

Kapiti Coast District Council

Kapiti Coast Beach Profiles Monitoring Report

March 2013

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1. Introduction

Beach and off-shore profiles along the Kapiti coast were surveyed during the 1970's by the (then) Ministry of Works. This was followed later by surveys undertaken by Christchurch consultants, Morris and Wilson Ltd., following storm damage in 1976 and again in 1979. These surveys were repeated in the early 1980's. Further surveys were also carried out during the 1980's by the Manawatu Catchment Board (now Horizons Regional Council).

More focused beach surveys began in 1994 at Paraparaumu, initially because of concern about the eroding coastline along the southern end of Marine Parade. This work was done by Cuttriss Consultants Ltd., Paraparaumu. The survey programme was later extended to include parts of Raumati and Waikanae, and continued on a more or less annual basis until 2003 (*KCDC Reports 1 to 8: J L Lumsden*).

In 2000, as part of a coastal hazard management study, beach profiles were surveyed along the length of the Kapiti coast (*Strategies for Managing Coastal Erosion Hazards on the Kapiti Coast, Vol II Appendices: J L Lumsden, Draft May 2003*). As far as was possible, the surveys were based on existing profiles, some of which had been established originally by the Ministry of Works and by Morris and Wilson, and later for the Paraparaumu series. Some of the older profile markers had since been lost and these were replaced as near as possible to the original sites, albeit further inshore in most cases. Also included in this series were two profiles established by Wellington Regional Council adjacent to the mouth of the Waikanae River, as required by conditions attached to a consent to periodically re-align the river outlet channel.

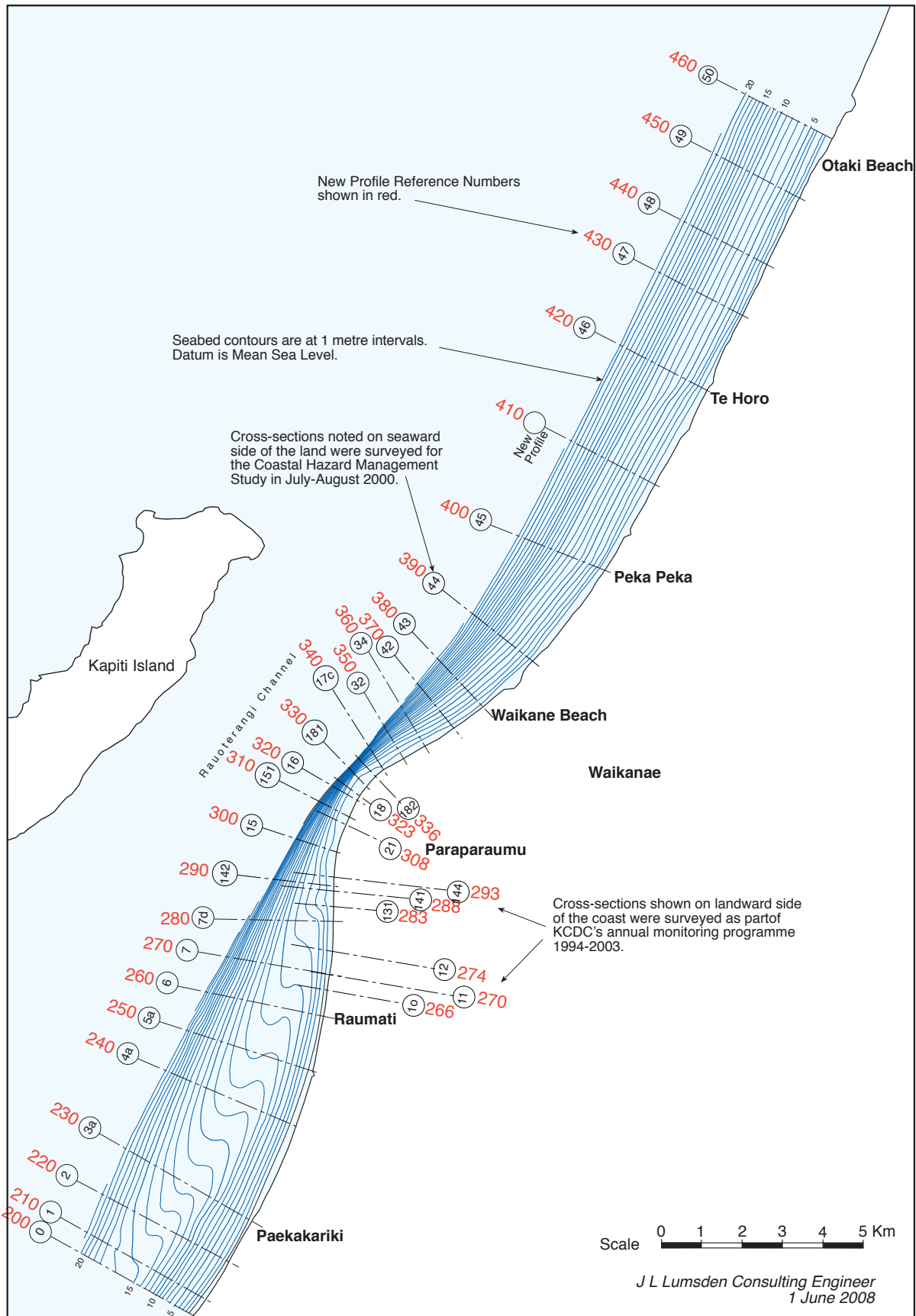
Later surveys were also carried out in January 2005, November 2005, December 2007, August 2008 and June 2011, although not always at all profiles. The profiles surveyed are shown on the bathymetric plan on the following page.

This report records the results of profile surveys carried out by Cuttriss Consultants Ltd in June 2011, and discusses the state of the coast and its exposure to coastal hazards at that time.

2. Beach Profile Numbering

Among the general recommendations contained in the Draft Strategy for Managing Coastal Erosion Hazards, referred to above, was the need to develop an integrated beach shoreline survey programme in order to assess coastal erosion trends on a district-wide basis. The somewhat informal manner in which surveys had been conducted in the past had led to a profile numbering system that was ad hoc to say the least and bore little relevance to position along the coast.

A new profile numbering system was developed in conjunction with the Council's surveyors, Cuttriss Consultants Ltd. The bathymetric plan on the following page shows both the old numbers as well as the new number (in red). The primary profiles (27 total), selected to provide more or less uniform coverage along the Kapiti coast, as well as include critical areas, are numbered as a series 200-460. Several other profiles (shown on the landward side of the plan) allow for some of the cross-sections from previous surveys to be included as secondary profiles.



Bathymetric Plan of Kapiti Coast as Surveyed in July 2000 with New Profile Reference Numbers

3. Recording Profiles and Changes

At least since 1994, beach surveying has generally been carried out by Cuttriss Consultants Ltd., Paraparaumu. Over time, the methodology has been improved. The company is now able to consistently survey to 3 metres below Mean Sea Level (MSL) and this was the case for the June 2011 survey. This means that beach volume measurements can be calculated to a common baseline that generally includes the surf zone where much of the offshore sediment movement occurs. To facilitate record keeping, Cuttriss Consultants Limited have developed a method using an Excel spreadsheet routine whereby the beach volumes (the amount of sediment per metre of beach above the baseline) can be calculated directly from the survey data, and beach profile changes can be assessed.

Previously, the survey data had been sent to Wellington Regional Council where staff would use their software to provide plots of each profile and a record of the volume changes. This often took some time and the plots required scanning and redrafting before using for reporting purposes. Furthermore, the regional council software did not always provide useful beach volume results because the survey baseline was not consistent. The methods now used overcome these difficulties.

4. Survey Results

The revised reporting format, developed prior to the previous profile report and used here, provides details of the changes at each profile in tabular form. The purpose of this is not only to simplify the reporting process and allow easy reference, but also to enable direct comparisons to be made with earlier records. Thus, rather than providing a lengthy discussion of beach changes in the text of the report, the necessary information is provided in the following appendices:

- i) A summary of beach profile changes at each location.
- ii) Survey profile plots (including selected previous plots) for each profile. These are taken from the plots produced by Cuttriss Consultants Ltd and transferred on to a standard template using a common scale.
- iii) Reduced level and volume calculations, including changes, at 10 metre intervals along each profile. This information is also taken directly from the Cuttriss Consultants spreadsheets.

