (1834: 133).

S13 is a large squarish yard, marked by a built-up terrace on the downslope side. It is 30 m east of S7 and quite separate.

S14 is 15 m east again of S13 and separate from it. It has an area of stones at its south-west corner on which a brass shako plate of the 3rd Regiment was picked up (see below). The eastern ridge or wall extends to the coast where it forms the eastern end of a built-up terrace which covers all the area below S13 and S14 and abuts directly on the mangroves.

S15 and S16 are bounded by low ridges and appear to have no dividing wall. S15 is 40 m x 12 m and is aligned east-west, while S16 is perhaps 18 m square but aligned more nearly north-west - south-east.

S17 and S18 are terraces north-east of S16 and slightly downslope of this structure. Below them are two others set of terraces. Running north-east of the terraces below S18 is a 3 m wide, 55 m long terrace which is interpreted here as a path. It was not given a separate number.

It is difficult to reconcile this pattern with that shown on the 1827 map. The area marked E is possibly closest to S17 and S18, though the terraces observed downslope of these are not aligned as that shown on the 1827 map. Similarly, the other outlined 1827 structures do not match up, and nor do the buildings, though S5 and S6 may be the two buildings shown in the enclosure east of the wharf.

South of the Stockade:

In an enclosure next to the gardens marked out west of the fort, the 1827 map marks a large building and a smaller one nearby, connected by paths. The enclosure seems also to take in a hollow in the scarp which is at its steepest and highest at this spot. These structures have been called S22, S23 and S24. S22 is the Commandant's house, marked by a large platform of stones over a terrace at the scarp edge. S23 is a smaller stone terrace 15 m south-east along the scarp. S24 is the hollow already mentioned as a possible quarry for the wharf, S1.

S25 is similar in size to S23 and is an oblong stone platform aligned north-south about 8 m south of the south-east corner of S24. It is not marked on the 1827 map.

S31 is the hospital, area C of the 1827 map. Difficulty was experienced plotting possible remains of the hospital as bedrock is particularly close to the surface. One clearly artificial mound, possibly a collapsed chimney, was plotted and may be the small building marked east of the main hospital on the 1827 map.

Surface clearing in this area, and between S25 and the hospital would be needed to resolve the question of artificiality of the remains.

East of the Stockade:

Stretching north-west of the hospital towards the well is a line of stone platforms or patches which appear to represent the "miserable hovels" first erected for marines and convicts. Seventeen of these (S26, S26a, S27, S40 - S44, S46 - S54) are roughly along the alignment; five are north of the hospital (S28 - S30, S38 - S39); and the area called S45, possibly the building marked on the 1827 map between the hospital and the south-east corner of the stockade, is west of the alignment. Plate 3 shows S41, one of the largest patches, with ranging poles set on either side of a possible wall base.

On the far side of the wall is a pile of stones, S55, which may represent upcast debris. Two smaller structures are also included here, S9 which may be the small building marked on the north of the pathway from wharf to houses past the north-west corner of the stockade, and S59.

Between S54 and S55 is the well, S11, today 3.9 m deep but originally reported to be 30 feet (9.1 m) deep. This is now very much eroded - the sides are undercut and the mouth is now 3.5 m in diameter, nearly twice the original 6 feet.

East of the well and S54 is a patch of stones which may represent the workshop area labelled D on the 1827 map. Its outlines were obscured by fallen trees.

The outermost structure in this group is a small stone patch S56, on the top of the hill above the path east of S18. It is apparently not marked on the 1827 map.

In the gully east of S56 and stretching in a rough alignment around the eastern line of "hovels" are six hollows (S19 - S21, S57, S58, S58a) which are similar to S65 in form and size and may also be rubbish pits.

East of the Hospital:

The convicts barracks, marked F on the 1826 map, appeared to be two structures in 1975. S70 is a long low mound, while S33 is a smaller stone pile possibly representing either a cookhouse or guardhouse. This is the barrack which was nearly complete in 1826 when Campbell replaced Barlow, and was first used to house the 57th Regiment detachment.

Unfortunately the area of the military barracks is obscured by vehicle tracks. Here remain the only free-standing walls (Plate 4) on the site (S62) which are possibly the small building marked east of the larger in area G of the 1827 map. This remaining building is 8 m x 6 m in external dimensions with 50 cm wide walls. It appears to have had a western entrance set flush with the wall and an eastern entrance protected by wind walls extended about 2 m from the sides. Searcy (1905:46) suggested that this may have been a church as several places near it marked out with stones seemed to him to be graves. However, its strength suggests that it could also be interpreted as an armoury.

The small area of stones marked S62a may represent the chimney or cookhouse of the military barracks. The status of the area of stones marked S62b is unclear at present.

I could find no statement of the date of construction of the Military Barrack, though it must have been constructed while Barlow was commandant.

A number of hollows similar to those discovered on the fringes of the main settlement were found here also (S63, S64, S72, S73). Considerable

quantities of glass, china and metal debris were picked up in and around S65, leading to the suggestion that these were rubbish pits, perhaps collapsed as part of their contents decayed.

S71 is a large circular pit having a partial kerbing of stone. It is 1.32 m deep and 8 m in diameter. Its regularity would argue against its use as a quarry, its width and shallowness against its use as a well. Could it be a sawpit? A small circle is marked in the appropriate spot on the 1827 map.

Various stone alignments were noted east of the military barracks, though most appear to be natural and do not appear on the 1827 map. At least one gap in such an alignment is filled by a squared corner of stones (S64) and this may represent a fence or other enclosure.

At the eastern-most edge of the site, at the end of a fenceline which appears to follow a natural outcrop, is a rectangular enclosure marked on the 1827 map with internal dotted paths, similar to those shown for the garden near the fort. Parts of the eastern and southern walls of this enclosure were recorded (S74). S74 is about 760 m east of the hospital, S31.

Three low mounds over 120 m east of the military barracks (S66, S67, S68) were marked as possible graves. They are low, covered with stones and relatively narrow for their width. Close to the standing wall in the military barracks area is a patch of white stones (S69) which are not of local origin. Until it burned out a few years ago this was headed by an ironwood tree on which a cross was carved. Local folklore reports that this is Mrs Hicks' grave. No sign of other graves in the vicinity was noticed though records indicate that about 20 people died at the settlement during its existence.

East of the Well:

Relatively few features were detected along this line. The 1827 map shows three small enclosures beside the swamp east of E, but these were not located. Some very difficult to interpret variations in the ground surface, recorded as S34, S35 and S36, may coincide with the

square marked at the junction of the paths in the second red lined rectangle on the 1827 map but more work is required to clear undergrowth in this area.

No signs were noted of the three red lined rectangles marked "the parallel red lines mark the ground for building upon" and it seems that these may have been a planning addition never executed.

The line east of the well was continued east to the point where the northern swamp terminates against a ridge which marks a natural boundary to the site, approximately where the northern boundary fence is marked on the 1827 map.

