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Title of Paper

Co-Ordination Between Defence  
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Abstract

The need for an effective transport co-ordination system between defence and the civilian transport infrastructure has been a subject of discussion for a number of years. Such co-ordination would permit the most efficient utilization of civilian transport resources in support of defence operations while, at the same time, allowing the normal infrastructure support to the civilian community to continue. At present there is a lack of formal machinery to achieve this.

The paper explains the need for formal arrangements between defence and the various transport modes. It identifies the type of civilian transport infrastructure support which would be required to enable defence to respond to credible contingencies in accordance with accepted government policy.

Work currently being done by the movement and Transport Branch of Defence Central to reach memorandum of arrangements with the modal operators is identified and the progress of such negotiations summarized.

Finally, the paper discusses the need for some form of national defence transport co-ordinating committee and deals briefly with comments made at the Royal United Services Institute Seminars on this matter.

LAND TRANSPORT IN NORTHERN DEVELOPMENT AND NATIONAL SECURITY:  
IMPLICATIONS FOR THE NORTHERN TERRITORY

by

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ABSTRACT

The military and the nation as a whole need to plan in peacetime for the high level of civil-military cooperation demanded in war. Planning for national security must proceed in tandem with that for national and regional development. It is in this context that the author identifies strategic assets and vulnerabilities in the civil land transportation infrastructure, with particular reference to the Northern Territory; and makes recommendations for better civil-military liaison and planning at national, state and regional levels.

The fundamental conditions of Australian national security planning are quite unique. There are no overseas models which Australian national security planners can copy. The sheer size of Australia poses enormous defence planning problems, compounded by Australia's extremely limited resources and their concentration in essentially one corner of the continent. In endeavouring to establish a more self-reliant defence posture for Australia, the difficulties of rapid and sustained movement of men and material from the south-east to the isolated and remote northern areas necessitates that defence planning must be based on use of local resources and the civil transport infrastructure to the maximum extent possible.

The necessity for planning at a variety of levels from the regional through to the central, for planning Australian Defence Force development in the light of constraints imposed by assets and vulnerabilities in the civil infrastructure, and for national security planning to proceed in conjunction with regional and national economic development, all requires the development of some machinery for coordination at both national and regional levels which does not exist today.

Before focussing on the land transport infrastructure serving the Northern Territory, it is worth noting some general strategic considerations which will help to set the scene.

It is generally accepted that direct or indirect threats to Australia are most likely to come from within or through the Indonesian Archipelago, Papua New Guinea and the arc of islands eastwards to New Caledonia. The countries within that arc are, for the purposes of contingency planning, close enough to be regarded as potential enemies as well as potential allies. The remoteness of the southern half of Australia coupled with the vastness of the oceans flanking it to the west, south and east, point to northern Australia being the more likely target of hostilities. If only for reasons relating to proximity to the arc of islands across Australia's northern approaches, both Cape York and the Top End of the Northern Territory and the adjacent Kimberley region of Western Australia are areas of prime geo-strategic concern. Of the two, the Top End/Kimberley region as a potential initial lodgement area has more to offer an enemy should he be contemplating sustained lodgements or higher level operations.

To sustain a medium- to high-level incursion, an enemy would have to secure a good general purpose port backed on to a sizeable local infrastructure, offering scope for expansion of the initial lodgement. The only port along the whole of the northern Australian coastline which meets these requirements is Darwin. The only other ports which might be considered are Port Hedland and Dampier on the west coast and Cairns and Townsville on the east coast. The vulnerable access channels, specialized wharfage, limited infrastructure behind the wharves, and distance from potential enemy bases preclude Port Hedland and Dampier. Distance, the difficult passage through Torres Strait, and the confined waters bounded by the Great Barrier Reef tend to preclude Cairns and Townsville. This is not to say these and perhaps other lesser ports such as Broome, Derby and Wyndham would not serve a subsidiary purpose or be the target of harassment in lower-level operations.

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The port of Darwin and the local infrastructure is also well placed geographically for the support of Australian counter-offensive operations in the maritime environment.

Additionally, at some time in the future, Darwin could emerge as a major import/export asset in the national economy and, hence, loom large as a strategic entity in its own right rather than as a means to an end.

In any consideration of mid- to high-level threats to northern Australia, Darwin inevitably will require paramount considerations.

