

Aim

To present a compelling case to change the response model at Manly Station to a 5-day Career Yellow watch with a Volunteer component.

Executive Summary

The workload of Manly volunteers has reached a tipping point which is no longer sustainable during working weekdays. In the last three years the call rate has more than doubled going from 333 to now over 680 calls per year with the majority of the increase coming from Medical calls.

In late 2015 The Area Manager supported an interim request from the brigade for an increase in establishment, a brigade funded medical response/incident support vehicle and no backup calls to Silverdale during working hours. At the same time communication was entered into with St Johns which has resulted in this year adding an additional ambulance during working hours Mon-Fri, which has resulted in very little change.

Even though the brigade was able to increase establishment there is still a churn of 17% and in the last 12 months the brigade was unable to respond to 45 calls during working hours Mon-Fri, due either to no driver or insufficient crew.

The Auckland Council estimate that the population of the Hibiscus Coast 49,000 (2017) will grow by 33% by 2031 as well as this Government has announced that the 'Penlink' corridor is now a priority which will hasten development.

The Area Manager has reviewed the ability of FENZ to deliver a full Operational Capability to the Whangaparaoa Community within the Service Delivery Guidelines that FENZ require and has determined five options:

1. Option 1: Do Nothing
2. Option 2: Yellow Watch (Mon-Fri 07:00-17:30) with Minor Building alteration
3. Option 3: Yellow Watch (Mon-Fri 07:00-17:30) with Building Redevelopment
4. Option 4: Option 3 + Additional Appliance
5. Option 5: 7 Day Yellow Watch
6. Option 6: 24/7 Plus Volunteers

On balancing costs, benefits and risk it is recommended that Option 2 Yellow Watch (Mon-Fri 07:00-17:30) with minor building alterations be chosen as an interim. This solution offers savings in capital costs over the short term whilst considerable investment is spent on the Christchurch rebuild. Then Option 3 utilising the sale of the land behind the station as a building footprint and financial reinvestment. Once the station is redeveloped this solution would offer a fully functioning fire station fit to accommodate both Career and Volunteer and house the Volunteer Medical Response / Incident Support vehicle that is currently in a fenced in enclosure in the carpark. This option could also accommodate option 4 into the future.

Furthermore, the introduction of a career yellow watch will not only assist the volunteers in their current workload but see the response times drop i.e. alert to K1 90 seconds currently 300 seconds. Not only that, there will be additional risk reduction activities that can be carried out in the area

This will also assist the Silverdale yellow watch responses particularly around the safety of their staff (2 in 2 out rule) and risk assessment required when waiting for additional appliances. And reduce

Silverdale Volunteers calls as they have been providing backup to the Manly area (Manly 911 being a must backup appliance)

Background

This memo outlines the increased workload of the Manly Volunteers to a point now that is not sustainable in their current form and proposes alternative considerations to support them.

The Manly Response Area:

Urban Growth has seen the Manly Response Area grow to over 18824 (2017)

4x shopping centres - (Stanmore Bay, Whangaparaoa, Manly and Gulf Harbour)

