3. LAND FOR DRAINAGE AND ROAD PURPOSES – HAYTONS/WIGRAM ROAD

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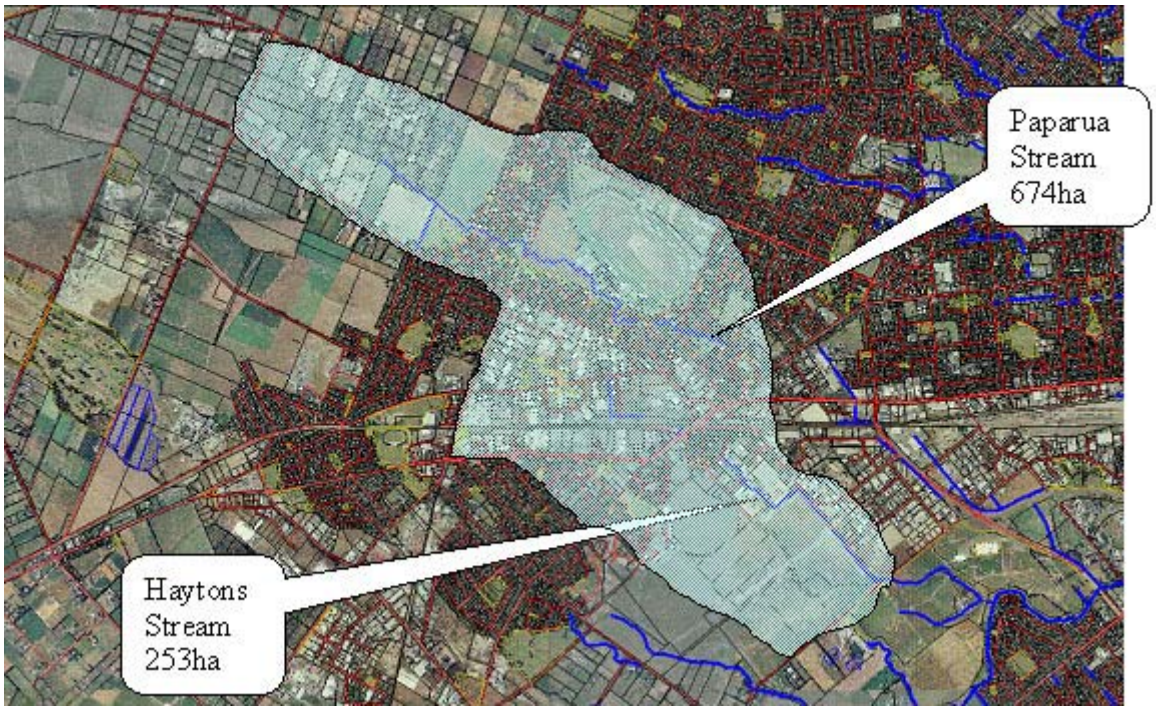
The purpose of the report is to seek the Council's approval to acquire a parcel of land on Haytons/ Wigram Road for drainage and road purposes. This particular location is the constricting point to the whole catchment and frequently floods and the purpose of the acquisition is to divert the watercourse and relieve the current restrictions in the system and provide a better route for land drainage to the Wigram East Retention Basin.

BACKGROUND

Haytons and Paparua Streams serve a catchment of 1082ha of industrial, commercial and residential land North and West of Wigram retention basin extending to West of Carmen Road.

The existing twin culverts at Wigram/Haytons Road corner are undersized and cause frequent flooding (at least annually) of the road to a depth of 600mm.

For some time the Council has been aware of flooding concerns which are attributable to restrictions in the capacity of Paparua Stream upstream of the Wigram ponding basin.



DESCRIPTION OF THE CATCHMENT AND WATERWAY

1. Haytons Stream

The above catchment plan dating from the 1970's shows a catchment of 253ha extending from Buchanans Road in the North to Sparks Road in the South and from Carmen Road in the West to Haytons Road in the East. The catchment is largely industrial or commercial with 27% of the catchment as residential.

The existing stream along Haytons Rd is quite shallow with an invert level at mid height on the incoming Paparua Main Drain 1800 mm piping.

Haytons Stream system contributes a 5 year design flow in the order of 4.5 cumecs to the confluence of the two waterways. (combined flow of 10m3/sec)

2. Paparua Stream

Paparua Stream has a catchment of approximately 674ha. It contributes 5.5 cumecs to the confluence and all but the upper reaches of the catchment area are developed.

Between the confluence of the two streams and the intersection of Wigram and Haytons Road a further 155ha of aerodrome and industrial land contributes to the flow.

OPTIONS

The options available to rectify the flooding problems are:

1. Divert the stream and replace the existing twin 600mm culverts with a larger culvert across Wigram Road West of Haytons Road.