To protect a lodgement based on Darwin, the enemy would plan on seizing Katherine, its vital river crossings and nearby RAAF Base Tindal. This would effectively close the only land access to the Top End. Katherine is also strategically significant because it is the logical site for a forward base supporting Australian operations in the Top End, the Kimberley region and the Roper River area. With the development of RAAF Base Tindal about 12 kms south-east of Katherine on the Stuart Highway, the Katherine-Tindal complex will become a vital element in the civil/military infrastructure.

In order to transport sizeable forces across Australia's water gap and logistically support those forces in a lodgement, an enemy would have to achieve a measure of naval and air parity, if not local superiority. In such a case, as a general rule, internal lines of communication (road and rail) have an intrinsic advantage over external lines (shipping). Moreover, the further inland the road/rail corridors are the more secure they will be.

Two other towns in the Northern Territory warrant singling out for consideration before turning to discussion of the land transport infrastructure serving the region.

The first is Nhulunbuy. The massive bauxite mining venture on the eastern tip of the Gove Peninsula in north-eastern Arnhem Land, operated by Nabalco Pty. Ltd., has developed major facilities to handle the million tons of bauxite and alumina exported each year. Nhulunbuy is essentially the 'company town' located nearby and is the residential and commercial centre of the Gove Peninsula. It has most of the trappings of a modern town. Nearby is the excellent natural, protected harbour, Melville Bay - probably the best in the region. It has a fine airport. The Nhulunbuy/Nabalco complex is undoubtedly a valuable national asset but it is almost serenely isolated. In addition it is situated at a point central to control of the Arafura Sea and the Gulf of Carpentaria. Furthermore, within an hour's flying time, lies Groote Eylandt in the Gulf of Carpentaria, the site of a major manganese mining venture - one of the three economic sources of this strategically important metal so critical to the world's steel industries. (The other major commercial sources are in South Africa and the USSR.)

The Nhulunbuy/Nabalco complex is obviously of considerable strategic significance, the vulnerability of which is heightened by the fact that it is landlocked in the Wet and road access in the Dry to the Gove Peninsula is difficult at the best of times and then only by four-wheel-drive vehicles. Consequently, it is not too wild a stretch of the imagination to postulate

that Nhulunbuy and/or Groote Eylandt could be singled out as targets for limited lodgement with their resources including populations held to ransom. Nhulunbuy is also likely to play a significant role in an enemy's concept for high-level operations.

The second potentially key town is Borroloola on the McArthur River in the south-west corner of the Gulf of Carpentaria. Upstream is the extremely rich lead-zinc-silver mine owned by Mount Isa Mines Pty. Ltd. It is currently planned that, whenever the mine comes into production, a major 'company town' and port will be established in the Pellew Island group off the mouth of the McArthur River. In the meantime, barracks and related facilities for a large workforce (equivalent to about an infantry battalion) is kept ready for occupation at short notice. Its strategic significance stems from its potential as a nodal point in a second land access route to the Top End. This is discussed in more detail later.

The Top End is much more than a potential target for enemy operations. It is well placed to play a significant role in the control of passage between the Indian and Pacific Oceans through or over the Indonesian Archipelago. It is also well placed to facilitate the exercising of a more assertive defence posture in controlling the western limits of the 'enclosed' Arafura Sea.