The appended summary pages include a commentary and a broad qualitative assessment of the erosion risk at each profile. The risk assessment is based on knowledge of the beach at that location together with the recorded beach changes and the width of dry beach, which is nominally the horizontal distance between Mean High Water Spring (MHWS) tide level and the shoreline (toe of dune, seawall, etc.), at the time of the survey. On sandy and gravel beaches where there is no dune scarp and little evidence of a dune toe, the +2.0 m level (above MSL) is used. The purpose in making this assessment is to provide an indication of locations where coastal management intervention may be necessary, and to enable such efforts to be prioritized.

It should be noted that the distances and the volumes recorded are indicative rather than absolute. Given the nature of the coast, and the forces acting on it, these values change from day to day. While every effort is taken to make a realistic assessment of the erosion risk, the coast is dynamic and conditions (and hazard risks) can quickly change.

Items ii) and iii) above are largely provided for recording purposes so that future surveys will have an appropriate database that can be referred to for measuring and understanding long-term changes.

5. Conclusions and Recommendations

It is important to note that this report is being produced largely as a matter of record as the survey was done almost 2 years ago. In that time, the Kapiti coast will have changed and the results need to be considered with that in mind.

Several areas where erosion risk is high have been noted in past survey reports. These areas are well known and generally remain at high risk although the risk does not appear to have increased to any significant extent during the period leading up to the June 2011 survey.

A visit to the site of the southernmost profile (200) at the northern end of Centennial Highway, in October 2012, confirmed advice from Council staff that erosion had occurred that may, in time, threaten the stability of the highway. This erosion appears to have occurred since the June 2011 survey and, although localized, seemed reasonably aggressive and will need to be monitored closely. It is assumed that the NZTA is aware the situation. Prior to the June 2011 survey there was some growth in beach volume below MSL and the beach may recover over time.

There are two profiles (220 and 230) that monitor changes along the shore at Paekakariki. One of these is at the southern end of the rock revetment and the other is further to the north (opposite Paneta Street) where the coast is protected by a timber seawall. Despite the presence of seawalls at these two locations there has been little net change across these profiles in the 11-year period to June 2011.

Similarly at Raumati, where the coast, particularly towards the south, is vulnerable and the erosion risk is high, the beach sections of the three profiles here (250, 260 and 270) were, in June 2011, either similar to or higher than they were in June 2000 – albeit with some dynamic behavior evident during the period. Again the presence of beach protection works at Raumati does not seem to have been causing many problems as far as coastal sediment movement is concerned.

There could be a number of reasons for the apparent stability at Paekakariki and Raumati. Most likely is probably a lack of much serious storm action but a positive sand budget and off-shore bar protection may also contribute. The point to remember is that these parts of the Kapiti coast, although relatively stable over at least the past decade, remain vulnerable to damage from major storms such as occurred in 1976 and in the early 1980s. While these storms are fading from memories it must be kept in mind that these events can and will occur from time to time. The prospect that climate change will increase the hazard risk in the future should also not be ignored.

Further north, along Marine Parade at Paraparaumu, although sand levels fluctuated after the revetment was built, the beach at the time of the June 2011 survey was not showing marked changes. There are understood to be concerns about erosion immediately to the south of the revetment and this will need to be monitored.

Beyond the Marine Parade revetment and north to around Profile 330 (off the lane between Beach Haven Place and Bahama Crescent) the coast becomes increasingly wider and generally more stable. The area to the north of this, through to the Marine

Reserve Beacon is considered more vulnerable because it appears to be affected by the Waikanae River outlet. Aside from the development on the dunes at 175 Manly Street, residences are set reasonably well back from the coast and the erosion risk in June 2011 remained moderate. Generally, beach volumes have increased since 2000 although erosion has occurred at Profile 350 (at the Marine Reserve Beacon) and the toe of the dune appears to have receded around 10 metres. As in the past, this part of the Paraparaumu coastline requires regular monitoring.

North of the Waikanae River there are few problems and beach volumes generally increased between 2000 and 2011.

The following recommendations arise out of this report:

- i) Regular monitoring, particularly at those places along the coast where the erosion risk is high, remains important. Particular parts to keep under observation include the area at the northern end of Centennial Highway (Profile 200), the coast to the south of the new revetment at Paraparaumu, and the northern section of the Paraparaumu coastline leading up to the Marine Reserve Beacon (Profile 350).
- ii) Given the time that has elapsed since the last profile survey was carried out (June 2011) and this assessment of the results, consideration should be given to undertaking a new survey around June of this year.

6. Appendices

The following are appended:

- i) Summary of beach profile changes June 2000 – June 2011
- ii) Set of profile plots
- iii) Survey record details for each beach profile surveyed in June 2011

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25 March 2013

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Summary of Beach Profile Changes June 2000 – June 2011

Summary of Beach Profile Changes June 2000 to June 2011

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
200	0	SH1 Paekakariki Datum: N 615496.11 E 253819.68	26.59	-1	7	21	-5	8	Southernmost profile. Predominantly pebble beach near northern end of Centennial Highway. At June 2011 the area below MSL had accreted since December 2007. This is considered a potential problem area as recent erosion (since June 2011) was evident adjacent to the highway in September 2012. Further survey here to determine the current vulnerability and regular monitoring is advised.	High
210	1	Ames Street Datum: N 615492.43 E 254118.09	23.48	0	2	33	-1	15	This profile is located 147m north of the protection works fronting the condominiums situated to the north of Fisherman's Table Restaurant. The Ames Street description of the location may not be accurate. The beach here is predominantly coarse sand and has generally accreted in the area around MLWS since June 2000. Only minor changes have occurred on the upper part of the beach. Despite a reasonable width of 'dry' beach, vulnerability remains moderate.	Moderate
220	2	Beach Road Datum: N 616859.27 E 254782.89	-5.05	-3	-1	0	0	6	Situated off the end of Beach Road where it joins The Parade, Paekakariki. The coast here is protected by a seawall. Although there have been fluctuations in the bar are below MLWS, net beach changes during the period are relatively small. The lack of much 'dry' beach means that vulnerability remains moderate.	Moderate (Protected by seawall)
230	3	Paneta Street Datum: N 617883.10 E 255214.05	3.12	0	12	-9	0	10	Directly opposite Paneta Street, Paekakariki. Only minor changes in profile above MLWS. Significant fluctuations (movement) in bar area below MLWS but profiles above MSL show little net change during the period. Not particularly vulnerable unless protection works fail.	Moderate (Protected by seawall)

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
240	4	McKay's Crossing Datum: N 620236.65 E 256203.26	-48.39	-8	4	-15	-3	10	Profile extends seaward from the car park at the end of QE II Park Driveway. Generally only park related infrastructure in the area. Dune face has receded 3-5 m during the period. Moderate loss of sediment across the beach and offshore. Erosion risk remains high. Proximity of a stream outlet to the north may be a factor. On-going shoreline recession appears likely.	High
250	5	South Raumati Datum: N 621621.47 E 256566.66	-17.58	0	2	12	0	0	Situated at the south end of the Raumati seawall. The zone across the beach shows remarkably little net change during the period. Although there has been some accretion in the area near MLWS, the modest overall loss in volume from the profile occurred offshore below MLWS. Since there is effectively no 'dry' beach, the sea impacts on the rock-protected timber seawall during most tides and general vulnerability in this area is high.	High (Protected by seawall)
260	6	Hydes Road Datum: N 622972.34 E 256813.12	-15.79	0	7	8	0	0	Profile extends seaward from end of Hydes Road in South Raumati. This area is also within the more vulnerable zone along the southern part of the Raumati seawall. Beach growth reported after the Dec 2007 survey has been lost although the profile between MSL and MLWS remains higher than in 2000. Below this level losses have occurred giving a modest net reduction in sand volume during the period.	High (Protected by seawall)
270	11 7	Takitimu Road Datum: N 624048.04 E 256952.39	49.14	3	12	0	0	7	Profile extends seaward from end of Takitimu Road at Raumati Beach. Sandy beach with timber seawall protection (no rock toe protection). The beach here tends to be higher and flatter than at South Raumati. After some losses prior to Dec 2007, the beach at this profile has undergone reasonable accretion during the period up to June 2011. Although at the time of the survey, there was a reasonable width of dry beach its exposure is such that vulnerability remains moderate to high.	Moderate to high