Structures Beyond the Bordering Fences:

Various attempts were made to locate sawpits reported as lying 1 mile (Morris, 1964:7) and 3 miles from the settlement (Everard, 1912:74). Two searches by four people each occupying half a day did not cover much land and as it is clear from contemporary reports that timber was cut at considerable distances from the site, and that parties were commonly sent into the bush for various purposes (Morris, 1964:9, 10) the location of this evidence of activities at Fort Dundas must be a matter of chance. Extensive enquiry into the matter among the people of Garden Point produced one report of a large pit in the general area, but its discoverer had left before he could show it to us.

A search was unsuccessfully made for the well supposedly located near the Johns River (Map 2), a small creek entering the sea near the present Garden Point barge landing. Other wells may have been located near the swamp at S74 as this is marked into possible garden beds on the 1827 map, and at the inland end of the swamp north of Fort Dundas as this is a matter of local tradition.

No sign was detected of paths and tracks belonging to the settlement period with the exception of the small terrace or path below S56.

No visible trace remains of the settlement gardens at Garden Point. Indeed, Searcy (1905:46) could find no trace of them by the end of

century, but they would in any case have been eradicated by activities associated with the camps of Japanese pearl fishers in the 1930's, and with the Mission which preceded the present settlement, both of whom used the lagoon's water supply.

Between the lagoon and the east-west airstrip traces can still be located of the brick kiln, though today reduced to ground level. Pilling carried out some work in this area in the 1940's (Hart and Pilling, 1968:98-99, and A Pilling, pers. comm. to J Allen, 12 April 1967).

Unfortunately, no opportunity has yet arisen to examine Harris Island in Aspley Strait. This was supposed to have been fortified though local reports put the landing place and other stonework at the southern end rather than at the north from which it might have been expected a threat would come. Luxmore Head, which has the northward view obscured from Fort Dundas and considerably greater elevation, is reputed to have been a lookout, but was also not examined.

Comparison of Maps

The survey data was converted to a map at a scale of 1:1000 and plotted to the nearest half metre and half degree. Contours have not been plotted. The conversion of this map for publication was accompanied by the sketching of the 1827 map to the nearest similar size, and this has greatly facilitated both comparisons and confusion. Thus it still proves difficult to locate structures exactly from one map to the other. Furthermore, the proportions are different. Thus if the well, wharf and stockade are aligned then much of the coastal areas on the 1827 map are wrong, as are the outer areas of the site. However, if the well is retained as the major point of coincidence between the two maps, then it may be noted that the distances between the well and the eastern enclosure (S74) are quite closely comparable, even though S74 appears much smaller on the 1975 map. But it must be noted that the rough enlargement of the 1827 map to closest fit with the 1975 map is not based on an enlargement to the same scale. Thus measurements made with dividers on an actual

sized copy of the 1827 map seem to show that the 1827 mapped structures are considerably exaggerated in size over the measurements obtained in 1975. Calculations using the scale on the 1827 map give the following results:

- an exaggeration of the distance from the hospital (S31) to the convicts barracks (S70) of 36%;
- an exaggeration of 20% in the distance from the hospital to the military barracks (S62);
- an exaggeration of 12% in the distance from the hospital to the outer enclosure (S74).

Thus we have a situation where the 1827 map can be enlarged to a quite reasonable proportional fit with the 1975 map, but yet appear to be quite wrong when the 1827 scale is used to calculate intra-site distances.

Comparison of the 1827 and 1975 maps with air photographs shows that the 1975 map accords better with the topography, and it might be a reasonable assumption to compare the 1827 map with military battle maps rather than topographic surveys.

It is not suggested that the 1975 map is completely accurate; indeed it is only to be expected that surface clearance around the remains of structures will reveal the outlines more exactly. I would expect considerable alterations to the map in the stockyards, hospital and military barracks areas from such clearance.

Excavations

A small trench was excavated at right angles to the ditch and bank to determine the ditch profile, the method of rampart construction, and in the hope that the original ditch and bank profile might be reconstructed.

A 2m wide trench (Plate 5) set out in 2 m squares labelled Q.3 to Q.10, was excavated without baulks across the ditch and rampart of the stockade on the east side between the gate and the north-east corner as shown on Map 3. Excavation proceeded by squares and by 10 cm spits

which followed the contour in the ditch, but were horizontal on the bank.

The ditch was reported to have been originally 10 feet deep, though the existing vertical depth of less than 1.5 m rendered it unlikely that this was a vertical measurement unless extremely narrow at the base. Figure 1 shows the profile as excavated, and the only way a depth of 10 feet can be obtained is a measurement up the slope of the outer side of the ditch. However, it is 10 feet deep measured this way.

The material filling the ditch appears largely to have been derived from the collapse of the bank. Within Square Q6, covering the centre of the ditch, a large number of stones were exposed. These lay mostly over towards the outer edge of the ditch, forming a stone barrier reaching from just below the present ground surface to just above the base of the ditch. Differing deposits were noted on either side of this barrier, that on the outer side being finer, with fewer stone chips and charcoal flakes, while the material on the inner side was coarser, with many stone chips and quantities of charcoal. This material (Layer 2) was quite loose (Figure 1) and it can be suggested that at some point in this area of the rampart, there was a major collapse of the bank into the ditch when stones and timber gave away and the rubble fill slid in behind.

This material does not reach the base of the ditch, which is occupied by fine sediments with little charcoal and no stone (Layer 3). It is suggested that these were deposited by water action during the life of the settlement. Evidence for lack of clearing the ditch base is presented by the find of a large part of a round bodied green glass bottle about 10 - 14 cm above the base of the ditch, lying as if it had been tossed empty over the rampart (Plate 6). It is the most complete glass object found during the 1975 season. In a crack in the sandstone base of the ditch a small and very corroded key was excavated. It appears to have had a hollow barrel and no wards and was about 3 cm long, possibly a handcuff key. As it is so near the base it was probably lost during the construction of Fort Dundas, and as this was the beginning of the 1824-1826 wet season would soon

have been covered by standing water and a layer of silt.

The excavation of the base of the rampart was conducted in two parts. After the removal of the first horizontal spit of Q8 revealed a line of smallish stones along the crest of the bank and below it, to the east, a large burnt log (confidently identified by the excavators as ironwood)(Plate 7), the bank was excavated by removing the southern half of Q8 and the northern half of Q9, giving a continuous centre section.

The southern half of Q8, the outer face of the rampart, revealed the in situ remains of four horizontally laid ironwood logs. These were 20 - 20 cm in diameter and chocked up with stones 10 - 15 cm across. It is apparent that the base at least, and probably the whole of the rampart was built from horizontally laid logs held together with a large part of the materials excavated from the ditch. This acceptably resolves the question raised by the existence of two 1824 sketches, one showing the rampart with vertical posts, the other showing it with horizontal logs in favour of the horizontal, but our excavation was not wide enough to allow a determination of whether the horizontal logs were held in position by vertical stringers or by their own weight.

Excavation was then shifted to the inside of the fort and Q10 and the northern half of Q8 excavated. Q10 revealed a soil (Layer 5) under the surface debris at the western end and this soil was followed east under the bank, suggesting that this was the original surface on which the bank was constructed. The inner edge of the bank at this point appeared to have been shored up with large stones to a height of 30-50 cm. Behind this kerbing the fill was pure sandstone chips (Layer 4), the matrix being decomposed sandstone with no added charcoal or earth. This extended to the line of stones along the crest of the rampart.