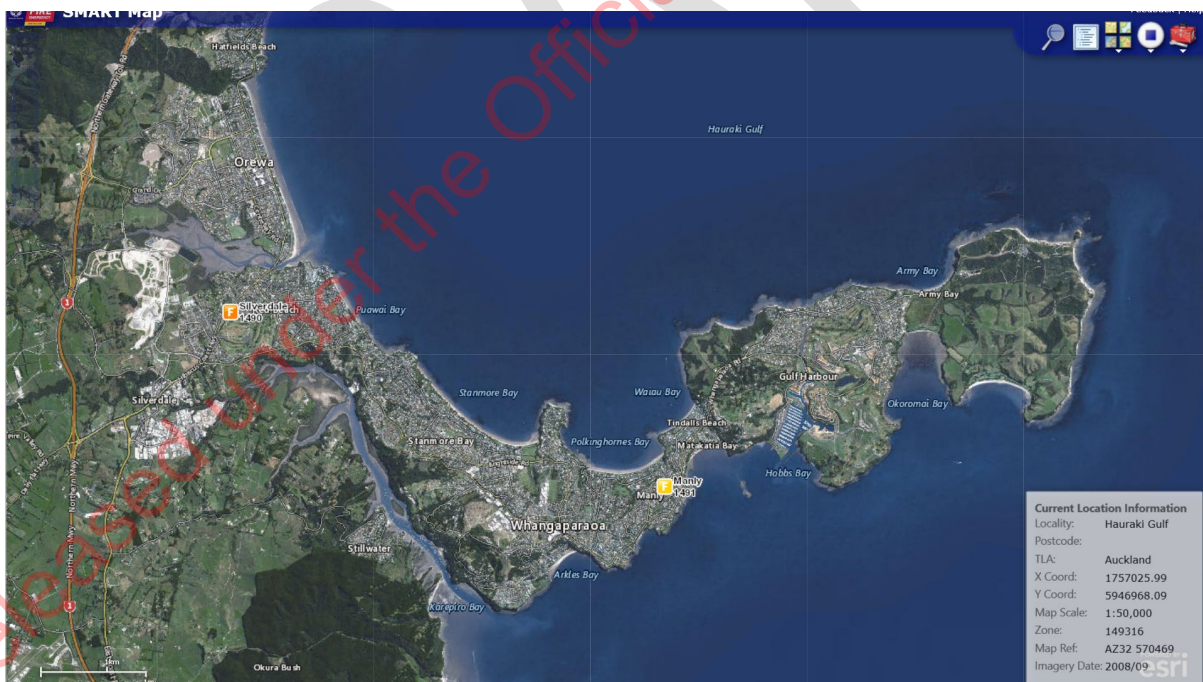
2x Colleges- (Whangaparaoa, Wentworth)

4x Primary Schools – (Stanmore Bay, Whangaparaoa, Gulf Harbour, Wentworth)

2x Light Industry areas – (Whangaparaoa and Gulf Harbour)

1045 Marina berths, Regional Park, Defence training facility, a number of Retirement Villages and Care Facilities and still more development in progress

The geographical constraints of the Whangaparaoa Peninsular mean that traffic leaving the peninsular has now surged to over 20,000 vehicles in the morning Mon-Fri forcing Auckland Transport to introduce a Dynamic 2nd Lane in the morning and late afternoon.



FENZ Current Operating Capability for the Hibiscus Coast

Silverdale

Silverdale is currently a 5-day yellow watch operating between the hours of 07:00-17:30Hrs manning the Rescue Tender 907.

The Silverdale Volunteer Brigade operate 24/7 as there is two appliances, a Water Tanker and Operational Support and has a membership of 36 Firefighters and 8 Operational Support.

Silverdale is situated at 147 Hibiscus Coast Highway, Red Beach which is 10km away from Manly. This location is elevated out of the tsunami risk zone of Orewa enabling quick access to the communities of Silverdale, Red Beach, Orewa, Millwater, Hadfields Beach, Waiwera, Stillwater, Wainui, Dairy Flat and Stanmore Bay as we back up to the Whangaparaoa Peninsular (Manly response area)

Last year Silverdale responded to 960 incidents up from 781 in 2016

The impact of Manly responses during week days also impacts on the Silverdale Volunteers in the form of increased work load

Incidents Responded By Silverdale in the past 3 years

Incidents	2015	2016	2017
Assist Public	16	24	57
False Alarms	193	210	252
Hazardous Emergencies	19	10	13
Heat/Pressure	7	15	9
Medical	119	153	266
Other Fires	95	91	70
Rescue	39	74	44
Special Service Calls	39	46	59
Structure Fires with damage	18	21	21
Structure Fires with no damage	16	15	13
Vegetation Fires	51	41	46
Vehicle Accident	56	81	110
Total	668	781	960

Manly

Manly is currently an auxiliary Volunteer Fire Brigade to Silverdale Volunteer Fire Brigade. The Area Manager along with Regional Manager are currently looking to make it a stand- alone brigade.

