



21.5 Alice Street/Anderson Street

This Alice Street/Anderson Street area provides vehicular access to the school and to beaches. Sections of Anderson Street and Eagle Rock Parade are steep and subject to erosion.

The Alice Street/Anderson Street area drains to Sandy Creek, mainly through an unnamed tributary, which is deeply eroded. Approximately 60% of the catchment has piped underground drainage.

21.6 Amaroo Crescent

This catchment includes Amaroo Crescent, and parts of Berthon Street and Aireys Street. The section of Aireys street near the Great Ocean Road provides access to a considerable number of properties, while the section down to the creek is very steep and subject to significant erosion.

The Amaroo Crescent area drains to Sandy Creek. Considerable flooding has been noted to occur in this area, including overland flows down Amaroo Crescent to its junction with Berthon Street. Approximately 70% of the catchment has piped underground drainage.

21.7 Aireys Inlet North Rural

This is the rural area to the west of the Great Ocean Road and South of Boundary Road. Gilbert Street is the busiest street. Problems relate to high vehicle speeds leaving the Great Ocean Road and road erosion between Aireys Street and Boundary Road. If the proposed Aireys Inlet sportsground is constructed additional traffic will be generated.

There are also steep sections of Boundary Road, Luggs Road and McConachy Road where they slope down towards Painkalac Creek.

Parts of the Aireys Inlet North Rural area drain towards Painkalac Creek with the remainder draining to Sandy Creek. There is no piped underground drainage in this catchment.

21.8 Tourism Precinct

This area includes Inlet Crescent, Lighthouse Road, Federal Street, and the lower shops on the Great Ocean Road. This area is subject to the most tourist traffic, including touring coaches.

Issues in the Tourism Precinct include coaches using Inlet Crescent, and high vehicle speeds on Lighthouse Road, which is also used by many pedestrians. Approximately 40% of the catchment has piped underground drainage.

21.9 Aireys Inlet East

The Great Ocean Road, the Alice Street/Anderson Street area and the Tourism Precinct form three boundaries of this area, with the ocean forming the boundary on the east. There are no priority roads for improvement within this area. The existing piped drainage scheme is under capacity. Over 90% of the catchment has piped underground drainage.

21.10 Aireys Inlet South West

This area is associated with River Road. Council already has proposals to upgrade this area. Approximately 20% of the catchment has piped underground drainage.



22. Implementation Issues

With a total budget construction estimate of in excess of \$9 million the capital works for improvements to roads and drainage in Aireys Inlet will need to be programmed over several years.

Feedback from the Community Reference Panel, and the Public Information Day, indicates that the community currently has significant concerns regarding the nature and the cost of any improvement works. An important element of implementation will be demonstrating the benefit of the scope of works and an appreciation of the cost implications of achieving service improvements.

A key to the success of implementing the Aireys Inlet improvements will be building upon the trust that has developed during the consultation phase of this plan. Trust can be further built by ensuring that one of the precincts is selected for a trial upgrade, and with further community consultation is successfully implemented.

Once a successful scheme can be demonstrated it may be possible to accelerate the process to carry out work in more than one improvement catchment areas simultaneously.



23. Conclusions and Recommendations

23.1 Existing Conditions

The studies associated with development of the Aireys Inlet Road and Drainage Plan indicated that there are significant problems with the existing road and drainage infrastructure.

The problems result in the following consequences:

- ▶ Road safety risks;
- ▶ Frequent flooding;
- ▶ Poor road conditions;
- ▶ Dust and mud from road surfaces;
- ▶ Drain blockages; and
- ▶ Pollution of watercourses.

23.2 Consultation

Within the community there is a range of views on what improvements should be undertaken. The views range from doing nothing to carrying out a major drainage upgrade and sealing of all the streets.

During the development of the Plan extensive consultation was carried out with Shire staff, government agencies and the community to ensure the range of the views within the community were understood.

Key concerns for many residents in relation to infrastructure improvements are:

- ▶ Loss of township character;
- ▶ Increased traffic volume;
- ▶ Increased traffic speeds;
- ▶ Loss of native vegetation; and
- ▶ Cost.

Key outcomes from the community consultation which have influenced the recommendations are:

- ▶ “Preserve indigenous vegetation by keeping construction within the width off the existing street construction”;
- ▶ “Avoid materials that have urban associations such as black seal, barrier kerbs, and float finished concrete”;
- ▶ “Avoid additional street lighting”;
- ▶ “Provide a meandering road appearance”; and
- ▶ “Slow traffic by calming techniques that include restricting road width at regular intervals”.



23.3 Proposed Road Solutions

- ▶ Only upgrade priority streets. (Some upgrades will involve traffic calming without sealing);
- ▶ Use alternative design and construction standards (including use of 'softer' and 'informal' materials);
- ▶ Install no additional street lighting;
- ▶ Maintain existing road pavement widths;
- ▶ Minimise the effect on existing vegetation;
- ▶ Use traffic calming to slow traffic and improve pedestrian safety; and
- ▶ Use designs that impart a meandering appearance to the streets to retain a rural character.

23.4 Proposed Drainage Solutions

- ▶ Overall design of drainage should be based on a storm intensity that would occur once in every five years;
- ▶ Ensure all existing underground pipelines can meet flows from existing developments;
- ▶ Upgrade table drains to provide adequate capacity for storm flow, detention storage and erosion protection typically by using Water Sensitive Urban Design (WSUD) swale principles;
- ▶ Replace table drains with pipes where slopes are too steep for effective erosion protection;
- ▶ Upgrade outfall pipes to minimise erosion;
- ▶ Provide pipes where construction of swales will significantly impact native vegetation;
- ▶ Pipe alignments selected to minimise impacts on native vegetation;
- ▶ Use wetlands for water quality improvements where space permits; and
- ▶ Use bioretention for water quality improvements before discharges to watercourses.

23.5 Cost Estimates

The construction budget estimate for the Road and Drainage plan, based on concept level estimates, is \$9.4M which equates to an average of \$10 000 per property within the study area.

23.6 Recommendations

GHD advises that the Surf Coast Shire Council consider this report and adopt the following recommendations, which have been presented to the Panel, and to the public attending the public information day:

- ▶ Enter discussions with external Stakeholders including Vic Roads to determine what financial support (in the form of grants and contributions to works) might be available;
- ▶ Commence investigations/negotiations for a wetlands site to the west of the town;
- ▶ Adopt the proposed smaller "improved catchment areas" for proposed upgrade projects;
- ▶ Develop a more detailed project for a single catchment based upon the concepts developed in this Road and Drainage Plan;
- ▶ Consult with the community of the initial catchment;
- ▶ Resolve an intention to declare a special charge scheme; and
- ▶ If the process in the single catchment is successful repeat the process in other parts of Aireys Inlet.



Appendix A
Character Study

Focus Study comments



FOCUS STUDY COMMENTS

As part of the Character Study a Focus study was carried out based on the precincts shown on the Plan Below (Figure A1). The comments included are from the three precincts forming the area of this plan only.

Figure A1 Focus Study Precincts





PRECINCT N1

1. What features of the precinct positively contribute to its character?

- Relatively few street lights
- Unsealed roads (not unanimous)
- Street setbacks
- Vegetation along verges
- Gully pedestrian crossings
- Indigenous vegetation throughout

2. What features of the precinct detract from its character?

- Lack of pedestrian pathways to beach
- Unsealed roads (not unanimous)
- Light pollution (public and private)
- Lack of walking paths generally
- Parking problems at Sandy Gully
- Lack of safety lighting

3. How would you like to see the precinct develop into the future, i.e. what is the preferred character?

- Indigenous planting
- Pedestrian access improved – pathways
- Restrict traffic volumes
- Maintain village character

PRECINCT N2

1. What features of the precinct positively contribute to its character?

- Hilly terrain
- Indigenous vegetation cover

2. What features of the precinct detract from its character?

- Poor standard of Lighthouse Road
- Lack of pedestrian friendliness

3. How would you like to see the precinct develop into the future, i.e. what is the preferred character?

- Encourage planting of indigenous plants to encourage birds
- Avoid environmental weeds
- Seal high traffic areas – although concern about how this affects the character
- Avoid street lights on Federal Street where they would detract from lighthouse area



PRECINCT N3

1. What features of the precinct positively contribute to its character?

- Open spaces
- Vegetated landscape
- Screening of development by vegetation
- Larger allotments – allowing for vegetation
- Dirt roads
- Walking access is important
- Flat length of Bambra Road
- Accessibility to shops, beach
- Bush feel (particularly in the north)

2. What features of the precinct detract from its character?

- Street lighting
- Environmental weeds
- Excessive clearing of understorey
- People don't understand their environment (need education about indigenous vegetation)

