# AIM, PRINCIPLES AND OBJECTIVES OF FORESHORE MANAGEMENT PLAN

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#### 1.1 AIM, VISION AND OBJECTIVES

#### Aim:

1.

- The aim of this FMP is to provide a practical and prescriptive framework to restore, rehabilitate and provide controlled access and recreation facilities within, and adjacent to, the foreshore reserve at Burns Beach.
- The FMP has been prepared to satisfy Condition 23 of the Subdivision Approval for Stage 1 of the development and to provide a basis for foreshore management for subsequent stages of the Burns Beach development.
- A draft version of this FMP has been reviewed by the DPI (Coastal Planning and Bush Forever Section) and the City of Joondalup, and these agencies will act as clearing authorities for current and future FMP subdivision conditions

#### Vision:

• A sustainably managed foreshore reserve that is treasured by the Burns Beach community for its environmental, recreation and social values.

#### Objectives:

- Create a context from which detailed construction and rehabilitation plans can be progressively prepared and implemented.
- Provide pedestrian and emergency access through the foreshore to the coast and along the coast.
- Provide designated recreation nodes and entry points to the foreshore.
- Consider future integration with access and facilities to the northern swimming beach.
- Protect, enhance and rehabilitate coastal vegetation.
- Educate and manage foreshore users with interpretative signs.
- Provide functional facilities to maximise the sustainable use of the foreshore and coast by the community.
- Encourage the involvement and participation of the community in foreshore/bushland management.

#### 1.2 OPPORTUNITIES AND CONSTRAINTS

A number of opportunities and constraints within the foreshore reserve were considered in preparing this FMP:

#### **Opportunities:**

- ✓ The coastline is stable and in a long-term context is not accreting or eroding.
- ✓ Offshore limestone reefs/ricks (particularly in the southern portion of the foreshore reserve) act to reduce wave energy and potential for coastal damage.
- ✓ The majority of the foreshore is well vegetated and relatively stable. This is in reference to physical stability as the quality and condition of the vegetation has been variably impacted in places by historic gazing and weed invasion (primarily in the southern areas).

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- ✓ The foreshore reserve is a minimum of 97 metres wide (and varies up to 160 metres wide) it therefore provides an adequate buffer for coastal protection and opportunities for recreation facilities.
- ✓ Clearing of native vegetation within the development area (outside but adjacent to the foreshore reserve) will provide a ready supply of seed, topsoil, brush and mulch for rehabilitation purposes.
- ✓ Existing tracks through the foreshore can be consolidated and improved to provide designated access to the coast.
- ✓ Rehabilitation of degraded areas will increase the conservation value of the foreshore.

#### Constraints:

- \* Approximately 35% of the foreshore contains vegetation in excellent condition. It will be necessary to protect these areas from degradation and inappropriate access.
- \* Approximately 65% of the foreshore vegetation is subject to some form of degradation (either in terms of stability or weed invasion). In particular coastal instability has the potential to escalate with increased use pressure. It will be necessary to stabilise, restore and rehabilitate these areas, and restrict inappropriate access.
- \* Two dune blowouts in the foreshore have developed over many years and currently form attractive areas for sand boarding and uncontrolled four wheel drive access. These areas require access control, stabilization and rehabilitation.
- \* The primary dune system of the foreshore consists of steep dunes and deep swales. The ease of access to the beach is greatly impeded by the dune formations in the area and it will be necessary to create safe and controlled access through the dunes to the beach.
- \* The swimming beach in the area is to the north of the Structure Plan area by approximately (100-300 metres). This beach is within the Regional Open Space and outside the foreshore immediately west of the development. Given this beach will create a natural attraction to the community, particularly those who wish to swim, controlled access and facilities will need to be provided. The exact nature and scale of facilities at this swimming beach will need to be discussed further with the City of Joondalup, DPI and CALM.

2.