The station is situated at 960 Whangaparaoa Road on 3500m²of land and is a single bay station which was officially opened 21st February 1970 with a training room and 3x small offices, the carpark is a fenced off for secure parking for a Medical Response / Incident Support vehicle. Manly is a First Responder Brigade (see appendices certificate of title and Floor Plan)

This location is elevated out of the tsunami risk zone and enables quick access to the suburbs of Whangaparaoa Peninsular

It has a membership of 25 Firefighters



In 2017 the brigade received 680 calls this was up from 502 in 2016 and 333 in 2015.

Incidents Responded By Manly in the past 3 years

Incidents	2015	2016	2017	Total
Assist Public	4	11	17	32
False Alarms	50	65	66	181
Hazardous Emergencies	2	2	2	6
Medical	205	327	492	1,024
Other Fires	21	19	20	60
Rescue	8	20	21	49
Special Service Calls	13	22	20	55
Structure Fires with damage	4	6	5	15
Structure Fires with no damage	4	7	4	15
Vegetation Fires	17	11	14	42
Vehicle Accident	5	10	18	33
Heat/Pressure		2	1	3
Total	333	502	680	1,515

Non Responses

2017 saw the brigade unable to respond 47 calls due to either No Driver or insufficient crew, only 2 of these calls were outside the 06:00-18:00hrs (refer Table below pg. 6)

From the table (pg.6) you can see over the past 3yrs a steady shortfall in the day time capability of the brigade versus night time capability. There is a number of reasons for this the main one being that members are either unable to be released from their place of employment or are travelling off the peninsula for employment.

This is also identified in first appliance to be Alert to K1 within 5 minutes. In the last 12 months Manly was only able to manage that on average 60% of the time

Increase in Medicals

The increase in Medicals as a result of the MoU with St Johns has also impacted on the capacity of the brigade for day time calls this can be clearly seen in the increase of calls, in 2015 the brigade attended 205 medicals, 2017 this increased to 492 medicals and already this year (01 May) 487 medicals. St Johns have tried to ease the burden and commissioned an additional ambulance for the Hibiscus Coast taking the total to 3 ambulances. However, it is the time that an ambulance is transporting to hospital that is the problem (34km away from Manly), Auckland traffic congestion and demands on St Johns resources.

Incidents not responded to in the past 3 years

Year: 2015

Incidents	12AM - 6AM		6AM - 12PM			12PM - 6PM			6PM - 12AM		Total	Annual Average
	Insufficient crew numbers	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	Total		
Vegetation Fires						1		1			1	0.3
Vehicle Accident				1	1	1		1			2	0.7
Medical			4	1	5	3	1	4			9	3.0
False Alarms			3		3	2		2			5	1.7
Hazardous Emergencies			1		1						1	0.3
Rescue			1		1						1	0.3
Total			9	2	11	7	1	8			19	6.3

Year: 2016

Incidents	12AM - 6AM		6AM - 12PM			12PM - 6PM			6PM - 12AM		Total	Annual Average
	Insufficient crew numbers	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	Total		
False Alarms			2		2	3		3			5	1.7
Assist Public						1		1	1	1	2	0.7
Medical			1		1	1		1			2	0.7
Other Fires			1		1						1	0.3
Total			4		4	5		5	1	1	10	3.3

Year: 2017

Incidents	12AM - 6AM		6AM - 12PM			12PM - 6PM			6PM - 12AM		Total	Annual Average
	Insufficient crew numbers	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	No Driver	Total	Insufficient crew numbers	Total		
Medical	1	1	5		5	4		4	1	1	11	3.7
Assist Public			2		2	1		1			3	1.0
Special Service Calls			2		2	4		4			6	2.0
False Alarms			12	1	13	3		3			16	5.3
Hazardous Emergencies						2		2			2	0.7
Other Fires						1		1			1	0.3
Rescue			1		1	1		1			2	0.7
Vehicle Accident			1		1	3	1	4			5	1.7
Structure Fires with damage			1		1						1	0.3
Total	1	1	24	1	25	19	1	20	1	1	47	15.7

Only the following non-response reasons have been considered.

