



Water Authority
of Western Australia

WESTERN

North Dandalup Dam

Environmental Management Plan

Vegetation Monitoring
Establishment of Permanent
Observation Transects

Authority use only

Report No. WP 115
January 1992



**Water Authority
of Western Australia**

**WATER RESOURCES DIRECTORATE
Water Resources Planning Branch
Dams Section**

North Dandalup Dam
Environmental Management Plan

Vegetation Monitoring
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Observation Transects

Havel Land Consultants

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ENVIRONMENTAL MANAGEMENT PLAN FOR NORTH DANDALUP PROJECT.

ESTABLISHMENT OF PERMANENT OBSERVATION TRANSECTS.

Introduction.

As a part of the preparation of the Environmental Management Programme four permanent transects were established in the valley of the North Dandalup River for a long term study of the impact of the project on vegetation. The rationale for the establishment of the transects is that whilst it is possible to anticipate the impact of the project on the basis of the preliminary impact assessment and associated studies, there is a need to actually record the impact on the basis of pre- and post-construction studies. This needs to be done not only in order to check the predictions already made, but also to improve the basis on which the environmental impact assessment of future projects can be made.

Location of the transects.

The location of the transects was influenced by earlier studies, firstly by the vegetation surveys of the area likely to be affected by the project, namely the area to be inundated and the area at and below the dam wall, and secondly by the earlier studies of the impact water level fluctuation within and downstream of the reservoir on the surrounding vegetation. The latter studies were carried out on four dams that have been in operation from 10 to 60 years, and indicated that in upper reaches of the dams vegetation tended to return following the initial overclearing, and that below the dams the main form of impact was the deposition of clay and silt on the stream bed during and after the dam construction.

Two of the transects [B and C] are located in the upper reaches of the reservoir, on the river itself and its major tributary, the Cronin Brook, within the Murray and Myara landforms respectively. The intention is to define the degree to which the vegetation of the river banks can tolerate short term inundation, so as to minimise the extent of clearing necessary for the maintenance of adequate water quality.

The third transect [A] is situated downstream from the dam wall just within the boundary of the important reserve no. 21038, and is intended to monitor the impact of the dam construction on the vegetation of the reserve, including some species listed as being in need of survey and monitoring and one species recently gazetted as being rare.

The fourth transect [D] is on similar site to the third transect, but located well within the reserve, so that it is unlikely to be affected by the project. It is, however, subject to climatic fluctuations, and will therefore make it possible to separate the effect of climate on the rare species from the impact of the project itself. This is important as the reserve and the dam wall are situated within the drought-prone Helena landform with shallow stony soils.

Size and structure of the transects.

Each of the three main transect consists of a series of contiguous 20x20 m plots spanning that portion of the valley that could be affected by the project. A complete enumeration of all trees, in terms of species, number of stems, their diameters and the height of the tallest tree, has been carried out on the plot. Within each plot, four

1x1 m quadrats have been established for the enumeration of the shrub and herb species in terms of their height and cover percentage. In addition, each major plot has been photographed so as to provide the visual record of the vegetation prior to impact.

The fourth transect [control] consists only of a linear baseline linking 1x1 m quadrats at the spacing of two quadrats/20 m. This transect is designed and located so as to give maximum information on the three rare species within the reserve, namely *Anthocercis gracilis*, *Boronia tenuis* and *Senecio leucoglossus*.

The lengths of the four transects are 80, 80, 160 and 120 m respectively.

The plots within the reserve have been established with particular care, so as to minimise their impact on the vegetation.

Measurements.

The initial establishment and the first measurement of the transects were carried out in early October 1990. This was followed by remeasurement in early October 1991, which concentrated on changes in the shrub quadrats. There were no apparent changes in the tree stratum, however photos were taken of the entire plots, including the tree stratum.

The comparison of the first and second measurements of the shrub and quadrats indicates that changes have taken place in some species, though at this stage it would be difficult to assess their statistical significance.

Changes in vegetation.

The most striking change is in *Senecio leucoglossus*, an annual species now classified as priority 2 species, that is a taxon with few poorly known populations on conservation lands. This species, which occurred as numerous flowering tall herbs at the upper end of transect D and from there toward transect A in 1990, could only be located on transect D in 1991 as dead individuals from the previous season. The deaths are not surprising in an annual species, but the failure to regenerate is. There has been a smaller but observable decrease in the occurrence of *Anthocercis gracilis*, recently gazetted as a declared rare species. Although most of the individual occurrences in quadrats in transects A and D were relocated at their initial percentage cover, there was a decrease in one quadrat, and in two other quadrats the species could not be relocated.

There has also been a decrease within the quadrats containing *Boronia crenulata* var. *gracilis*, a species with a restricted geographical range, though in this case the situation is less clearcut. The clearance of tree debris from a track has damaged an adjacent plot containing the species, and its disappearance from another, undisturbed plot is balanced by a strong development nearby.

By contrast to the above species, the remaining priority species, *Boronia tenuis*, has retained its initial levels of occurrence and cover.

However, there have been multiple [more than three per species] disappearances of non-gazetted species from the quadrats which indicate that there are fluctuations within the shrub and herb stratum from year to year. In some cases, such as the species of shallow stony sites [*Burchardia umbellata*, *Chamaescilla corymbosa*, *Opercularia echinocephala*, *Billardiera coerulo-punctata*, *Neurachne alopecuroides*, *Haemodorum* sp.] this may be attributable to the particularly high summer temperatures in between the measurements. This is also the most likely explanation for the reductions in *Anthocercis gracilis* and *Senecio leucoglossus*, which occur on comparable sites within transects A and D.

In other cases, such as *Tetrarrhena laevis*, *Chorizema ilicifolium*, *Acacia extensa* and *Pteridium esculentum* on the fertile and moist sites within transect C, the reduction or disappearance appears to be due to excessive height and density of the shrub stratum, resulting in overshadowing and death. Similar explanation is also likely for *Boronia crenulata* var. *gracilipes*, which occurs on optimum moist sites within transect B. In both transects the tall shrub stratum appears to be past its prime and is beginning to collapse. Within the normal cycle of prescribed burning within State forest these tall shrublands would have already been prescribed burnt and new cycle of regeneration initiated.

Minor variations in occurrence [1 or 2 per species] have also been recorded for numerous other species.

Conclusions.

The establishment of the transects, and their remeasurement prior to any impact of dam construction, has proved beneficial in that natural patterns of variation have been detected which might otherwise have been subsequently ascribed to human activities.

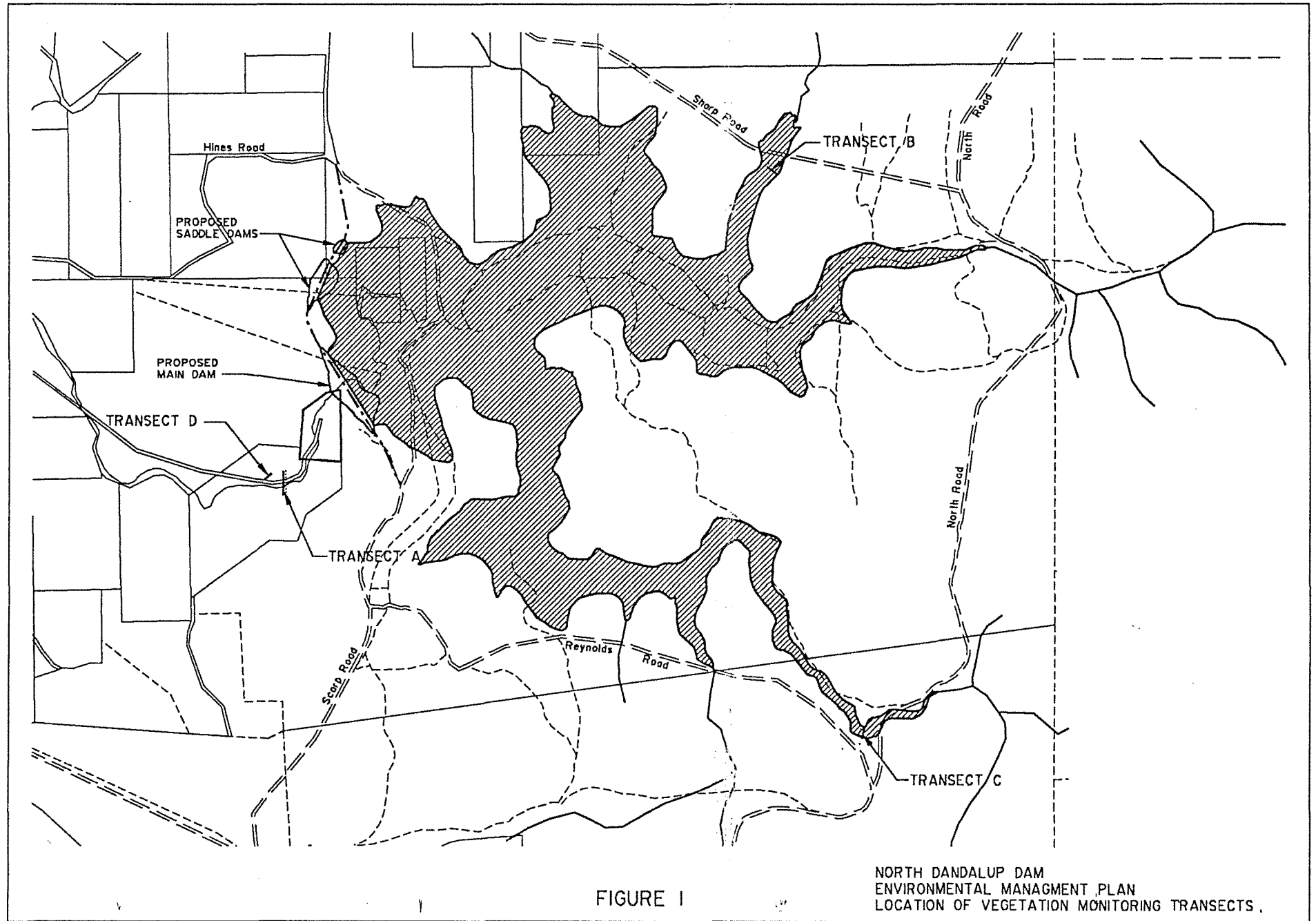


FIGURE 1

NORTH DANDALUP DAM
ENVIRONMENTAL MANAGMENT PLAN
LOCATION OF VEGETATION MONITORING TRANSECTS.