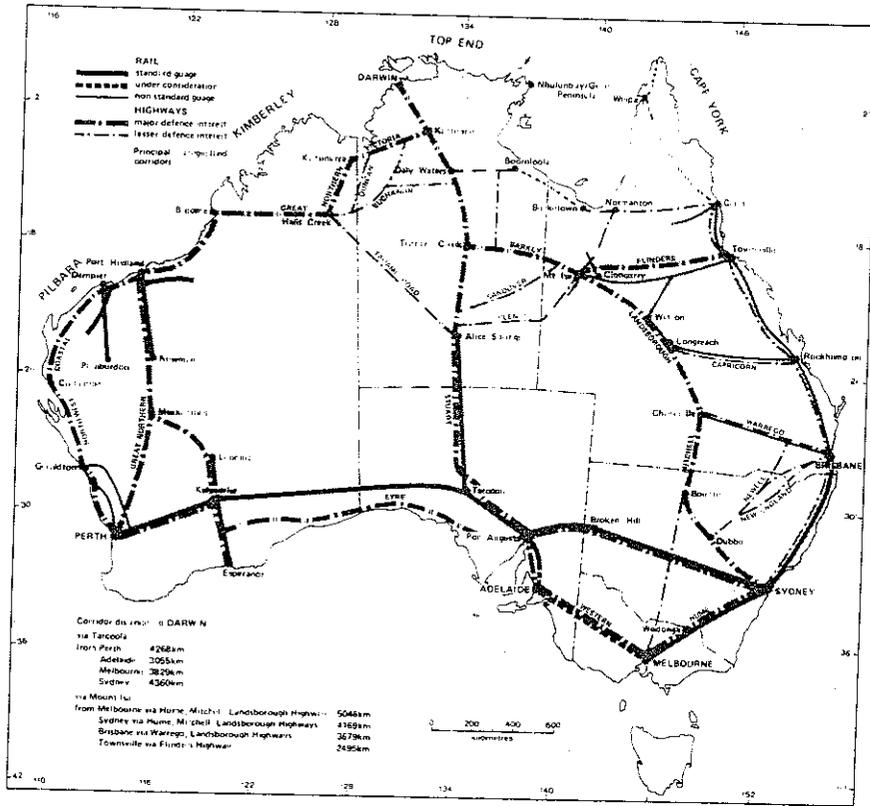
It is against these broad considerations that the adequacy of and prospects for the land transport infrastructure serving the region are assessed in this paper.

To appreciate the scale and nature of Australia's transcontinental transport network, it is helpful to visualise Australia less as an island continent and more as an archipelago of isolated communities and regions separated by vast 'oceans of emptiness' except for the all too few and therefore critical transport nodal points. Strategic flexibility in terms of optional use of the main trunk corridors is measured in enormous distances. For example, goods from Perth destined for Kununurra in the east Kimberley region are usually freighted by road via Port Hedland and Broome. If the roads are flooded, it is not uncommon for urgent freight to be re-routed via Tarcoola-Alice Springs-Katherine to Kununurra, a 'detour' on the grand scale. On an even grander scale, one can visualise Port Augusta/Tarcoola in wartime as being a switching terminal for transcontinental traffic flowing to northern Australia west-about via the Nullarbor Plain and Western Australia, east-about via Broken Hill and the eastern states, as well as directly north via Alice Springs and Katherine.

Similarly Alice Springs provides a switching point for much more limited tonnages to be re-routed north-westward via Tanami Road to Halls Creek in the Kimberley region of Western Australia and north-eastward via the Plenty and Sandover Highways to Mount Isa in western Australia.

Further north on Stuart Highway, Iennant Creek and Daly Waters have significance as focal points for east-west as well as north-south traffic. And Katherine, as has been mentioned earlier, is uniquely important as being the only land gateway to Darwin and the Top End as well as being the site of the Stuart Highway junction with the Victoria Highway to the Kimberley.

FIGURE 1. PRINCIPAL STRATEGIC LAND CORRIDORS



This basic transcontinental transport grid serving northern Australia is most unlikely to change in the foreseeable future. The capacities of each sector, however, are likely to increase in line with the requirements of national development and national security. The preferred main corridors for defence transport purposes are referred to in this paper as the eastern, central and western corridors. Of particular significance is the Australian standard gauge railway network linking the main support areas - Victoria and New South Wales - to the central corridor and reaching as far north as Alice Springs, as well as to the western corridor.

The defence concern is about ways and means of getting military forces and material from the south to the north of Australia which is largely empty - with the emphasis being on "getting there first with the most" and being able to sustain the effort logistically. Such timely and adequate logistical deployments have the potential to disadvantage an enemy disproportionately, especially so when faced with the prospect of crossing Australia's sea approaches. In other words, a capacity for sizeable and timely pre-emptive defensive deployments would greatly enhance the level and credibility of Australia's deterrent posture.

Nevertheless, deterrence may fail and it may not be possible to determine where, when and how the enemy's main blow is likely to fall. An aggressor would have considerable scope for diversions and feints. He may even achieve surprise by striking pre-emptively at a series of key localities and facilities. In such situations it is important that Australia should have the capabilities and capacities to react from the south quickly, flexibly and in strength in order to contain initial lodgements before they can be consolidated, and then be able to bring to bear reserve combat power great enough to dislodge them. To do this decisively will require the utmost in carrying capacity and rapidity of delivery from the three main land transport corridors serving the North. Furthermore, the transport modes available within those corridors should lend themselves in a defence emergency to detailed control arrangements in accordance with strict priorities as to the sequence of despatch and arrival of force components and materiel. Historically, these requirements have been generally best met by railways, but this may be challenged by modern road transport, especially "road trains", depending on their availability, collective capacity and organisation. However, railways still have an important advantage in that their total resources can be harnessed centrally more easily and rapidly than the fragmented civil road transport industry. There are about 35 000 to 50 000 owner-drivers in the trucking sector, most of whom are local operators, and the long distance segment is dominated by an estimated 10 000 owner-drivers. In this context it is important to note that Australia should be able to defend itself while conducting "business as usual" for as long as possible. The demands on all modes of transport would continue to be heavy and road transport may be best suited for much of this requirement in a wartime situation.