# FORESHORE MANAGEMENT PLAN

Broadly speaking it was acknowledged that the FMP needed to address a number of significant issues, which included:

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- Pedestrian access to beach;
- Pedestrian (dual use) and emergency access along and through the foreshore reserve;
- Dune recontouring, rehabilitation and restoration;
- Weed control and fire control:
- Recreation nodes;
- Fencing, signage, public art, seating, lookouts, rubbish bins, shelter, toilets, car parking and landscaping (formal);
- Commercial opportunities (e.g. beachside café);
- Development foreshore interface (eg. batters, retaining walls and fencing); and
- Consideration of access and facilities at the swimming beach to the north.

The FMP as outlined below in **Section 5** has been subdivided into five main sections, including:

- The broad rationale behind the FMP design philosophy layout;
- A description of the structural elements to be provided through the FMP;
- Descriptions of how the construction process (both within the foreshore and at the interface) will be managed to minimise disturbances to the foreshore reserve;
- Descriptions of how the various natural areas within the foreshore reserve will be managed and/or restored to maximise its conservation value; and
- A summary of the maintenance activities that will be carried out between the commencement of works and the handover to the City of Joondalup.

#### 2.1 DESIGN PHILOSOPHY AND FMP LAYOUT

The basic design philosophy that has driven the preparation of the FMP has been the need to balance multiple objectives: the need to provide for recreational activities and to provide a sense of place for local residents and coastal area users, and; the need to ensure that the fragile coastal landforms and vegetation within the foreshore reserve are protected and maintained.

The starting point for this is to ensure that the foreshore reserve was an appropriate width to contain the naturally dynamic coastal processes that prevail, and to ensure that there is sufficient area to provide appropriately located access paths and other facilities. The width of the foreshore reserve had been set through the Metropolitan Region Scheme Amendment process, and was based on the outcomes of the previous two formal EPA assessments. During these assessments it was determined that the coastline of the site has been relatively stable over the past 46 years, and that no consistent, significant erosion process had taken place that would warrant a wider foreshore reserve than that provided.

The next progressive step taken during the formulation of the FMP was an assessment of the foreshore condition, including the degree of historic disturbance, dune stability, weed infestation, and intensity of management required to restore foreshore areas to stable vegetation communities. The foreshore assessment was carried out using high-resolution aerial photography with mapping prepared at a scale of 1:500, followed by comprehensive ground truthing by a qualified environmental consultant/botanist. The resultant foreshore condition mapping that was prepared is presented in **Figure 2**. From this it was determined that approximately 65% of the foreshore area has been subject to variable degrees of degradation, and 35% remains in "Excellent" condition.

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The foreshore condition mapping has been a key input into the FMP preparation process, and has provided the information necessary to:

- Understand the areas of the foreshore that currently retain conservation value such that these areas can be protected and managed into the future;
- Identify areas that have been subject to degradation over time so that these can be restored and managed; and
- Determine the most appropriate location for built-form features (e.g. dual use paths) and/or recreational areas (recreation nodes) so as to avoid high conservation areas to assist in the immediate protection and long-term maintenance of such areas.

Based on the above, the general layout for the FMP is shown in **Figure 3** for the northern section and **Figure 4** for the southern section of the foreshore reserve. The key features shown in these plans include:

- The areas of vegetation to be retained, protected and managed;
- The location of managed recreation nodes (as consistent with the Burns Beach Structure Plan);
- The location of the dual use path and beach access paths (which have been located on areas of existing tracks where possible to minimise future disturbance in the foreshore reserve);
- The proposed location of lookouts (based on strategic viewing locations);
- Fencing and access control measures; and
- Locations of roadside parking.

The specific descriptions of these features (including construction details where relevant) and other structural elements associated with the FMP are provided below in **Section 5.2**.

In order to satisfy the multiples objectives identified earlier, the FMP adopts a "coastal node" approach to providing recreational areas for the coastal area users. The FMP shows that two recreation nodes (POS 6 and POS 3 as identified in the Structure Plan) will be developed in and adjacent to the foreshore reserve to encourage community use of the foreshore area. These recreation nodes are considered to be a critical element of the FMP and will facilitate the dual objectives of providing for community use and ensuring conservation of other parts of the foreshore reserve. The recreation node areas that are situated within the foreshore reserve have been located in such a manner so as to avoid high conservation value areas. By providing areas within the foreshore reserve that are specifically for recreational use allows for an interface between the Public Open Space and foreshore reserve, and provides a hard boundary for recreational use and guided channels into the beach access paths provided through the foreshore reserve.