- No Officer
- No Driver
- Not Recorded
- Insufficient Crew.

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2015 Interim Assistance

In 2015 The Area Manager supported a request from the Brigade for alternative options to assist them in meeting their struggling responses.

These included:

- an increase in Establishment from 16 to 22 members
- The purchase of brigade funded Medical Response / Incident Support vehicle
- Part of the Establishment to be Operational Support, but First Responder Qualified
- No backup calls to Silverdale Area Mon-Fri working hours (North Shore Appliances to pick up short fall)
- Requesting more support from St Johns Territorial Manager in the form of additional ambulance

The idea behind the brigade purchasing a medical response van was to assist in a reduced crew turnout for First Responder Duties, i.e. only 2 firefighters required and No requirement for Class 2 licence.



It is important to note the impact of Manly no longer responding as backup into Silverdale First Response Area has impacted on costly delay in 2nd response and an even bigger impact on the Areas of East Coast Bays and Albany

Brigade Churn

To brigade did step up in 2015 to meet the increased establishment, but as you can see below they have had a consistent churn, this is mostly to do with the high demand of medical calls. Despite the recruitment uptake the brigade is still having problems with turnout Mon-Fri working hours

Calendar Year	Opening Headcount	Leavers	New Hires	Closing Headcount	Churn
2015	18	3	8	23	14.63%
2016	23	7	5	21	31.82%
2017	21	4	9	26	17.02%

Current Problems

The current problems or challenges are:

1. Tactics currently being deployed at incidents often have to take into account the 'two in two out' rule, which for an Officer at Silverdale can be challenging as back up is often coming from the North Shore. It can also hinder deployment of resources or put a strain on those that are in attendance
2. There is very little contingent capability for the Hibiscus Coast area from FENZ during weekdays and a heavy reliance on the North Shore appliances. Silverdale and Manly Area should be treated as a satellite town with a population of over 49,000 collectively and Auckland Council estimate the growth to be 33% more by 2031.

As a comparison to other Area's see table below

Area	Population	Career Personnel	Shift Pattern
Hibiscus Coast (Silverdale)	49,000	4	Yellow Mon-Fri
Gisborne	36,000	6	24/7
Wanganui	40,300	10	24/7
Nelson	46,000	10	24/7

3. The geographic constraints of the Whangaparaoa Peninsular are such that it requires a close operational relationship between Silverdale and Manly Fire Stations as their strategic locations means they approach the incidents from opposite directions thus providing some mitigation to the traffic congestion on the peninsular which is a factor of the limited number of main arterial roads.
4. The building footprint of Manly is such that it will require additional work to make it workable for both Career and Volunteer, an interim solution may be to utilise a port-a-com until funds are available to redevelop the site
5. Medical Responses are extremely high and requires the crews to be First Responders. Talks with St Johns has seen a 3rd ambulance commissioned at Silverdale Mon-Fri, this seems to have had little impact. Our discussions indicate a continued high reliance of first response brigades by career ambulance
6. Response requirements within the Silverdale Response area during working hours Mon-Fri has often seen the North Shore appliances responding up to the Hibiscus Coast leaving large areas of the North Shore uncovered (Refer Appendices North Shore appliances turnout to Hibiscus Coast)
7. Manly 911 appliances is currently a Type 2 appliance, introducing a career crew will require a Type 3 appliance, which would be quite suitable for both career and volunteer

Other Impacts

In reviewing the situation of Silverdale and Manly the analysis conducted as part of Region 1 Station Infrastructure Review 2015-16 was reviewed and updated using the latest data from Auckland Council. The anticipated NRRM incident rates were verified and ARCGIS analysis conducted. This showed that Manly station is in the correct location to service the risks associated the Whangaparaoa Peninsular.