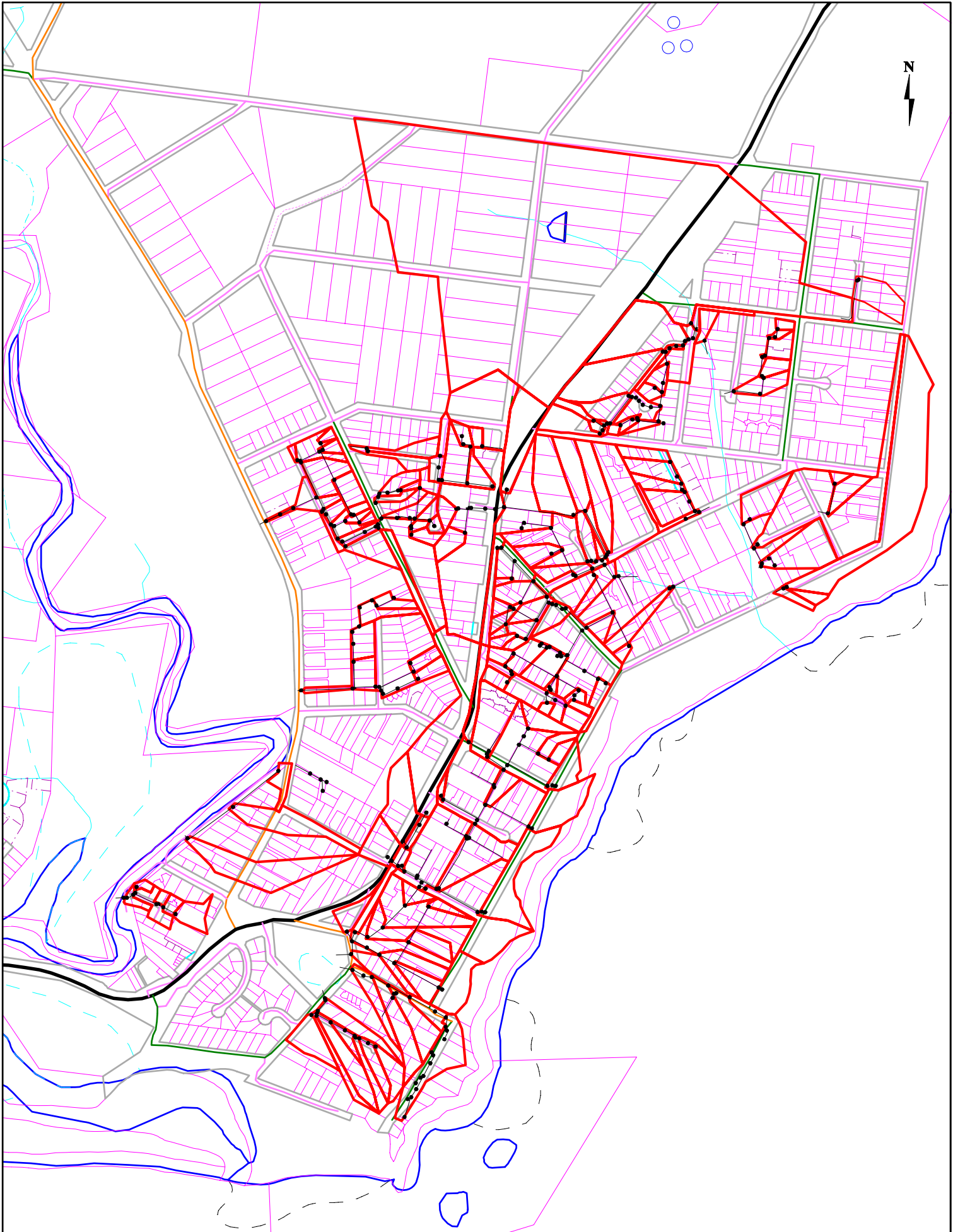
3. How would you like to see the precinct develop into the future, ie. what is the preferred character?

- Context in terms of surrounding vegetation and views from surrounding houses
- Encourage post and wire fencing
- Prohibit enclosed fencing



Appendix B

Existing Drainage network and Sub-Catchments



DATA SOURCE			
Prepared:	MK	Date	Workspace Airey subareas.WOR
Checked:	BA	Date	Location G:13118698\ISWMM\Drainage model
Approved:	-	Date	Map Grid MGA Zone 55 (GDA 94)

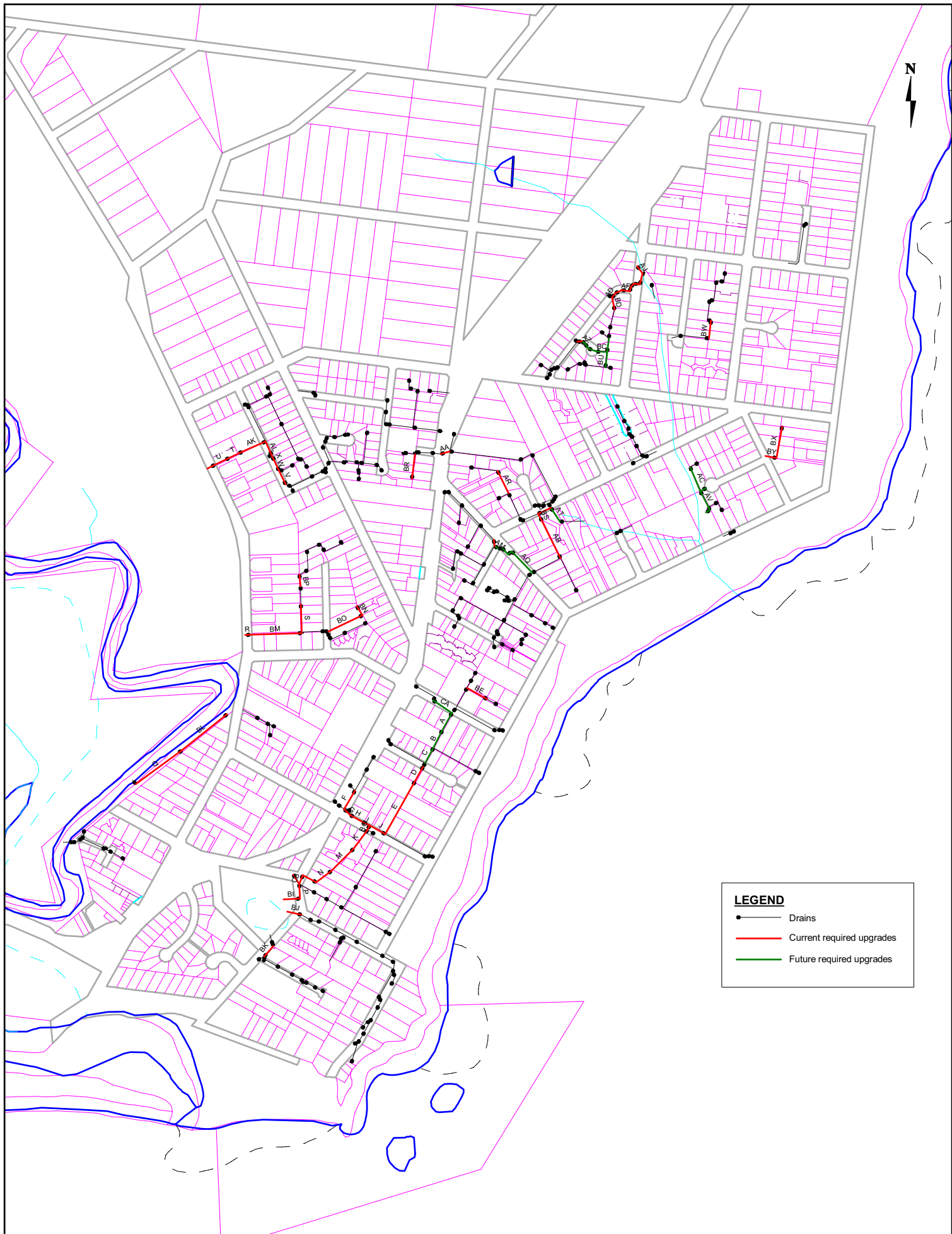


180 Lonsdale Street
Melbourne VIC 3000
Tel: 61 3 8687 8000
Fax: 61 3 8687 8111

Project: Aireys Inlet Roads and Drainage Study			
Title: Aireys Inlet Drainage Subcatchments			
Project No:	31/18698	Date:	12/02/2007
		A3	Scale: 1:7000
Sh 1 of 1		Rev. 0	



Appendix C
Output from Drainage Modelling



LEGEND

- Drains
- Current required upgrades
- Future required upgrades

DATA SOURCE			
Prepared:	MK	19 Sept 06	Workspace Aireys drainage.WOR
Checked:	BA	19 Sept 06	Location G:\18698\SWMM\Drainage model
Approved:	-	-	Map Grid MGA Zone 55 (GDA 94)