While it is expected that there will be some disturbances in the foreshore reserve to facilitate the provision of the recreation nodes (earthworks and construction activities) these have been specifically designed to be relatively minor. The clearing of the node areas and loss of any remnant vegetation is to be adequately mitigated and offset through:

- The location of the nodes being in areas that have been historically degraded and disturbed;
- The considerable restorative and rehabilitative works that will be carried out in other partially and significantly degraded foreshore areas (approximately 65% of the foreshore reserve as shown in **Figure 2**);and
- The positive effect that the provision of focussed recreation areas will have on the protection of the conservation foreshore areas (approximately 35% of the foreshore reserve).

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The nodes have been located in the central and southern portions of the foreshore reserve, given that the existing grades allow for their placement, with the least amount of earthworks and disturbance within the foreshore reserve and are located away from areas of higher conservation value. The northern portion of the foreshore reserve contains vegetation mostly in "Excellent" condition, and the landforms tend to be more steeply undulating when compared to the southern and central portions which would mean that the earthworks for any recreation nodes would cause considerable disturbance. On this basis the area of POS in the northwest corner of the Urban area (POS 1) is wholly within the development area rather than within the foreshore reserve.

# **ATTACHMENT 2**



# ATTACHMENT NO 3 PAGE 1 BURNS BEACH DRAFT FORESHORE MANAGEMENT PLAN

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
1	S W & A L Munsie	7 Aztec Island Retreat	Support (proforma)	Support FMP
		HALLS HEAD WA 6210		
2	Illegible		Support (proforma)	Support FMP
3	Angela Y Hodgson	2260 Clayton Rd	Support (proforma)	Support FMP
		HELENA VALLEY WA 6056		
4	Illegible		Support (proforma)	Support FMP
5	Bryley Pty Ltd		Support (proforma)	Support FMP
6	Illegible		Support (proforma)	Support FMP
7	E Anderson		Support (proforma)	Support FMP
8	Burns Beach Ratepayers,	2 Third Avenue	Objects to the proposed path linking the	There is no alternative than to locate the path
	Residents and Community	BURNS BEACH WA 6028	existing pathway east of the toilet block	where it is proposed due to the location of
	Recreation Assoc (Inc)		and Jack Kikeros Community hall due to	dunes. This proposal has the least impact on
			its closeness to residences (15m). Suggests	the dunes.
			this will cause noise problems, vandalism	
			and damage to foreshore reserve from	
			pedestrians and cyclists. Proposes a path	
			further south within the reserve.	
9	R Adams		Support (proforma)	Support FMP
10	A P Devereux		Support (proforma)	Support FMP
11	Robert Devereux		Support (proforma)	Support FMP
12	Illegible		Support (proforma)	Support FMP
13	Joyce Mateljan		Support (proforma)	Support FMP
14	? Ellis		Support (proforma)	Support FMP
15	Brian Fitzgerald		Support (proforma)	Support FMP
16	J Edwards		Support (proforma)	Support FMP
17	V Lambertini		Support (proforma)	Support FMP
18	Illegible		Support (proforma)	Support FMP
19	Mr H Lynch	7 Jubilee Crescent CITY BEACH WA 6015	Support (proforma)	Support FMP
20	Marbel Holdings Pty Ltd		Support (proforma)	Support FMP
21	E Mustard		Support (proforma)	Support FMP
22	D Fearnall	17 Skerne Rise PADBURY WA 6025	Support (proforma)	Support FMP

