

542/201

Ferry Road Humphries Drive Intersection

COSTS

Total	Renewal	Backlog	Unallocated	Growth
\$2,434,686	\$486,938	\$837,532	0	\$1,110,217

COST ALLOCATION

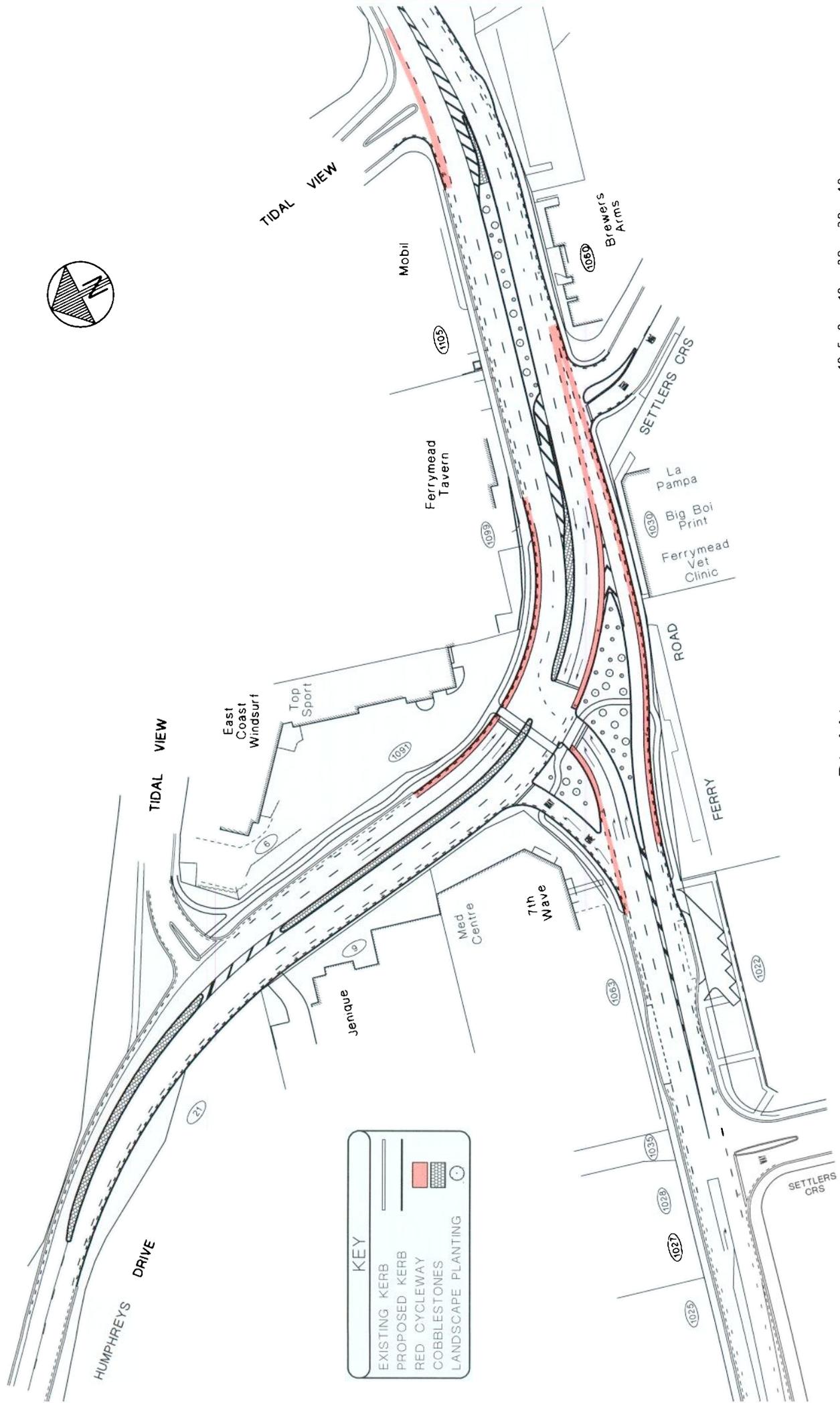
Primary Driver:	Continued poor Level of Service (congestion and delay) to vehicles exiting Ferry Road. Continued poor safety performance of existing intersection.
Secondary Driver:	
Capacity discussion:	
References:	