An interpretation of this situation would be that the inner side of the rampart had an elevated walkway composed of materials excavated from the ditch and perhaps used to support the base of the rampart proper.

I shall now turn to the question of the construction of the stockade. At the point excavated the ditch was cut into sandstone base rock (Plate 8), taking advantage of its considerably fractured nature but showing some trimming marks along the edges of the base, probably made by picks. Elsewhere on the site this sandstone is quite soft once the outer patina is penetrated, so that the excavation of the ditch is not likely to have been particularly difficult. In the excavated section support of the sides by bricks was not needed, and this may have been true for most of the rest of the ditch. However, if, as is probable, the rampart logs were severely attacked by termites then brick reinforcing of the rampart may well have been resorted to at a later stage.

In the attempt to suggest a reconstruction of the original rampart profile I have calculated the volume of material excavated from the ditch. At the point of the excavation the original ground surface appears to have had a slope of 1 in 30 up to the east. Approximately ten cubic metres of material was removed from each 2 m length of ditch, mainly as sandstone lumps or chips. The material in the bank and ditch today is about 8.5 cubic metres for each 2 m length, so that the shortfall is about 15%. The ditch total is 3.5 cubic metres but of this 0.5 cubic metres is on the outer side of the stones in the ditch and can be considered to have come from the glacia. The bank has about 5 cubic metres for each 2 m length. If the bank was originally about 25% wood, and this may be a conservative estimate, then the total bank volume per 2 m length would have been $5.0 \text{ m}^3 + 3.0 \text{ m}^3 + 2.0 \text{ m}^3 = 10.0 \text{ m}^3$. Allowing for some material from the ditch to have been spread over the outer bank, this still leaves us with 15 - 20% of the excavated materials unaccounted for. Most probably this was removed for building purposes.

? We are thus left with the picture of a more or less flat bottomed ditch nearly 2 m wide at the base and 1.8 m in vertical depth. The slope up the outer face of the ditch is 3.5 m, close to the 10 foot depth originally reported. A line extending the slope of the rampart to 5 m (16 feet) was sketched on the excavation section and it was assumed that the inner face of the bank above the supposed elevated walkway was nearly vertical. The resulting outline was then measured

? 3.05

for its equivalence to 10.0 m³ per 2 m length of ditch. A possible reconstruction is shown in Figure 2. Bremer wrote to Croker on 11 November 1824: "It is composed on Timber (of immense weight and Solidity) in layers five feet in thickness at the base, the height of the work inside being six feet, the ditch ten feet deep and fifteen wide" (HRA, Series III, Vol V:772), and while there may be some doubt as to the placement of the logs in this reconstruction and indeed queries about the relative volumes of wood and stone in the rampart, the profile and calculated volumes accord well with both descriptions and information gained from the excavation.

Surface Finds

Most of the artifacts picked up on the site came from within or around the edges of identified structures, though the spread of items was more general in the stockyards area. The vast majority of these items are pieces of green glass, some from round, some from square bottles. Occasional pieces of stoneware bottles or storage jars were recovered, and a smaller quantity of china and glass from clear bottles or jars. Pieces of slate were picked up near structure 4e within the stockade and near S70, the Convicts Barrack. A large number of pieces came from the area of the Commissariat Store (S2), particularly along the tide line, and several bits were picked up on the rocky shore where the wharf (S1) used to be. Finds made within the excavation have been briefly commented on but the analysis of the bulk of the finds remains. Pilling mentions two unpublished papers on the ceramics (pers. com. to Jim Allen, 12 April 1967).

3rd Regiment Shako Plate:

The most important surface find was a brass shako plate of the 3rd Regiment, stationed there with Captain Barlow (Plates 9 and 10). It was picked up on the stony area at the south-west corner of S14 in the stockyards area of the site in a heavily blackened condition.

Cleaning took some time and began with washing in soap and water. Acetone proving ineffective for further cleaning the badge was examined under a microscope and the back scraped gently with dental probes.

This established the superficiality of the black coating, and it was thereafter removed using a fibreglass eraser. Analysis of this coating material shows it to be basically copper in the form of an oxide, impregnated with 8 - 10% carbon (probably resulting from intermittent bushfires) with 0.4 - 0.6% zinc, and 0.3 - 0.4% iron. No trace of gold was found, suggesting that it was not an officer's gilded shako plate.

Even before completion of final cleaning it was apparent that the plate had once had an extension at the upper edge which had been broken off by bending until the metal split. The extension was most probably in the form of a crown and its detachment marks a ritual defacement, preventing subsequent misuse.

The plate itself is domed, the words PENINSULA above the dragon awarded by Elizabeth I and DOURO below, indicating battle honours won during the Peninsula Campaign (1809-1812). The 3rd Regiment was subsequently awarded other battle honours for this campaign and it seems likely that the badge was discarded when Major Campbell relieved the garrison at Fort Dundas, and no doubt brought new uniforms and accoutrements for the 3rd Regiment detachment.

The plate was made by stamping between dies, the concave die being crisply marked, the convex one probably just rounded. No sign of wire loops or other attachment devices are detectable on the back, and it is unlikely that bushfires would have been hot enough to melt any such held on by solder. This absence is most unusual in shako plates of this period and it is probable that the plate was attached by applique methods to a cloth backing which was then sewn to the shako.

This plate is at present unique. Its issue is unknown to the National Army Museum, London, both in the honour it displays and its lack of attachment loops (S Wood, pers. comm. 20 September 1976.)

DISCUSSION

From the historical and archaeological research combined here, it is clear that most of the major construction work at Fort Dundas was completed between September 1824 and September 1826. Though Campbell was initially of the opinion that the Melville Island settlement would remain the main settlement in the north and formulated plans for further buildings, he was directed not to undertake new work and by late 1827 had so changed his mind that he rehearsed the objections to the site in despatches to the Governor of New South Wales (1834:161). Except, therefore, for improvements to the stockyards and perhaps the building of some cottages, the map of April 1827 ought to represent fairly accurately the situation at the site's abandonment in early 1829.

It is then that the 1827 and 1975 maps should, allowing for surveying inaccuracies, be nearly identical. Though they agree in major details they disagree in many minor ones. A contributing factor to this lack of detailed coincidence is the accumulation of one and a half centuries of leaf mould, combined with the action of termites, roots and cyclonic storms.

That so much was accomplished just by burning off and scrub cutting is an indication of how much more could be achieved by a programme of extensive excavations of large areas to a depth of about 20 cm.

When and by whom such a programme could be conducted are matters for conjecture. In the meantime, however, the site, owned by the Tiwi of Melville Island, remains protected by its island situation, by the disinterest of the owners, and by the lack of any pressure from Darwin for tourist visiting rights. Nevertheless, almost all visitors to the island are taken to Fort Dundas and a well-marked vehicle track passes by the Military Barracks to the Fort. It would seem, therefore, that a plan for the protection of the site is necessary. Apart from the possibility of persuading the owners to declare the whole peninsula of Punata as a reserve, some alterations to the track layout to avoid structures to which it at present comes too close, and the provision of barriers to prevent further tracks

being made, are required. It would also be desirable that the state of clearing reached in 1975 be maintained to prevent re-growth of large trees. Metal labels for the structures should also be provided.