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
280	7D	Tainui Street Datum: N 625355.55 E 256986.14	-41.95	2	0	-5	0	20	This profile is located off the end of Tainui Street at Raumati Beach where there is a new timber seawall recently constructed by KCDC. The adjacent coastline here features a range of landowner-constructed attempts at shore protection of variable quality, or is otherwise unprotected. The beach here is flatter and is, thus, somewhat less vulnerable than further south. Sand levels across the beach have improved since Dec 2007 but remain generally lower than those recorded in June 2000. Most of the sand loss since 2000 has occurred offshore below MLWS. Vulnerability remains moderate.	Moderate
290	142	Manson Lane Datum: N 626217.77 E 256944.66	-65.26	-5	-10	-6	0	14	Situated off the junction of Wharemauku Road and Marine Parade, Paraparaumu. This is the beginning of a vulnerable part of the Paraparaumu coast extending several hundred metres to the north (along Marine Parade). Although erosion here tends to be cyclical, loss of beach and dune sand, particularly since 1994, left an insufficient dune buffer between the shoreline and the roadway. A trial sand renourishment project was undertaken (using 6000m ³ of sand along 300m of beach) in late 1994 and, for a time, this achieved moderate success. By 2005, further erosion had threatened the roadway and protective measures (rock revetment) were undertaken by the Council. This profile crosses the revetment. Above MHWS beach levels are similar to the December 2007 survey. Further seaward, across the beach from MHWS, sand levels are not markedly different out to RL -2 (250 m offshore). Beyond that point the seabed is lower than in 2000 but is similar to the December 2007 survey. There was no evidence in June 2011 to indicate that the revetment was causing any adverse effects on the beach and the vulnerability remains moderate.	Moderate

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
300	15	Ocean Road Datum: N 627067.14 E 257033.53	100.96	17	28	30	11	29	This profile, located opposite the end of Ocean Road, is towards the more stable northern end of Marine Parade. This profile shows significant growth since June 2000 with both dune advancement and raised beach levels. The roadway (Marine Parade) here is not considered vulnerable because of the width of 'dry' beach at the time of the survey and the buffer provided by the setback from the coast.	Low
310	151	35 Manly Street Datum: N 627938.92 E 257310.54	46.44	3	0	-3	27	45	The coast in the region of this profile site benefited from substantial accretion between 1994 and 2000. The width of dry beach in this area has contributed to significant dune growth. Across the tidal zone the beach profile recovered the losses evident at the time of the Dec 2007 survey and levels are generally similar to those in June 2000. Considerable movement in the bar area below MLWS is noted. Overall, the profile has gained a reasonable volume of sand since 2000. Housing here is well set back from the coast and this, plus a generous width of 'dry' beach, means that the erosion risk is low.	Low
320	16	83 Manly Street Datum: N 628310.26 E 257472.87	-27.04	-12	2	-21	14	39	This profile is adjacent to the walking track to the beach off the end of Nathan Avenue. This is also part of the area that underwent significant growth between 1994 and 2000. Although there has been a modest net reduction in beach volume since 2000 much of the greater loss that occurred between 2000 and 2007 has been recovered. This is noted in significant dune growth. Sand bar activity in the region of MLWS makes the loss of 21 m look worse than it actually is. Significant bar movement offshore is also noted. As is the case at Profile 310, housing is set well back and vulnerability remains low.	Low

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
330	181	131 Manly Street Datum: N 628683.43 E 257706.15	90.05	13	12	-5	13	38	Profile 330 extends off the beach access lane between Beach Haven Place and Bahama Crescent. The beach at this location underwent significant growth between 2000 and 2003 but most of this was lost by Dec 2007. Since then there has been a significant increase in beach volume and this can be seen in the considerable amount of dune growth that has occurred and also across the beach. Below MLWS normal bar fluctuations occur. In the past this profile has been considered a pivot point in that it lies more or less at the boundary between the area to the south that accreted significantly between 1994 and 2000, and the coast to the north that eroded during the same period. The beach here remains reasonably stable and, for the time being, vulnerability is considered low.	Low
340	17	201 Manly Street Datum: N 629092.10 E 258151.27	76.72	8	25	14	7	27	This profile is located off the end of the formed but unnamed road off Manly Street, just north of Watson Drive. It also lies around 150 m north of the development on the foredune at 175 Manly Street that was placed at risk during the period of erosion between 1994 and 2000. Significant accretion took place between 2000 and 2007. Since Dec 2007 there has been some reduction in beach volume but, overall, there remains a modest increase in volume compared to what was there in June 2000. Beach levels are generally higher and the dune face has advanced several metres since 2000. The shape of the profile, however, indicates that this is a rather dynamic zone and, from previous experience, it is clear that this part of the Paraparaumu coast should be closely monitored. The properties here (aside from those at 175 Manly Street) are reasonably well set back from the coast and, in June 2011, the risk from coastal erosion is considered to be moderate to low.	Moderate to low

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
350	32	Marine Reserve Beacon Datum: N 629343.29 E 258593.04	-130.53	-14	20	-10	-10	34	This beacon, at the northern end of the Paraparaumu Beach adjacent to Waikanae Estuary, marks the SW corner of the southern boundary of the Kapiti Marine Reserve. The reserve extends from the Waikanae Estuary to Kapiti Island, and partly beyond. The profile was originally established by Wellington Regional Council to monitor changes across the estuary, as required by a consent condition. The volume of sand at this profile has reduced significantly since 2000. Although most of this loss occurred between 2000 and 2007, further losses have occurred since that time. It is noted that the dune face has retreated by around 10 m and the upper part of the beach is significantly lower. Again, houses nearby remain reasonably well set back but, as with Profile 340, this area needs to be closely monitored. This part of the Paraparaumu coastline, and for some distance further south (including the properties at 175 Manly Street), is thought to be influenced by the Waikanae River channel and the extent to which this flows to the south in the offshore zone. It is noted that the June 2011 profile shows a significant depression in the seabed around 250 m offshore and, although it is not certain, this may have been formed by the river flowing to the south. If so, this has implications for beach recovery as this mechanism was thought to have been a causative factor in the erosion that occurred prior to 2000, and which placed the development at 175 Manly Street at risk and led to significant accretion further south (in the area around Profile 310).	Moderate
360	34	Otaihanga Datum: N 629391.43 E 259310.97	90.59	#	#	#	#	#	This profile was also established by Wellington Regional Council. It crosses the Waikanae River estuary and, as can be seen from the profile, sand movements below MHWS are substantial. Because of the dynamic nature of river mouths, reporting on changes in the location of MHWS, etc., is largely meaningless but it is noted that there has been an on-going modest growth in volume since 2000.	NA