ATTRIBUTES

Project Manager:	Chris Nordstrom, Paul Roberts
Work Planned:	Installation of traffic signals at intersection.
Location:	Ferry Road/Humphreys Drive intersection.
Special features being addressed:	Correction of poor geometry/cross-section. Cycle safety.
A statement of the outcomes being addressed (LoS, Community Outcomes):	Improved Level of Service (particularly PM peak and weekends) Improved network safety
Options considered:	A large number of signalisation schemes have been developed and assessed.
Implications of not doing the project:	Continued poor Level of Service (congestion and delay) to vehicles exiting Ferry Road. Continued poor safety performance of existing intersection.
Linkages with other projects:	Ferrymead Bridge.

Location of other relevant supporting information:

Improvement plans 2002
City Streets Manager report to Council.



KEY

- EXISTING KERB
- PROPOSED KERB
- RED CYCLEWAY
- COBBLESTONES
- LANDSCAPE PLANTING



PLAN
1:1000

MJR 28/06/02
TP135212

FERRY ROAD/HUMPHREYS DRIVE INTERSECTION IMPROVEMENTS

3. FERRY/HUMPHREYS INTERSECTION IMPROVEMENTS

Officer responsible City Streets Manager	Author Paul Roberts, Transport Planning Engineer, DDI 941-8618
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The purpose of this report is to obtain Council's approval, for the purposes of consultation, of the proposed improvement at the Ferry/Humphreys intersection ('the intersection') and associated works on Ferry Road between the intersection and west of the Ferrymead Bridge. Approval is also sought to proceed with property negotiation and settlement where appropriate, in order to minimise further delays in the project. The Hagley/Ferrymead Board at its meeting on 3 July 2002 supported the recommendations as set out below.

EXISTING SITUATION

Humphreys Drive and Ferry Road east of the intersection are classified as (limited-access) Major Arterials in the City Plan's roading hierarchy. West of its intersection with Humphreys Drive, Ferry Road is classified as a Minor Arterial up to Aldwins Road (with limited-access provisions between the intersection and the Tunnel Roundabout).

The intersection caters for approximately 30,000 vehicles over a typical day. The existing intersection layout requires eastbound traffic exiting from Ferry Road to give-way to westbound traffic on Humphreys Drive and use a seagull-type merge arrangement with eastbound traffic from Humphreys Drive. Current demand for this particular movement can regularly rise to 1,100 vehicles per hour and this leads to considerable queuing and delay at times. This generally occurs during the weekday evening peak, but can be observed with increasing frequency at weekends, due to the growth in recreational traffic. Sporadic delays can lead to reliability problems for public transport routes to Sumner/Mt Pleasant on the outbound journey, with 'knock-on' impacts for inbound journeys. Traffic volumes on Ferry Road have been rising by an average of 3.3% per year and the problems at the existing intersection are forecast to worsen considerably given anticipated continued traffic growth in the area, and to extend over longer and longer periods of each day.

The intersection and its approaches also have a poor accident history. Some 37 accidents have been reported to police in the past 5 years, and anecdotal evidence suggests that there are many more that go unreported. Of the accidents reported, the largest group (27%) are due to vehicles turning right from Ferry Road being hit by vehicles travelling west towards Humphreys Drive. This group of accidents illustrates that people have difficulty judging appropriate gaps and/or feel compelled to take risks to turn right out of Ferry Road. The next biggest group (22%) of accidents involves vehicles travelling to or from Humphreys Drive that lose control on the bend. Early last year, Council installed a guard rail on the north-west corner of the intersection to offer some protection to vehicles travelling west that do lose control - and to the medical centre that was threatened by collision from such vehicles. This was accepted to be a temporary measure - akin to providing an ambulance at the bottom of the cliff - as prevention of such accidents requires extensive shape-correction work on the curve. Humphreys Drive curves round into Main Road on a radius of approximately 50 metres, which is well below the desirable standard for the typical speeds recorded at this point (mean = 52kph).