49-51 Malop Street
Geelong VIC 3220
Tel: 61 3 5273 1800
Fax: 61 3 5273 1801

Project: Aireys Inlet Roads and Drainage Study			
Title: Aireys Inlet Drainage Upgrades			
Project No: 31/ 18698	Date: 15/09/2006	A3	Scale: 1:7000
Sh 1 of 1			Rev. 0



Appendix D
Summary of Community Responses

**Surf Coast Shire/Aireys Inlet Road and Drainage Plan
 Summary of Writtten Responses**

Address	Road Issues	Drain Issues	Anti Seal	Letter Comments Summarised
Hopkins St	1	1		Cnr Hopkins St and McConachy St left hand side. Gravel wash from recent rains.
Aireys St		1		We have concern about the state of the pedestrian crossing Sandy Gully in the middle of Aireys St
Aireys St	1	1		Erosion and siltation will continue to damage the amenity of the area and increase hazards until road and drainage works are properly completed
Aireys St		1		Gutters or lack of are unable to control water run off during wet weather. The problems incurred are road damage of both gravel and surfaced roads.
Aireys St	1			In summer our rd is dry and cars have trouble stopping after the hill. After rain on two occasions we have not been able to get out of our driveway.
Aireys St	1			Corrugation and dust on Hopkins St, Hartley St and Aireys St.
Albert Ave	1	1		Footpath from Albert Ave to general store has large puddles. Corner of Albert Ave has tree roots, have to walk around to avoid slipping/tripping
Albert Ave	1	1		Congratulations on commencing this study.
Alice Rd				Strongly against any permanent resident having to fund any such works.
Alice Rd	1	1		Careless grading of the roads over time has degraded a number of crossovers in the area so that the drainage pipes underlying crossovers are completely dysfunctional.
Alice Rd	1		1	Narrowing roads will deter through traffic turning in for a speedy look through and also increase pedestrian safety. Does not want the roads to be sealed or gutters to be put in place.
Alice St			1	Alice St is a dirt Rd and it adds to the beach ambience, We request that it not be sealed.
Alice St	1	1		Eagle Rock Rd and Alice St should be sealed and drainage improved.
Alice St			1	Like the town the way it is
Amaroo Cres	1	1		The pot holes in Berthon St at the end of Amaroo Cre, Aireys St east of the creek, flooding from the road reserve behind 17 Amaroo
Anderson St			1	Do not seal roads, build more pedestrian paths to the beach to reduce car traffic.
Anderson St			1	Like the town the way it is
Bambra Rd			1	Leave town the way it is.
Bambra Rd		1		Phillips St still discharges across Bambra Rd along 21 Bambra Rd and into River Rd, turning my property into an island. Have lived here 6 years and the roads have been graded but never applied gravel at this end.
Bambra Rd	1	1		Unsealed Rd, Repeated erosion of rd surface, blockage of culvert after heavy rain. Rd has deep channels will cause accident.
Bambra Rd	1			Rd to Urquharts Bluff Beach is in poor condition & needs widening
Bambra Rd	1	1		Either roads need to be sealed or a system needs to be constructed to catch all road waste that washes into Painkalac through the stormwater.
Bambra Rd		1		Stormwater damage to property is ruination of the driveway, erosion to the land and loss of indigenous groundcover due to their submersion under the gravel carried by the water.
Bambra Rd	1			High access roads need sealing.
Bambra Rd		1		Water flows through property from Hopkins St and Bambra Rd has no fall for stormwater requiring drainage to creek.

Surf Coast Shire/Aireys Inlet Road and Drainage Plan Summary of Writtten Responses

Address	Road Issues	Drain Issues	Anti Seal	Letter Comments Summarised
Barton Crt	1	1		Gravel blocking up drains and keeps running into settling pond, either empty gravel form pond more often or start sealing roads.
Beach Rd			1	Like the town the way it is
Beach Rd	1			Beach road between GOR & Bambra rd is one of the worst roads in Aireys Inlet and is only maintained 2-3 times a year. Not good enough
Beach Rd	1	1		Drainage channel on north side of Beach Rd between Eagle Rock Pde and GOR is ineffective, road is badly corrugated.
Beach Rd		1		Some ocean roadside gutters (along gravel roads) become too deep and pool after rain.
Berthon St			1	We are in Berthon St And we don't have any problems and would like a street to remain a dirt road.
Berthon St	1			Do not seal roads and ignore the pathway implications please. Make sure there is "Access for all"
Berthon St			1	Would strongly oppose to sealing the roads and would much rather see ways of slowing down traffic speeds.
Boundary Rd	1			The roads condition has deteriorated over last few years. Not enough maintenance
Boundary Rd			1	Please don't seal roads, today after 2-3 days of rain there isn't a problem with the drainage or stormwater.
Boundary Rd	1	1		Yes increased traffic usage and the effects of this on local roads.
Boundary Rd	1	1	1	Boundary Rd becomes speed way in holiday season and weekend, dangerous behaviour creates lots of dust, please do not seal as in will attract more speeding, we suggest speed humps. Residents must clear their drains on a Regular basis as council clearing has been minimal.
Brent Ave	1			Drivers loose traction on unsealed Beach Rd at steep down hill section. Cars frequently skid when approaching Bambra Rd. Pedestrians also in danger of skidding car.
Eagle Rock Pde		1	1	Would like roads left unsealed, but need to work on drainage issues.
Eagle Rock Pde		1	1	Keep roads the way they are however drainage might need to be looked at to avoid flooding in the future.
Eaglerock Pde	1	1		Speeding traffic is a concern and if roads are sealed traffic will increase and get faster. Drainage on the south side should be upgraded
Eastern Hill Rd,			1	Please leave Reserve rd as an unsealed rd
Federal St	1	1		Footpath required for lighthouse road. Lack of drain on north side of Phillip St near Eaglerock Pde causes water to run across phillip street causing gravel washaway, replacing and grading gravel is not fixing this problem. Roads with steep hill should be sealed.
Gilbert St			1	Like the town the way it is
Gilbert St		1		Natural water course running across Gilbert St between Boundary Rd and Hopkins St has deteriorated and is swamp like on either side of street when it rains.
Great Ocean Rd		1		Water damage to the NE corner of block and the bicycle path that runs along the front of the property.
Great Ocean Rd	1	1		Would like sealed roads and drains in 50% of Aireys Inlet, some roads must remain gravel to help keep the rural atmosphere. Street lighting needs to be increased for safety of foot travel. Aireys Inlet Hotel car park needs to be sealed.
Hartley St		1		Stormwater flooding is an issues, water runs of drain and removes crushed rock from driveway. Please do not seal the roads.

**Surf Coast Shire/Aireys Inlet Road and Drainage Plan
 Summary of Writtten Responses**

Address	Road Issues	Drain Issues	Anti Seal	Letter Comments Summarised
Hartley St			1	Please keep town the way it is.
Hopkins St	1			Summer is very dusty and there is no footpaths so you have to walk on roads, throat, eyes and lungs are irritated by dust and cars travelling at a fast speed is very dangerous.
Hopkins St	1			Hopkins St is a main rd in the area and should be sealed, or have 40kph speed limit. Too much dust in summer.
Hopkins St			1	I would like the street I live in left as it is, I like the rural appearance.
Hopkins St	1			Unmade roads cause dust in summer and mud and potholes in winter. Has not been graded in months and would prefer sealed roads.
Lighthouse Rd	1			Management of traffic, especially day visitors and pedestrian access into the township.
Inlet Cre	1			Traffic is increasing in the town and feel it should be considered to do some major upgrading.
Inlet Cre	1			Inlet Cre should be sealed as it is a tourist rd and has lots of traffic. Funding should come from the council.
Inlet Crescent		1		Council to remove stormwater once it leaves property, this isn't happening
Kauarra Jong Dr	1	1		Airey's St & Gilbert Rd are unsealed and Kuarrajong doesn't have concrete gutters
Kerrie Crt	1			Dust in summer can be unbearable.
Kurrajong Ave		1		Spoon drains in our road largely work well but are only maintained by some residents, therefore efficiency is poor outside some homes (non-permanent) Some roads very prone to flooding.
Lohan Rise	1	1		Inlet Cre is unsealed but is used by many. Should be sealed and speed humps to avoid hoons
Nancy St	1			Hopkins Street needs to be sealed, in summer its dusty and in winter its muddy and pot holes.
Panorama Dve	1			Pearse road has in creased traffic over years, highly suggest sealing.
Panorama Dve	1	1		Underneath my house has been flooded by stormwater runoff from Pearse Rd. Aireys St is a real mess in terms of drainage and road surface.
Pearse Rd	1			This street is very slippery when wet and has many pot holes, it also has a tree growing in the actual area of the road. This should be a sealed rd with the tree to be removed as it is dangerous.
Pearse Rd	1	1		Supports drainage and road upgrade in Pearse Rd will be willing to contribute to cost of sealing road
Pearse Rd		1		Lack of properly maintained water courses.
Pearse Rd			1	Likes the town the way it is.
Pearse Rd	1			Pearse Rd & Aireys St heavily corrugated. Not maintained on regular basis. Dusty in summer
Pearse Rd	1	1		Pearse Rd bumpy and slippery when wet. Property suffers rain water run off from Bree Crt
Pearse Rd	1	1		Pearse Rd has potholes, is dusty and has no drainage. Property is affected by drainage from Bree Crt
Pearse Rd		1		Drain opposite drive visitors can't do a right hand turn out of driveway, impossible for cars travelling other direction to pass here.
Pearse Rd	1			Gravel Surface and the dust is a problem, but the traffic travelling to fast is our main concern
Philip St		1		Stormwater run off at the Bambra Rd end of Philip St, drains are inadequate and there is severe erosion after heavy rain.