There is still ongoing urban growth of the Whangaparaoa Peninsular, Gulf Harbour, Whangaparaoa, Stanmore bay areas and now the announcement from Government that the 'Penlink' corridor is now a priority will see development increase

The urban growth of Silverdale and its surrounding areas is going to have an impact on all FENZ resources

The proposed Dairy Flat land banking with a view to build a 24/7 station is still some time away and will not alleviate the current workload of the Manly Volunteers

The Future of St Johns Ambulance service and their ability to service the public expectations

Options

Data has also been looked at to support the current Silverdale Yellow Watch model

On the balance of costs, benefits and risk the following options are presented:

- A. **Option 1: Do Nothing.** Manly is already working at a high tempo in comparison to other 24/7 or yellow watch stations (St Helliers, Devonport, Titirangi) and the expanded operating area with increased incident rate would lead to a significant shortfall in operational responses. Again as the area grows so to the number of vehicles which causes continual traffic delays and delaying FENZ volunteers getting to the station during peak times but also backup appliances. Furthermore, the anticipated increase in incident rates would exceed the capacity of the local volunteers posing an increased risk of collapse of the Volunteer Brigade.
- B. **Option 2: Yellow Watch (Mon-Fri 07:00-17:30) Minor Building alteration.** This is the easiest of the options to implement. The facility although minimal would require either the opening of two rooms to accommodate a watch room for a crew of 4 and/or a port-a-com for the additional turnout and storage of career staff. Would immediately ease the response requirements of the Volunteers during peak call times. The risk is that without a port-a-com the station working areas are very tight for a yellow watch crew and any volunteers which could lead to a rift between the two. Yellow watch crew could immediately undertake Risk Reduction activities
- C. **Option 3: Yellow Watch (Mon-Fri 07:00-17:30) With Building redevelopment.** This is the ideal solution as it allows a much more station friendly environment and a station that is fit for purpose. (the cost of the redevelopment could be funded by the sale of the land behind the station). The station was determined to be in the correct location by the NRRM Model (See Appendices NRRM Station Location analysis) .

- D. **Option 4: Option 3 + Additional appliance.** This solution would allow the volunteers to provide backup 24/7 to the community even though the yellow watch crew would do the bulk of the day calls, it would still provide FENZ coverage when Manly appliance is already deployed at calls.
- E. **Option 5: 7-Day Yellow Watch.** This solution would relieve Volunteer response impost and decrease response times alert to K1 across all day time calls to 90 seconds. However, Volunteers do not have issues responding at weekends.
- F. **Option 6: 24/7 Plus Volunteers.** This solution is looking towards the future, but would only be possible with a 2nd appliance and an enhanced building extension. Right now the Volunteers are not having an issue responding after hours and at weekends, however consideration should be given to this option when a re-development is looked at

Preferred Option

On balancing costs, benefits and risk it is recommended that Option 2 Yellow Watch (Mon-Fri 07:00-17:30) with minor building alterations be chosen as an interim. This solution offers savings in capital costs over the short term whilst considerable investment is spent on the Christchurch rebuild. Then Option 3 utilising the sale of the land behind the station. Once the station is redeveloped this solution would offer a fully functioning fire station fit to accommodate both Career and Volunteer and house the Volunteer Medical Response / Incident Support vehicle that is currently in a fenced in enclosure in the carpark. This option could also accommodate option 4 – 6 into the future.