The superelevation applied on this corner needs correction to reduce the potential for the loss-of-control accidents. Finally there is a group of accidents that occur due to right turns from and to Ferry Road east of the intersection. In this section there is one of two entrances into Settlers Crescent, along with driveways serving the Ferrymead Tavern and a Mobil filling station. Whilst 'only' 5 of such accidents have been reported to Police in the past 5 years, again anecdotal evidence suggests that collisions involving right-turning vehicles are much more frequent.

There has been a long-standing intention to complete a cycle route from Sumner to Hagley Park. Cycle lanes recently installed over the Ferrymead Bridge partially complete the link between the cycle lanes over the causeway ending at Scott Park, and the cycle lanes that start again west of the Humphreys Drive intersection. However, cyclists are still currently poorly served at the existing intersection of Ferry/Humphreys, particularly those traveling east. Pedestrians seeking to cross Humphreys Drive or Ferry Road in this area are also poorly served by the existing layout.

THE PROPOSED IMPROVEMENTS

The option now proposed for the Ferry/Humphreys intersection and approaches is the provision of traffic signals as shown in the attached plan. This differs from a roundabout proposal that was originally indicated in a 1999 Draft Feasibility Report, because subsequent analysis has revealed a roundabout would have had limited longevity (in terms of capacity) and also offer a poor level of service to pedestrians and cyclists.

The proposed option has the following features:

- Traffic travelling east on Ferry Road will have a double right-turn to facilitate signal-controlled egress;
- Westbound traffic on Ferry Road will not be impeded by the proposed signals, continuing to enjoy a continuous movement as it does today, via a slip lane. The slip lane has been designed to ensure that this movement will not be impeded by any queuing by the westbound Humphreys Drive movement;
- Cycle lanes will be marked throughout the project;
- Pedestrians will have a signal-controlled crossing facility at the intersection (except crossing the westbound slip lane into Ferry Road which will be similar to today);
- The existing ban on right-turn movement from Humphreys Drive into Ferry Road will be retained.
- Humphreys Drive will be widened on the intersection approaches to provide space for 2 vehicle lanes and a cycle lane in each direction;
- The curve will be eased slightly and shape-correction work included to provide the right super-elevation;
- A landscaped solid median is proposed between the intersection and Tidal View to restrict right-turning manoeuvres;
- The improvement proposed for consultation provides for a gap in this solid median that will continue to allow right turns into Settlers Crescent (across 2 westbound lanes), whilst preventing right-turns out of this road (across 4 lanes);
- The solid median proposed will prevent direct right-turns to be made either into or out of the driveways on the north side of the road.
- The proposal is compatible with any of the options currently being considered for improvement/replacement of the Ferrymead Bridge.

The traffic signals and associated works proposed will address both current and projected capacity problems whilst also considerably reducing the risk of accidents. Extensive testing has been conducted and indicates that the proposed signals will cater for existing traffic and anticipated growth in a safe and efficient manner. They will be able to operate with a comparatively short cycle time that balances and minimises delay to all vehicles through the intersection. Members of the Sustainable Transport and Utilities Committee who were able to attend the recent joint seminar with the Hagley/Ferrymead Board on this subject will have had the opportunity to view the simulation modelling that illustrates this performance.

The proposal to introduce a solid median between the intersection and Tidal View is made on safety grounds, to reduce actual accidents and the accident risk. This is the primary reason why the City Plan provides for the provision of solid medians along Major Arterials. Following a preliminary consultation meeting with businesses in the area in November 2001, where concern was expressed at the possibility of a solid median, extensive surveys were conducted in late February 2002 to observe turning movements to and from the main road along this section that might be affected by this proposal. Results of a video survey conducted as part of this exercise are given in Table 1 following. Vehicles directly affected by the solid median proposal now proposed constitute about 15% of all turning traffic and 1.3% of all traffic along this section of Ferry Road.