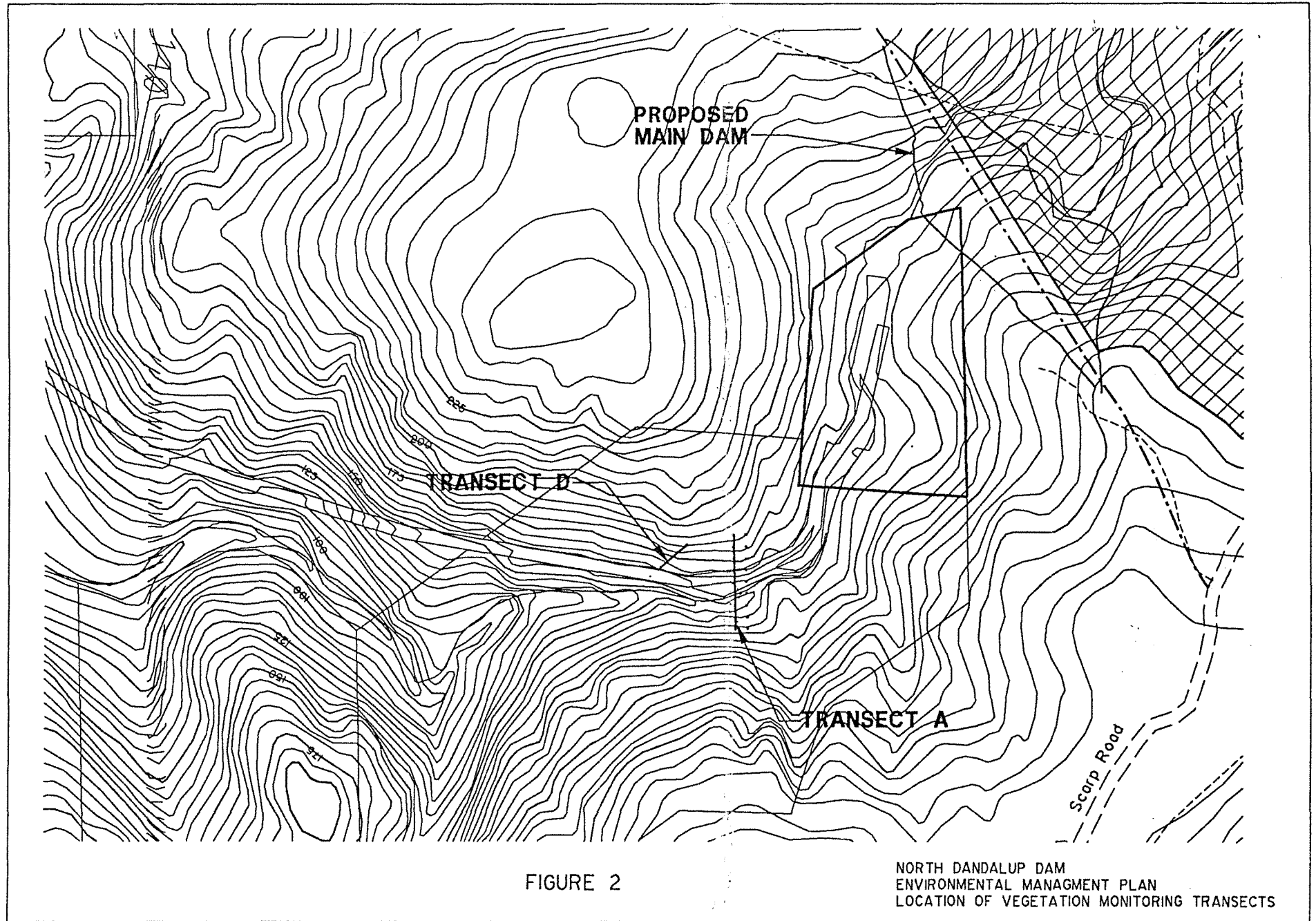
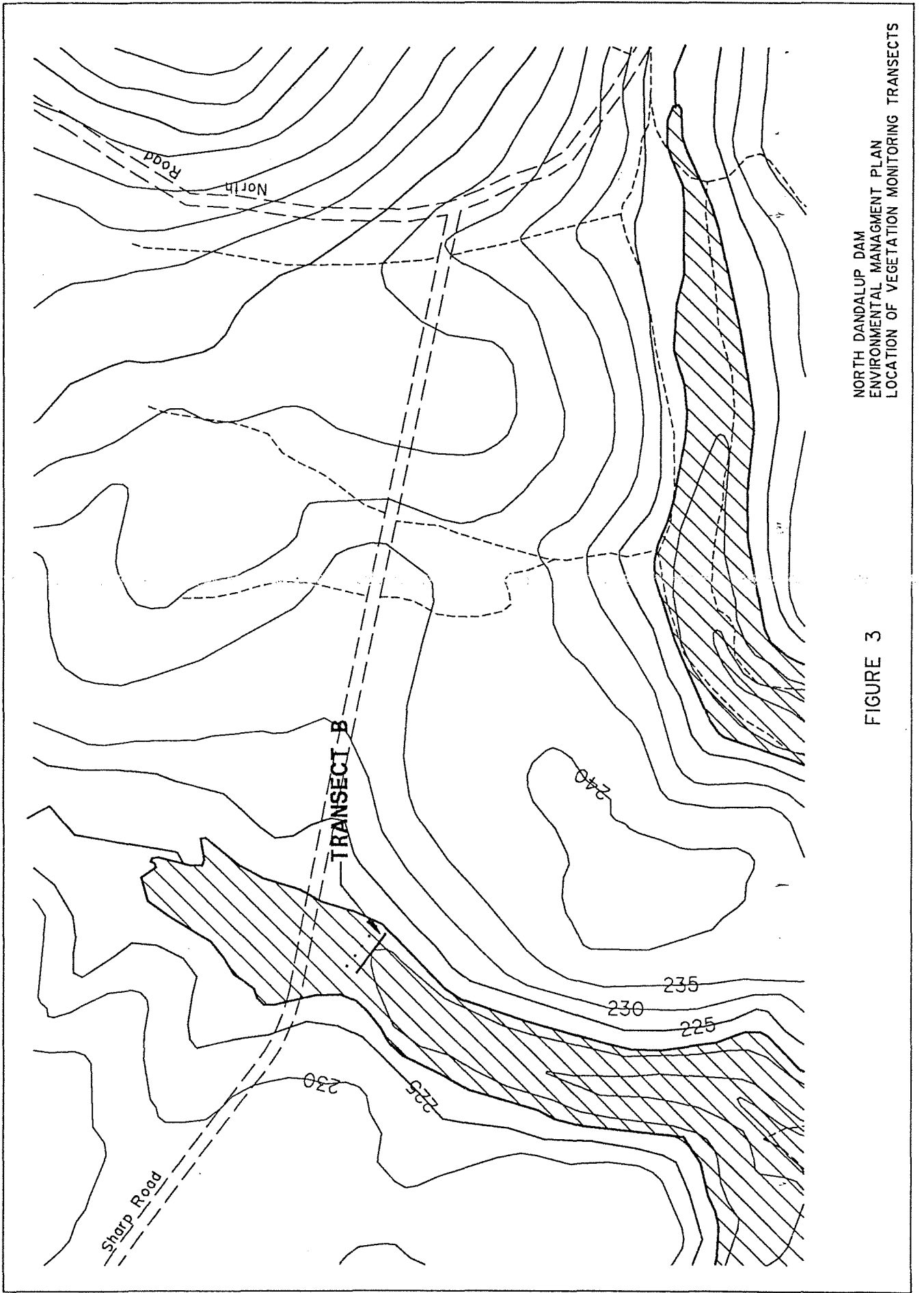


FIGURE 2

NORTH DANDALUP DAM
ENVIRONMENTAL MANAGEMENT PLAN
LOCATION OF VEGETATION MONITORING TRANSECTS



NORTH DANDALUP DAM
ENVIRONMENTAL MANAGEMENT PLAN
LOCATION OF VEGETATION MONITORING TRANSECTS

FIGURE 3

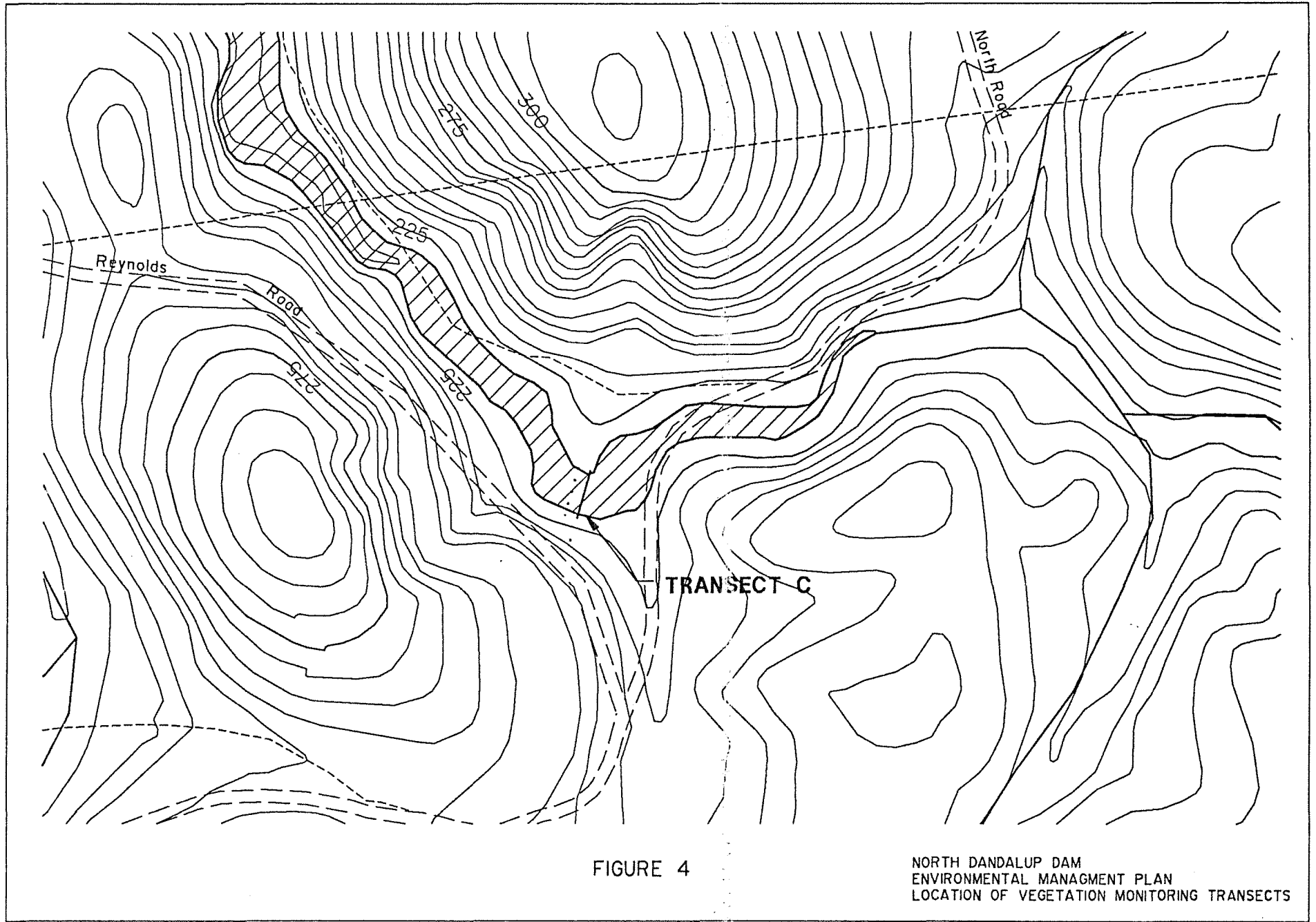


FIGURE 4

NORTH DANDALUP DAM
ENVIRONMENTAL MANAGEMENT PLAN
LOCATION OF VEGETATION MONITORING TRANSECTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 1 QUADRAT: 1 (NE)

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS LAELIAE</i>	2	6	25		36				
<i>HIBBERTIA HYPERICOIDES</i>	52	0.3	5		30				
<i>BILLARDIERA COERULEA-P</i>	211	0.2	<1		1				
<i>SPEVILLEA DIVERSIFOLIA</i>	43	0.4	2		10				
<i>DARWINIA STERIODORA</i>	314	0.3	2		3				
<i>EUCALYPTUS LAELIAE(S)</i>	2	1.0	10		15				
<i>TETRAARRHENIA LAEVE</i>	101	0.2	1		1				
<i>LEUCOPOSON PULCHELLA</i>	427	0.2	1		3				
<i>STYLIDIUM AMOENUM</i>	377	0.1	<1		1				
<i>XANTHOSIA CANIDA</i>	339	0.1	1		<1				
<i>OPERCULARIA ECHINOCLADIA</i>	357		<1		1				
<i>XANTHORRHOEA PRELISII</i>	91	1.0	3		1				
<i>CHAETOCHEITE AVELANEA</i>	417	0.5	<1		<1				
<i>AGATHA PULCHRELLA</i>	227	0.5	1		3				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 1 QUADRAT: 5