Furthermore, the introduction of a career yellow watch will not only assist the volunteers in their current workload but see the response times drop i.e. Alert to K1, 90 seconds previously 300 seconds. Not only that there will be additional risk reduction activities that can be carried out in the area

This will also assist the Silverdale yellow watch responses particularly around the safety of their staff and risk assessment required when waiting for additional appliances. And reduce Silverdale Volunteers calls as they have been providing backup to the Manly area (Manly 911 being a must backup appliance)

Mitigating Factors

To achieve the ideal option, the sale of the land at the rear of Manly Station once the known requirements of FENZ resources at Manly is decided, will fund the redevelopment of the station

Appendices

North Shore's Appliance Turnouts to Hibiscus Coast

Incidents Attended by at least one of the North Shore appliances (831,851,807,811,821)

Incident ID	Manly Volunteer Fire Brigade (Auxiliary)				Silverdale Station				Total
	0600 - 1200	1200 - 1800	Other Times	Total	0600 - 1200	1200 - 1800	Other Times	Total	
2017	9	12	1	22	41	65	8	114	136
2016	1	5		6	49	49	10	108	114
2015		3		3	50	61	5	116	119
Total	10	20	1	31	140	175	23	338	369

Incidents Attended by Individual Appliances

Incident ID	Incident ID	Manly Volunteer Fire Brigade (Auxiliary)				Silverdale Station				Total
		0600 - 1200	1200 - 1800	Other Times	Total	0600 - 1200	1200 - 1800	Other Times	Total	
2017	ALBA851	5	5	1	11	14	25	1	40	51
	BIRK821		1		1	1	2		3	4
	EAST831	3	7		10	22	33	6	61	71
	TAKA807	1	5		6	6	8	2	16	22
	DEVO811					2			2	2
	Total	9	18	1	28	45	68	9	122	150
2016	BIRK821						1	1	2	2
	DEVO811					1	1		2	2
	EAST831	1	4		5	36	43	7	86	91
	TAKA807		1		1	5	2	1	8	9
	ALBA851		1		1	13	9	3	25	26
	Total	1	6		7	55	56	12	123	130
2015	ALBA851		1		1	13	14	1	28	29
	BIRK821					1	2		3	3
	EAST831		2		2	39	50	3	92	94
	TAKA807					1	6	1	8	8
	DEVO811		1		1		1		1	2
	Total		4		4	54	73	5	132	136
Total		10	28	1	39	154	197	26	377	416

Silverdale's Appliance Turnouts

Responses By Call Signs from Silverdale in the past 3 years

Incidents		2015	2016	2017
SILV901	Assist Public	6	14	29
	False Alarms	149	172	186
	Hazardous Emergencies	11	5	9
	Heat/Pressure	5	13	6
	Medical	62	79	152
	Other Fires	68	71	48
	Rescue	21	47	20
	Special Service Calls	25	21	25
	Structure Fires with damage	9	14	10
	Structure Fires with no damage	15	10	10
	Vegetation Fires	34	21	31
	Vehicle Accident	26	39	63
	SILV9011	False Alarms	3	2
Other Fires		11	9	7
Structure Fires with damage		4	8	3
Vegetation Fires		26	15	19
Vehicle Accident		1	1	
Hazardous Emergencies			1	
Structure Fires with no damage			2	
Assist Public				1
Medical			1	
SILV907	Assist Public	11	10	29
	False Alarms	143	158	189
	Hazardous Emergencies	17	9	13
	Heat/Pressure	6	11	7
	Medical	60	79	116
	Other Fires	47	46	34
	Rescue	32	42	33
	Special Service Calls	19	24	43
	Structure Fires with damage	9	13	11
	Structure Fires with no damage	11	12	6
	Vegetation Fires	30	26	19
	Vehicle Accident	42	63	96
SILVOSU1	Assist Public	2	6	6
	False Alarms	5	4	2
	Hazardous Emergencies	4	5	2
	Heat/Pressure	2	2	
	Medical	13	19	12
	Other Fires	4	4	4
	Rescue	10	19	11
	Special Service Calls	19	22	7
	Structure Fires with damage	7	15	12
	Structure Fires with no damage	3	2	1
	Vegetation Fires	8	4	3
Vehicle Accident	36	52	54	
Total		1,016	1,191	1,332