The main transport corridors serving northern Australia should be relatively secure, have sufficient capacity to meet the surge requirements of war and provide for flexibility within and between transport modes and routes. How much capacity? How much flexibility? These are difficult questions to answer because, although defence logistic requirements can be measured reasonably precisely there are many other things to consider. For example, the seasonal surges in the transport requirements of Australia's vast and geographically widespread pastoral and agricultural industries are demanding enough in normal times. However, a severe drought could necessitate the mass movement by road and rail of large herds and flocks to distant agistment pastures. Natural disasters on the scale of Cyclone Tracy's devastation of Darwin can make great demands on the national

transport infrastructure. Such calamities are just as likely to happen during war as in peace.

Another factor to consider is the evacuation of civilians in time of war. Although we would wish to conduct "business as usual", rapid, mass evacuation of the population from the combat zone may become essential and this could clash with the forward movement of troops and their material. The operational situation may preclude the use of air and shipping. In any event such relatively scarce resources should not be put at risk lightly. The only option may be evacuation by road and/or rail, although it would seem that interstate railways these days are more geared to hauling freight than carrying passengers.

To summarize so far: Australia needs a transcontinental land transport infrastructure which

1. can deliver large volumes and tonnages rapidly, over long distances, relatively securely and for long periods;
2. can provide for flexibility in routing for the deployment and redeployment of forces; and
3. incorporates a surplus capacity.

To meet these objectives the investment in the transcontinental transport infrastructure is bound to be expensive and lengthy.

However, it should be noted that a good and secure transcontinental system can act as a powerful force multiplier. An investment of, say, \$700 million well spent on the system and its infrastructure could prove equivalent to several times that investment in standing military forces and equipment, especially in terms of enhancing Australia's capacity for timely pre-emptive deployments, rapid and flexible reaction and the logistic support of protracted operations.

It is only realistic to admit that any such expenditure should be influenced heavily by economic considerations, and those which relate to regional development in northern Australia are the most important. All advances in the direction of a more populated North with a better developed civil infrastructure will lessen the burden of transporting troops and materiel across the continent for the defence of northern Australia, and will therefore improve Australia's deterrent posture. A larger population in the North would provide more scope for raising regional reserve forces such as North West Mobile Force (NORFORCE), and a broadened civil infrastructure would make it more possible to provide defence requirements locally.

The central south-north transport corridor is the most secure because of its inland remoteness. This advantage is less marked, however, in respect of the eastern corridor through Mount Isa. Furthermore, the central corridor has the advantages of the relatively high-speed Australian national standard gauge railway network from Perth, Sydney and, possibly, Melbourne extending via Tarcoola as far north as Alice Springs. Although the Queensland railway extends as far west as Mount Isa, it is narrow gauge, capable of only fairly slow speeds, subject to congestion under pressure, and therefore limited in carrying capacity. Moreover, it is poorly aligned for easy conversion to standard gauge.

Nevertheless, all three corridors should be considerably upgraded - especially to and through the Pilbara and beyond Port Hedland; beyond Alice Springs in the central corridor; and to and beyond Townsville, Cairns and Mount Isa in the eastern corridor. In relation to the upgrading of roads, the Road Grant Act 1981 specifies that "national highways are roads which ... assist in the mobility of defence forces and their supplies and equipment" and the Australian Bicentennial Road Development Program's objectives include the completion of the national highway system to acceptable

standards by 1988. The priorities to be accorded to the upgrading of each corridor are likely to be determined by other than defence considerations, but the fact that the central corridor is already linked into the Australian standard gauge railway network as far north as Alice Springs and that its extension would obviously "... assist in the mobility of defence forces and of their supplies and equipment" should carry a lot of weight.