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
EUCALYPTUS LAELIAE	2	6.0	50		40				
BORONIA TENUIS	521	0.3	15		15				
HAKEA UNDULATA	125	0.5	8		10				
HIBBERTIA COMMUTATA	54	0.1	1		1				
HIBBERTIA HYPERICOIDES	52	0.3	3		2				
BILLARDIERA COCAUDOP	211	0.2	3		<1				
GREVILLEA DIVERSIFOLIA	43	0.4	3		15				
MELALEUCA					<1				
COMMENTS 10/91 1BT									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A*

PLOT: *1*

QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS LAELIAE</i>	2	6	45		60				
<i>HIBBERTIA HYPERICOIDES</i>	52	0.3	5		10				
<i>BENJARDIERA COERULO-P</i>	211	0.2	1		1				
<i>DARWINIA CITRIDODORA</i>	314	0.3	1		1				
<i>XANTHOSIA CANDIDA</i>	339	0.1	<1		1				
<i>DAMPiera ALATA</i>	36	0.2	1		1				
<i>HAKEA LISSOCARPHUS</i>	2	0.5	10		10				
<i>ACACIA LATERITICOLA</i>	221	0.5	2		10				
<i>CISSYTHA RACEMOSA</i>	203	0.1	2		8				
<i>COMPLODENDRUM MARSHII</i>	247	0.1	<1		1				
<i>EUCALYPTUS CALOPHYLLAGS</i>	1			0.05	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A **PLOT:** 2 **QUADRAT:** 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		2/10/90		9/10/91					
		H	C	H	C	H	C	H	C
<i>HIBBERTIA HYPERICOIDES</i>	52	05	8		10				
<i>DAYANDEA NIVEA</i>	172	02	7		6				
<i>HOVEA TRISPERMA</i>	252		<1		<1				
<i>DARWINIA CITRINODORA</i>	314		<1		<1				
<i>EUCALYPTUS CALOPHYLLA</i>	1	05	15		15				
<i>XANTHOXIA CANDIDA</i>	339		<1		<1				
<i>ELLERBIA COERULEA</i>	211		1		2				
<i>MACADAMIA RIEDELI</i>	75	15	50		50				
<i>LEUCOPHYTES CALOPHYLLA</i>	1	70	50		50				
<i>GOMPHOLEBIUM PODIUM</i>	248	03	20		15				
<i>STYLIUM AEROBICUM</i>	377	005	2		2				
<i>LEMANDEA SP.</i>			<1		<1				
<i>MACACIA VADAPPELLA</i>	23	10	3		5				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: / QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
ACACIA UROPHYLLA	23	15	5	18	5				
EUCALYPTUS CALOPHYLLA	1	11	65		70				
XANTHORRHOEA PREISSII	91	10	35		50				
DERIVIA CITRIDORA	314	05	5		5				
HOVEA TRISPERMA	252	02	3		2				
EUCALYPTUS CALLOSUS	1	05	2		2				
SEMPHOLE BUNN MURSONI	247	01	<1		<1				
LOMANDA BRITANNICA	522		1		1				
DROSERA PALLIDA	575		1		1				
BLACHNARIA UMBELLATA	119		<1						
XANTHOSIA CRUIDA	339		<1		1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 1 QUADRAT: 4 (E)

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
STYLIUM HISPIDUM	385	0.1	<1		1				
HOVEA TRISPERMA	252	0.2	1		1				
EUCALYPTUS CALOPHY (S)	1	0.5	5		5				
GOMPHOLOBIUM HARPIN	247	0.1	<1		<1				
LOMANDRA BRITTANI	522	0.05	<1		<1				
DROSERIA 2 SPECIES	575	0.1	3		1				
BURCHARDIA UMBELLATA	449		<1						
XANTHOSIA CANDIDA	339	0.05	1		2				
HAKEA LISSOCARPA	48	0.6	4		5				
HAKEA STENOCARPA	183	0.8	15		20				
ACACIA NERVOSA	224	0.5	4		5				
HIBBELTIA IMPERIOIDES	52	0.3	4		5				
LYNCHERIA NIGRA	172	0.2	3		3				
CAECOMIA RACEMOSA	203	-	20		20				
ACACIA PULCHELLA	227	0.5	1		1				
LEPIDOSPHERIA TENNE	64	0.5	<1		<1				
TRICHOCLINE SPATHULATA	409	0.1	<1		<1				
MOSS	457		3		<1				
DANTHONIA SETACEA	98	0.05	<1		<1				
LEUCOPOGON PULCHILLUS	427		<1		1				
DARWINIA CITRINODORA					2				
LOMANDRA SP					<1				
HAEMODORUM SP					<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A* PLOT: *2* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90		9/10/91					
		H	C	H	C	H	C	H	C
<i>OPERCULARIA ECHINOCEPH</i>	357		1		1				
<i>HIBBERTIA HYPERICOIDES</i>	52	05	55		50				
<i>DRYANDRA NAYEA</i>	172	02	3		3				
<i>CASSYTHA RACEMOSI</i>	203		13		8				
<i>HOVEA TRICPERM</i>	252		<1		<1				
<i>ACACIA BERLINDSA</i>	224		4		4				
<i>DROSEREA PALLIDA</i>	575		<1		<1				
<i>EUCALYPTUS WANDOO(S)</i>	4	10	5		5				
<i>ACACIA DULCIBELLA</i>	227	05	<1		3				
<i>DARWINIA CITRILOBATA</i>	314		1		2				
<i>GOMPHROBIUM POLYM</i>	247		<1		<1				
<i>EUCALYPTUS CALOPHYLL</i>	1	05	<1						
<i>XANTHOLIA CANADICA</i>	339		2		2				
<i>BRIZA MINOR</i>	523	004	<1						
<i>LEUCOPOGON FULCHELLI</i>	427		<1		<1				
<i>DANTONIA SETACEA</i>	98		<1		<1				
<i>EUCALYPTUS LAELINE(S)</i>	2		<1						
<i>BILLARDIERA COERULEA</i>	211		<1		<1				
<i>NEURACHNE ALOPECUR</i>	414	03	<1						
<i>HIBBERTIA AFF SERRATA</i>			<1						
<i>CAESIA</i>			<1		<1				
<i>BURCHARDIA VIMBELETA</i>			<1						
<i>STYLIDIUM BRANNON</i>					<1				
<i>TRICHOCLINE</i>					<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 2 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
<i>OPERCULARIA ECHINOCEPH</i>	357	0.05	1		1				
<i>DARWINIA CITRIODORA</i>	314	0.3	3		5				
<i>GOMPHOLOBIUM MARGINATUM</i>	247	0.05	<1		<1				
<i>XANTHOSIA CANDIDA</i>	339	0.1	<1		<1				
<i>LEUCOPOGON PULCHELLUS</i>	427	0.2	<1		<1				
<i>BILLARDIERA ODORATA</i>	211	0.1	<1		1				
<i>NEURACHNE ALEPECUROID</i>	414		1		-				
<i>STYLIDIUM AMOENUM</i>	377	0.02	<1		<1				
<i>ACACIA UROPHYLLA</i>	23	1.0	4		8				
<i>SENECIO HISPIDULUS</i>	406	0.2	<1		-				
<i>THELEMITRA CRISTATA</i>	167	0.2	<1		<1				
<i>HAKERA UNULATA</i>	185	0.3	30d		2				
<i>HAEMODORUM SP</i>		0.3	<1		<1				
<i>EUCALYPTUS CALOPHY (S)</i>		0.2			1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 2 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		9/10/91					
		H	C	H	C	H	C	H	C
HIBBERTIA HYPERICOIDES	52		1		1				
ACACIA PULCHELLA	227	0.5	25	0.9	25				
DARWINIA CITRIFOLIA	314		5	0.2	8				
GOMPHOLOBIUM MARGINATUM	247		2	0.1	2				
XANTHOSIA CANDIDA	339		2	0.05	2				
LEUCOPOGON PULCHELLUS	427		8	0.2	8				
DANTHONIA SETACEA	98		2	0.1	2				
BILLARDIERIA COERULEA-P	211		1	0.2	1				
STYLIDIUM AMOENUM	377		2	0.05	2				
HAKKA UNDULATA	185		2	0.3	1				
EUCALYPTUS LAELIPE	2		10		15				
TRYHALIUM LEDIFOLIUM	88	6.0	1	8.0	2				
LAGEDEFERA PUESELI	402	0.03	<1	0.02	<1				
CALADENA SP			<1						
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A* PLOT: *3* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/90							
		H	C	H	C	H	C	H	C
LEUCOPOGON PULCHELLUS	427		8		1				
DARWINIA CITRIODORA	314		10		10				
HIBBERTIA HYPERICOIDES	52		1		1				
ACACIA EXTENSA	20		1		1				
PIMELEA CILIATA	305		3		3				
DAYANDRA NIVEA	172		1		1				
ACACIA PULCHELLA	227		3		3				
HAEMODORUM SP		0.5	<1		-				
XANTHOSIA CANDIDA	339		2		2				
SPHAEROLEBIUM MEDIUM	89		<1		-				
GOMPHOLOBIUM MARGIN	247		1		1				
TRICHILIM LEBIDICUM	88	0.4	4		15				
LOMANDRA SP			<1		<1				
DROSERA P. PALUDA	515		<1		-				
XANTHOXARXON PREISSII	91		<1		4				
STYLIDIUM BRUNNIANUM	379	0.04	<1		-				
EUCALYPTUS CALDWEYLLA	1	10.00	100		100				
CASSYTHA					<1				
CAMPYLOPOGON MOSS					3				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: 4 PLOT: 3 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		9/10/1991					
		H	C	H	C	H	C	H	C
LEUCOPOGON PULCHELLUS	427		<1	0.2	1				
DARWINIA CITRIDORA	314		<1	0.2	1				
ACACIA PULCHELLA	227		20	12	20				
STYLIDIUM AMDENUM	377		<1	0.1	1				
HAKEA TRIFURCATA	425		<1		-				
DANTHONIA SETACEA	98		1		<1				
EUCALYPTUS CALOPHYLLA(S)	1		5	20	15				
STYLIDIUM HICPIDUM	385		<1		1				
OPERCULARIA ECHINOC	357		1		1				
HYPOCALYPTUM ANGUSTIF.	57		<1		<1				
HAKEA UNDULATA					<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 3 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
DARWINIA CITRIFLORA	314		4	0.2	4				
HAKER VINCULATA	185		1	0.3	1				
SPHAEROLOBIUM MEDIUM	84	0.2	<1						
XANTHOSIA CANDIDA	339		2	0.05	1				
HIBBERTIA AFF. SERRATA	297		3	0.3	2				
DAVIDSONIA HOBBESII	238		25	0.4	25				
HIBBERTIA HYPERICOIDES	52		20	0.3	15				
DRYANDRA NIVEA	172		3	0.1	3				
MACROZAMIS REDLEYI	75		20		10				
LEUCOPSSON PULCHERRIMA	427		3	0.2	3				
EUCALYPTUS LAELIAE	2	8.0	80	8.0	80				
TRYMALIUM LEDIFOLIUM	88		2		2				
ACACIA EXTENSUS	20		4		5				
HAETOGRAMMUM SP			<1						
ORCHIDOPSIS LONICERAE	539		<1	0.3	<1				
GILLARDIERA CORALLOIDES	211		1	0.4	2				
BURDECKIA GIBBELLATA	149		<1		<1				
LOMANERA SP			<1		<1				
STYLIDIUM ANDEANUM	377		<1		<1				
DROSERACEA PALLIDA	515		<1		<1				
ANTHODORIS SPACIOSA	524		1		-				
ACETIA PASTILLATA	227		1		1				
XANTHORRHOEA HUMILIS					1				
OPERCULARIA ECHINOC					<1				
COMMENTS	9/10/91 A-E could not be positively identified								