NRRM Station Location Analysis

NRRM Station Location Analysis

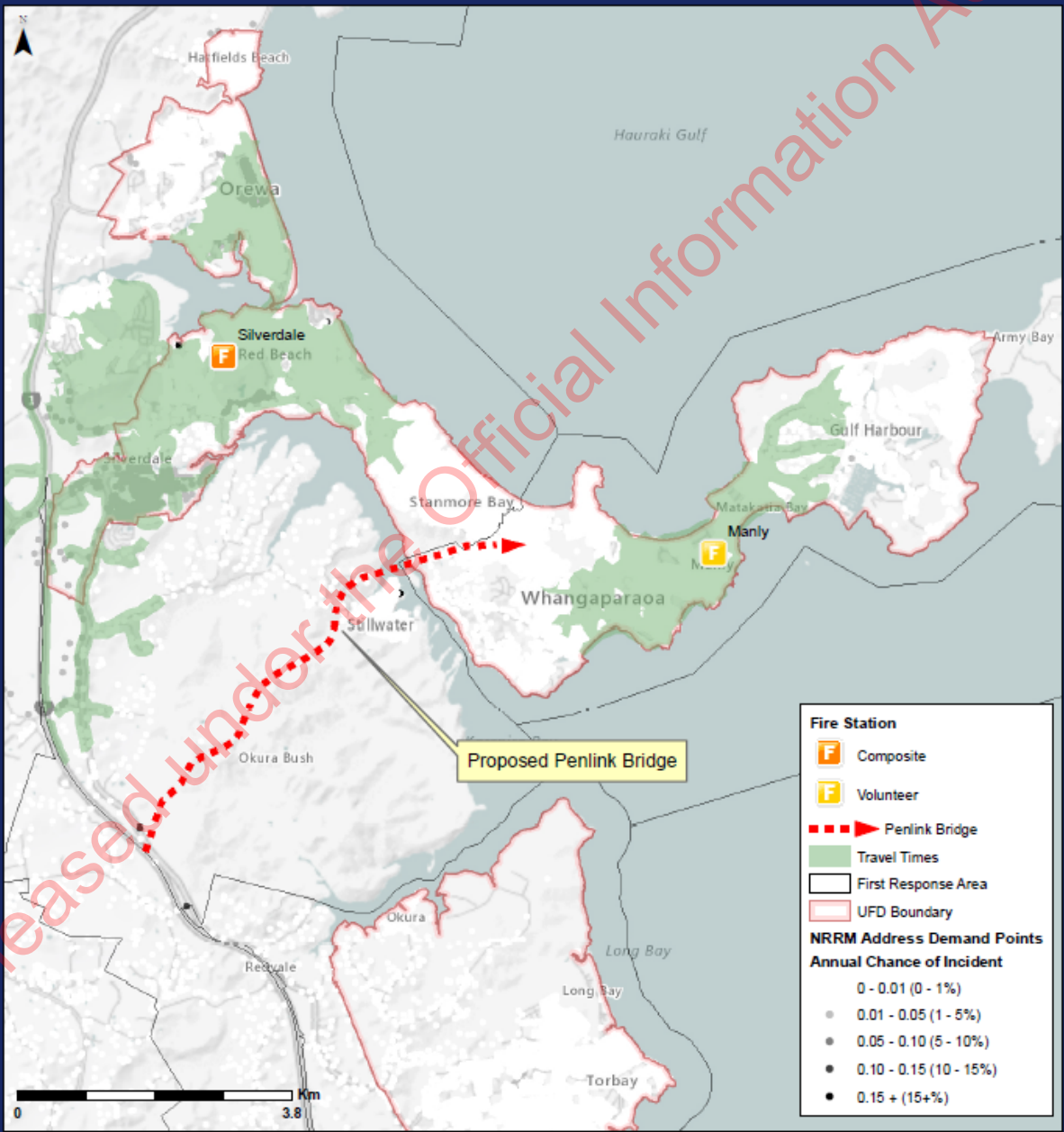
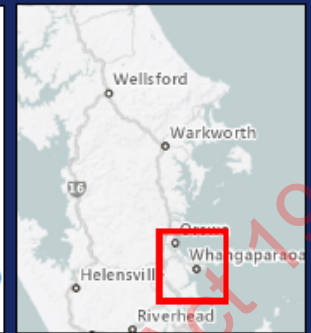
Station 1491 Manly