This line of discussion leads directly into consideration of the Alice Springs-Darwin railway link.

In January 1983, the Federal Government announced that funds would be provided for completion of the standard gauge rail link between Alice Springs and Darwin. This project stalled on 19 May 1983 when the Federal Treasurer announced that the Commonwealth should share the cost with the Northern Territory on the basis of 60:40 per cent respectively. If the Northern Territory was to reject this approach, the Commonwealth offered to provide, in place of the railway, a high standard road link from Alice Springs to Darwin by 1987. This decision was not well received by the Northern Territory and subsequently the Commonwealth Government initiated the Independent Economic Inquiry into Transport Services in the Northern Territory by Mr David Hill. The Hill Report concluded that "... investment in the railway ... cannot be justified ..." adding the qualification that "... This conclusion may, of course, be influenced by defence or other considerations on the part of the Commonwealth Government which were outside the Inquiry's terms of reference".

The Strategic and Defence Studies Centre, Australian National University, subsequently undertook a study of the defence implications of the Alice Springs-Darwin railway connection which was published under the title Defend the North: The case for the Alice Springs-Darwin railway. It concluded that the defence value of the railway is undoubtedly very substantial. It would contribute significantly to the deterrence of any major threat to Australia, and it would be essential if the Australian Defence Force was ever required to meet any medium- or high-level threat in northern Australia. Although it is possible to quantify some of the tonnages that would be required in contingent circumstances, the defence value of the railway cannot be quantified any more than the social and developmental aspects. It is clear, however, that the defence value is extremely high. Taken together with the substantial social and developmental benefits, it would certainly be more than enough to offset any lack in the financial viability of the project. Given this more comprehensive perspective, the proposed railway thus warrants strong national endorsement.

Other conclusions to emerge from the Centre's study were as follows:

1. The existing capability to switch surplus capacity from one principal strategic land corridor to another was very important.
2. All three corridors (see Figure 1) could be taxed to the utmost simultaneously, and hence they should not be regarded as strategic alternatives.
3. There should be no suggestion of establishing absolute priorities concerning the upgrading of the capacities of the three corridors on defence grounds; all three require upgrading on that count. However, the relative invulnerability of the central corridor, its direct relationship to the defence of Darwin and the Top End and the fact that the Australian standard gauge railway network already extends as far as Alice Springs all point to the singular importance of the central corridor.

4. The upgrading of the Stuart, Barkly, Great Northern and Victoria Highways, presently undertaken under the Bicentennial Road Development Program, is a military requirement.
5. Similarly, there is a requirement to upgrade to all-weather standard and continually maintain the sealed or partly sealed roads from Mataranka to Roper Bar (Roper Highway), Daly Waters to Borroloola (Carpentaria Highway) and the Buchanan Highway to Halls Creek, priority being given to bridges.
6. There is also a requirement for construction of all-weather, preferably sealed, roads from Jabiru to Gove; from Roper Bar to Gove along the east coast of Arnhem Land; on a suitable axis into the Daly River estuary area; from Alice Springs to Halls Creek (the Tanami Road); from Kununurra to Derby through Gibb River; and access routes to key points on the coastline. The priority should be given to all-weather gravel roads in preference to slower progress with sealing.

It is pleasing to note that the Northern Territory Government is still pursuing ways and means of completing the Alice Springs-Darwin railway link. The Government commissioned Canadian Pacific Consulting Services to re-examine the project and is encouraged by their final report dealing with the economic viability of the railway extension. Route survey work is continuing. At the time of writing (January 1986), exploratory discussions were being held with possible private consortium members, and consideration by the Northern Territory Government was being given to its own possible equity participation, to possible ways in which the Commonwealth Government might be invited to contribute, and to the possibility of cooperation from the Australian National Railway.

A strategic vulnerability of great significance to stress again is the fact that the only overland access to Darwin and much of the Top End is via Katherine. It is the focal point for the road corridors from north Queensland, for the road and proposed rail corridors from the south via Alice Springs, and for traffic from the Kimberley. Katherine is at the site of three crossings over the Katherine River - an imposing obstacle at any time but of formidable dimensions in the Wet. There is one low-level crossing (the original road alignment) a short distance downstream, and the two high-level (barely above flood level at times) crossings at the town site. One is the new road crossing and the other is the disused but still potentially usable rail crossing. There is no scope for easy additional crossings upstream because of the width and depth of 13 gorges, and the Arnhem Land plateau is extremely rugged. Downstream the country is subject to widespread and persistent inundation in the Wet, and there is little, if any, commercial incentive to construct major roads into the area. Katherine is a key factor in the defence of Darwin and the Top End. It is also important in the context of defence of the Kimberley region in the event that the Kimberley were to be denied support from the south.