To conclude, this paper presents a report of a stage in the continuing study of Fort Dundas; much remains to be done, both historically and archaeologically, and if nothing else the 1975 survey demonstrates that Fort Dundas would be well worth a continuing research programme. It is also of considerable interest to the general public (and perhaps could become a viable tourist attraction). Indeed, without much difficulty an archaeological and developmental programme could be combined. The generous grant of the interim National Estate programme, of which the 1975 season was the first step, deserves to be backed up by awareness, protection and further research.

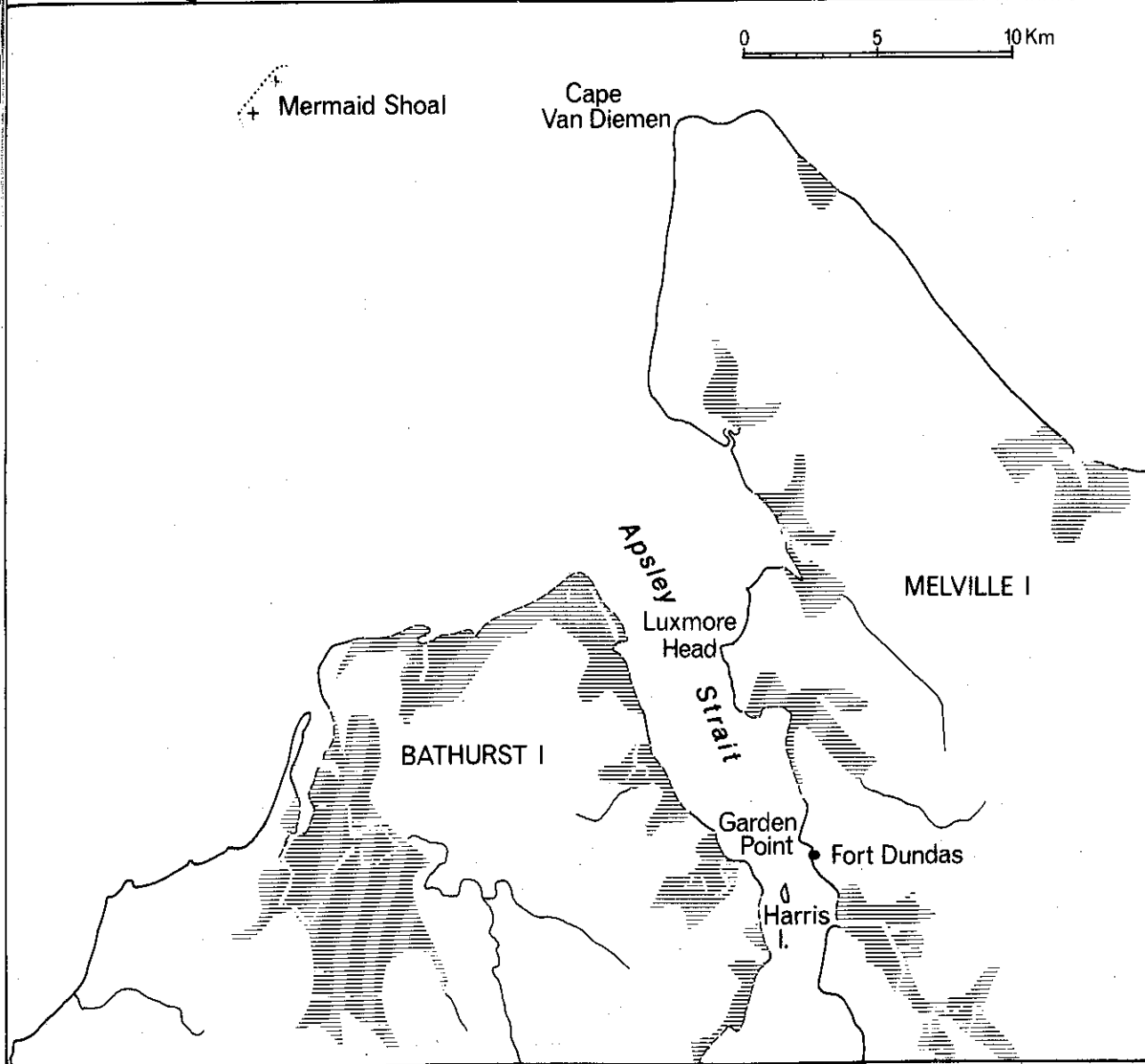
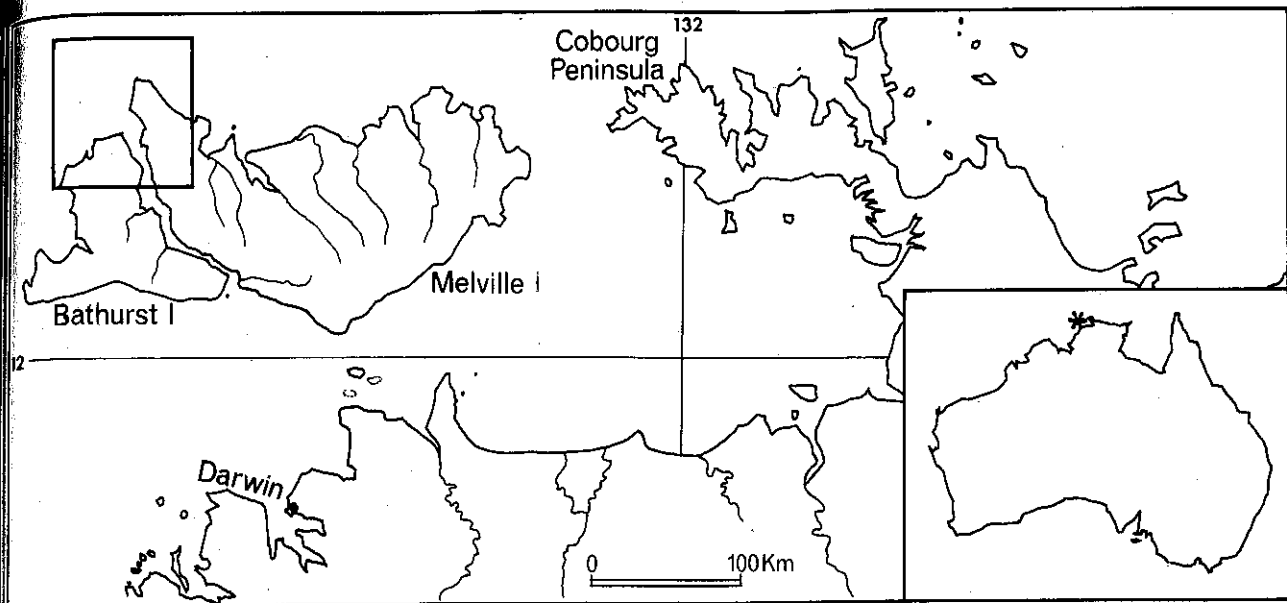
ACKNOWLEDGEMENTS