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
23	? Shaw		Support (proforma)	Support FMP
24	Illegible		Support (proforma)	Support FMP
25	C L & J Bladen		Support (proforma)	Support FMP
26	Peter Lorenz		Support (proforma)	Support FMP
27	REM Holdings Pty Ltd		Support (proforma)	Support FMP
28	Ron Slavin	11 Third Avenue	As Submission 8. Proposes an additional	See Submission 8
		BURNS BEACH WA 6028	alternative in a more northerly direction.	
29	M T Jacoby	29 Jutland Parade DALKEITH WA 2005	Support (proforma)	Support FMP
30	M J & A A Naisbitt	DALKEIIII WA 2003	Support (proforma)	Support FMP
31	Simon Watling		Support (proforma)	Support FMP
32	R J Elliot		Support (proforma)	Support FMP
33	M M Towers		Support (proforma)	Support FMP
34	Illegible		Support (proforma)	Support FMP
35	Robin May Doherty		Support (proforma)	Support FMP
36	Frank Marra		Support (proforma)	Support FMP
37	Illegible		Support (proforma)	Support FMP
38	A Wallis		Support (proforma)	Support FMP
39	JA & P Cooper		Support (proforma)	Support FMP
40	R Ogden		Support (proforma)	Support FMP
41	Illegible		Support (proforma)	Support FMP
42	Illegible		Support (proforma)	Support FMP
43	Dale & Gail Walsh	103 Victoria Street	Support	Support FMP
		MOSMAN PARK WA 6012		11
44	Illegible		Support (proforma)	Support FMP
45	Jean Middleton		Support (proforma)	Support FMP
46	E M Hall		Support (proforma)	Support FMP
47	Illegible		Support (proforma)	Support FMP
48	Illegible		Support (proforma)	Support FMP
49	D Montgomery		Support (proforma)	Support FMP
50	Tuck Chien Chen		Support (proforma)	Support FMP
51	Illegible		Support (proforma)	Support FMP
52	B G Quartermaine		Support (proforma)	Support FMP

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NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
53	Pamela Hoare		Support (proforma)	Support FMP
54	Giuffre Letterminees Pty Ltd		Support (proforma)	Support FMP
55	John Henderson for John H Henderson Testamentary Trust		Support (proforma)	Support FMP
56	Geoffrey Falls		Support (proforma)	Support FMP
57	Diane White	24 Mahogany Court WOODVALE WA	Support (proforma)	Support FMP
58	Mrs Karen Letterlan		Support (proforma)	Support FMP
59	Illegible		Support (proforma)	Support FMP
60	Gary Ackland		Support (proforma)	Support FMP
61	Harry Bergman		Support (proforma)	Support FMP
62	Illegible		Support (proforma)	Support FMP
63	Illegible		Support (proforma)	Support FMP
64	C Hayward		Support (proforma)	Support FMP
65	J A France		Support (proforma)	Support FMP
66	J S & V Kohn	10 Warralong Crescent COOLBINIA WA 6050	Support (proforma)	Support FMP
67	Illegible		Support (proforma)	Support FMP
68	Illegible		Support (proforma)	Support FMP
69	C & L Tremlett		Support (proforma)	Support FMP
70	Sue Bosch	11 St Helena Way ILUKA WA 6028	Objects for the following reasons: - foreshore is too narrow to offer long-term stability to buildings at the edge of the reserve.	The width of the foreshore reserve was set with Amendment 992/33 to the Metropolitan Region Scheme and, subsequently, DPS2 which also created the adjacent Burns Beach Structure Plan No.10 (Structure Plan No. 10) area. This process took over 6 years during which time a thorough assessment of the land and its environmental issues was undertaken.
			- POS 6 is too close to the beach. Suggests POS 6 be halved in size to provide local fauna habitat and reduce water use.	POS 6 forms part of the Structure Plan No. 10 area and intrudes into the foreshore reserve. Its size will enable a suitably sized coastal passive recreational node and is supported.