If Darwin were to be seized the enemy's task in securing his lodgement would be greatly facilitated by the fact that any Australian counter-attack overland would be restricted to the single land route north via Katherine. The enemy's problem would be compounded if it were possible to develop another axis, for example, an all-weather road from Borroloola to Nhulunbuy via Roper Bar, and then west to Darwin. Logistic support could then be provided through the eastern corridor via Mount Isa, bypassing the bottleneck at Katherine.

Such a development might encourage the establishment of a naval

facility and/or an air force base on the Gove Peninsula. The resultant combined civil/military infrastructure would facilitate control of the maritime approaches, especially in and over the Arafura Sea, and pre-emptive defensive deployments as well as enabling ground operations in support of Darwin. Consequently, a potential enemy's costs in all respects of mounting operations in the region would be greatly increased, probably disproportionately so.

There are some prospects that an all-weather road connection with Nhulunbuy (Gove Peninsula) may eventuate. The first stage of a \$63 million all-weather road between the Stuart Highway and Nhulunbuy was under consideration for 1984 by the Northern Territory Government, subject to completion of satisfactory negotiations with Aboriginal landowners and the Northern Territory Land Council. Three possible corridors (See Figure 2) were considered:

- a. a northern corridor from Darwin extending the existing road to Jabiru in Arnhem Land eastward across the Top End to Nhulunbuy;
- b. a central corridor from the Stuart Highway just south of Katherine in the vicinity of Maranboy north-east across Arnhem Land via Mainoru and the Frederick Hills to Nhulunbuy; and
- c. an eastern (or Roper) corridor from the Stuart Highway further south of Katherine in the vicinity of Mataranka through Roper Bar and north to the Gove Peninsula along the west coast of the Gulf of Carpentaria.

In a press release by the Northern Territory Minister for Transport and Works on 28 August 1982, it was announced that the "Roper Corridor" had been selected and the Commonwealth Government had indicated it would provide financial aid to have the road finished for the 1988 Bicentennial. The Minister said it was proposed to build the road in three stages - a dry weather access to be started in 1984/85, followed by a gravelled all-weather road and then complete sealing. The Minister said the road would be of benefit to defence as well as a great advantage to tourism, fishing industries, local communities and the people of Gove. However, it seems that negotiations with the Aboriginal landowners along the "Roper Corridor" and the Northern Territory Land Council stalled that particular proposal.

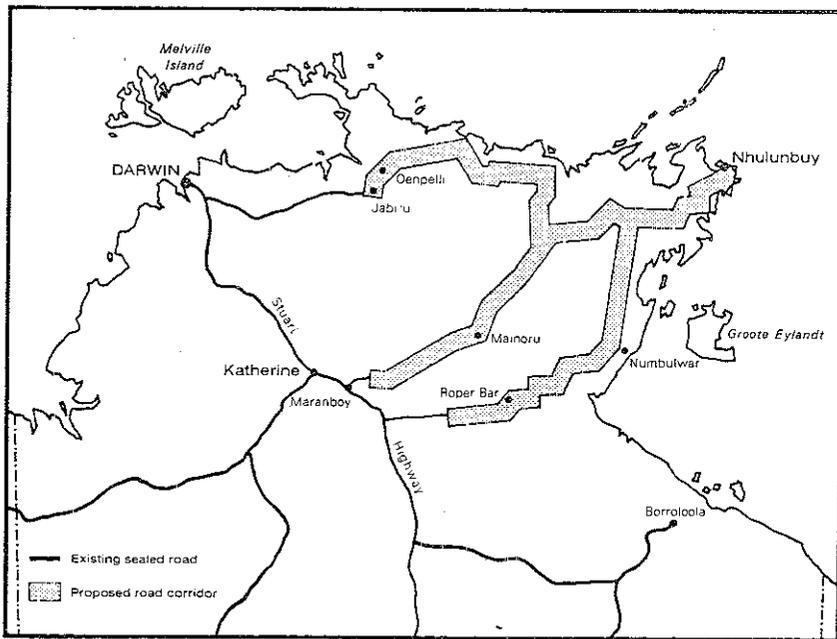
Initiatives taken by a number of Aboriginal communities in Arnhem Land, a new approach to government support of road development in Arnhem Land, coupled with the evident progressive development of the road connection between Roper Bar and Numbulwar and in the north-east sector of Arnhem Land suggest that the trafficability of all three corridors may improve steadily over the next several years or so.