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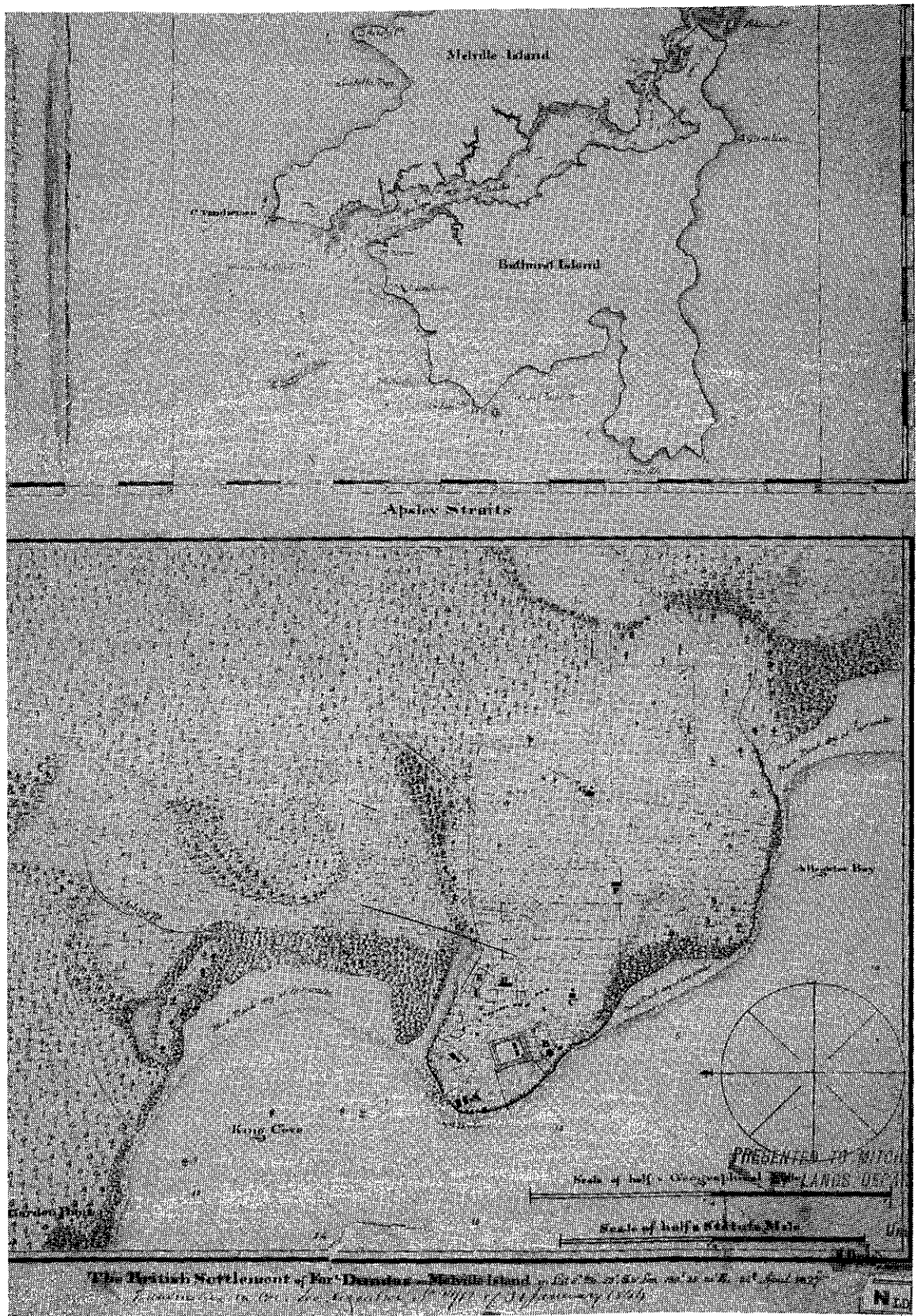
I would also like to thank Mr P Spillet for his help in gathering historical information, and the Australian Survey Office, Department of Administrative Services, Darwin, for the 1975 map. Winifred Mumford, Department of Prehistory, Research School of Pacific Studies, ANU, drew Map 1, and the photographic plates were provided by the Museums and Art Galleries of the Northern Territory from my photographs, except for the pictures of the shako plate taken by Mr A Dartnall and provided by the Australian Information Service. Colonel P C Gration, OBE, Directorate of Engineers, Department of Defence, Canberra, provided interesting information and discussion of the possible antecedents of the construction of the redoubt at Fort Dundas, but alas this remains an unsolved problem.

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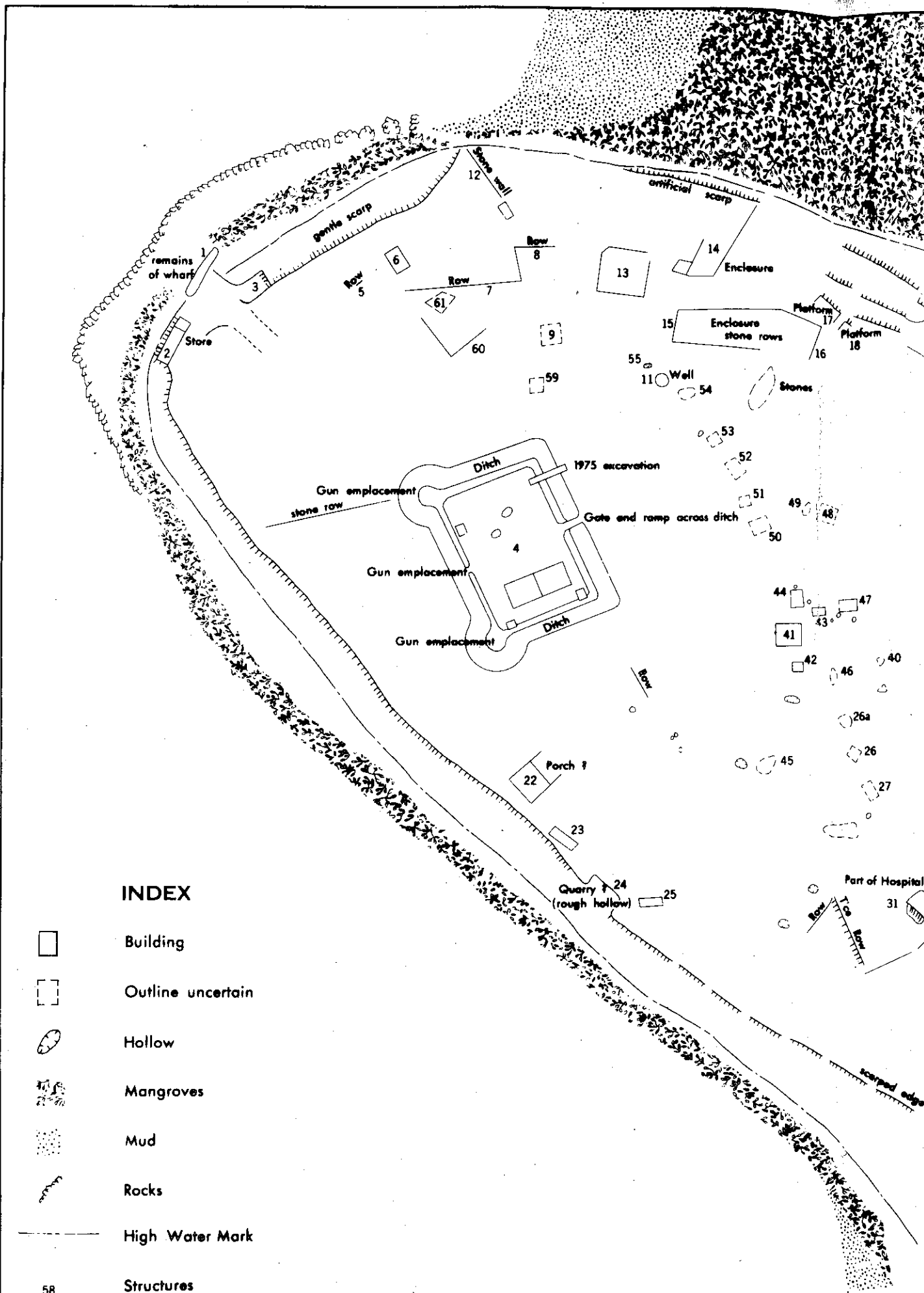
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