Surf Coast Shire/Aireys Inlet Road and Drainage Plan

Summary of Writtten Responses

Address	Road Issues	Drain Issues	Anti Seal	Letter Comments Summarised
Philip St			1	Please do not seal the roads
Phillip St	1			No parking due to steep grade of road where it meets gutter this leads to erosion
River Rd		1		Water lying in drains and overflow onto property from swamp on other side of road
River Reserve Rd		1		Drainage of the river when it reaches high levels, stagnant water most certainly a health issue as well as a flood problem
Rivers Rd			1	Likes the town the way it is.
Roadknight St		1	1	Erosion is causing a ditch outside driveway. Roads need more frequent grading but do not seal them
Roadknight St		1		Gutter on east side fills with gravel when graded causing water to flow under house. Reoccurring problem
Roadknight St	1	1		The drain under Hartley St at Airey St corner becomes blocked and stormwater causes gravel to run onto the surface of Philip St. Creates dust in summer and is extremely muddy in winter.
Spence Ave	1			Unmade road in Gilbert st north of Boundary Rd is in constant need of grading
Taroona Rd			1	Aireys St (west of GOR) rises to crest a T section of Taroona Rd, needs signage. Don't pave gravel roads.
Taroona Rd	1			All roads with red sand/clay turn to mush after rain. Corner Aireys St & Gilbert St have poor visibility turning right from Aireys to Gilbert and is also very narrow.
Vera Crt				Vera crt already has a road and drainage system which we have paid for, I am not paying for anymore that we will not be using.
Wright St			1	Like the town the way it is
Wright St	1			Hopkins St should be sealed as is used often. The day after its graded it returns to same shocking state
Anon	1			Hopkins St and Harley Street rough
Anon	1			A footpath required in Pearse Rd between GOR and Aireys St as cars travel at high speeds.
Anon	1		1	Boundary Rd between GOR and Bamba often gets corrugated, but does not want it sealed as traffic is too fast already. Thinks should generally stay the same.
Anon	1			Gravel roads, Aireys St, Pearse Rd, Hopkins St, Gilbert St McConachy's Rd are in poor state.
Anon	1			Bad corrugation and dust problems are an issues in Hartley St
Anon		1		Corner of Bamba Rd and River Rd had high water level in the stormwater drain days after the rain had stopped, subsequently it affected other houses and came very close to our house.
Anon	1	1		Kerbing required along the south side of GOR between shops and Alice St to prevent water flowing off road into properties on the south side during heavy storms.
Anon			1	Like the towns dirt roads pleas do not change them.
Anon	1	1		I am concerned about run off into Paikalac Creek, during rainfall events the river becomes orange from gravel, must not be good for fish life.
Anon		1		Poor drainage along footpath beyond Post Office, Outside Eagles Nest Gallery becomes muddy with large puddles and cars use grass strip to access GOR when entering and leaving the gallery.
Anon	1		1	Pearse Rd is always corrugated eventually deep ruts develop where it joins GOR. Stormwater drains need to be cleared of rubbish before winter starts. Pearse road a big muddy mess in winter and a dust storm in summer.

**Surf Coast Shire/Aireys Inlet Road and Drainage Plan
Summary of Writtten Responses**

Address	Road Issues	Drain Issues	Anti Seal	Letter Comments Summarised
Anon		1		The ocean side of the GOR between the shops and Alice St is subject to erosion, particularly affecting driveways.
Anon	1			Shocking corrugations, pot holes and collapsing of roads in winter while the summer causes dry dust along hopkins street and Bethon St. Also the speeding is an issue.
Anon	1			Access to Painkalac Crt from Inlet Cres
Anon			1	Likes the town the way it is.
Anon	1		1	Likes the town the way it is. Footpaths are welcome
Anon	1		1	We think in general there is a need for some improved drainage and some of the through roads may need sealing, however we believe that straight concrete drains and sealed block roads are totally unacceptable in Airey's Inlet.
Anon	1			Anderson St should be sealed as it is school road and used a lot.
Anon	1			Lack of pedestrian routes to beaches at Boundary and Sandy Gully.
Anon	1			Painkalac Crt from Inlet Crs - small section unsealed why, graded occasionally but is no point it is the same after a week.
Anon	1	1		Hopkins St has drainage issues and enough traffic to justify sealing the road. A turning lane is required at the entrance to Aireys St off the GOR.
Anon	1	1		Drainage and corrugated roads are a continuing problem in Aireys Inlet.
Anon		1		Hopkins St/Berthon Stare a constant problem as water rises & discharges into creek.
Anon	1	1		Drainage on Pearse Rd and disgraceful state of Beach Rd
Anon	1			Gravel roads need to be sealed as corrugations are terrible.
Anon	1	1		Drainage & erosion problems. Corrugated roads are also an issues we suggest sealing them.
Anon			1	Like the town the way it is.
Anon	1	1		Seal roads and improve drainage as the town is getting bigger. Anderson, Roadknight, &F20 Community Hall needs to be sealed.

Summary of responses

115	Number responding
69	Road problem identified
54	Drainage problems identified
30	Against sealing



Appendix E
Confirmation of Issues

**Surf Coast Shire/Aireys Inlet Road and Drainage plan
Panel Identification and Confirmation of Issues**

ISSUES	Triple Bottom Line Consideration			Importance	Panel Comments	
	Social	Economic	Environ't			
Road Safety Issues						
RS 1	Traffic travelling fast	- ve	0	- ve	Extremely Important	Huge issue on all roads in town
RS 2	Poor braking performance on unsealed roads	- ve	- ve	- ve	Important	Reducing speed would assist in this
RS 3	Limited visibility at junctions	- ve	- ve	- ve	Low importance	Limited visibility helped slow vehicles Higher importance on Great Ocean Road Junctions
RS 4	Uneven surface for pedestrians	- ve	0	0	Important	Pathways Project may have a positive effect
RS 5	Pedestrians sharing roadway with fast moving vehicles	- ve	- ve		Important	
RS 6	Limited visibility after dark	- ve	0	+ve	Not important	Panel members felt that night sky was more important
RS 7	Deep drains next to road	- ve	-ve	0	Very Important	Safety risk to vehicles and pedestrians
RS 8	Road signs	0	0	-ve	Not important	Signs were considered of limited value and often ignored, the minimum appropriate level of signage was considered appropriate. A request was made that the shire carry out a signage audit.
Road Condition Issues						
RC 1	Surface needs regular grading	- ve	- ve	-ve	Very Important	Panel considered more grading needs to be carried out. Some panel members thought some roads deteriorated within days of being graded. Some roads better than others and some sheeting gravels have performed better
RC 2	Corrugations in road	- ve	- ve	-ve	Very important	This issue include rut formation particularly Pearce Road
RC 3	Access difficulties on steep streets	- ve	0	0	Very Important	The issue of increased erosion was also a major related issue
RC 4	Erosion of road surface	0	- ve	- ve	Important	Especially on steeper roads where material quickly lost
RC 5	Dust in summer, mud in winter	- ve	- ve	- ve	Lower importance	Panel felt vegetation in garden helped control dust. If traffic could be slowed that would help. General discussion about dust control chemicals which had been used at Eagle Rock parade
RC 6	Silt washed onto roads	- ve	- ve	- ve	Very important	
RC 7	Interruptions to access during grading	- ve	0	0	Not important	Although there are issues of interruption to access while grading this was not considered a major inconvenience
Drainage Issues						
D 1	Pipe sizes may be inadequate	- ve	0	- ve	Very important	Advice will be given by GHD following investigation
D 2	Pipe system blocks caused by silt and gravel	- ve	- ve	- ve	Important	
D 3	Drains blocked by silt	- ve	- ve	- ve	Important	
D 4	Deep drains	- ve	0	0	Very important	Very important
D 5	Drain erosion	- ve	- ve	- ve	Very important	Very important
D 6	Watercourse performance	- ve	- ve	- ve	Not important	Current problems seem more related to sedimentation
D 7	Erosion of Paths and roads	- ve	- ve	- ve	Important	
D 8	Flooding	- ve	- ve	- ve	Very important	
D 9	Private discharges to table drains	0	0	- ve	Important	Needs better control by shire
Pollution issues						
P 1	Silt and gravel deposited in ocean, water courses and Painkalac creek	- ve	0	- ve	Very Important	
P 2	No removal of Nutrients	0	0	- ve	Important	Some septic tanks are still discharging to creeks
Environmental issues						
E 1	General Character of Aireys Inlet	+ve	+ve	+ve		
E 2	Unsealed Road Appearance	+ve	0	+ve	Important	Although there was a preference for unsealed roads a key consideration was a rural appearance
E 3	Appearance of Drains	0	- ve	- ve	Very important	the existing appearance of many drains was poor including shape
E 4	Biodiversity of Aireys Inlet	+ve	0	+ve	Extremely Important	Any vegetation damage should be using appropriate indigenous species and the cost allowed for in work
E 5	Protection of existing vegetation	+ve	0	+ve	Extremely Important	Although trimming was acceptable existing vegetation should be protected as much as possible