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
370	42	Ara Kauka Car Park Datum: N 630165.97 E 259829.33	50.42	9	18	30	11	30	This profile is to the north of the Waikanae River and extends seaward from the car park off Ara Kauka (roadway). Although the dune face is largely unchanged, the toe has filled and the profile across the beach generally higher. Offshore, changes are small. The width of "dry" beach indicates that vulnerability in June 2011 was relatively low.	Low
380	43	Te Moana Road Datum: N 630707.50 E 260517.74	16.37	3.0	8	21	10	38	Located off the car park at the end of Te Moana Road, Waikanae Beach. Some dune growth has occurred and the toe has filled significantly. Beach levels are generally higher than in 2000 and fluctuations offshore are within the range of normal bar movement. The significant width of "dry" beach and 20 m setback of the edge of the carpark indicates low vulnerability.	Low
390	44	Tutere Street Car Park Datum: N 631883.74 E 261744.79	30.42	2	7	-3	11	40	Profile situated off the Tutere Street carpark at the northern end of Waikanae Beach. Dune growth is evident but there have been only minor changes in the profile seaward of MHWS. The profile is considered stable and the erosion risk remains low.	Low
400	45	Peka Peka Road Datum: N 634187.61 E 263495.65	63.09	1	4	-6	9	50	This profile extends seaward from the end of the seal on Peka Peka Road. Although there has been some interesting dune growth in the zone around RL 3-4 m, sand levels across the beach remain stable. Normal bar movement offshore noted. The coastline here is typically stable and vulnerability remains low.	Low
410	New	Te Hapua Road (Nov 2005) Datum: N 635882.45 E 264364.96	#	#	#	#	#	48	This profile is located on the beach access track off the end of Te Hapua Road. It was first surveyed in Nov 2005 and comparison with 2000 profiles is not possible. It is noted that there has been some growth in beach volume (65.41 m ³) since the December 2007 survey. The shape of the profile and the width of the "dry" beach indicates a stable coastline and low vulnerability.	Low

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
420	46	Te Horo Beach Road Datum: N 638724.13 E 265774.91	48.25	5	11	12	0	23	The base point for this profile is on the track leading to the beach off Rodney Avenue, near the junction with Te Horo Beach Road. This profile has also remained stable with some build up of sand across the beach zone and offshore below MLWS. The beach here is steeper than further south, which is indicative of coarser sediments. Development (Te Horo) is set well back from the coast and vulnerability remains low.	Low
430	47	Sims Road Datum: N 640641.55 E 266638.61	92.84	15	10	0	15	11	This profile is at the end of Sims Road where it turns towards the coast. The beach here is noticeably steeper, which indicates significant proportions of gravel-sized sediment. The source of the gravel is the Otaki River, which lies approx. 1500m to the north. There has been a reasonable build-up of beach material in the upper part of the beach (between MSL and RL 3 m) and across to MLWS. Vulnerability is low.	Low
440	48	Te Horo Datum: N 641878.46 E 267172.15	83.01	12	11	12	35	20	This profile is situated close to the south bank of the Otaki River. It is a steeper beach with a higher proportion of coarse sediments including gravel and is affected by movements in the river mouth. There has been a substantial build-up of sediment, particularly above RL 2 m, and across the beach down to RL -2 m. Because of the nature of the coast at this profile (predominantly gravel) the figures referring to dune toe and width of dry beach are indicative of the changes only. There is no significant development nearby and vulnerability remains low.	Low

New Profile No	Old Profile No	Profile Location ¹	Volume Change 2000-11 m ³ /m	Beach Displacement 2000 - 2011				Width of Dry Beach ² m	Commentary	Erosion Risk ³ (June 2011)
				MHWS m	MSL m	MLWS m	Dune Toe m			
450	49	South Otaki Beach Datum: N 643549.43 E 267964.09	39.49	16	0	6	8	31	The datum for this profile is on the base of the monument to two sunken ships on Marine Parade, South Otaki Beach, just north of the junction with Rangiorua Road. Aside from some accumulation of sand near MSL and above, there have been relatively minor changes in the profile since 2000. Unfortunately the June 2000 record does not go beyond 200 m offshore (RL -2 m) but the seabed level beyond this point is generally higher than it was in December 2007. Vulnerability is considered low as the profile appears to be reasonably stable and there is an adequate set back to the roadway. It was noted in the previous profile report (June 2008) that the long-term behaviour of the coastline north of the Otaki River is uncertain because of the short length of the survey record and on-going surveys are recommended. This comment remains valid.	Low
460	50	North Otaki Beach Datum: N 645068.43 E 268693.06	46.06	4	12	0	43	6	This is the northernmost profile in the present survey series and is located at the side of the gravel carpark off Marine Parade at North Otaki Beach, just south of the junction with Kowhai Street. Generally this profile has remained stable with some accretion in the dune section and normal sand movements across the beach and offshore. Vulnerability remains low.	Low

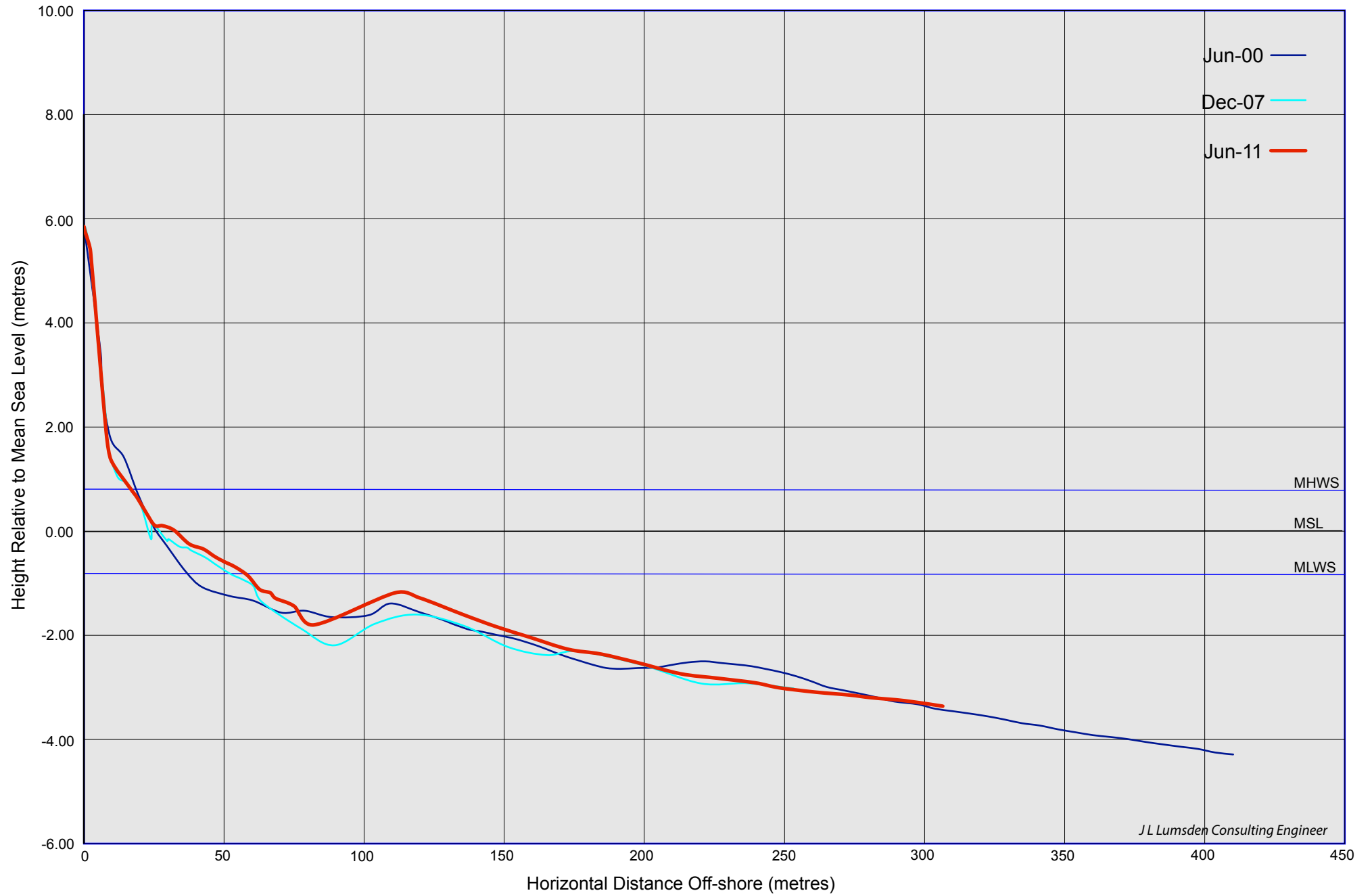
Notes:

1. Profile datum, established by Cuttriss Consultants Ltd., Paraparaumu, is in terms of Wanganui Circuit Coordinates, origin Mt Stewart: 700,999mN and 300,000mE.
2. The "Width of Dry Beach" is the distance under still conditions between MHWS and the shoreline (nominal toe of dune, seawall, etc) at the time of the survey. Where there is no apparent dune toe, measurement is at +2.0m.
3. "Erosion Risk" provides an assessment of the vulnerability (coastal erosion) at the time of the most recent survey (June 2011) and requires regular review.