Map 1

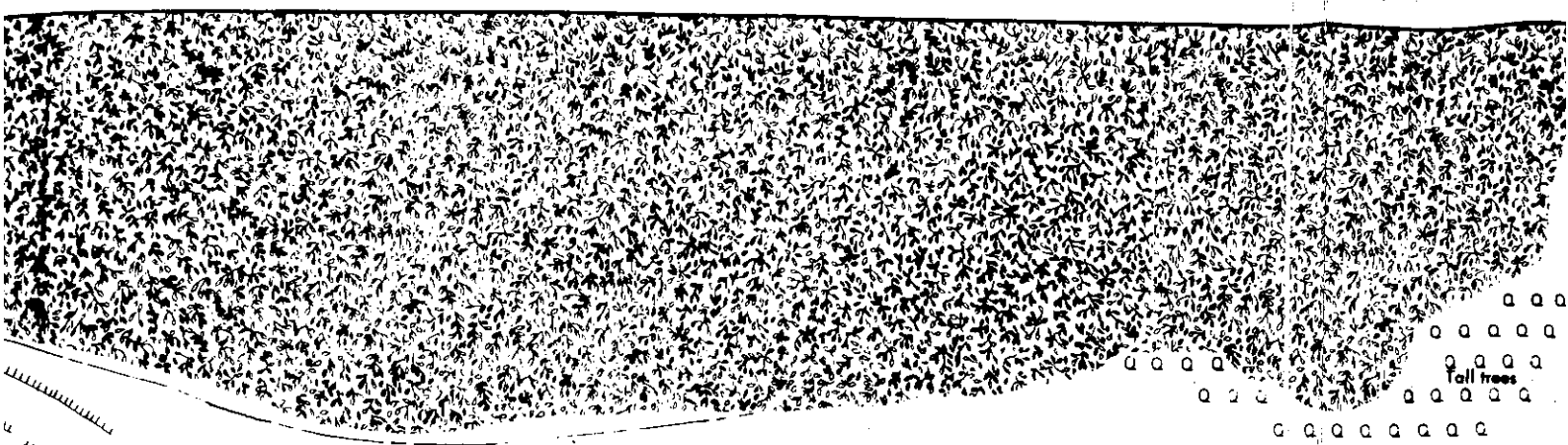


Map 2

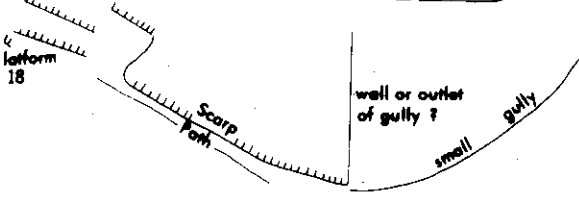


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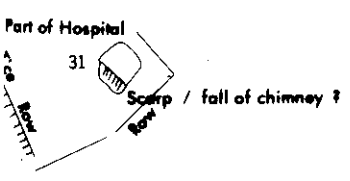
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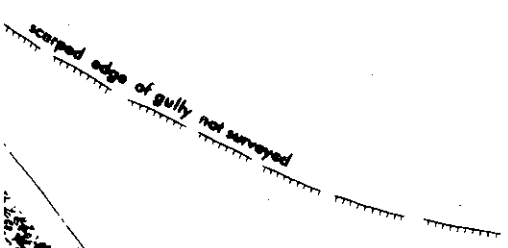
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70 Convict Barracks