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 3 QUADRAT: 5

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		9/10/1991					
		H	C	H	C	H	C	H	C
<i>DARWINIA CITRIGODORA</i>	314		1		1				
<i>HAKEA UNDULATA</i>	185		1	0.4	1				
<i>XANTHOSEA CINDEEA</i>	339		4	0.1	4				
<i>HIBBERTIA HYPERICIFOLIA</i>	52		25	0.4	25				
<i>DALRYMPLEA NIVEA</i>	172		25	0.3	25				
<i>LEUCOPOGON BURGESSII</i>	427		3	0.4	8				
<i>EUCALYPTUS LAELAE</i>	2	8.0	15	8.0	15				
<i>ACACIA EXTREMA</i>	20		5	15	5				
<i>HAEMODORUM SP.</i>			1	0.3	1				
<i>BELLARDEA CORALUPEA</i>	211		1	0.4	2				
<i>BURCHARDIA UMBELLATA</i>	149		<1						
<i>LOMANDRA SP</i>			<1						
<i>ANTHOCERCIS SPACILLA</i>	524		2		1				
<i>HAKEA LISSOCARPHA</i>	43		50		50				
<i>CASSYTHA RACEMOSA</i>	203		2		1				
<i>GOMPHOLOBIUM MARGIN</i>	247		3		3				
<i>AYRA CARDAMYLEA</i>	459		<1		-				
<i>BAIZA MINOR</i>	523		<1		-				
<i>STYLIDIUM BRUNGLIANNII</i>	379		<1		<1				
<i>SYMPHYLA & PETIOLARIA</i>	87		<1		-				
<i>DELIAELLA ECHINOC</i>	357		<1		-				
<i>TEYSSAOTUS DICHOTOMUS</i>	144		<1		-				
<i>STYLIDIUM BULBIFERUM</i>					<1				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A* PLOT: *4* QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		<i>8/10/90</i>							
		H	C	H	C	H	C	H	C
<i>ACACIA UROPHYLLA</i>	<i>23</i>		<i>30</i>		<i>20</i>				
<i>TRYPHALIUM LUTIFOLIUM</i>	<i>88</i>		<i>2</i>		<i>10</i>				
<i>THYSANOTUS MULTIFLOUS</i>	<i>145</i>		<i><1</i>		<i><1</i>				
<i>DARWINIA CITRIDGOLA</i>	<i>314</i>		<i>3</i>		<i>-</i>				
<i>HAKEA UNDOLOATA</i>	<i>185</i>		<i>3</i>		<i>5</i>				
<i>HIBBERTIA HYPERICODES</i>	<i>52</i>		<i>2</i>		<i>5</i>				
<i>HYPOCALYMMA ANGSTA</i>	<i>57</i>		<i>2</i>		<i>2</i>				
<i>XANTHOSIA CANDIDA</i>	<i>339</i>		<i><1</i>		<i>1</i>				
<i>DANTHONIA SETACEA</i>	<i>98</i>		<i><1</i>		<i><1</i>				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 5 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
DARWINIA CITRIODORA (LL)	314	1.0	65	1.0	70				
" " (SL)	315								
TRYSANOTUS DICHO TOMUS	144		2	dead	-				
TRYMALIUM LEDIFOLIUM	88		2	0.4	4				
DANTONIA SETACEA	98		<1		-				
THELYMITRA CRISTATA	167		<1	0.3	1				
EUCALYPTUS CALDAPHYLLA	1		<1		-				
LEPIDOSPHERA	64		1		-				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 6 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1980							
		H	C	H	C	H	C	H	C
GREVILLEA DIVERSIFOLIA	43	20	55		60				
AGONS LINEARIFOLIA	26		3/50		3				
ASTARTEA FASCICULARIS	28		10		10				
TETRARHENA LAEVIS	101		<1		—				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A* PLOT: *6* QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		H	C	H	C	H	C	H	C
<i>DRYANDRA PRAEMORSA</i>	<i>173</i>		<i>45</i>		<i>45</i>				
COMMENTS		<i>DRYANDRA HAS DETERIORATED IN HEALTH</i>							

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A

PLOT: 6

QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
AGONIS LINEARIFOLIA	26		<1		<1				
2 DRYANDRA PRAEMORSA	173		2		-				
LEPTOCARPUS COANGUSTATUS	66		15		15				
BAUMEA VAGINALIS	438		2		2				
ASTARTEA FASCICULARIS					2				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 7 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
GREVILLEA DIVERSIFOLIA	43	40	45		60				
MOSS CAMPHYLOPUS	451	0.01	1		-				
REST ROCK WITH SOME									
LICHENS									
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *A* PLOT: *7* QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1992							
		H	C	H	C	H	C	H	C
<i>ASTARTEA FASCICULARIS</i>			<i>2</i>		<i>2</i>				
<i>REST ROCK & WATER</i>									
COMMENTS		<i>MARKERS WASHED OUT</i>							

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: **A**

PLOT: **7**

QUADRAT: **3**

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		H	C	H	C	H	C	H	C
<i>GREVILLEA DIVERSIFOLIA</i>	43	4.0	30		30				
<i>TRYMALIUM FLORIBUNDUM</i>	89	3.0	50		50				
<i>TRYSANOTHEUS DICOTOMUS</i>	144		8		8				
<i>PHYLANTHUS CALYCIUS</i>	80		1		1				
<i>2 BROMUS DIANDRUS</i>	525		3		10				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A

PLOT: 7

QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		15/10/1990					
		H	C	H	C	H	C	H	C
<i>GREVILLEA DIVERSIFOLIA</i>	43	4.0	30	4.0	30				
<i>BROMUS DIANDRUS</i>	525		1	0.1	1				
<i>XANTHOSIA CANDIDA</i>	339		1	0.05	<1				
<i>CALOTHAMNUS QUADRIFIDUS</i>	311		65	2.0	60				
<i>DARWINIA CITRIDORA</i>	314		5	0.3	0.5				
<i>ACACIA PULCHELLA</i>	227		1	-	-				
<i>DROSEREA PALIDA</i>	515		1	1.5	1				
<i>LEPIDOSPERMA ANGUSTATA</i>	63		1	0.2	<1				
<i>CAESIA PERVIOLORA</i>	141		2	0.3	2				
<i>HAKEA LISSOCARPHA</i>	48		25	0.4	30				
<i>HIBBERTIA HYPERICOIDES</i>	52		20	0.2	20				
<i>TETRALARXENA LAEWS</i>	101		2	0.1	2				
<i>XANTHORRHOEA PREISSII</i>	91		1	0.5	5				
<i>PHYLLANTHUS CALYCIATUS</i>				0.3	5				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 8 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
<i>CALOTRIXIS BVDRIEUS</i>	311	15	60	15	60				
<i>PHYLLANTHUS CALYCINUS</i>	80	0.3	10	0.3	7				
<i>DARWINIA CITRIODORA (SL)</i>	315	0.3	7	0.3	10				
<i>STYPIANDRA GLAUCA</i>	138	0.3	2	0.3	2				
<i>HAKEA LISOCARPHA</i>	48	0.5	8	0.4	10				
<i>XANTHORRHOEA PREISSII</i>	91		2	0.4	3				
? <i>BROMUS DIANDRUS</i>	525		2	0.2	2				
<i>NEURACHNE ALOPECURIDEA</i>	414		1	0.1	1				
<i>LEPIDOSPERMA TENUE</i>	64		2	0.2	2				
<i>BURCHARDIA UMBELLATA</i>	199		<1		-				
<i>LOXOCARYA FLEXUOSA</i>	127		4	0.1	6				
<i>LOMINDA SP</i>			2		4				
<i>ACACIA PULCHELLA</i>	227		1	0.5	1				
<i>ACACIA EXTENSA</i>	20		2	0.6	10				
<i>DRYANDRA PRAEMORSA</i>				0.1	<1				
<i>HIBBERTIA HYPERICOIDES</i>				0.2	10				
<i>EUCALYPTUS LAELAE</i>		10	50	10	50				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: **A** PLOT: **8** QUADRAT: **2**