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
			Questions who will maintain the foreshore reserve when the developers have finished the estate.	Normally the local authority is offered "vesting" of reserve land by way of a management order. In this instance, Council previously resolved not to accept vesting of the foreshore reserve adjacent to the Structure Plan No. 10 area. The Department for Planning and Infrastructure will need to offer vesting to another government body, possibly the Department of Conservation and Land Management since it is likely to manage the Parks & Recreation reserve immediately north of this site.
			Mentions a safe swimming beach at Burns Beach proposed by John Quigley at the last election and queries the impact of the proposal on this beach.	No details of this proposed beach are known. Nevertheless, the precise location of a swimming beach north of the developable land within Structure Plan No. 10 has not been finalised. The FMP does not extend this far north.
			Expressed several concerns about the health of the environment in terms of global warming, rising sea levels and greenhouse emissions and questioned the City of Joondalup's duty of care.	These concerns are general and not specific to the FMP. It is considered that the FMP does not compromise the City's duty of care.
			Questions what type of trees will be planted and encourages transplanting of Christmas Trees and native Grass Trees.	Due to a number of concerns raised in public submissions and from the City, the list of plants proposed for the foreshore reserve has been extended. No Christmas trees or native Grass Trees have been identified in the foreshore reserve.
			Requests the construction of a wildlife	This request does not relate to consideration

# ATTACHMENT NO 3 PAGE 5

# BURNS BEACH DRAFT FORESHORE MANAGEMENT PLAN SCHEDULE OF SUBMISSIONS FOLLOWING ADVERTISING (CLOSED 16 MAY 2005)

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
			underpass to Neerabup Park.	of the FMP.
			along Marmion Avenue	
			Queries whether a letter be sent to the developers requesting purchasers be aware and tolerant of the noise of Black	This request does not relate to consideration of the FMP.
			Cockatoos so they can coexist.	
			Requested a response to an earlier letter regarding the salaries of City employees in relation to the number of ratepayers.	This request does not relate to consideration of the FMP
71	B H Pearson	Not given	Support (proforma)	Support FMP
72	Illegible	Not given	Support (proforma)	Support FMP
73	L Poustie for Brian Byass	Not given	Support (proforma)	Support FMP
74	S Stott	Not given	Support (proforma)	Support FMP
75	P L Hesling	Not given	Support (proforma)	Support FMP
76	Simon Norrish	Not given	Support (proforma)	Support FMP
77	Cheak Boon Heng	Not given	Support (proforma)	Support FMP
78	A P & R S Heal	Not given	Support (proforma)	Support FMP
79	A R John	Not given	Support (proforma)	Support FMP
80	Janet E Hall	Not given	Support (proforma)	Support FMP
81	Terry Cockman	Not given	Support (proforma)	Support FMP
82	B Saki	Not given	Support (proforma)	

#### LATE SUBMISSIONS

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
83	J D Foulkes	Not given	Support (proforma)	Support FMP
84	Illegible	Not given	Support (proforma)	Support FMP
85	John C Morgan	Not given	Support (proforma)	Support FMP
86	Urban Bushland Council	PO Box 326	Objects on the basis that the vegetation mapping	These errors have been noted and amended in a
	WA Inc	West Perth WA 6872	in the FMP is incorrect, and some of the	revised FMP.
			proposed species of plants are inappropriate and	

NO.	NAME OF	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
	SUBMITTER			
			will cause too much disturbance of the site.	
87	Illegible	Not given	Support (proforma)	Support FMP
88	Quinns Rocks Environmental Group	PO Box 27 QUINNS ROCKS WA 6030	Objects for the following reasons:  - the plan lacks a statement about the conservation and geoheritage value of the site, a vegetation type and condition map, plant species and fauna lists, strategies for weed management, and vermin eradication program	The main purpose of the FMP is to address management of the foreshore reserve and some background as to the conservation value of the land is included. Adequate statements have been provided regarding vegetation type, vegetation condition, plant species, local rare fauna, weed and vermin management are included in the FMP, details of which will be provided at the detailed design stage with engineering drawings. A vegetation condition map has now been provided in a revised FMP.
			- effects of cut and fill for the foreshore road and intrusion of POS	The extent of cut and fill, and therefore battering, along the foreshore road will be carefully considered at the detailed design stage. Some intrusion into the foreshore reserve is proposed to allow gentle slopes to the foreshore road.
			- weed and fire control and management of areas in good condition  - the land is included in Bush Forever and	Weed management is included in the FMP and expanded upon in the revised FMP. Fire control is linked to weed control and in part is controlled in this way.
			concerns about the extent of any clearing	See Submission 70. The Department for Planning and Infrastructure formulated the Bush Forever Plan.will assess the FMP in accordance with this plan.
			- proposed stabilisation of blowouts that are a natural feature	Further to discussions on the blow-outs will occur with the City and the Department for Planning and Infrastructure. The revised FMP states that