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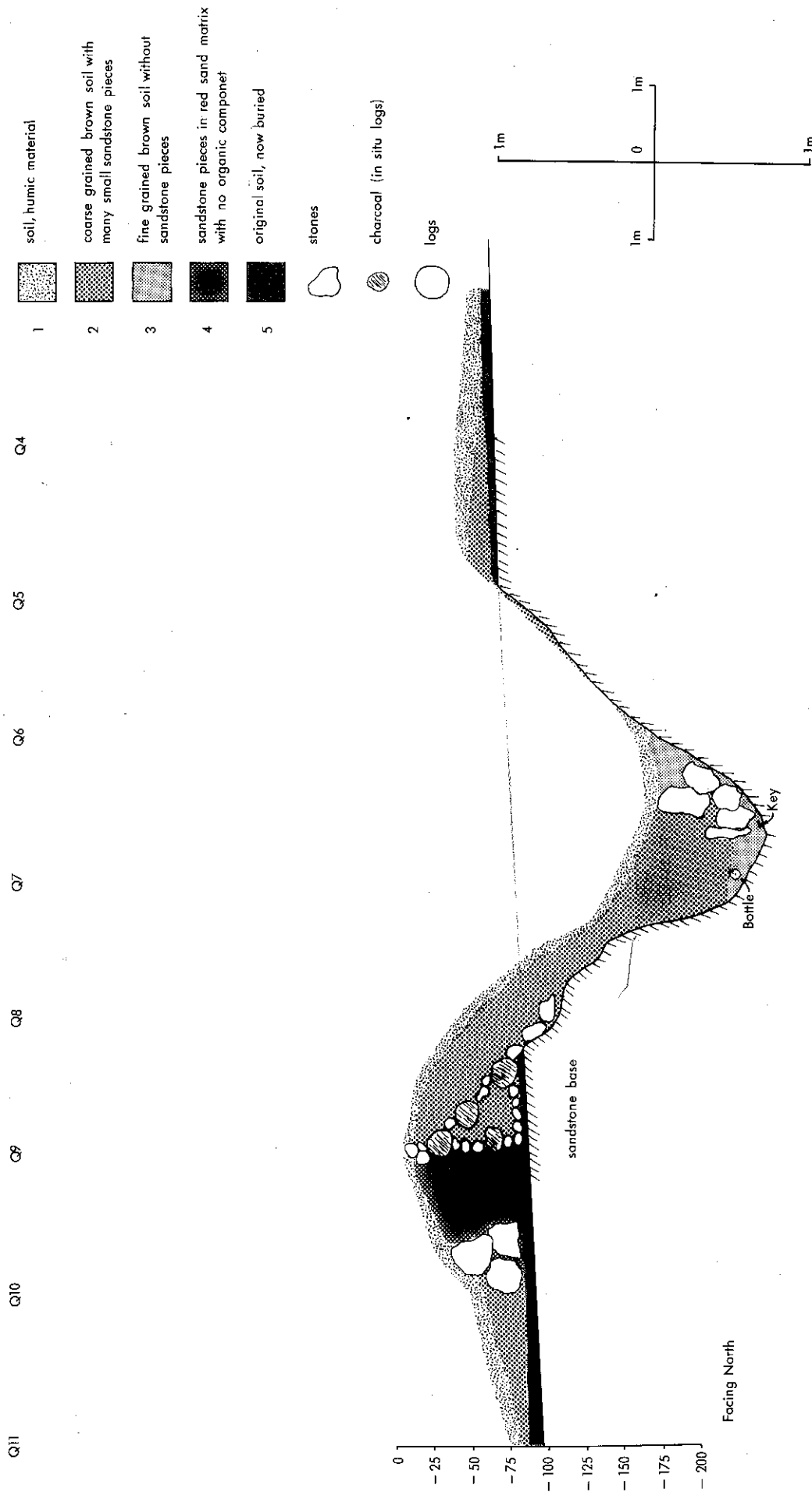
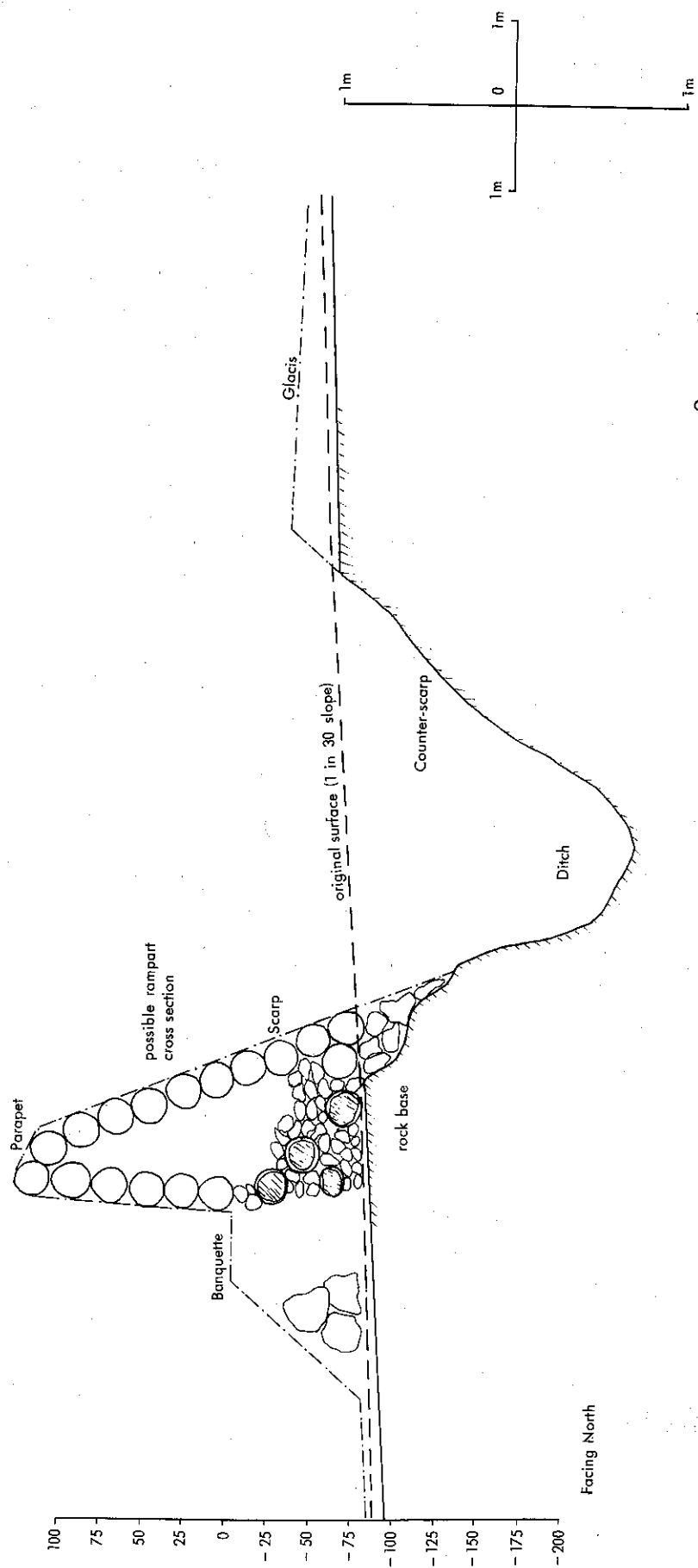


Figure 1

Prepared by the Australian Survey Office,
Department of Administrative Services,
Darwin N.T.,
March 1976