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		2/10/1999							
		H	C	H	C	H	C	H	C
PHYLLANTHUS CALYCHUS	80	0.3	3	0.3	4				
STYRANDRA GLAUCA	138	0.3	45	0.3	45				
LEPIDOSPERMA TENUE	64		1	0.3	2				
HAEMODOCUM SP			4	0.3	4				
CHEILANTHUS TENUIFLORA	92	0.2	6	0.2	6				
BRIZA MARITIMA	458		1	0.2	3				
HIBBERTIA IMPERATORIDES	52		30	0.2	30				
TRYSANOTHEUS PATERSONII	146		1	1.0	2				
DROSER A PALLIDA	515		1	0.2	1				
DODONAEA CERATOCARPA	281		<1	0.5	<1				
GREVILLEA DIVERGIFOLIA	48	20	50	25	60				
XANTHOSIA CANDIDA	339		<1		-				
COMPHOLOBIUM MARITIMUM	247		2		2				
LOMANDRA BAITTONI	522		1	0.1	1				
APIACEAE - TRACHYMENE				0.03	<1				
MOSS CAMPHYLOPUS				0.02	4				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 8 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		2/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
<i>CALOTHAMNUS QUADRIFIDUS</i>	311	16	70	12	80				
<i>PHYLANTHUS CALYCINUS</i>	80	0.5	20	0.5	25				
<i>CHOLANTHES TENUIFOLIA</i>	92	0.2	1	0.1	3				
<i>STYRANDRA GLAUCA</i>	138	0.5	10	0.5	10				
<i>LOXOCARYA FLEXUOSA</i>	127	0.2	5	0.2	5				
<i>DAOSERA PALIDA</i>	515	0.3	1	0.3	1				
<i>PIMELIA IMBRICATA</i>	306	0.5	2	0.5	2				
<i>STYLIDIUM GLOBIFERUM</i>	389	0.1	2	0.1	2				
<i>BRIZA MAXIMA</i>	458	0.3	1	0.2	1				
<i>AIKACARYOPHYLLA</i>	459	0.1	<1	0.1	<1				
<i>HERBERTA REPENSINOIDA</i>	53	0.1	<1	-	-				
<i>ACACIA POLYCHAETA</i>	227	0.9	1	11	3				
<i>HYALOSPERMA COTULA</i>				0.1	1				
<i>MILLOTIA TENUIFOLIA</i>				0.1	3				
<i>MOSS CAMPHYLOPUS</i>				0.02	6				
<i>LEPIDOSPERMA TENUE</i>				0.3	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: A PLOT: 8 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
CALOTY-AMNUS QUADRIFID	311	10	70	10	60				
PHYLLANTHUS CALYCINUS	80	0.5	3	0.5	2				
STYLIDIUM BULBIFERUM	380	0.1	<1	-	-				
STYDANDRA GLAUCA	138	0.5	5	0.5	3				
LODGE CAR YA FLEXUOSA	127	0.2	2	0.2	3				
DROSER A PALLIDA	515	0.3	<1	-	-				
HIBBERTIA RHADINOPDA	53	0.1	35	0.1	40				
ACACIA PULCHELLA	227	1.0	5	1.0	4				
DARWINIA CITRIDDRACEL	315	0.6	15	0.6	15				
BILLARDIERA COERULO-P	211	1.0	3	-	-				
HEMIGENIA INCANA	348	0.2	2	0.4	3				
BURCHARDIA UMBELLATA	149	0.5	<1	-	-				
TRYMELIUM LEDIFOLIUM	88	0.2	<1	0.2	<1				
HAEMODOCUM SP		0.6	1	0.6	<1				
CAESIA PARVIFLORA	141	0.2	<1	0.2	<1				
NEURACHNE ALOPUROIDEA	414	0.1	1	-	-				
HIBBERTIA HYPERICOIDES				0.2	4				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 1 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
<i>DRYANDRA NIVEA</i>	172	0.2	25	0.2	20				
<i>LOXOCARYA FLEXUOSA</i>	127	0.2	25	0.2	25				
<i>CONOSTYLIS SETOSA</i>	154	0.1	4	0.1	4				
<i>LEPIDOSPERMA ANGUSTAT</i>	63	0.2	15	0.3	4				
<i>LECHENAULTIA BILBOEA</i>	415	0.2	1	0.2	1				
<i>LOMANDRA SPARTEA</i>	464	0.3	2	0.3	2				
<i>HYPOCHAERIS GLABRA</i>	499		<1		-				
<i>HAEMODORUM SP</i>		0.3	<1	0.3	<1				
<i>TRIPTERODOCCLUS BRUNONIS</i>	280	0.3	2	0.3	2				
<i>XANTHORRHOEA PREISSII</i>	91	0.5	<1	0.5	1				
<i>OPERCULARIA ECHINOCEP</i>	357	0.05	<1	0.05	<1				
<i>XANTHOSIA CANDIDA</i>	339	0.02	1	0.03	<1				
<i>HIBBERTIA ACEROSA</i>	291		1	0.05	2				
<i>NEURACME ALOPECUROID</i>	414	0.03	<1		-				
<i>LOMANDRA HERMIPHROD</i>	133	0.1	1	0.1	1				
<i>CYATOCHAETE AVENACEA</i>	417	0.3	<1	0.3	<1				
<i>COMPOLOBIUM MARGINATUM</i>	247	0.1	1	0.1	4				
<i>STYLIDIUM LINEATUM</i>	387	0.01	<1	0.01	<1				
<i>DANTONIA SETACEA</i>	98		1		-				
<i>LOMANDRA SONDERII</i>	137	0.05	<1	0.1	<1				
<i>COMPOLOBIUM PREISSII</i>	249	0.04	<1						
<i>LEPIDOSPERMA TENUE</i>	64	0.4	1	0.4	1				
<i>BOSSIAEA ORNATA</i>	31	0.2	<1	0.05	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B* PLOT: */* QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
LOXOCARYA FLEXUOSA	127	0.3	20	0.3	15				
LECHIENAVLTA BILOBA	415	0.2	<1	0.2	<1				
TRIPTEROLOCCUS BRUNNEUS	280	0.3	<1	0.3	1				
XANTHORRHOEA PRICKER	91	0.5	2	0.6	2				
OPERCULARIA ECHINOCERF	357	0.05	<1	-	-				
XANTHOSIA CANDIDA	339	0.02	1	0.02	1				
CYTOCHAETE AVENACEA	417	0.3	1						
DANTHONIA SETACEA	98	0.02	<1	0.05	<1				
BOSCHIAEA ORNATA	31	0.2	1		1				
GREVILLEA WILSONII	15	0.5	6	0.4	8				
DAMPIERA LINEARIS	365	0.03	<1	0.03	2				
TETRARIA CAPILLARIS	516		<1		<1				
STYLIDIUM JUNCEUM	386	0.2	<1						
DANTHONIA SP					1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B* PLOT: *1* QUADRAT: *3*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10 /1990							
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS MARGINATA</i>	4	9	30	9	30				
<i>ALLOCAQUARIA FRASER</i>	15	9	15	9	15				
<i>MACROZAMIA RIEDLET</i>	75	1	3	0.7	5				
<i>GREVILLEA WILSONII</i>	45	0.5	12	0.5	12				
<i>LOXCARYA FLEXUOSA</i>	127	0.2	50	0.2	50				
<i>DRYADRA NYE A.</i>	172	0.1	20	0.1	20				
<i>LOMANDRA SONDERI</i>	137	0.3	2	0.3	3				
<i>CONOSTYLIS SETOSA</i>	154	0.2	3	0.2	3				
<i>PENTAPELTS PELTIGERA</i>	412	0.1	1	0.1	1				
<i>XANTHOSIA CANDIDA</i>	339	0.1	1	0.1	1				
<i>COMPHOLOBIUM PREISSII</i>	249	0.1	<1	0.05	<1				
<i>PTILOTUS MANGLESII</i>	444	0.1	1	0.1	1				
<i>LOMANDRA SPARTEA</i>	464	0.3	1		1				
<i>XANTHORRHOEA GRACILIS</i>	20	0.4	<1		1				
<i>LOMANDRA HEMIPHRODITA</i>	133	0.2	<1		<1				
<i>SCAEVOLA STRIATA</i>	372	0.1	<1		<1				
<i>LOMANDRA BRITTANII</i>	522	0.1	<1		<1				
<i>PATERSONIA PYGMAEA</i>	158	0.1	<1		<1				
<i>LEPIDOSPERMA ANGUST</i>	63	0.2	<1		<1				
<i>CALADENIA SP.</i>		0.1	<1	0.3	<1				
<i>BILLARDIERA COERULEA</i>	211	0.1	<1	-	-				
<i>TRYMALIUM LEDIFOLIUM</i>	88	0.2	<1	-	-				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 1 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1999							
		H	C	H	C	H	C	H	C
<i>LOXOCARYA FLEXUOSA</i>	127	0.2	25	0.3	25				
<i>DRYANDRA NIVEA</i>	172	0.1	35	0.1	25				
<i>CONOSTYLUS SETOSA</i>	154	0.2	2	0.2	3				
<i>PENTAPELTIS PELTIGERA</i>	412	0.1	1	0.1	2				
<i>XANTHOSIA CANDIDA</i>	339	0.1	<1	0.1	1				
<i>LOMANDRA SPARTEA</i>	464	0.3	<1		<1				
<i>LOMANDRA HERMAPHROD</i>	133	0.2	<1		<1				
<i>DAMPiera LINEARIS</i>	365	0.1	<1	0.1	1				
<i>LOMANDRA BRITANNI</i>	522	0.1	1		1				
<i>LEPIDOSPERMA ANGUST</i>	63	0.2	1	0.2	1				
<i>TRYMALIUM LEDIFOLIUM</i>	88	0.2	<1	0.2	<1				
<i>EUCALYPTUS PATENS</i>	5	2.0	30	2.5	35				
<i>LASIOPETALUM FLORIB</i>	62	0.3	6	0.3	8				
<i>HYPOLAENA EXSULCA</i>	526	0.3	30	0.3	25				
<i>MIRBELIA DILATATA</i>	413	0.1	<1	0.3	2				
<i>HEMIGENIA RAMOSISS</i>	349	0.1	1	0.1	1				
<i>BORONIA GREU. VAR GRA</i>	263	0.2	<1	0.2	2				
<i>LOMANDRA PREISSII</i>	135	0.2	1		1				
<i>CYATOCHEATE AVENAC</i>	417	0.4	5	0.4	5				
<i>PLATYSACE COMPRESSA</i>	336	0.2	<1		-				
<i>DANTHONIA SETACEA</i>	98	0.1	<1		-				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 2 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
MIRBELIA DILATATA	413	0.3	<1		<1				
ACACIA ALATA	19	0.5	2	0.5	2				
LEPIDOSPERMA ANGUST	63	0.2	2		2				
CYTOCHAETE AVENACEA	417	0.5	45		45				
AGONIS LINEARIFOLIA	26	20	30		40				
ASTARTEA FASCICULARIS	28	1.0	30		30				
LEPTOCARPUS COMPAUCTUS	66	0.5	25		20				
DAMPIERA LINEARIS	365		<1		1				
BORONIA CRENULATA GRAC	263	0.3	1		2				
PATERSONIA OCCIDENTALIS	78	0.3	1						
LOMANDRA INTEGRALIS	134	0.2	<1		<1				
GONOCARPUS BENTHAMII	332	0.02	<1		2				
DROSER A PLATYSTIGMA				0.01	2				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B*

PLOT: *2*

QUADRAT: *2*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		12/10/1991					
		H	C	H	C	H	C	H	C
LASIOPETALUM FLORIB.	62	0.5	65	0.5	65				
LOXOCARYA FLEXUOSA	127	0.3	35	0.3	35				
MIRBELIA DILATATA	413	0.3	1	0.4	1				
EUCALYPTUS MEGACARPA	3	60	25	60	25				
ACACIA ALATA	19	0.5	1	0.5	1				
LEPIDOSPERMA ANGUST	63	0.2	1		1				
BILLARDIERA COERULEO	211	0.1	<1		-				
PENTAPELTIS PELTIGERA	412		<1	0.05	<1				
ASTROLOMA CILIATUM	416	0.05	2	0.05	2				
TETRARIA CAPILLARIS	516	0.3	1		1				
LOMANDRA SP			<1		-				
CYATOCHEATE AVERNACEA	417	0.5	1		1				
TETRARAHENA LAEVIS	101	0.2	1	0.2	1				
2 GOND CARPUS BENTH		0.02	<1		<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B* PLOT: 2 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		2/10/1999							
		H	C	H	C	H	C	H	C
<i>ASONIS LINEARIS</i>	26	20	40	25	40				
<i>ASTARTEA FASCICULARIS</i>	28	10	8	15	10				
<i>GAMBIA TRIFIDA</i>	107	20	30	20	30				
<i>ACACIA ALATA</i>	19	10	5	15	6				
<i>BANKSIA LITTORALIS</i>	10	0.1	<1	0.2	<1				
<i>DAMPiera FEDERATA</i>	363	0.2	2	0.8	3				
<i>CYATOCHEATEA YENACA</i>	417	10	45	10	45				
<i>LASIOPETALUM DAMBUN</i>	62	10	3	10	3				
<i>GONOCARPUS BENTHAMII</i>	332		1	0.2	1				
<i>MIRBELIA DILATATA</i>	413	0.1	<1	0.3	<1				
<i>BILLARDERA FLORIBUNDA</i>	213		3		3				
<i>TETRARRHENA LAEVIS</i>				0.2	1				
<i>HOVEA</i> (SPP. 1)					<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 2 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
<i>ACONIS LINEARIS</i>	26	2.0	70	2.0	70				
<i>ASTARTEA FASCICULARIS</i>	28	1.0	45	1.3	45				
<i>ACACIA ALATA</i>	19	1.0	<1	0.1	<1				
<i>CYATOCHAETE AVENAC</i>	417	1.0	45		45				
<i>BORONIA CAEN. VAR GRAC</i>	263	0.2	1		—				
<i>DROSER A PULCHELLA</i>	502	0.1	1		2				
<i>DAMPiera LINEARIS</i>				0.1	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B

PLOT: 3

QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990		15/12/1991					
		H	C	H	C	H	C	H	C
<i>AGONIS LINEARIFOLIA</i>	26	3.5	20	2.0	10				
<i>CYATOCHAETE AVENAC</i>	417	0.5	60	0.5	60				
<i>EUCALYPTUS PATENS</i>	5	5.0	25	5.0	25				
<i>THOMASIA PANICULATA</i>	290	1.0	2	1.0	2				
<i>ASTARTEA FASCICULARIS</i>	28	2.5	75	2.5	75				
<i>HOVEA TRISPERRIMA</i>	252	0.5	1		-				
<i>DAMPiera HEDERACEA</i>	363	0.3	1	0.3	1				
<i>BORCHIA CREN. VAR. GRAC</i>	263	0.3	1		-				
<i>ACACIA ALATA</i>	19		2.0	1.1	2				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 3 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
LASIOPETALUM FLORIB.	62	0.6	2	0.6	2				
ASONIS LINEARIFOLIA	26	3.5	60	2.5	50				
CYTOCHAETE AVENAC	417	0.5	60	0.5	60				
MIRBELIA DILATATA	413	2.5	50	3.5	50				
EUCALYPTUS PATENS	5	10.0	25	10.0	25				
ACACIA ALATA	19	0.6	20	0.6	15				
PLATYSACE COMPRESSA	336	0.4	1	0.4	1				
CASSYTHA RACEMOSA	203	0.3	2	0.8	2				
ACACIA DIVERGENS	218	2.0	5(0)		—				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B* PLOT: *3* QUADRAT: *4*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
LASIOPE TALUM FLORIBUND	62	0.6	65	0.6	50				
AGONIS LINEARIFOLIA	26	3.5	45	1.0	35				
CYTOCHAE TE AVENACEA	417	0.5	25	0.5	20				
TETRARRHENA LAEVIS	101	0.3	2	0.3	2				
MIRBELLIA DILATATA	413	2.5	1	0.1	1				
TETRAARIA CAPILLARIS	516	0.4	8	0.4	8				
EUCALYPTUS MEGACARPA (c)	3	0.1	<1	0.2	1				
LOXOCARYA FLEXUOSA	127	0.4	<1	0.4	—				
EUCALYPTUS MEGACARPA (H)	3	14.0	10	14.0	8				
COMMENTS <i>DISTURBED BY ROAD WORKS</i>									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B*