Appendix F
Community Panel Final Report



AIREYS INLET ROADS AND DRAINAGE IMPROVEMENT PLAN COMMUNITY REFERENCE PANEL: RECOMMENDATIONS

Under the Terms of Reference (paragraph 2) the Community Reference Panel is required to make recommendations to the Council for its consideration and determination. These are the Panel's recommendations:

1. If roads require sealing they need to have many of the features, including the use of materials, addressed by the Consultants to provide traffic calming and to preserve the local character.
2. The concepts developed by the Consultants for roads and drainage (that is in the use of materials, creation of natural looking swales and chicanes and narrow road widths) should be adopted, if needed and shown to be cost effective, in preference to traditional urban designs as they are more appropriate for Aireys Inlet.
3. There was concern about the costs of the works set out by the Consultants with some members of the Panel arguing that there would be little or no support in the Community for such costs with others arguing that the costs would have to be met otherwise higher costs would be faced in the future. The Council needs to take very careful consideration of these concerns.
4. In this light the Panel strongly supports the concept of dividing Aireys Inlet into 8 catchment areas and have the communities in those areas meet with the Council and the Consultants to then recommend to Council what works should be performed in their areas and at what cost. Traffic management issues should also be addressed in these considerations. It was also recommended that the Planning Department of the Shire be involved in deciding these catchment areas. (Community Reference Panel members residing in or having business interests in these areas should also attend these meetings.)
5. The Council should highlight, at the Community Consultation Workshop, that this was the next step in the process and would take place before any decision on works to be undertaken was made by Council.
6. The Panel recommends that Council support Area 8 as a special Tourist Precinct and work with the community, including all businesses located in or having interests in that area, to develop an overall strategic plan, incorporating a walker friendly environment, and identify funding options (e.g. State and Federal Governments).
7. The Panel believes that Council also needs to identify other sources of funding for roads and drainage and to give estimates to the community groups mentioned above under 4 of these and its own contributions before any decisions are made and any work commences.
8. There was no agreement in the Panel about the extent of the works required with views ranging from doing very little other than to increasing maintenance, to only doing some priority work (such as where there are safety or major erosion problems) to undertaking all the work set out by the Consultants. The Panel accepted that there were probably some areas where work was required because of severe drainage and safety problems (e.g. Hopkins and Barton Streets, Bambra and Philip Streets). In addressing these issues the Council should ensure that the designs are not only adequate for resolving the problems but in keeping with the natural environment and character.
9. As a result of these differences the Panel recommends to Council that further detailed consultation with the Community as a whole needs to take place to bring better understanding of the needs and how they can be best met. In addition the issues addressed concerning lifecycle costs by Mr. Ian Godfrey and the response by the Consultants are very important as Council needs to show cost effectiveness in any proposals adopted. The Panel believes these issues require further consideration and recommends that the Council, the Consultants and Mr. Godfrey meet to ensure that there is full understanding between the Council and Mr. Godfrey before these issues are addressed in public forums.
10. Irrespective of any decisions made, the Panel strongly recommends that Council does not under spend on maintenance of roads and drainage in Aireys Inlet and allocates amounts required to maintain roads and drains to the standards it has adopted. In addition Council needs to assess whether it would be more cost effective, at least in some cases, to increase spending on maintenance rather than on new capital works.

Reference Panel Members:

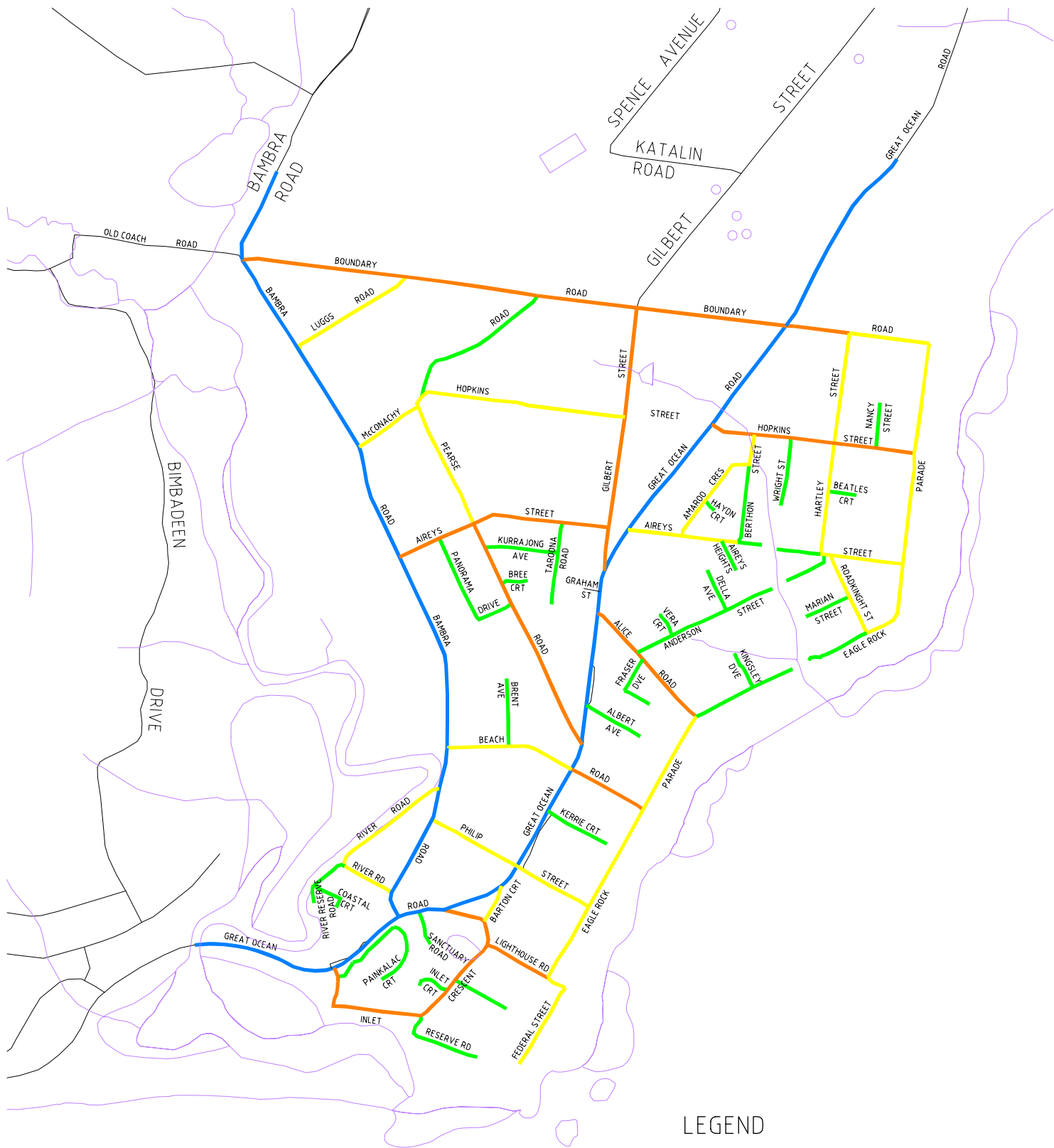
Kerry Harris
Len Girvan
Barbara Noelker
Kim Neubecker
Vanessa Schernickau