The removal of direct right turns *out* of Settlers Crescent (east) in the scheme now proposed for further consultation would have some affect on those vehicles that currently make this manoeuvre. On average this amounts to about 1 vehicle every 2 minutes during peak times. These drivers would have to take an alternative route. Two alternatives exist; using the west end of Settlers Crescent to turn right into Ferry Road and then back towards Sumner; although longer in distance, this would actually be much easier given reduced volumes on this section and the proposed signals. Alternatively, these drivers can turn left out of Settlers Crescent (east) and then right into Tidal View and left back onto the bridge.

The proposed removal of direct right turns into or out of properties on the north side of the road will generally affect a limited number of vehicles¹ to 2 properties, The Ferrymead Tavern and the Mobil Filling Station. Those turning right *off* the main road at present will be able to make this manoeuvre at either end of Tidal View (via a protected turning areas) and can enter the properties from Tidal View. Those turning right *onto* the main road at present will also be able to make this manoeuvre at either end of Tidal View or via protected U-turning slots in the median. It is pertinent to note that agreement-in-principle has been reached to acquire land required for the improvement with the owner of The Ferrymead Tavern.

¹ Except for Settlers Crescent, it is accepted that the observations for movements denoted in Table 1 may understate current demand for some properties where that might occur at weekends (the video survey having been conducted on a Wednesday).

Table 1: Principle Observed Turning Movements between Ferry/Humphreys Intersection and Ferrymead Bridge

30 Mins Starting	Affected by Current Median Proposal					Not affected by Current Median Proposal						
	RT out of Settlers East	RT into Mobil Station	RT out of Mobil Station	RT into Ferry-mead Tavern	RT out of Ferry-mead Tavern	RT into Settlers East	LT into Settlers East	LT out of Settlers East	RT into Tidal View	LT into Tidal View	RT out of Tidal View	LT out of Tidal View
07:30	1	N/a	n/a	n/a	n/a	13	14	2	7	0	1	6
08:00	1	N/a	n/a	n/a	n/a	1	21	11	8	0	1	15
08:30	4	N/a	n/a	n/a	n/a	15	28	9	22	2	0	23
09:00	8	N/a	n/a	n/a	n/a	15	37	8	12	1	5	5
09:30	9	N/a	n/a	n/a	n/a	12	12	14	7	2	5	9
10:00	16	N/a	n/a	n/a	n/a	25	15	22	11	1	5	9
10:30	13	N/a	n/a	n/a	n/a	10	14	17	16	4	3	10
11:00	10	N/a	n/a	n/a	n/a	16	10	18	8	0	5	14
11:30	15	N/a	n/a	n/a	n/a	20	16	17	11	2	5	25
12:00	8	N/a	n/a	n/a	n/a	10	14	23	12	4	6	27
12:30	7	4	1	0	0	16	14	17	5	0	18	28
13:00	7	2	1	0	0	8	15	20	9	2	3	23
13:30	7	3	4	0	0	18	5	16	8	2	6	12
14:00	10	2	5	0	2	8	16	17	12	2	2	16
14:30	10	1	5	0	1	9	10	21	20	3	4	22
15:00	16	2	3	0	1	20	10	24	16	1	4	24
15:30	10	1	4	2	0	15	11	20	16	0	6	31
16:00	12	4	2	1	2	16	22	24	15	2	2	29
16:30	16	0	3	1	1	10	22	29	17	3	3	30
17:00	15	2	0	2	0	6	9	26	14	7	3	42
17:30	12	1	0	3	0	11	23	16	12	1	1	39
18:00	14	1	0	1	0	6	14	10	10	3	1	33
18:30	22	3	1	2	0	4	11	13	19	2	4	22
19:00	10	2	3	4	0	5	8	8	15	0	2	22
Total	253	28	32	16	7	289	371	402	302	44	95	516

Note: n/a indicates video survey did not capture these movements at these times

COSTS AND BENEFITS

It might be noted that improvement of this intersection has been on the Council's programme for a number of years. Delays have occurred as a result of land requirements and uncertainty generated over proposals for improvement of the Ferrymead Bridge. The 2001/02 Annual Plan allocation for this project has been carried forward for property purchase and the draft 2002/03 plan provides a total budget of \$1.914m for the improvement, which is in line with the current estimate. Transfund New Zealand have accepted the project for a 48% subsidy, with the Benefit/Cost Ratio calculated to be 5.8. This is indicative of the considerable benefits expected to be achieved by the proposal.