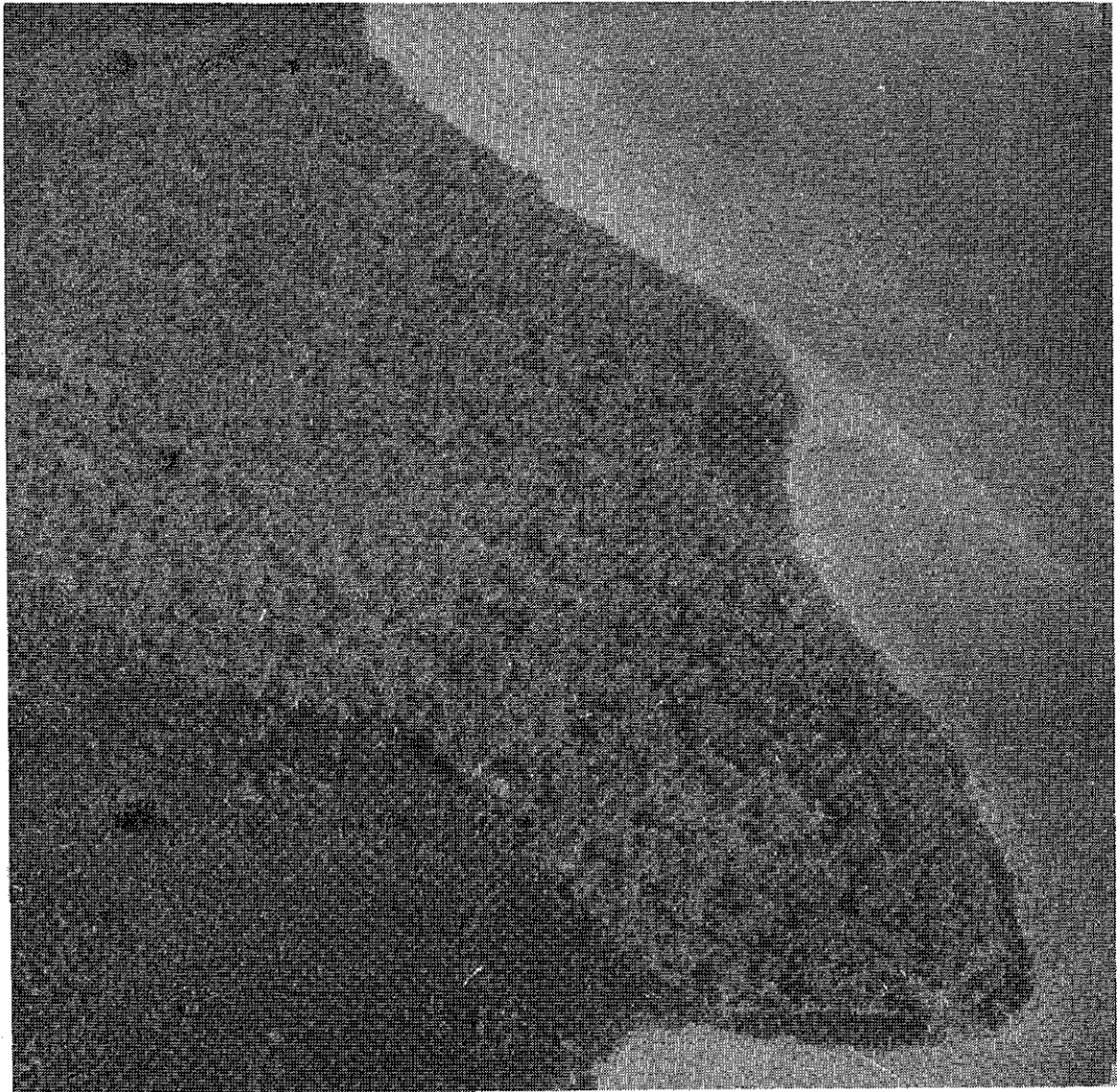
Q11 Q10 Q9 Q8 Q7 Q6 Q5 Q4 Q3



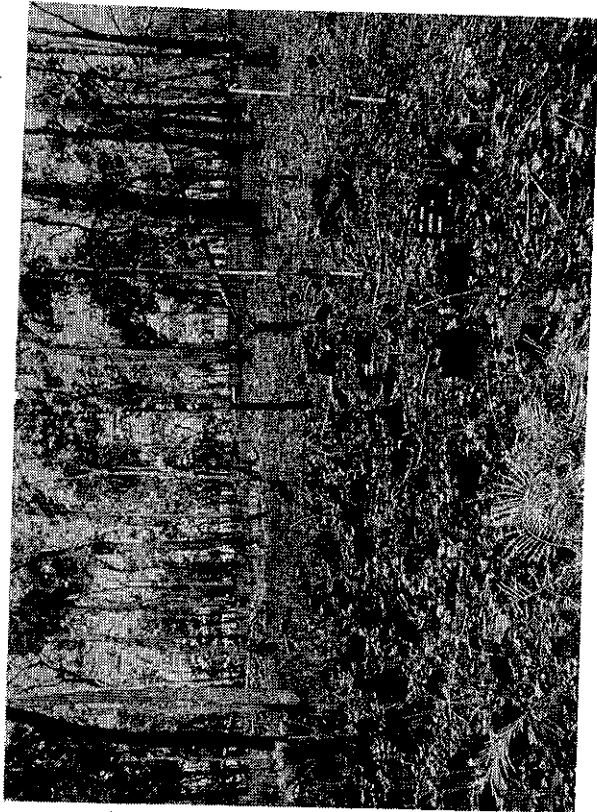
Cross-section —
 Reconstruction of Original Fortification
 Fort Dündas

Figure 2

Prepared by the Australian Survey Office,
 Department of Administrative Services,
 Darwin N.T.
 March 1976.



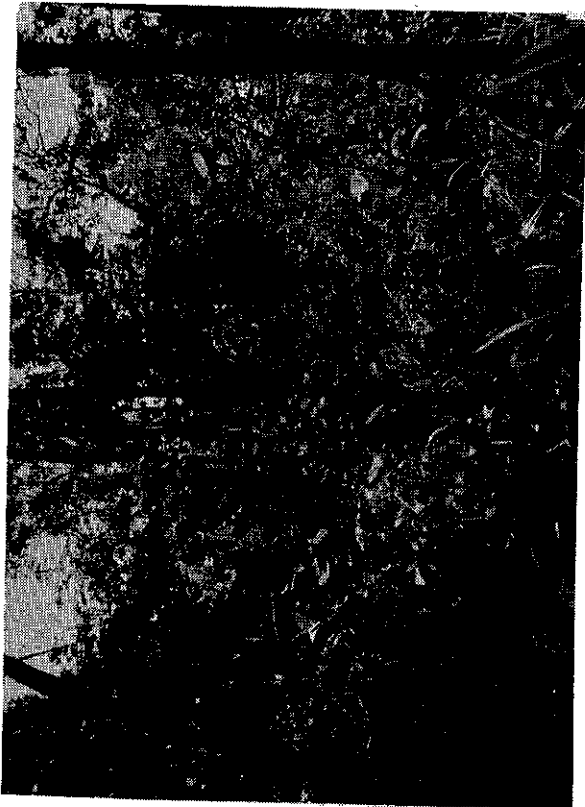
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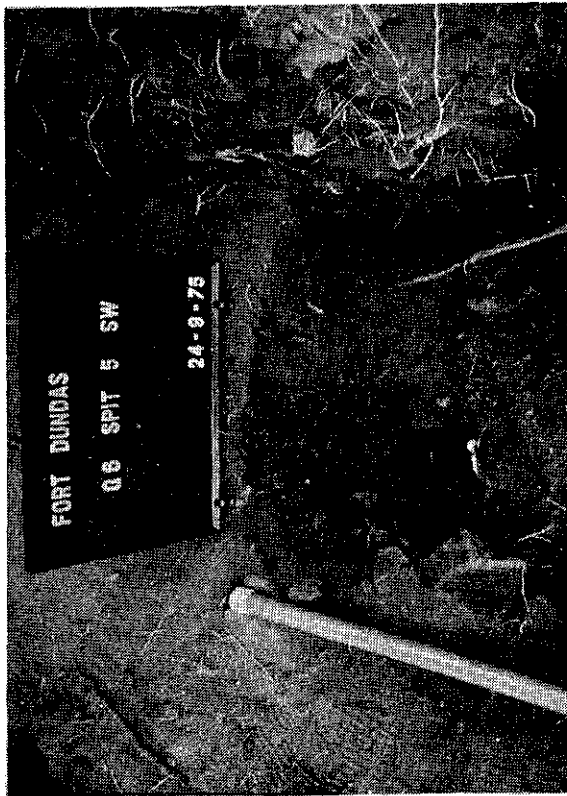
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