Furthermore, the direct road alignment between Borroloola and Roper Bar, particularly the southern sector to about mid-way (Nathan River Station on Limmen Bight River), is being steadily improved. An expression of Defence interest in these projects might well stimulate progress.

From the defence point of view and with an eye to regional development aspirations in northern Australia generally, a good deal more needs to be known of the extent of trafficability in the Wet.

Generally, it seems, the early overlanding alignments were selected on the basis of access to water in the Dry, easy going, minimum engineering and the existence of good natural river crossings. Little thought was given in those earlier times to the development of alignments which would ultimately provide for all-weather access. Consequently, much of the early overlanding stock route system which influences route alignment today follows low ground, special arrangements being made to cope with isolation during

FIGURE 2. PROPOSED CORRIDORS FOR A ROAD TO NHULUNBUY



the annual Wet.

Given different incentives, access to detailed air-photo imagery in the Wet and related geological studies, and extensive local knowledge, the potential for all-weather trafficability in the Wet may prove to be less inhibiting than is the traditional perception. Much of the plains is above persistent flood level; not all of the soil is clay; rock or gravel fill is often readily available; water run-off rates can be extended. Also, the military requirements of all-weather trafficability on subsidiary lines of communication need not be for high construction standards.

To return to more general considerations - historically, there was much political advocacy for and many studies of the development of Australia's land transport infrastructure serving the north on both defence and developmental grounds. The most detailed and comprehensive of all reports which advanced the "strategic and developmental" perspective was the Report by Sir Harold Clapp, the Director-General of Land Transport, on Standardisation of Australia's Railway Gauges, presented to the Minister for Transport and External Territories in March 1945. At that time the Army favoured the construction of "a strategic and developmental standard gauge railway" linking Darwin with Camooweal, Mount Isa, Bourke and Townsville, and ranked it next in importance to the complete standardisation of the entire network between Fremantle/Perth and Townsville. However, Sir Harold Clapp himself maintained that the completion of a standard gauge link from Darwin through Mount Isa to Bourke and Townsville "can be justified on grounds other than those of defence", since the line would open up the pastures of the Barkly Tableland to both the east and the north. Does Sir Harold's line of reasoning concerning the value of the Barkly Tableland hold good now and for the future? Would it be valid to include the prospects for the vast Duchess phosphate field and the huge McArthur River mineral lode as added incentives for reconsidering the development of the transport infrastructure in central and western Queensland? If the rail link between Alice Springs and Darwin comes to fruition, there would seem to be strong grounds for the linking of Queensland into the standard gauge railway network via the Alice Springs-Darwin connection.

Planning for national development and national security should be indivisible. However, if this proposition is to be taken seriously, much will have to be done to establish the short and, more particularly, the long term development potential of the North. This is not likely to be an easy task and the need for care and caution is exemplified by the history of high expectations and spectacular failures in large-scale development projects in the North. A very sound and comprehensive data bank needs to be established.

The prospects for development in Australia's northern regions, as well as the problems which pertain to that development, to movement and transportation, and to military operations, cannot be divined from Canberra. The northern regions are not just remote in terms of distance; their prospects and problems are also remote in terms of the experiences of most decision-makers and public service advisers in the national capital. Moreover, the resources, terrain, climate, water resources and available infrastructure differ markedly from region to region. Organisational structures need to be developed both for planning at the regional levels and for coordinating this planning with the more comprehensive national plans.

On the military side, there is a need to improve the current arrangements for civil-military liaison at the State level as well as developing new structures for planning and familiarisation at regional levels. At the regional level the military needs to become familiar with the details of climate and terrain; the assets in the local infrastructure;

to get to know the people living in the area; to be acquainted with and perhaps even able to influence the likely directions of infrastructure development in the various regions. The principal regions are Cape York, the Top End, the Kimberley and the Pilbara.

The necessity for reliance by the military on the civil infrastructure requires in turn that there be some machinery for coordinating the planning of those agencies responsible for infrastructure development at the Federal level with that of the Australian Defence Force. The current arrangements are very uneven; in some areas they are non-existent, while in others they exist on paper but remain unpractised.