Kapiti Coast District Council

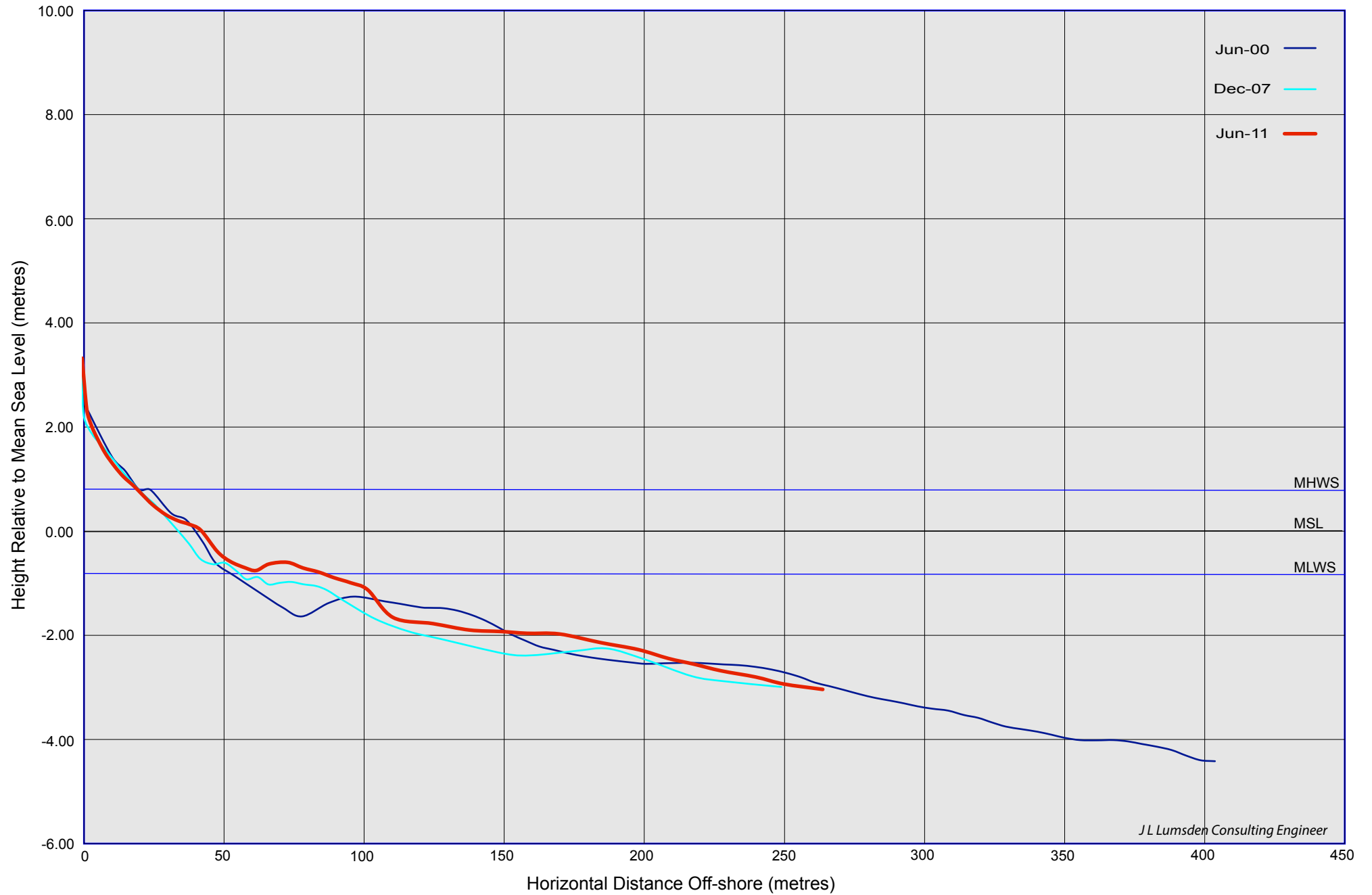
**Profile Plots
June 2000 – June 2011**

KCDC Profile 200: SH1 Paekakariki

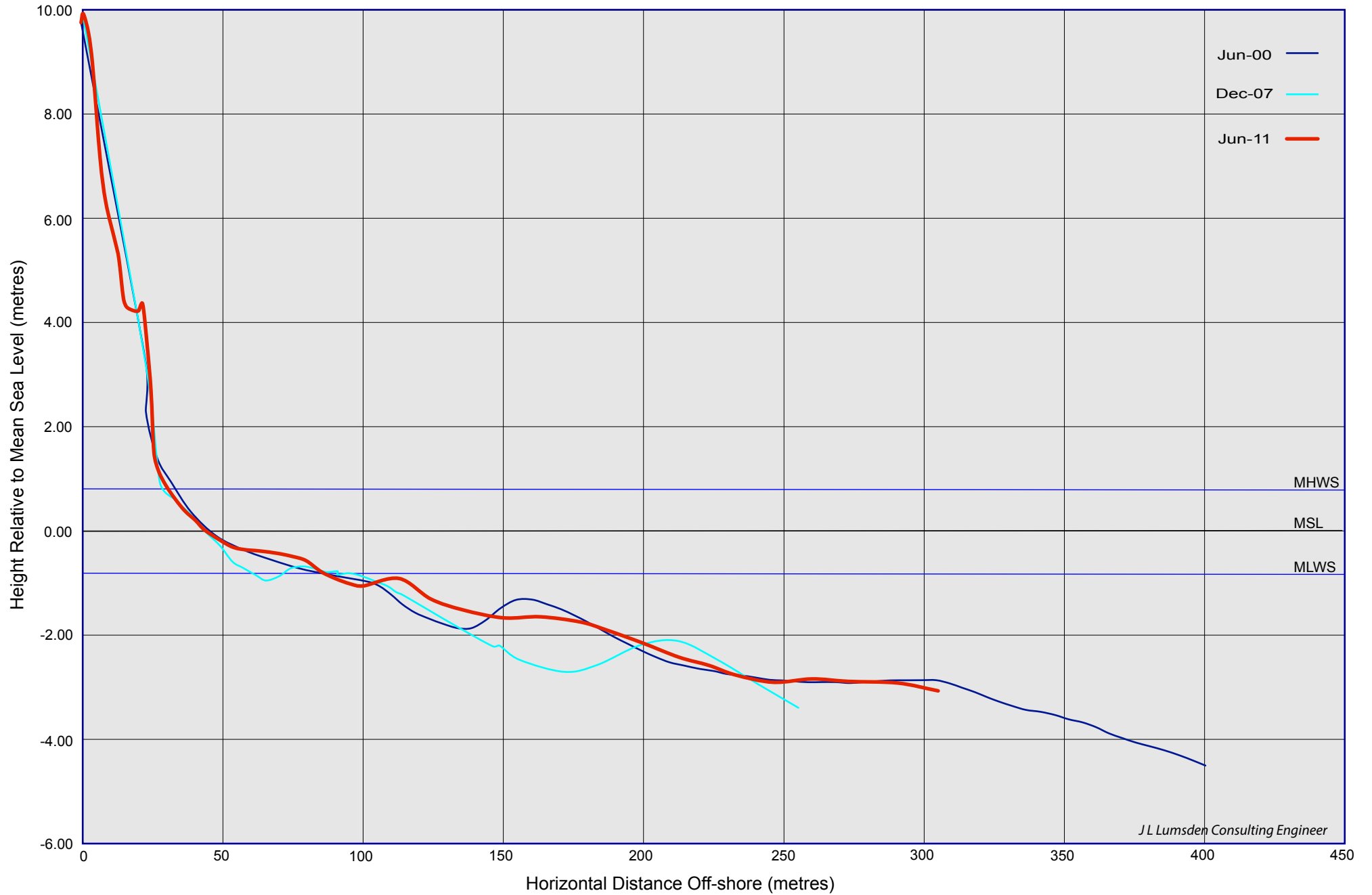


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KCDC Profile 210: Ames Street