Jim Barton
Ken Musker
Jane Grant
Ian Porter
Eric Webb

David Thompson
Joan Forster
Frieda Wachsmann



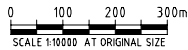
Appendix G
Amended Road Hierarchy



LEGEND

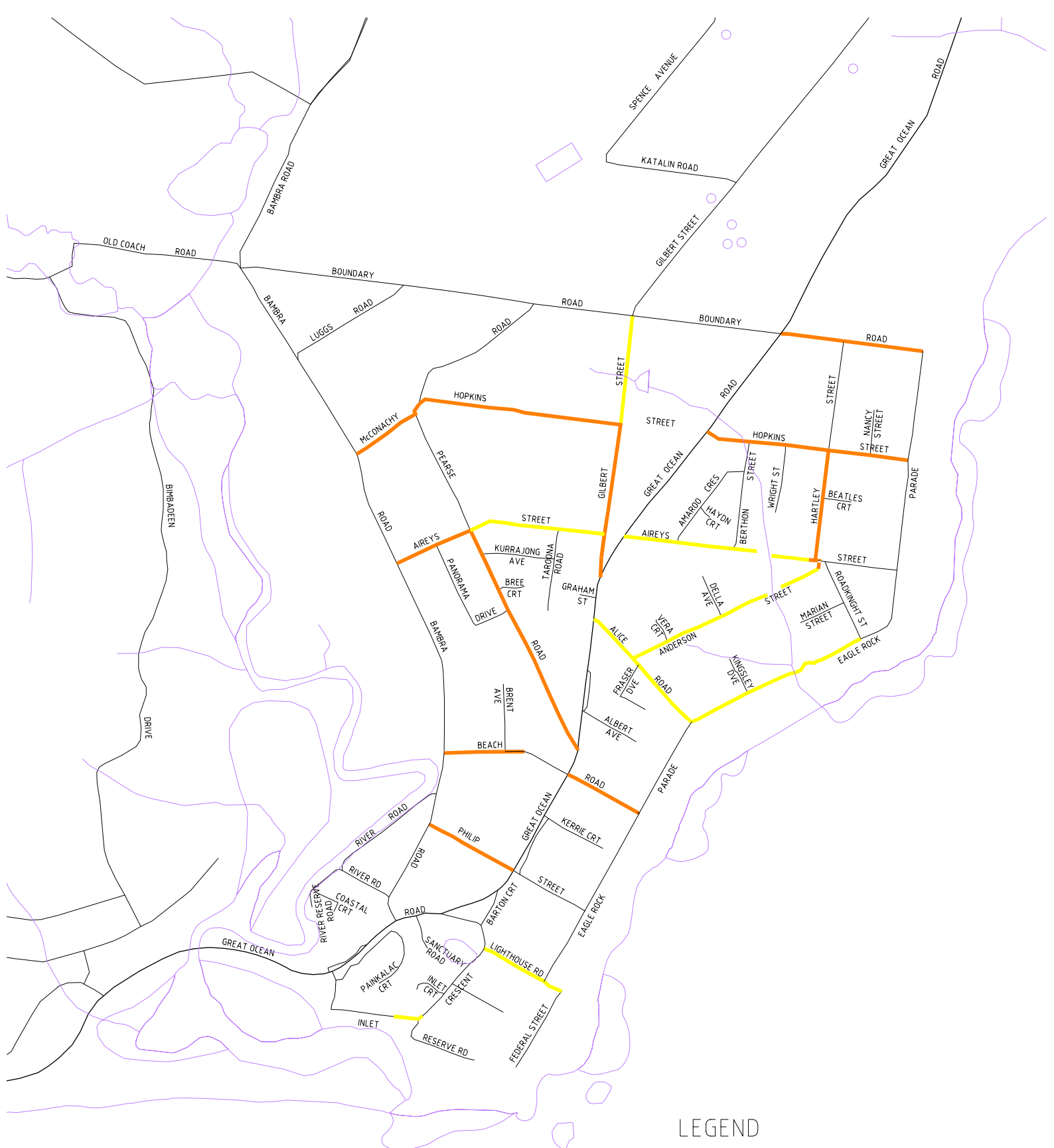
- LEVEL A
- LEVEL B
- LEVEL C
- LEVEL D

AMENDED ROAD HIERARCHY
AIREYS INLET TOWNSHIP





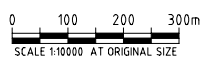
Appendix H
Road Priorities



LEGEND

- HIGH PRIORITY
- MEDIUM PRIORITY

ROAD IMPROVEMENT PRIORITY
AIREYS INLETTOWNSHIP





Appendix I
Road Improvements and Costs

Surf Coast Shire/ Aireys Inlet Road and Drainage Plan
Recommended Road Treatments

ROAD	GHD Suggestion	Community Comment	Length	Road treatment \$/m	Cost
BOUNDARY ROAD					
GOR to Hartley Street	Unsealed Option C	OK	160	70	\$11,200
Hartley Street to Eagle Rock parade	Unsealed Option C	OK	225	70	\$15,750
GILBERT STREET					
Boundary Road to Hopkins Street	Unsealed Option C	OK - May need different treatment if football oval built	290	70	\$20,300
Hopkins Street to Aireys Street	Sealed Option A	Some preference to remain unsealed	300	450	\$135,000
Aireys Street to GOR	Already sealed, single choke to slow traffic entering from GOR	OK	Item	2000	\$2,000
McCONACHY STREET - All	Sealed to prevent erosion, Option D	OK	190	275	\$52,250
HOPKINS STREET					
McConachy to Gilbert Street	Unsealed, Option A. Possible addition of separate gravel footpath	OK	600	80	\$48,000
GOR to Berthon Street	Sealed, Option B, separate footpath for first section from GOR	OK	115	410	\$47,150
Berthon Street to Hartley Street	Sealed, Option B, separate footpath where possible	OK	222	410	\$91,020
Hartley Street To Eagle Rock Parade	Sealed, Option B, separate footpath where possible	Some preference to remain unsealed but pedestrian route makes this a safety concern	222	410	\$91,020
HARTLEY STREET Hopkins to Aireys St					
Hopkins to Beatles Crt	Sealed, Option B	Some preference to remain unsealed but will link up to Aireys Street Junction that will need sealing	130	410	\$53,300
Beatles Crt to Aireys St	Sealed, Option C	Some preference to remain unsealed but will link up to Aireys Street Junction that will need sealing	170	360	\$61,200
AIREYS STREET -					
Bambra Road to Pearce Road	Sealed to prevent erosion, Option D	OK	215	275	\$59,125
Pearce Road to Tarrona Rd	Sealed to prevent erosion, Option D	OK	230	275	\$63,250
Taroona Rd to Gilbert St	Sealed, Option C	OK	125	360	\$45,000
Great Ocean Road to Amaroo Cres	Sealed Option B	OK	135	410	\$55,350
Amaroo Cres to Berthon Street	Sealed, Option B or Option C	Option C	160	360	\$57,600
Berthon Street to Creek	Sealed to prevent erosion, Option D	OK	70	275	\$19,250
Creek to Hartley Street	Sealed to prevent erosion, Option D	OK	115	275	\$31,625
Hartley Street Junction	Junction sealed to prevent erosion, Feedback from panel on layout options required	Junction Option B preferred	Item	40000	\$40,000
PEARSE ROAD					
GOR to Tree	Sealed, Option B with footpath separated where possible. Tree incorporated in choke.	OK	325	410	\$133,250
Tree to Panorama Drive	Sealed, Option B with footpath separated where possible	OK	90	410	\$36,900
Panorama to Bree Court	Sealed, Option B with footpath separated where possible	OK	70	410	\$28,700
Bree Crt to Kurrjong Ave	Sealed, No chokes as already only 4m wide and to avoid further restriction for fire service	OK	110	275	\$30,250
Kurrjong Ave to Aireys Street	Sealed, Option B	OK	75	410	\$30,750
Aireys to McConachy	Sealed on steeper section to prevent erosion option C incorporating an existing tree into choke	OK - Note addition to streets priority list	200	360	\$72,000
ANDERSON STREET					
NORTH - Creek to top of slope	Sealed to prevent erosion, Option D	OK	125	275	\$34,375
SOUTH - Creek to top of slope	Sealed to prevent erosion, Option D	OK	125	275	\$34,375
INLET CRESCENT					
	Pair of chokes west of car park and closure north of Reserve Road	Should be considered as part of a tourist precinct. Pair of chokes could be a temporary solution	0	0	\$0
BEACH RD					
Bambra Road to Brent Avenue	Sealed to prevent erosion, Option D	OK	160	275	\$44,000
Brent Avenue to crest	Sealed to prevent erosion, Option D	OK	50	275	\$13,750
GOR to Eagle Rock Parade	Sealed or Unsealed, Option C	Unsealed option C	200	70	\$14,000
EAGLE ROCK PARADE					
Roadknight Street to turning area	Narrow entrance, 3.5m wide and provide angled parking over drain on South Side, posts on North Side to prevent parking, seal turning area	Don't provide parking but separate footpath on edge of bushes	120	275	\$33,000
Alice to Kingsley	Sealed to prevent erosion, Option B	Opinions divided (Possibly seal narrow strip)	170	410	\$69,700
Kingsley Drive to Car park	Sealed, to prevent erosion, Option B		130	410	\$53,300
PHILIP ST from end of existing seal to Bambra Rd	Sealed to prevent erosion, Option D with reduced passing places	OK	200	275	\$55,000
LIGHTHOUSE RD - Inlet Cres to Eagle Rock Pde	Option A. Possible addition of exposed aggregate footpath	OK for road, footpath would be part of Tourist Precinct and excluded from this project	225	100	\$22,500
ALICE RD					
GOR to Anderson Street	Already sealed	Traffic calming needed	120	100	\$12,000
Anderson St to Eagle Rock parade	Option A. Separate footpath on Northern Side	Preferred narrower than initial section	230	450	\$103,500
Construction Cost					\$1,820,740