PROPOSED CONSULTATION

Subject to Council approval that the attached scheme may form the basis for public consultation on this project, the intended form of consultation will comprise:

- Circulation of a publicity leaflet to all property owners and tenants in Settlers Crescent, Tidal View, on Ferry Road between the Bridge and Tunnel Roundabout and on Humphreys Drive within 200m of the intersection;
- Circulation of this leaflet, and presentations if requested, to local residents groups (Mt Pleasant, Redcliffs, Sumner and Brookhaven);
- Provision of publicity material and submission forms in local papers including the Star and Bay Harbour News, to elicit opinions from other regular users.

It is proposed that the submission period would run from 29 July 2002 to 26 September 2002.

Following receipt and analysis of the feedback obtained by this process, a report would be brought back to Council through the Sustainable Transport and Utilities Committee for a final decision on the exact scheme to be implemented.

LAND ACQUISITION

The scheme requires acquisition of a number of parcels of land from adjoining owners. An existing designation in the Proposed City Plan exists on the south side of Ferry Road (only), for the purposes of road widening (to allow four-laning with a solid median). This designation affects three properties, including the Brewer's Arms Tavern. This designated land would be fully utilised by the current proposal.

Other property required for the project is not currently designated but preliminary negotiations have indicated that this land could be acquired without recourse to designation processes. For example, agreement-in-principle has been reached with the owner of the Ferrymead Tavern and 1091 Humphreys Drive.

To complete the acquisition of land required for this project, approval is now being sought from Council to purchase the severances required. It should be noted that, subject to agreement that the intersection should be signalised and a solid median provided along Ferry Road, the *extent* of land required to be purchased for the project would **not** be affected by any decision of Council whether or not a gap is provided in that median. Approval to proceed with land purchase now, as described below, will reduce the potential for further delay on this project and provide certainty for directly-affected land-owners.

The address of the properties affected are set out below. Detailed plans showing the severances marked Sec 1 to 10 are attached.

Addresses of Severances: 1026, 1030, 1060, 1063, 1091 and 1099 Ferry Road, 9 and 21 Humphreys Drive.

Legal Description: As shown on attached plans.

Zone: B4, Proposed City Plan.

Areas Required for Road: Shown marked Sec 1 to 10 on the enclosed plans.

Valuation: Compensation for the individual properties and severances inclusive of injurious affection will be assessed on the Council's behalf by independent valuation.

Proposed Settlement: Because of the number of properties involved and the need to strategically manage available financial resources it is proposed that the Property Manager be authorised to approve the necessary settlements on the following basis:

- (a) That the owners be offered the compensation assessed by the Council's valuer and, if the owners choose also to obtain their own valuation, compensation to be negotiated and settled at a figure between the respective valuations and up to the maximum assessed by either valuer.
- (b) That settlements so achieved be reported to the Council for information at a subsequent meeting.
- (c) That, in the event that settlement cannot be achieved within the above parameters, the matter be referred to the Council with a separate recommendation.

The above process will enable the Property Unit to efficiently expedite the acquisition of a group of contiguous properties. The ability to conclude negotiations and effect immediate settlement is in the interests of the property owners who are stimulated by not being delayed by the four-week reporting cycle to the Council and there is considerable saving in the staff time that would otherwise be involved in preparing and submitting individual reports on each property.

- Recommendation:**
1. That the scheme be approved for the purposes of inviting public comment.
 2. That the Property Manager be authorised to effect settlements as outlined above.
 3. That, following consultation on the proposal, a further report be brought back to Council prior to any decision on the final scheme to be adopted.



KEY

- DESIGNATED LAND (indicated by diagonal hatching)
- NON DESIGNATED LAND (indicated by a solid grey fill)
- LAND SWAP (indicated by a dotted pattern)

HUMPHREYS DRIVE

TIDAL VIEW

SETTLERS CRS

ROAD

FERRY

SETTLERS CRS

PLAN
1:1000



MJR 28/06/02
TP135208

FERRY ROAD/HUMPHREYS DRIVE REQUIRED PROPERTY