The Area Of Interest is the Manly & Silverdale First Response Areas of the Silverdale Urban Fire District within Area 3 (Waitemata) of National Fire Region 1. This is in recognition of treating the Peninsula as a whole entity.

Manly Map - 1: Travel Time from Manly & Silverdale Fire Stations with proposed Penlink Bridge route

Addresses within AOI: 19928 Annual Projected Demand within AOI: 41.35
 Addresses within 4 Min 30 Sec Annual Projected Demand within 4 Min 30 Sec
 Travel time within AOI: 9091 (45.6) Travel time within AOI: 24.9 (60%)

* Demand is measured as projected annual structure fire (100% weighting) + false alarm 1 ("Good Intent" - 50% weighting) + false alarm 2 ("Malicious/Defective" - 20% weighting) incidents



Author: James Sliddle
 Date: 11/05/2016
 Scale: 1:75,000 @A4
 Projection: New Zealand Transverse Mercator

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Manly Station Certificate of Title

References
Prior C/T 54D/157 & 56B/902

Land and Deeds 69

Transfer No.
N/C. Order No. B.393029.1



CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 19th day of March one thousand nine hundred and eighty five under the seal of the District Land Registrar of the Land Registration District of North Auckland

WITNESSETH that THE NEW ZEALAND FIRE SERVICE COMMISSION

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 3518 square metres more or less being Allotment 614 Parish of Waivera and Lot 1 Deposited Plan 67002 being part Allotment 615 Parish of Waivera and part Lot 582 Deposited Plan 17816 being part Allotment 18 Parish of Waivera.

[Signature]
Assistant Land Registrar

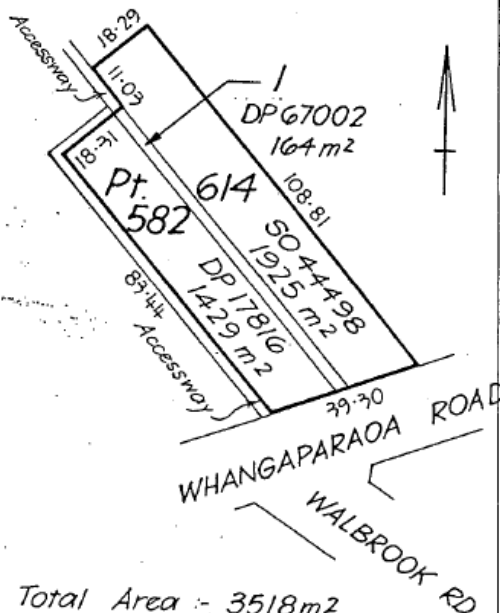
Interests at Date of Issue:

Subject to the restrictions and conditions imposed by Section 59 of the Land Act 1948 (affects part)

RODNEY COUNTY

Fencing covenant in Transfer 387575 (affects part)

[Signature]
A.L.R.



Measurements are Metric

Total Area = 3518m²

RIM
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55B/1248

No. 55B/1248

Released under the Official Information Act 1982