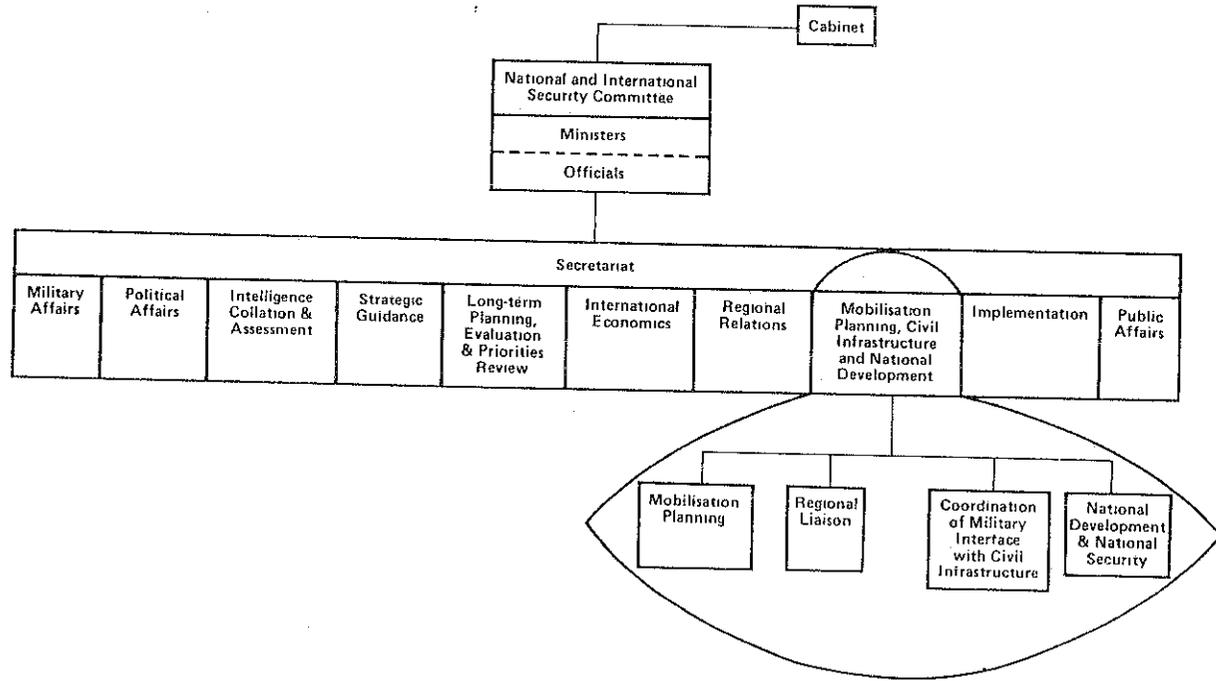
In the case of the transport infrastructure, there is a Defence Movement Coordinating Committee responsible for liaison with relevant transport agencies and operators, but its purview is limited to those transport resources normally used by the Australian Defence Force and its membership currently comes exclusively from within the Department of Defence. With respect to rail transport there are currently no formal coordination arrangements between the various railway authorities and Defence, although there are a number of proposals to improve the situation under consideration or in various stages of implementation - such as a "Defence transport advisory council" suggested by Mr Lou Marks, the Chairman of the Australian National Railways Commission; the "high level transport defence committee" proposed by Sir Peter Abeles; a "national defence transportation association" and a regular "transport outlook conference" suggested by Lieutenant-Colonel A.R. Howes.

The most satisfactory structure for a national coordinating mechanism involves the establishment of a National and International Security Committee of Cabinet, serviced by a strong and active secretariat, and coordinating national security planning with regional and national development. This proposal is illustrated in Figure 3.

However, without a clear, coherent and comprehensive statement of national objectives, the policies which we pursue will necessarily be less efficient and effective than they might otherwise be. Indeed the will to pursue them will frequently be found wanting for the lack of a visible goal.

This applies to the transport infrastructure no less than other areas of national development. Until the national objectives are delineated, we cannot specify the criteria which will allow us to determine where we should best use our limited resources. The solutions to the problems of infrastructure development will flow from the objectives we all set for this country.

FIGURE 3. NATIONAL SECURITY POLICY MAKING STRUCTURE - A PROPOSAL



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