PLOT: *4*

QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS MEGACARPA</i>	<i>3</i>	<i>20.0</i>	<i>70</i>	<i>20.0</i>	<i>70</i>				
<i>CYATOCHEAETE AVENACEA</i>	<i>417</i>	<i>0.5</i>	<i>50</i>	<i>0.5</i>	<i>45</i>				
<i>MIRBELIA DILATATA</i>	<i>413</i>	<i>0.3</i>	<i>3</i>	<i>0.3</i>	<i>6</i>				
<i>LASIOPETALUM FLORIBUN</i>	<i>62</i>	<i>0.2</i>	<i>8</i>	<i>0.2</i>	<i>3</i>				
<i>ACACIA ALATA (S)</i>	<i>19</i>	<i>0.2</i>	<i>1</i>	<i>0.2</i>	<i>2</i>				
<i>LECHENAULTIA BILOBA</i>	<i>415</i>	<i>0.3</i>	<i>10</i>	<i>0.3</i>	<i>15</i>				
<i>TETRARIA CAPILLARIS</i>	<i>576</i>	<i>0.3</i>	<i>1</i>	<i>0.3</i>	<i>1</i>				
<i>SCAEVOLA STRIATA</i>	<i>372</i>	<i>0.1</i>	<i>1</i>	<i>0.1</i>	<i>3</i>				
<i>EUCALYPTUS CALOPHYLLA</i>	<i>1</i>	<i>0.1</i>	<i>1</i>	<i>0.1</i>	<i>1</i>				
COMMENTS <i>SLIGHTLY DISTURBED BY ROADWORKS</i>									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B PLOT: 4 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1990							
		H	C	H	C	H	C	H	C
EUCALYPTUS MESACARPA	3	20.0	50						
CYATOCHEAETE AVENACEA	417	0.5	60						
MIRBELIA DILATA	413	3.0	60						
LASIOPETALUM FLORIBUND	62	0.2	35						
ACACIA ALATA (S)	19	0.2	1						
TETRARIA CAPILLARIS	516	0.3	5						
AGONIS LINEARIFOLIA	26	3.0	30						
BORONIA CREN. VAR. GAAC.	263	0.3	2						
ACACIA DIVERGENS	218	0.3	2						
BILLARDIERA FLORIBUND	213	0.3	1						
HIBBERTIA AMPLEXIFOL	292	0.2	1						
TETRAARRHENIA LAEVIS	101	0.2	1						
PLATYSACE COMPRESA	336		1						
HOVEA TRISPERMA	252	0.3	1						
COMMENTS: DESTROYED BY ROAD WORKS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: B

PLOT: 4

QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		2/10/1990							
		H	C	H	C	H	C	H	C
CYATOCHEA AENAC	417	04	20	0.4	20				
MIRBELIA DILATATA(S)	413	0.1	<1	0.3	3				
PHYLLANTHUS CALYCINUS	80	0.05	4	0.2	6				
CONOSTYLIS SETOSA	154	0.1	3	0.1	8				
LECHENAULTIA BILoba	415	0.3	6	0.3	4				
TRYPALIUM LEDIFOLIUM	88	0.3	<1	0.3	<1				
PLATYSACE TENUISIMA	337	0.1	<1	0.1	1				
LOMANDRA HERMANNIA	133	0.1	1		-				
STYLIUM JUNCEUM	386	0.2	<1		-				
XANTHOSIA CANIDIA	339	0.02	<1	0.02	<1				
HIBBERTIA ACERDA	291	0.03	1	0.03	2				
DANTONIA SETACEA	98	0.05	<1	0.05	<1				
LEUCOPETALUM FLORIB.	62	0.05	<1	0.05	1				
PLATYSACE COMPRESSA	336	0.2	<1	0	-				
ALLOCARPUS FRAS					4				
BURCLAR DIAL YMBEL				0.2	<1				
GOMPHOLOBIUM MARS.				0.05	<1				
PENTAPELIS PELTIGERA				0.05	1				
HEMIGLENIA				0.05	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *B* PLOT: *4* QUADRAT: *4*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		8/10/1980		15/10/82					
		H	C	H	C	H	C	H	C
<i>CYATOCHEUTE AVENACEA</i>	417	0.4	35	0.4	35				
<i>LEPIDOSPERMA TENUE</i>	64	0.5	25	0.5	25				
<i>LOMANDRA SCHLIERI</i>	137	0.3	20	0.4	20				
<i>BOSSIALA ORNATA</i>	31	0.4	25	0.4	25				
<i>PTILOLOTUS MANGLESII</i>	444	0.04	<1	0.04	2				
<i>THELYMITRA CRISTATA</i>	167	0.05	<1	0.4	<1				
<i>PIMELEA SAUVOLENS</i>	309	0.1	<1	0.1	<1				
<i>LODOCARYA FLEXUOSA</i>	127	0.2	20	0.2	20				
<i>LOMANDRA SPARTEA</i>	464	0.3	<1	0.3	<1				
<i>GOMPHOLOBIUM MARGIN</i>	247	0.2	<1	0.1	<1				
<i>MIRBELIA DILATATA</i>	413	0.1	<1	0.3	2				
<i>PHYLLANTHUS CALYCIUM</i>	80	0.1	<1	0.1	1				
<i>EUCALIPTUS MARGIN</i>	4	10.0	50	10.0	50				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 1 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		15/10/1991					
		H	C	H	C	H	C	H	C
EUCALYPTUS MARGINATA (N)	4	25.0	40	25.0	40				
EUCALYPTUS MARGINATA (S)	4	0.5	35	0.7	40				
DRYANDRA NIVEA	172	0.2	25	0.2	25				
BIACCHARDIA IMBELLATA	149	0.3	<1	-	-				
LOMANDRA BATTENI	522	0.05	<1	0.05	<1				
DAHPERA LINEARIS	365	0.05	<1	0.05	<1				
TETRAKARHENA LAEVIS	101	0.2	<1	0.2	<1				
AOENANTHOS BARBIGERUS	24	0.1	1	0.1	1				
LOMANDRA DRUMMONDII	531	0.4	2	0.4	<1				
BILLARDIERA (LARGE POD)			-	0.5	2				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 1 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
EUCALYPTUS MARGINATA	4	2.0	50	2.0	40				
TETARRHENA LAEVIS	101	0.2	1	0.2	1				
LOMANDRA DRUMMONDII	531	0.4	<1	0.4	<1				
TRYPHALIUM FLORIBUNDUM	8?	3.0	80	3.0	80				
CLEMATIS PUBESCENS	34	0.3	1	0.3	1				
LASIOPEALUM FLORIB.	62	0.3	3	0.3	3				
CYATOCHAETE AVENACEA	417		<1		—				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 1 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
BURCHARDIA UMBELLATA	149	0.3	41	0.3	41				
TETRARRHENA LAEVIS	101	0.2	2	0.2	2				
TRYMALIUM FLORIBUND	89	3.0	15	2.0	15				
CLEMATIS PUBESCENTIS	34	0.3	2	0.3	5				
MACROZAHIA RIEDLEI	75	0.5	15	0.5	20				
EUCALYPTUS PATENS	5	15.0	40	15.0	40				
XANTHORRHOEA PREISSII	91	2.0	30	2.0	30				
OXALIS CORNICULATA	527	0.02	41		-				
LASIOPE TALUM FLORIB				0.5	3				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 2 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
EUCALYPTUS PATENS (S)	5	3.0	60	3.5	60				
XANTHORRHOEA PREISSII	91	0.5	2	0.5	2				
TRYMALIUM FLORIB	89	3.0	30	3.0	5				
PTERIDIUM ESCULENT	81	0.2	15d	0.5	10				
EUCALYPTUS CALOPHYLLA	1	25.0	5	25.0	5				
LOMANDRA SONDERI	137	0.3	2	0.3	2				
HOVEA TRISPERMA	252	0.04	<1						
LOMANDRA SP		0.3	<1	0.3	<1				
NEURACHNEALDIPURDIDEA	414	0.1	<1						
TETRARRHENA LAEVIS	101	0.1	<1	0.1	<1				
EUCALYPTUS MARG(S)		0		0.7	1				
LASIOPETALUM FLORIB				0.2	<1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 2 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

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SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS PATENS</i>	5	15.0	20	15.0	20				
<i>TRYMALIUM FLORIBUND</i>	89	3.0	60	3.0	60				
<i>PTERIDIUM ESCULENT</i>	81	0.2	20d	0.1	<1				
<i>LAGENIFERA HUEGELII</i>	402	0.02	1	0.02	2				
<i>ACACIA EXTENSA</i>	20	0.04	<1						
<i>CLEMATIS PUBESCENTIS</i>	34	0.05	<1	0.05	<1				
<i>MACROZAMIA RIEDLEI</i>	75	0.5	10		3d				
<i>LEPIDOSPERMA TETRAQ</i>	65	1.0	1		2				
<i>CYATOCHEATE AVENAC</i>	417	0.5	2		2				
<i>TETRARRHENA LAEVIS</i>		0.1			1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 3 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
OXYLOBIUM LANCEOLATUM	257	6.0	50d		d				
AGONIS LINEARIFOLIA	26	3.0	80	3.0	80				
BAUHEA VAGINALIS	438	1.5	10	1.5	10				
LYPOCALYPTUS				1.5	10				
COMMENTS		PLOT FALLS IN STREAM - VEGETATION OVERHANGS							

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C **PLOT:** 3 **QUADRAT:** 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
OXYLOBIDUM LANCEOLAT	257	6.0	60	6.0	60				
AGONIS LINEARIFOLIA	26	3.0	30d	1.0	10				
TRYMALIUM FLORIBUND	89	3.0	25	2.0	25				
LEPIDOSPERMA TETRAR	65	1.0	75	1.0	75				
PTERIDIUM ESCULENT	81	0.5	30d		d				
TETRARRHENA LAEVIS		0.1	<1		—				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C **PLOT:** 3 **QUADRAT:** 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
<i>OXYLOBIUM LANCEOLATUM</i>	257	6.0	10	6.0	15				
<i>AGONIS LINEARIFOLIA</i>	26	0.3	8	0.3	8				
<i>TRYMALIUM FLORIBUNDUM</i>	89	2.0	10	2.0	15				
<i>LEPIDOSPERMA TETRAQUET</i>	65	1.5	90	1.5	90				
<i>EUCALYPTUS PATENS</i>	5	30.0	50	30.0	50				
<i>MACROZAMIA FIELLEI</i>	75	1.0	10	1.0	10				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 3 QUADRAT: 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
TRYMALIUM FLORIBUNDUM	89	3.0	20	2.0	40				
LEPIDOSPERMA TETRAXOET	65	1.0	20	1.2	40				
PTERIDIUM ESCULENTUM	81	0.5	10d		d				
TETRARRHENA LAEVIS	101	0.1	3	0.2	3				
EUCALYPTUS PATENS	5	30.0	15	10.0	20				
LEPTOCARPUS COANGUSTAT	66		2		-				
MACROZAMIA RIEDLEI				0.4	3				
COMMENTS VEGETATION COLLAPSED OVER THE PLOT									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *C* PLOT: *4* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
<i>TRYMALIUM FLORIBUND</i>	89	15	45	15	40				
<i>MACROZAMIA RIEDLEI</i>	75	0.5	25	0.5	25				
<i>EUCALYPTUS MARGINATA</i>	4	25.0	50	25.0	50				
<i>MIRBELIA DILATATA</i>	413	4.0	60	4.0	60				
<i>LASIOPETALUM FLORIB.</i>	62	0.5	8	0.5	6				
<i>EUCALYPTUS PATENS</i>	5	1.0	20	1.0	20				
<i>BURCHARDIA UMBELLATA</i>	149	0.2	<1		-				
<i>XANTHORRHOEA PREISSII</i>	91	2.0	<1	2.0	<1				
<i>PLATYSACE COMPRESSA</i>	336	0.4	3	0.4	3				
<i>MONDAXIS OCCIDENTAL</i>	532	0.1	1	0.1	1				
<i>TETRARRHENA LAEVIS</i>				0.2	1				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: **C**