Appendix J

Road Side Drainage and Water Quality Improvement

Surf Coast Shire/ Aireys Inlet
Table Drain Improvements

Location	Collection and Transport				Treatment	
	Improvement	Length	Cost/m	Cost	Treatment Type	Cost
Boundary Road						
Bambra to Luggs Road	None required	430			New wetlands	
Luggs Road to Gilbert	None required	625			New wetlands	
Gilbert to GOR	None required	400			Bioretention	400
GOR to Eagle Rock Parade	Swale both sides	375	230	86250	Bioretention	2000
Hopkins Street						
Pearce to Gilbert	Swale both sides	530	230		New wetlands	400
GOR to Berthon	Swale both sides	115	230	26450	Bioretention	400
Berthon to Hartley	Piped	220	440	96800	Bioretention	3600
Hartley to Eagle Rock Parade	Piped	210	440	92400	Bioretention	2000
Aireys Street						
Bambra to Pearce	Piped single side	210	440	92400	New wetlands	
Pearce Road to Gilbert	Swale both sides	360	230	82800	New wetlands	
GOR to Berthon St	Piped single side	300	440	132000	Bioretention	2000
Berthon St to Creek	Piped Single side	65	440	28600	Bioretention	1000
Creek to Hartley Street	Piped single side	115	440	50600	Bioretention	1200
Hartley St to Eagle Rock Parade	Swale both sides	215	230	49450	Bioretention	2200
Amaroo Crescent	Nothing					2600
Berthon Street						
Hopkins Street to Amaroo Crescent	Swale both sides	80	230	18400	Bioretention	800
Amaroo Crescent to Aireys Street	Swale single side	210	115	24150	Bioretention	3800
Wright Street	Piped	180	440	79200	Bioretention	3400
Hartley Street						
Boundary Road to Hopkins Street	Swale both sides	290	230	66700	Bioretention	3600
Hopkins Street to Aireys Street	Piped one side	290	440	127600	Bioretention	4800
Beatles Court	Nothing				Bioretention	1200
Eagle Rock Parade						
Boundary Road to Hopkins Street	Swales both sides	300	230	69000	Bioretention	2400
Hopkins Street to Aireys Street	Swales both sides	300	230	69000	Bioretention	2400
Aireys Street to Roadnight Street	Swales both sides	240	230	55200	Bioretention	1400
Roadnight Street to Creek	Piped one side	250	260	65000	Bioretention	1000
Creek to Kingsley Drive	Piped one side	150	485	72750	Bioretention	1400
Kingsley Drive to Alice Road	Swale both sides	170	230	39100	Bioretention	1000
Alice to Beach	Swale both sides	290	230	66700	Bioretention	2000
Beach Road to Philip Street	Swale both sides	300	230	69000	Existing wetlands	
Philip Street to Lighthouse Road	Swale both sides	210	230	48300	Existing wetlands	
Lighthouse Road	None required				Existing wetlands	
Federal Street	None required				Existing wetlands	
Nancy Street	Swales both sides	115	230	26450	Bioretention	2400
Roadknight Street	Swales Both sides	220	230	50600	Bioretention	1800
Marian Street	Pipe single side	130	440	57200	Bioretention	1800
Anderson Street						
Alice Road to Della Avenue	Swale both sides	255	230	58650	Bioretention	5400
Della Ave to Creek	Pipe single side	135	440	59400	Bioretention	2600
Creek to Aireys Street	Swale to existing pipe	125	220	27500	Bioretention	1800
Alice Road						
GOR to Anderson Street	Swale both sides	140	230	32200	Bioretention	2000
Anderson Street to Eagle Rock Parade	Swale both sides	225	230	51750	Bioretention	4000
Fraser Drive	Swale both sides	95	230	21850	Bioretention	1000
Della Avenue	Swale both sides	100	230	23000	Bioretention	1600
Vera Court	Swale both sides	65	230	14950	Bioretention	1400
Albert Avenue	Swale both sides	150	230	34500	Bioretention	2600
Beach Road						
Bambra Rd to Brent Avenue	piped single side	150	440	66000	New wetlands	
Brent to Crest	piped single side	60	440	26400	New wetlands	
Crest to GOR	swale both sides	120	230	27600	Existing wetlands	
GOR to Eagle Rock parade	Swale both sides	210	230	48300	Existing wetlands	
Kerrie Court	none required				Existing wetlands	
Philip Street						
Bambra Road to GOR	piped one side	240	440	105600	New wetlands	
GOR to Eagle Rock parade	swale both sides	200	230	46000	Existing wetlands	
Barton Court	Swale both sides	90	260	23400	Existing wetlands	
Inlet Court	None required				Existing wetlands	
Inlet Crescent						
GOR to Reserve Road	None required				Existing wetlands	
Reserve Road to Light house Road	None required				Existing wetlands	
Lighthouse road to GOR	None required				Existing wetlands	
Painkalac Court	None required				Existing wetlands	
Lohan Rise	None required				Existing wetlands	
River Road						
East-West	Swale both sides	150	260	39000	Bioretention	1800
River side	Swale both sides	320	230	73600	Bioretention	2400
River Reserve Road	Swale both sides	240	230	55200	Bioretention	1600
Coastal Court	Swale both sides	75	230	17250	Bioretention	1800
Pearce Road						
GOR to Panorama Drive	piped one side	415	440	182600	New wetlands	
Panorama to Aireys Street	Piped one side	500	440	220000	New wetlands	
Aireys street to McConachy	Swales both sides	350	260	91000	New wetlands	
Brent Avenue	None required				New wetlands	
Panorama Drive	None required				New wetlands	
Bree Court	None required				New wetlands	
Kurrajong Avenue	None required				New wetlands	
Tarrona Road	None required				Bioretention	4000
McConachy Road						
East	None required				New wetlands	
West	Piped single side	180	440		New wetlands	
Luggs Road	Swale both sides	340	230	78200	New wetlands	
Gilbert Street						
Boundary Road to Hopkins Street	Swale both sides	390	230	89700	Bioretention	2200
Hopkins Street to Aireys street	Swale both sides	300	230	69000	Bioretention	2000
Aireys Street to GOR	none required				Bioretention	800
Totals				3,324,750		92,000