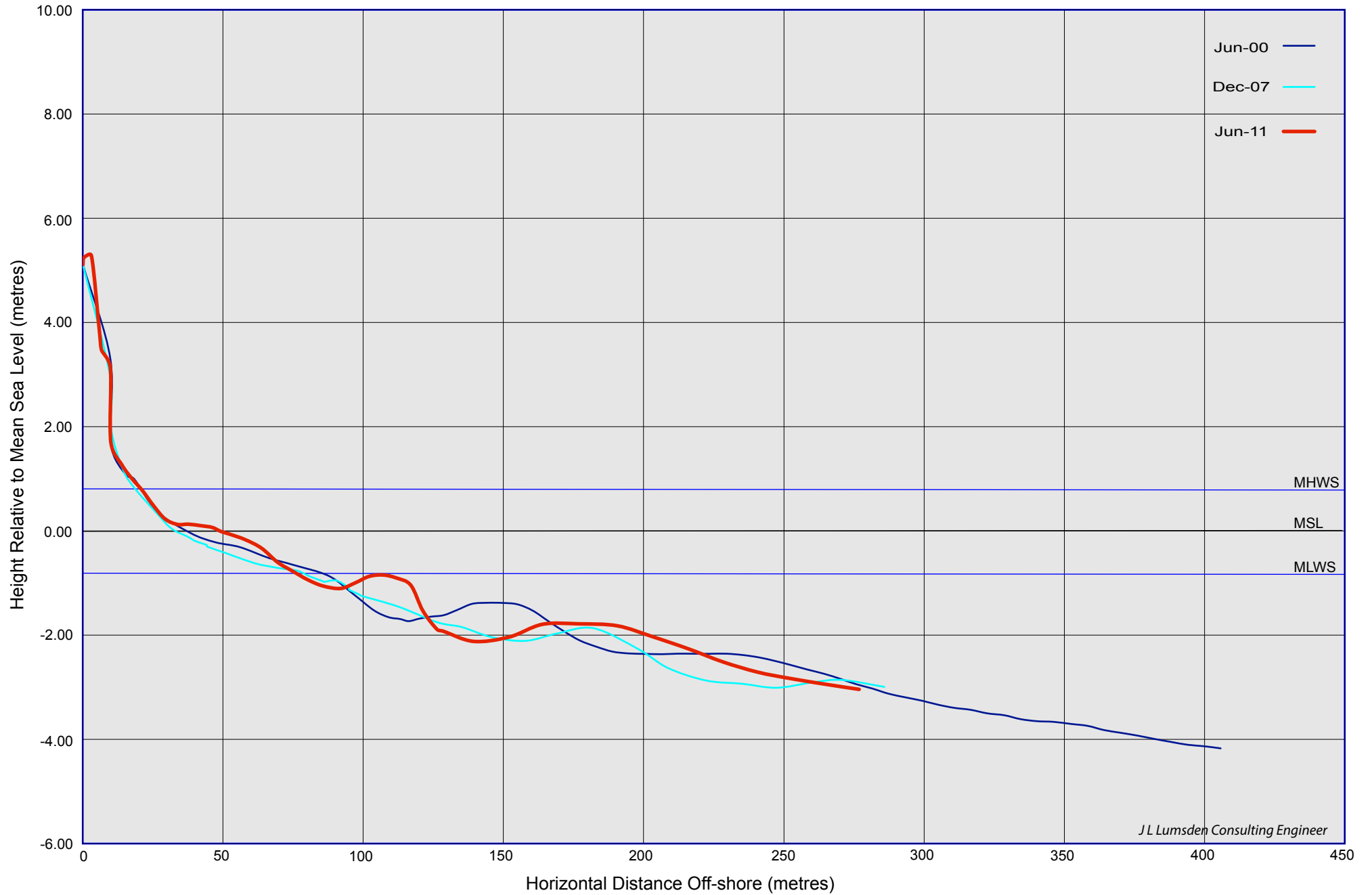


KCDC Profile 220: Beach Road

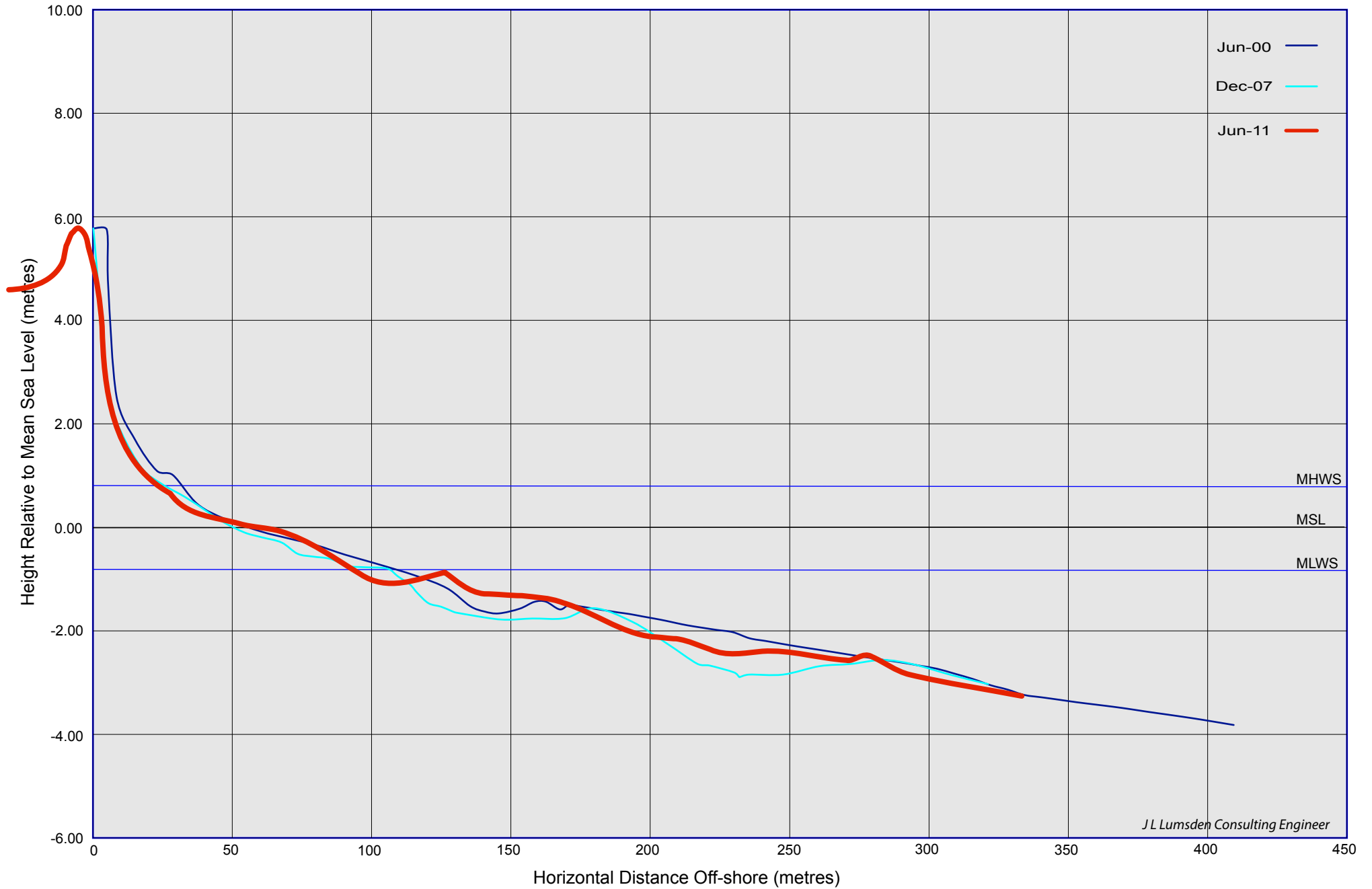


J L Lumsden Consulting Engineer

KCDC Profile 230: Paneta Street