PLOT: **4**

QUADRAT: **2**

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990		15/10/1991					
		H	C	H	C	H	C	H	C
<i>TRYMALIUM FLORIBUND</i>	89	15	70	20	80				
<i>EUCALYPTUS MARGINATA</i>	4	0.3	10	0.3	5				
<i>LASIOPETALUM FLORIB</i>	62	0.5	15	0.5	10				
<i>EUCALYPTUS PATENS</i> (s)	5	1.0	20	2.0	20				
<i>BURCHARDIA UMBELLATA</i>	149	0.2	1		-				
<i>EUCALYPTUS CALOPHYLLUM</i>	1	20.0	30	20.0	3.0				
<i>PTERIDIUM ESCULENTUM</i>	81		20d		-				
<i>DAMPiera HEDERACEA</i>	363		1						
<i>CALADENIA SP.</i>			<1		-				
<i>EUCALYPTUS CALOPHYLLUM</i>	1	1.0	3	1.0	3				
<i>LOMANDRA INTEGRALIS</i>		0.4	1	0.2	1				
<i>CHORIZEMIA ILICIFOLIUM</i>	33	15	<1						
<i>SCAEVOLA CALLIPTERA</i>				0.1	1				

COMMENTS

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN
 MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C PLOT: 4 QUADRAT: 3

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990		15/10/1990					
		H	C	H	C	H	C	H	C
<i>TRYMALIUM FLORIBUND.</i>	89	15	70	15	70				
<i>EUCALYPTUS MARGINATA</i>	4	250	30	250	30				
<i>LASIOPETALUM FLORIB.</i>	62	0.5	2	0.5	2				
<i>MACROZAMIA RIEDLEI</i>	75	0.5	3	0.5	5				
<i>XANTHORRHOE PREISSII</i>	91	0.2	<1	0.4	5				
<i>EUCALYPTUS MARG. (S)</i>	4	25	10	25	10				
<i>LOMANDRA DRUMMONDII</i>	531	0.3	1	0.3	2				
<i>TETRARRHENA LAEVIS</i>	101	0.1	1		-				
<i>ACACIA EXTENSA (S)</i>	20		<1		-				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: C **PLOT:** 4 **QUADRAT:** 4

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
TRYMALION FLORIBUND	89	15	75	15	75				
BURCHARDIA UMBELLATA	149	0.2	2	0.3	1				
XANTHORRHOEA PREISCH	91	2.0	40	20	40				
PLATYSACE COMPRESSA	336		5	0.3	3				
EUCALYPTUS CALOPHYLL(S)	1	1.0	10		10				
CHORIZEMA ILICIFOLIUM	33	15	3		-				
EUCALYPTUS MARGIN(S)	4	5.0	32	5.0	35				
TETRARRHENA LAEVIS	101	0.1	1	0.1	1				
EUCALYPTUS PATENS	1	7.0	30	7.5	40				
COMMENTS									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *D* PLOT: *1* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		9/10/91					
		H	C	H	C	H	C	H	C
<i>ANTHOCERCIS GRACILIS</i>	524	0.3	15	0.8	20				
<i>HYPOCALYMYA ANSUTIFOLIA</i>	57	0.4	15	0.4	15				
<i>HIBBERTIA AFF. SERRATA</i>	299	0.3	3	0.4	4				
<i>DARWINIA CITRIGERA (SH.C)</i>	315	0.3	8	0.3	8				
<i>DRYANDRA PRAEMORSA</i>	314	15	40	20	40				
<i>LASENIFERA HUESELII</i>	402	0.03	1		1				
<i>CHAMAESCILLA CORYMBOSA</i>	528	0.04	<1		-				
<i>SENECIO HISPIDULA</i>	406	0.3	<1		1				
<i>TRYMALIUM LEDIFOLIUM</i>	88	0.4	5	0.4	5				
<i>NEURASCONE ALOPECU.</i>	407	0.05	<1		<1				
<i>XANTHOSIA CANDIDA</i>	339	0.05	2		2				
<i>EUCALYPTUS LAELIAE</i>	2	6.0	5		5				
<i>THYCAIOTUS MULTIFLORUS</i>	145	0.1	1		1				
<i>BURCHARDIA UMBELLATA</i>	149	0.2	<1		-				
<i>MILLOTIA TENUIFLORA</i>	533	0.04	<1		-				
<i>PITHOCARPUS CORYMBULOSA</i>	534	0.1	1		-				
<i>STYLIDIUM HISPIDUM</i>	385	0.02	<1		<1				
<i>STYLIDIUM BRUNONIANUM</i>	379	0.02	<1		<1				
<i>STYLIDIUM AMOENUM</i>	377	0.05	1		<1				
<i>HAEMODORUM SP</i>		0.3	<1		<1				
<i>TETRAARIA OCTANDRA</i>	419	0.05	<1		<1				
<i>LOMAYDRA DRUMMONDI</i>	531	0.3	1	0.3	1				
<i>TRIPTEROCOCCUS</i>					<1				
<i>CAMPHYLOPUS</i>		0.02			1				
<i>DROSER ? PALLIDA</i>					<1				

COMMENTS *RIGHT OF LINE ; 3, 2R / 10/91 2 AG*

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D PLOT: 1 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		8/10/91					
		H	C	H	C	H	C	H	C
<i>HYPOCALYMMA ANSUETE</i>	57	0.4	3		3				
<i>DARWINIA CITRIODORA</i>	315	0.3	<1		2				
<i>DRYANDRA PRAEMORSA</i>	314	15	<1		<1				
<i>XANTHOSIA CANDIDA</i>	339	0.05	3		3				
<i>MILLOTIA TENUIFOLIA</i>	533	0.04	<1		-				
<i>LOMANDRA DRUMMONDII</i>	531	0.3	<1		<1				
<i>HAEMODORUM SP</i>		0.3	<1		-				
<i>ACACIA DULCHELLA</i>	227	1.0	<1		dead				
<i>HIBBERTIA HYPERICOIDES</i>	52	0.5	40		40				
<i>OLEARIA PAUCIDENTATA</i>	449	0.5	3		3				
<i>CAMPHYLOPHOS</i>	451	0.01	2		3				
lichen		0.01	2		2				
<i>LEPIDOSPERMA TENUE</i>	52	0.2	<1		<1				
<i>BAIZA MINOR</i>	523	0.05	<1						
<i>TRACHYMENE PILOSA</i>	338	0.04	<1		<1				
<i>THELYMITRA ?</i>			<1						
<i>NEURACHNE ALUPEC</i>	414	0.05	<1		<1				
<i>ANTHOCERCIS GRACILIS</i>		0.3	2	0.3	2				
APACIAE									
<i>STYLIDIUM HISPIDUM</i>				0.2	<1				
<i>XANTHOSARIA PREISSI</i>				10	2				

COMMENTS LEFT OF LINE; 5.5, 12 / 10/91 1AG

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: **D**

PLOT: **2**

QUADRAT: **1**

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90							
		H	C	H	C	H	C	H	C
<i>EUCALYPTUS CALOPHYLLA</i>	1	150	60		60				
<i>XANTHORRHOEA PREISSII</i>	91	30	20		15				
<i>DRYANDRA PRAEMORSA</i>	173	10	6		6				
<i>HAKEA UNDULATA</i>	185	10	6		6				
<i>ANTHOCERCIS GRACILIS</i>	524	05	9		9				
<i>BORONIA TENUI'S</i>	521	03	6		4				
<i>TRYMALIUM LEDIFOLIUM</i>	88	03	3		3				
<i>HYPOCALYMYA ANGSTIFOLIA</i>	57	03	1		2				
<i>TETRARIA OCTANDRA</i>	419	02	<1		1				
<i>BURCHARDIA UMBELLIFLORA</i>	149	04	<1		-				
<i>BOSSIAEA ORNATA</i>	31	01	<1		1				
<i>ACACIA UROPHYLLA</i>	23	05	2		2				
<i>LAGENIFERA HUEGELII</i>	402	001	<1		<1				
<i>STYLIDIUM AMOENUM</i>	377	005	<1		<1				
<i>HOVEA TRISPERRMA</i>	252	01	1		1				
<i>MOSS - CAMPHYLOPHOS</i>	451	01	1		1				
<i>TETRARHENA LAEVIS</i>	101	005	<1		<1				
<i>DARWINIA CITRIDORA</i>	315	03	1		1				
<i>LOMANDBA INTEGRA</i>			02		<1				
COMMENTS LEFT OF LINE (5x0.5) 10/91 1A5, 1B 4,0									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D