2. Replace the existing culverts with culverts under Haytons and Wigram Road.

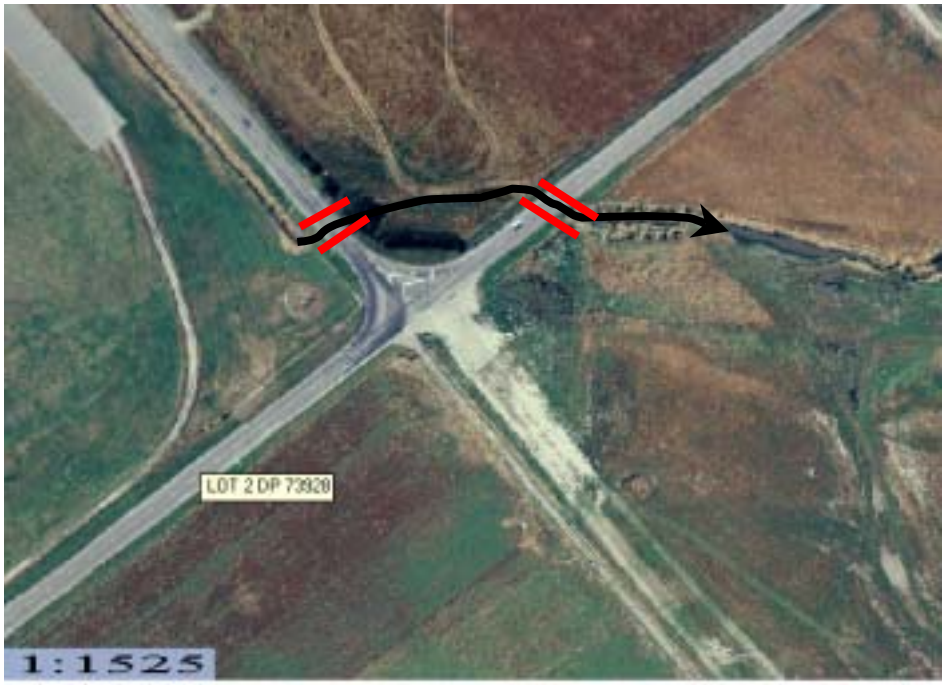
OPTION 1

This proposal includes diverting the watercourse to cross Wigram Road via a new culvert West of the intersection with Haytons Road and reconnecting it to the existing waterway upstream of the Proposed Southern Motorway extension. The access way into the A&P showgrounds will need to be renewed with a ford (with low flow piping underneath the ford). In the event of a flood access can be re-routed west of the waterway onto Wigram Road.

OPTION 2

This option involves the renewal of the existing pipes with new culverts of adequate capacity in the position of the existing twin pipes and deepening and widening of the existing channel.

Services that conflict with the new larger culverts will need to be re-laid under the new culverts.



SUMMARY

Diversion of the waterway to a new crossing west of Haytons Rd reduces the cost of road crossings and hydraulic losses (Option 1).

COSTED OPTIONS

Option 1	Rate/m	Distance/ea	Extension	Total Cost
Diversion of waterway up and downstream(26m3/m)	$260	257	$66,820	
New twin culvert	$2,000	20	$40,000	
Lowering of services	$15,000	2	$30,000	
Outlet/Inlet headwalls	$15,000	2	$30,000	
New ford with low flow piping	$750	20	$15,000	
				$181,820
Option 2				
New twin culvert	$2,000	40	$80,000	
Lowering of services	$15,000	4	$60,000	
Outlet/Inlet headwalls	$15,000	4	$60,000	
Excavation of waterway up and downstream(26m3/m)	$260	166	$43,160	
				$243,160

CONCLUSION

This site needs to be acquired to address the catchment drainage and localised flooding issues and secure the land for roading purposes.

Option 1 is cheaper than the existing route and is better for future drainage provision of the Wigram Aerodrome land when subdivision occurs.

In Options 1 & 2 flooding would be alleviated at Haytons/ Wigram corner and the current catchment constriction to the system will be removed to provide a better land drainage system to the Wigram East Retention Basin.

In the circumstances it is proposed that a new waterway be created West of Haytons Road and the waterway be diverted to a single culvert at Wigram Road.

LAND ACQUISITION

To provide the required outfall as described in Option 1 above it will be necessary to secure part of the property situated on the North Western corner on Haytons/ Wigram Roads. The area concerned is depicted on the attached plan and is SM 1307-01 from which it will be noted that part of the property is currently occupied by the existing roads and as such it is proposed to legalise the situation by acquiring Sections 3 and 4 containing 574m² for this purpose. The land required for drainage purposes is shown as Sections 1 and 2 and contains 1631m².

Discussions to acquire the land have been concluded with the owner of the property Wigram Aerodrome Limited which has agreed to dispose of the area to the Council on the terms contained in the public excluded section of this report.

The land situated on the North Eastern corner of Hayton/Wigram Roads has recently been subdivided into 30 industrial lots. As this is the route of the existing waterway no reserve land contribution has been taken from the subdivision, instead a full financial contribution for cash in lieu of reserves.

SOURCE OF FUNDS

Funds are available in the 2004/05 Waterways and Wetlands Capital Programme for Land Purchase in Halswell. City Streets will fund the acquisition of the land for road.

Recommendation: That the Council approve the purchase of Sections 1 and 2 and Sections 3 and 4 on the attached plan SM 1307-01 for drainage and roading purposes respectively from Wigram Aerodrome Limited on the terms and conditions contained in the public excluded section of this report.