NO.	NAME OF	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
	SUBMITTER			these will not be an contoured on combined
				these will not be re-contoured or earthworked.
			- inaccuracies in the text in relation to typical coastal vegetation, spelling of plant species, ceding of the northern portion of Structure Plan No. 10 site, plant species claimed to be endemic to this portion of the coast, type and location of significant species, areas of degraded to good condition	See Submissions 70 & 86.
			Support is given to the north-south dual use path, use of boardwalks, fencing, car parking along the foreshore road, and ongoing community involvement.	Comment is noted. The north-south dual use path, however, has been relocated closer to the foreshore road in the revised FMP due to the dune and vegetation damage that the original path would cause.
			Suggests alternative stabilisation of the degraded areas that will require rehabilitation., mulching instead of the uses of woody material for brushing of the foredunes, local seed collection, a review of the seed species, monitoring and management after 3 years be undertaken, use of indigenous species and interpretative signage, temporary exclusion fencing during works, consultation with the community on the northern swimming beach.	These suggestions are noted and, where not already included in the revised FMP, will be considered at the detailed design stage.
			Request additional community consultation at the detailed stage of planning and management	The revised FMP specifically refers to ongoing consultation with the community through the Conservation Advisory Committee and the Joondalup Coast Care Group.
89	E & D W Bowie	Not given	Support (proforma)	Support FMP
90	Illegible	Not given	Support (proforma)	Support FMP
91	Joondalup Community	Not given	Objects for the following reasons:	

NO.	NAME OF	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
	SUBMITTER  Const. Const. Formula London		- the foreshore reserve width has been	See Selection 70
	Coast Care Forum Inc		determined based on false assessments	See Submission 70.
			determined based on raise assessments	
			- construction of the western path will cause too	The path has been located where there would be
			much disturbance of existing vegetation in	the least foredune and vegetation disturbance.
			foredunes	
			- species list is too limited and lacks local plants	Noted. This list is expanded in the revised FMP.
			operation not to the random and ments form praints	The second secon
			- lack of information on techniques and	Some information is provided, however more
			machinery to be used, and controls in place	detail will be included at the detailed design stage.
			- proposed ripping and recontouring of blowouts	
			which would be incompatible with the	The revised FMP states that the blow-outs will no
			objectives of the Coastal Planning Policy 2.6	longer be re-contoured (ripped) or earthworked.
			- timing unrealistic as seed collection/storage	
			should have commenced last year	Noted. The revised FMP states that seed collection will commence in 2005.
			- no key performance indicators (KPI's) such as	Confection will confinence in 2003.
			survival rate of plants and weed invasion, for	Details of monitoring mechanisms will need to be
			monitoring	provided at the detailed design stage when the
				City assesses engineering drawings and landscape
				plans in relation to the foreshore reserve, and the
				proposed foreshore road
			- no provision for ongoing maintenance as City	Impognative of which government outhouts toll-
			of Joondalup has refused to accept vesting	Irrespective of which government authority takes responsibility for the foreshore, the developer will
				not be expected to maintain this land in the long-
				term. The Department for Planning and
				Infrastructure will make the decision in regard to
				vesting and the outcome of this process is not
				known at this stage.
			- incorrect statements regarding extent of	

# ATTACHMENT NO 3 PAGE 9

NO.	NAME OF SUBMITTER	ADDRESS	SUBMISSION SUMMARY	COUNCIL'S RESPONSE
	SUDMITTER			
			Pelargonium capitatum, vegetation survey	The errors have been noted and have been
			including condition and extent of degradation,	addressed in the revised FMP.
			identification of some existing plant species.	
			A comprehensive vegetation survey conducted	
			by the submitter in May 2005 was appended.	
92	K M Wood	Not given	Support (proforma)	Support FMP