Appendix K
Piped Drainage System Improvements

**Surf Coast Shire/Aireys Inlet Road and Drainage Plan
 Pipe Upgrades For Existing Conditions**

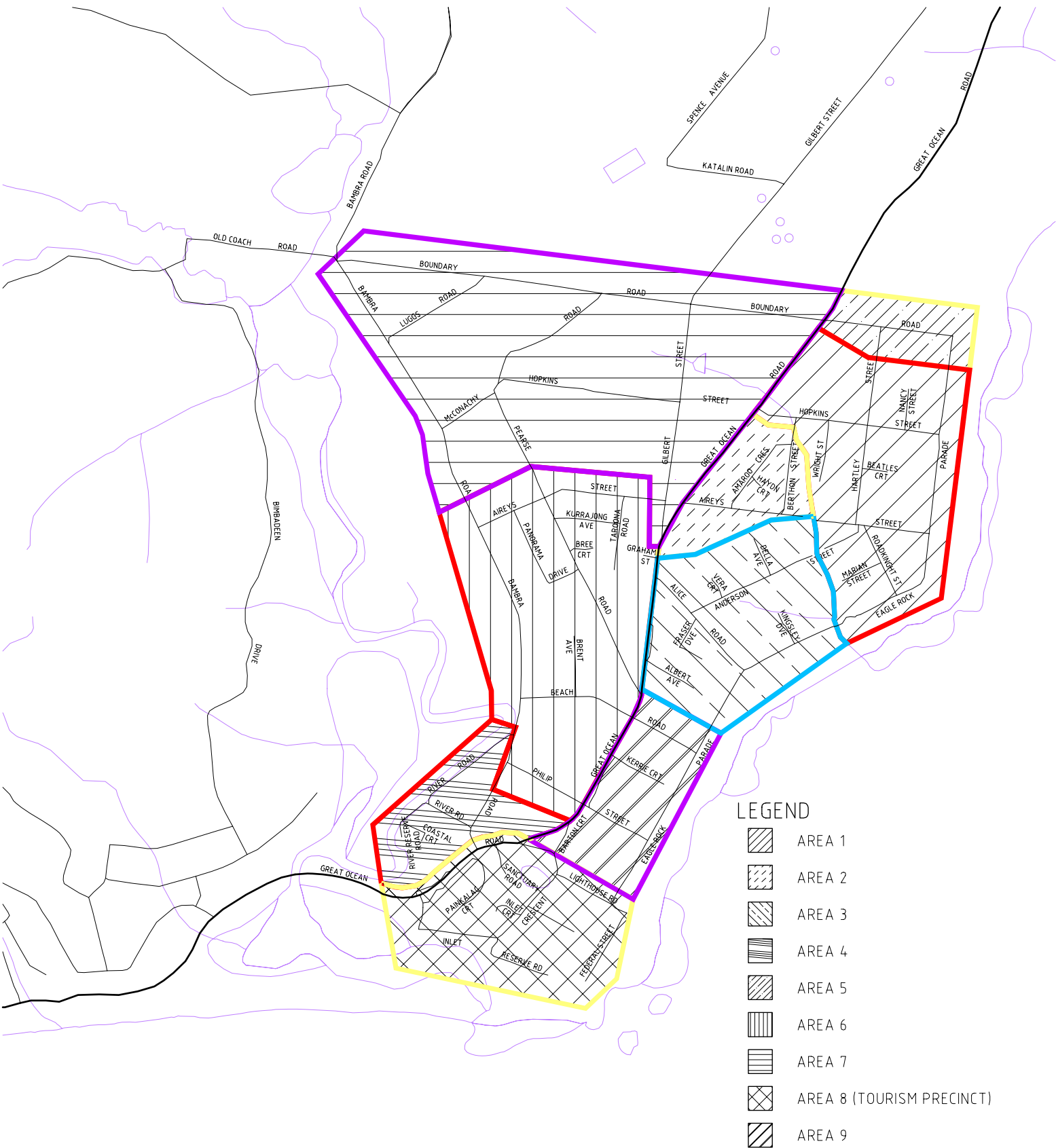
Pipe catchment	Pipe Name	Max flow/Full flow	Existing Dia	Proposed dia	Pipe length	Replac'mt cost/m	Current upgrades	Comments
1	D	1.25	450	600	35	380	\$28,300	Alternative may be to upgrade Eagle rock parade
1	E	1.07	300	600	126	380	\$62,880	Alternative may be to upgrade Eagle rock parade
1	H	1.08	300	375	29	200	\$5,800	
1	K	1.29	525	750	49	500	\$39,500	Alternative may be to upgrade Eagle rock parade
1	M	1.01	525	750	66	500	\$48,000	Alternative may be to upgrade Eagle rock parade
1	N	1.03	525	750	39	500	\$34,500	Alternative may be to upgrade Eagle rock parade
1	O	1.08	525	800	32	600	\$34,200	Alternative may be to upgrade Eagle rock parade
1	P	6.75	750	900	31	720	\$37,320	
1	BE	1.31	150	225	47	150	\$22,050	
1	BG	-	525	750	10	500	\$20,000	
1	BH	-	225	375	23	200	\$19,600	
1	BI	1.1	750	900	34	720	\$39,480	
1	BJ	1.12	300	375	30	200	\$21,000	
1	BK	1.69	375	450	29	250	\$22,250	
1	CA	1.32	300	375	47	200	\$24,400	
1	CB	-	750	800	20	600	\$27,000	
3	Q	2.95	200	450	119	250	\$44,750	
3	T	1.15	300	600	30	380	\$26,400	Alternative may be to divert flows along Aireys Street
3	U	1.34	375	600	33	380	\$27,540	
3	V	1.02	300	375	32	200	\$21,400	
3	W	1.06	300	450	23	250	\$20,750	
3	X	5.38	300	450	31	250	\$22,750	
3	AK	1.02	300	450	53	250	\$28,250	
3	AL	1.92	300	525	31	250	\$22,750	
3	BL	-	225	300	120	180	\$36,600	
3	BM	-	300	450	107	250	\$41,750	
3	BN	1.52	150	225	22	150	\$18,300	
3	BO	-	150	225	78	150	\$26,700	
3	BP	1.38	150	225	25	150	\$18,750	
4	Z	1.57	300	375	14	200	\$17,800	
4	AM	3.02	300	375	9	200	\$16,800	
4	BR	1.21	150	225	52	150	\$7,800	
4	BS	-	600	750	17	500	\$8,500	
4	BT	7.11	600	750	29	500	\$14,500	
5	BD	1.12	300	375	26	200	\$6,700	
5	AD	1.09	300	375	26	200	\$20,200	
5	AE	-	300	375	11	200	\$17,200	
5	AF	1.26	300	375	15	200	\$18,000	
5	AG	1.1	450	600	17	380	\$21,460	
5	AH	-	450	525	31	320	\$24,920	
5	AI	1.98	600	750	24	500	\$27,000	Alternative may be to divert some flows along Wright street
5	AJ	1.67	600	750	18	500	\$24,000	Alternative may be to divert some flows along Wright street
5	BW	1.27	225	300	37	180	\$21,660	
5	BX	0.08	150	225	67	150	\$25,050	
5	BY	-	225	300	24	180	\$19,320	
Construction Cost							\$1,133,880	

**Surf Coast Shire/Aireys Inlet Road and Drainage Plan
Pipe Upgrades For Fully Developed Conditions**

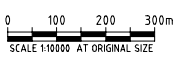
Pipe catchment	Pipe Name	Max flow/Full flow	Existing Dia	Proposed dia	Pipe length	Replac'mt cost/m	Future upgrades	Comments
1	A	1.05	300	375	41	200	\$9,700	Alternative may be upgrade Eagle rock parade
1	B	1.15	300	375	41	200	\$9,700	Alternative may be to upgrade Eagle rock parade
1	C	-	375	450	36	250	\$10,500	Alternative may be to upgrade Eagle rock parade
1	F	1.06	300	375	45	200	\$10,500	
1	G	1.07	300	375	18	200	\$5,100	
1	I	-	300	450	17	250	\$5,750	
1	J	-	450	750	38	500	\$20,500	
3	R	1.11	300	525	11	320	\$5,020	
3	S	1.78	225	300	57	180	\$11,760	
4	AO	3.67	375	600	18	380	\$21,840	
4	AP	-	375	450	10	250	\$17,500	
4	AQ	1.28	450	525	62	250	\$30,500	
4	AR	1.27	225	300	52	180	\$24,360	
4	AT	1.16	600	750	34	500	\$32,000	
4	AA	1.05	225	375	19	200	\$5,300	
4	AB	1.06	450	525	87	320	\$29,340	
5	AC	1.02	150	300	55	180	\$11,400	
5	AV	5.61	300	375	36	200	\$8,700	
5	AW	-	300	375	8	200	\$3,100	
5	AX	1.99	300	525	10	320	\$4,700	
5	AY	1.04	225	300	10	180	\$3,300	
5	AZ	3.35	225	300	9	180	\$3,120	
5	BA	1.22	225	300	12	180	\$3,660	
5	BB	7.12	225	300	18	180	\$4,740	
5	BC	-	225	300	22	180	\$5,460	
5	BU	-	225	300	32	180	\$20,760	
5	BV	2.07	300	450	29	250	\$22,250	
5	BZ	0.07	300	450	14	250	\$3,500	
Construction Cost							\$344,060	



Appendix L
Improvement Catchment Areas



POSSIBLE SPECIAL CHARGE SCHEME AREAS
AIREYS INLET TOWNSHIP





GHD Pty Ltd ABN 39 008 488 373

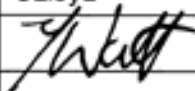
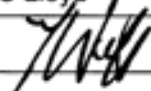
Level 3, 49-51 Malop Street
Geelong, Victoria 3220

T: (03) 5273 1800 F: (03) 5273 1801 E: gexmail@ghd.com.au

© GHD Pty Ltd 2007

This document is and shall remain the property of GHD Pty Ltd. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	B Ashworth	F. Watt	F. Watt	C Lloyd	C Lloyd*	02/03/2007
1	B Ashworth	C Lloyd	CLloyd	C Lloyd	C Lloyd	14/03/07
2	B Ashworth	F Watt		F Watt		22/3/07

* Denotes signature on original