PLOT: 2

QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		7/10/91					
		H	C	H	C	H	C	H	C
EUCALYPTUS CALOPHYLLA	1	15.0	40		40				
ANTHOCEROS GRACILIS	524	0.5	3		-				
TRYMALIUM LEDIFOLIUM	88	0.3	30		20				
TETRARIA OCTANDRA	419	0.2	1		1				
LAENIFERA HUEGELII	402	0.1	1		<1				
STYLIDIUM AETHEIUM	377	0.1	<1		<1				
HOVEA TRISPHERMA	252	0.1	2		1				
DARWINIA CITRIODORA	315	0.3	4		3				
EUCALYPTUS LAELIAE	2		20		20				
EUCALYPTUS CALD (CELEST)	1		<1		-				
ACACIA PULCHELLA	227	1.0	10	1.2	15				
HIBBERTIA HYPERICOIDES	52	0.3	15		15				
SPHAEROLOBUM MEDIUM	84	0.3	1		1				
OPERCULARIA ECHINOCEPH	357	0.2	2		1				
XANTHOSIA CANDIDA	339	0.05	3		3				
LOMANDRA SP		0.5	3		3				
DROSER A ? PALLIDA	515		<1		<1				
TETRARIA CAPILLARIS	516	0.2	<1		<1				
BOSSIAEA ORNATA					<1				
CAMPYLODIPUS					<1				
HOVEA TRISPHERMA					<1				
COMMENTS RIGHT OF LINE (7x2) / 10/91 / 5,2R									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *D* PLOT: *3* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		<i>12/10/20</i>		<i>9/10/21</i>					
		H	C	H	C	H	C	H	C
<i>TEMPALUM LEDIFOLIUM</i>	<i>88</i>	<i>0.5</i>	<i>2</i>	<i>0.8</i>	<i>15</i>				
<i>HAKEA UNCVLATA</i>	<i>125</i>	<i>0.5</i>	<i>5</i>		<i>dead</i>				
<i>DARWINIA CTRIODORA (s)</i>	<i>315</i>	<i>0.4</i>	<i>1</i>	<i>0.5</i>	<i>2</i>				
<i>HEMIGENA NODOSA</i>	<i>348</i>	<i>0.3</i>	<i>2</i>	<i>0.4</i>	<i>5</i>				
<i>DRYANDRA PRAEORCA</i>	<i>173</i>	<i>3.0</i>	<i><1</i>		<i><1</i>				
<i>HIBBERTIA HYPERICOIDES</i>	<i>52</i>	<i>0.5</i>	<i>60</i>		<i>40</i>				
<i>BORCHIA TENUIS</i>	<i>521</i>	<i>0.3</i>	<i>3</i>		<i>3</i>				
<i>XANTHOSIA CANDIDA</i>	<i>339</i>	<i>0.1</i>	<i>1</i>		<i><1</i>				
<i>TRACHYMENE PILOSA</i>	<i>338</i>	<i>0.05</i>	<i><1</i>		<i>-</i>				
<i>HAEMODORUM SP</i>			<i><1</i>		<i><1</i>				
<i>BRAZA MINOR</i>	<i>523</i>	<i>0.03</i>	<i><1</i>		<i>-</i>				
<i>PROSERA PALLIDA</i>	<i>515</i>		<i>1</i>		<i>-</i>				
<i>LOXOCOMA FLEXUOSA</i>	<i>127</i>	<i>0.1</i>	<i>1</i>		<i>1</i>				
<i>NEURACHNE ALOPEC</i>	<i>414</i>	<i>0.05</i>	<i><1</i>		<i><1</i>				
<i>GOMPHOLOBIUM MARGIN</i>	<i>247</i>	<i>0.1</i>	<i>1</i>		<i>-</i>				
<i>STYLIDIUM BULBIFERUM</i>	<i>380</i>	<i>0.05</i>	<i><1</i>		<i><1</i>				
<i>LEDIDOSPERMA TENUE</i>	<i>64</i>	<i>0.3</i>	<i>50?</i>		<i>2</i>				
<i>CASSYTA</i>					<i><1</i>				
COMMENTS	<i>LEFT OF LINE 1,0 / 287</i>								

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D PLOT: 3 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		9/10/91					
		H	C	H	C	H	C	H	C
TRYMALIUM LEDIFOLIUM	88	0.5	<1		3(d)				
DARWINIA CITRIODORA	315	0.4	5		5				
DRYANDRA PRAEMORSA	173	3.0	80		80				
HIBBERTIA HYPERICOIDES	52	0.5	2		1				
BOONIA TENUIS	521	0.3	15		10				
XANTHOSIA CANDIDA	339		4		4				
HEMIDORUM SP			2		2				
DROSERIA DELUDA	515		<1		<1				
STYLIDIUM BULBIFERUM	380	0.05	1		3				
LICHEN			10		10				
MOSS CAMPHYLOPODS	451		2		2				
BLAKEBEDIA UMBELLATA	152		<1		-				
LICHEN (FOLILOSE)			2		-				
ACACIA PULCHEREA	227		5		dead				
LEPIDOSPERMA TENUE	64		1		2				
CHAMAESCILLA CORYMBOSA	528		<1		4				
NEURAPOME ALOPEC	414		1		2				
TETRARRHENA LAEVIS					<1				
COMMENTS LEFT OF LINE, 15/24 / 10/91 1BT									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D PLOT: 4 QUADRAT: 1

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90							
		H	C	H	C	H	C	H	C
EUCALYPTUS LAELIAE	2	12.0	70		70				
DRYANDRA PRAEMORSA	173	2.0	60		60				
MACROZAMIA REIDLEYI	75	0.5	50		50				
HYDROCALYPTUS XANTHOCALYX	57	0.3	2		3				
DARWINIA CITRIGLORA	315	0.3	2		2				
LEUCOPOGON CAPITELLATUS	69	0.3	10		10				
TRYMALIUM LEDIFOLIUM	88	0.5	3		1				
ANTHOCERCIS GRACILIS	524	0.8	8		8				
TRICHOCLINE SPATULIFLORA	409	0.05	<1		<1				
LOMANDRA SP		0.3	<1		<1				
NEURACHNE ALEPECU	414		<1		-				
LOMANDRA BRITTANNII	522		<1		-				
ARTHROPODIUM CAPILLUM	486		3		-				
BROAD LEAFED MIMBROSA					2				
LINEAR LEAF					1				
HYBANTHUS CALYIGINUS					1				
DROSERAL SP					<1				
COMMENTS	LEFT OF LINE	2.0		10/91	1AG				

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D PLOT: 4 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990		9/10/91					
		H	C	H	C	H	C	H	C
EUCALYPTUS LAEVE	2	12.0	70		70				
DRYANDRA PRAEMORIA	173	2.0	30		30				
DROSEREA PALLEDA	515		<1		<1				
DARWINIA CITRIGDORA	315	0.3	2		2				
LEUCOPOGON CAPITATUS	69	0.3	4		3				
TRICHOPHYLLUM LEDIFOLIUM	88	0.5	2		2				
XANTHOZIA CANDIDA	339	0.1	4		3				
HEPARACAENE ALDPEC	414		<1		<1				
HIBBERTIA HYPERICOIDES	52	0.3	15		20				
HEMISENIA HISIDA	348	0.4	5		8				
CRASSIPEDIA SP	397	0.03	2		2				
STRELOMA CILIATUM	416		<1		<1				
STYLIDIUM ANOEMUM	377		<1		<1				
STYLIDIUM BRUNNIFOLIUM	379		<1		<1				
STYLIDIUM HISPIDUM	385		<1		<1				
STYLIDIUM CALCARATUM	381		<1		-				
MILLOTIA TENUIFOLIA	533		<1		-				
SPHAEROLOBIVM MEDIUM	84		1		1				
BORONIA TENUIS	521		4		4				
CONOSTYLIS SETOSA	154	0.1	<1		<1				
LOMANDRA SP.			1		1				
LOXOCARYA FLEXUOSA	127		<1		<1				
HAEMODORUM SP			<1		<1				
GOMPHOLOBIUM MARGIN	247		<1		<1				
CHAMAESCILLA CORYMB	528		<1		-				
SENECIO HISPIDULA	406		<1		-				
FLESHY BROAD LEAF (TRICH)					<1				
COMMENTS	RIGHT OF LINE; 45, 25R / 10/91 2BT								

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: *D* PLOT: *5* QUADRAT: *1*

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/1990							
		H	C	H	C	H	C	H	C
<i>XANTHORHIZA PRETORI</i>	91	05	3		3				
<i>TRYMALIUM LEDIFOLIUM</i>	88		2		10				
<i>SOMPHOLOBIUM MARSINATUM</i>	247		1		-				
<i>OPERCUARIA LEONOCLEMA</i>	357		1		-				
<i>ACACIA LADOPHYLLA</i>	23		2		2				
<i>HIBBERTIA PYLAEACOIDES</i>	52		15		20				
<i>IMPATIENS ANSOETHOLIVUM</i>	57	05	9		9				
<i>BALANITA MUEA</i>	172	02	3		6				
<i>ANTHODORIS GRACILIS</i>	524		4		4				
<i>TRIPTEROCOCOUS</i>	280	04	4		-				
<i>DIARRHIZA CITRIGDORA</i>	315		2		1				
<i>HEMISELIA INCIENS</i>	342		1		1				
<i>LOXOCARPUS FLEXUOSA</i>	127		<1		1				
<i>CHEILANTHUS TENUIFOLIA</i>	92		1		1				
<i>STYLIDIUM BAUMONIANUM</i>	379		3		3				
<i>STYLIDIUM HISPIDUM</i>	385		<1		<1				
<i>ACACIA POLYCHELLA</i>	227	03	1		2				
<i>XANTHOSIA CANDIDA</i>	339		2		2				
<i>HIBBERTIA AFFERRATA</i>	299		1		1				
<i>STYLIDIUM AMOENUM</i>	377		<1		1				
<i>DACYDIA PALLIDA</i>	515		1		1				
<i>LAGENIFERA HUEGELII</i>	402		2		2				
<i>HAMODORUM SP</i>			<1		<1				
<i>STYLIDIUM SP</i>			<1		<1				
<i>BROAD LEAF (TRICHOCLINE)</i>					<1				
<i>DRYADRA PRAEMORSA</i>					<1				
<i>LICHEN</i>					<1				
COMMENTS LEFT OF THE LINE) 1, 1R / 10/91 / AG									

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D PLOT: 5 QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90		9/10/91					
		H	C	H	C	H	C	H	C
XANTHORRHOEA PREISSII	91	0.5	2		4				
TRYMALIUM LEDIFOLIUM	88		1		-				
OPERCULARIA ECHINOCEPH	357		2		2				
DRYANDRA NIVEA	172	0.3	30		20				
DARWINIA CITRIGDORA			3		3				
LOXOCARYA FLEXUOSA	127		2		1				
STYLIDIUM HISPIDUM	385		<1		<1				
XANTHOSIA CRANIOIDES	339		4		4				
HIBBERTIA AFF. SERICEA	299		3		dead				
STYLIDIUM ANDENUM	377				1				
DROSERA ? PALLIDA	515		<1		<1				
HAEMODORUM SP			<1		<1				
MACRODROMIA PEGLE	75		80		80				
PHYLLANTHUS CALTROPIS	80		20		20				
AIRA CARNOPHYLLA	459		<1		-				
NERACUNE ALIPECUR	414		<1		<1				
LOMANDRA SP			<1		<1				
ACACIA UROPHYLLA	23		3		3				
SENECIO HISPIDULA	406		<1		-				
SPHAELODROMIA MEDIUM	84		1		1				
BILLARDIERIA COCAUO	211		1		-				
SENECIO LEUCO GORDONII	407		3		dead				
COMMENTS	LEFT OF LINE 2.5/15R								

NORTH DANDALUP ENVIRONMENTAL MANAGEMENT PLAN

MONITORING OF PERMANENT VEGETATION QUADRATS

TRANSECT: D

PLOT: 6

QUADRAT: 2

PERCENTAGE COVER AND HEIGHT OF SPECIES IN QUADRATS.

SPECIES NAME	CODE	DATE OF MEASUREMENT							
		12/10/90							
		H	C	H	C	H	C	H	C
EUCALYPTUS CALOPHYLLA	1	150	25		40				
MACRODAMIA REIDLEY	75	0.5	3		6				
PHYLLANTHUS CALYCINUS	80	0.3	2		2				
LEUCOPOSON CAPITELLATUS	69	0.2	2		3				
HAEMODORUM SP		0.4	<1		<1				
HIBBERTIA HYPERICOIDES	52	0.3	2		4				
OROBANCHE MINOR	529	0.1	<1		<1				
LOMANDRA SP	149	0.4	<1		<1				
EUCALYPTUS MARGINATA	4	120	50		40				
ACACIA LADBURNEA	23	0.5	5		3				
HIBBERTIA AFRICANA	299	0.3	3		dead				
HIBBERTIA AMPLEX	292	0.2	2		2				
ANTROPODION CAMPYLOPS	426	0.2	1		-				
EUCALYPTUS (FIELD)	1	0.3	5		5				
DARWINIA CITRIFLORA	315	0.3	3		4				
OPERCULARIA ECHINOCEPA	357	0.1	1		1				
PENTAPETES PELTIGERA	412	0.1	<1		<1				
LAGENIFERA HUESLII	402	0.1	1		1				
STYLIDIUM AMBENUM	377	0.1	<1		<1				
TETRARIA CAPELLARIS	516	0.2	<1		<1				
BURCHARDIA UMBELLATA	149	0.4	<1		-				
NEULAGINE ALOPECUROID	414	0.1	<1		<1				
TETRAEARTHENA LAEVIS	101	0.1	<1		<1				
COMMENTS	65,24								