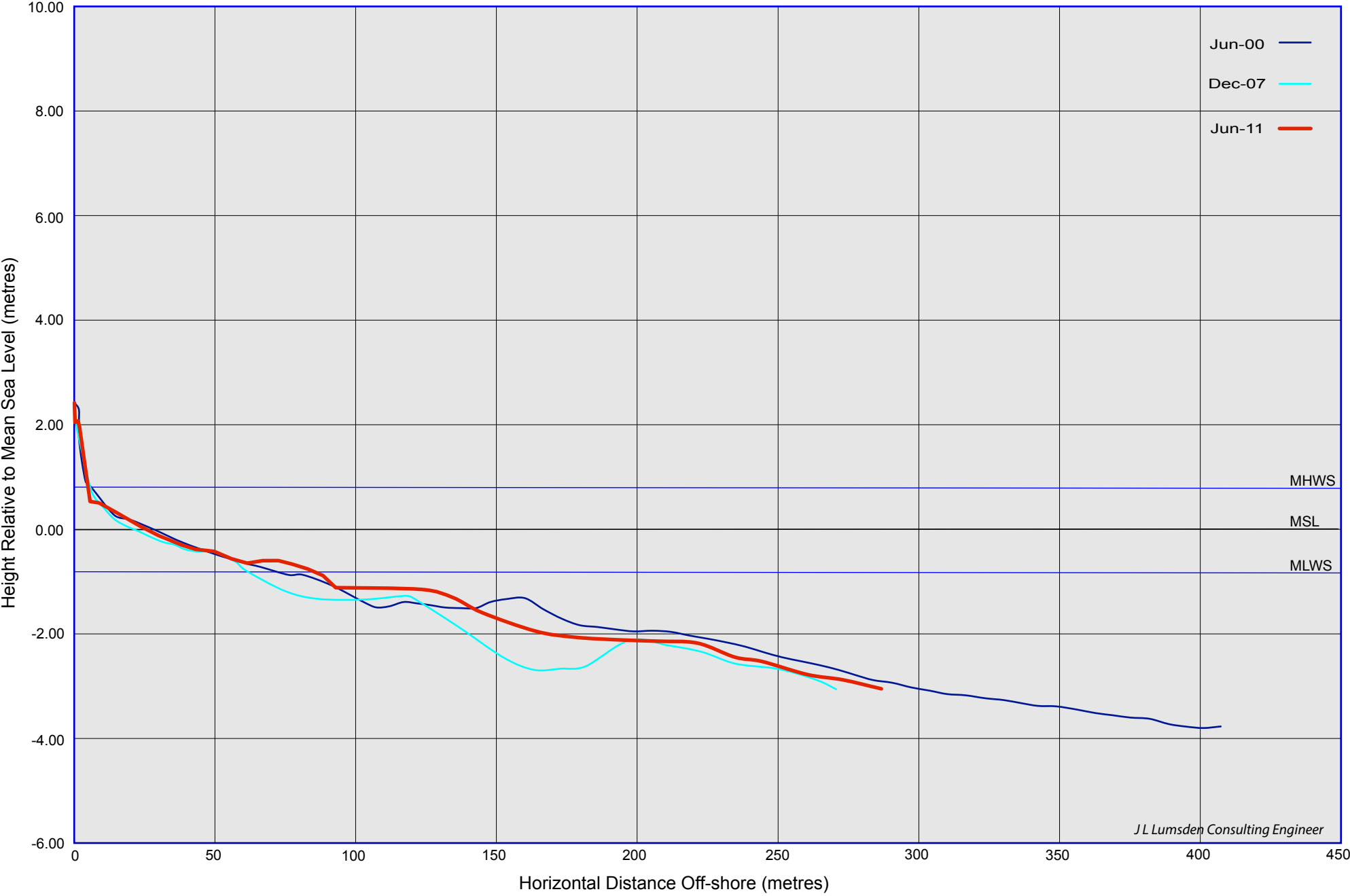


KCDC Profile 240: McKays Crossing

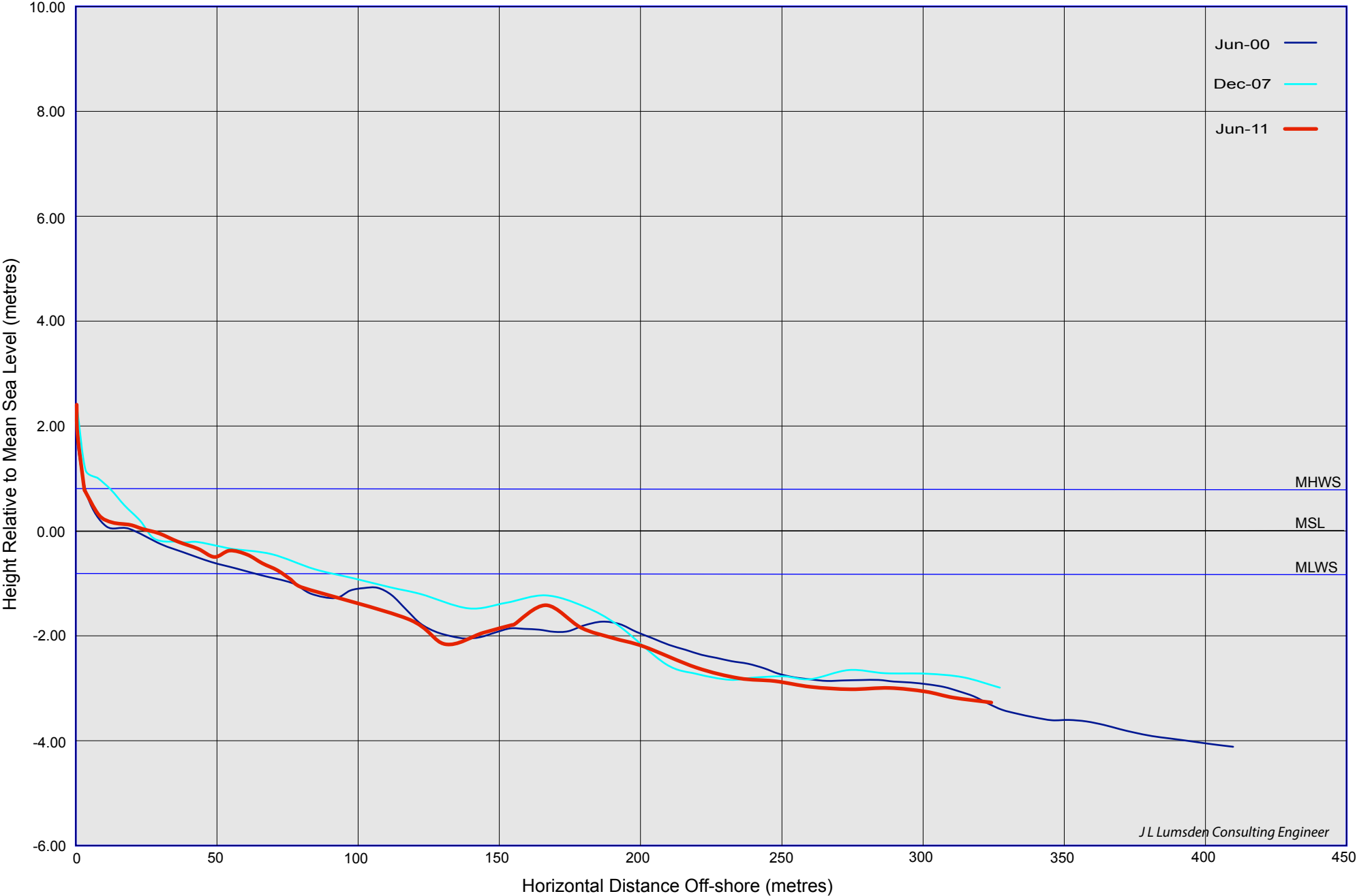


J L Lumsden Consulting Engineer

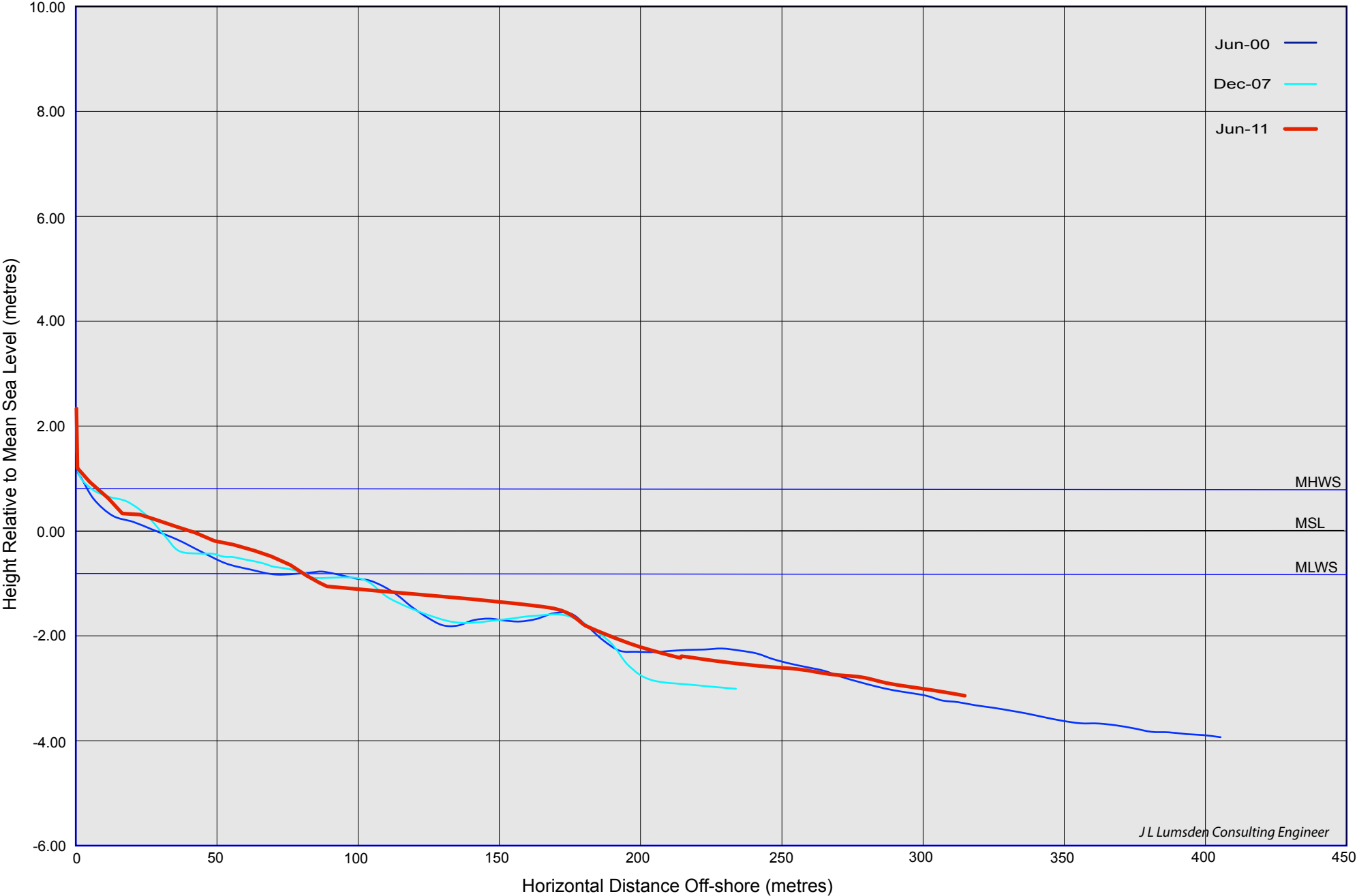
KCDC Profile 250: South Raumati



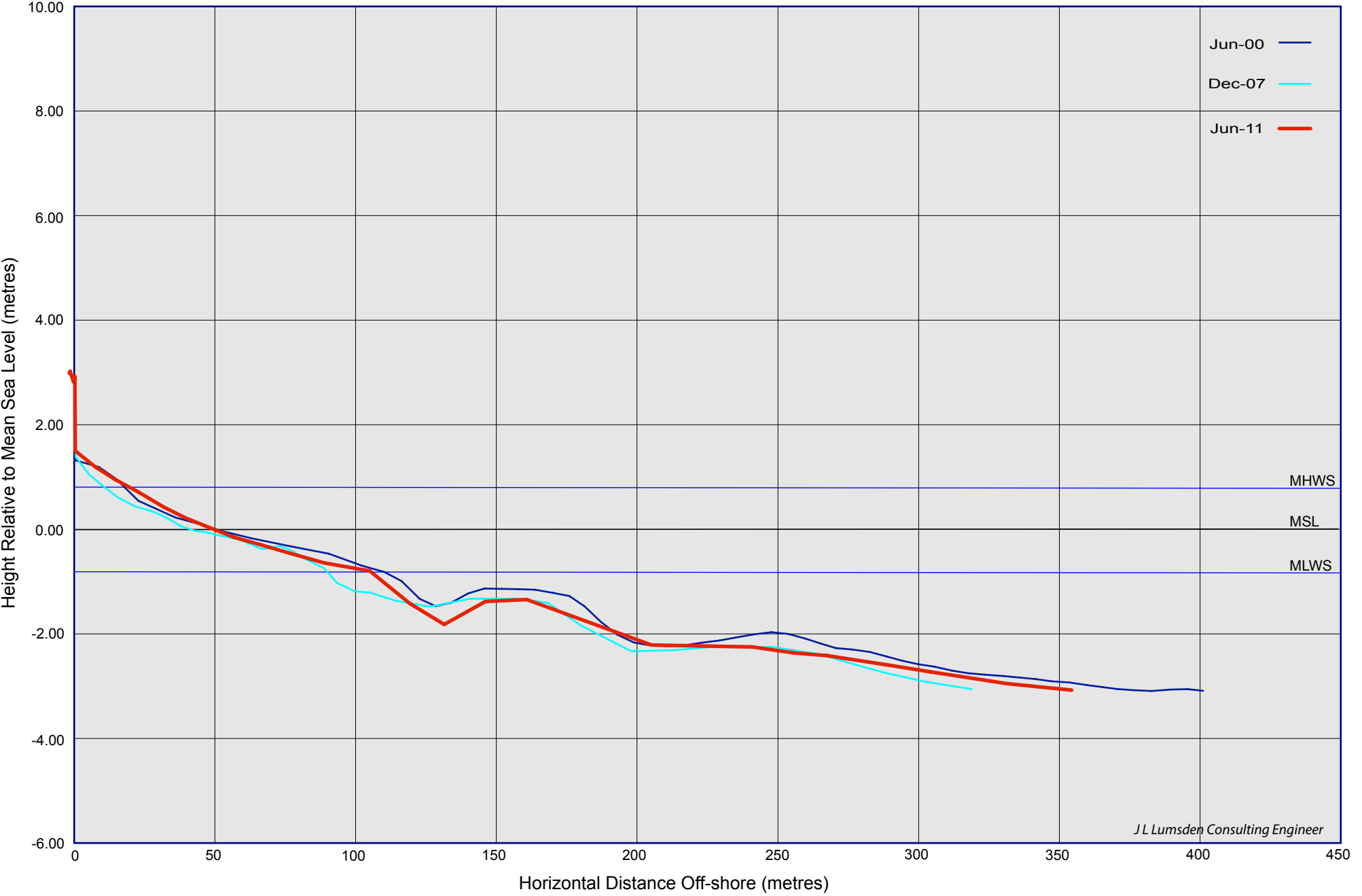
KCDC Profile 260: Hydes Road



KCDC Profile 270: Takitimu Road

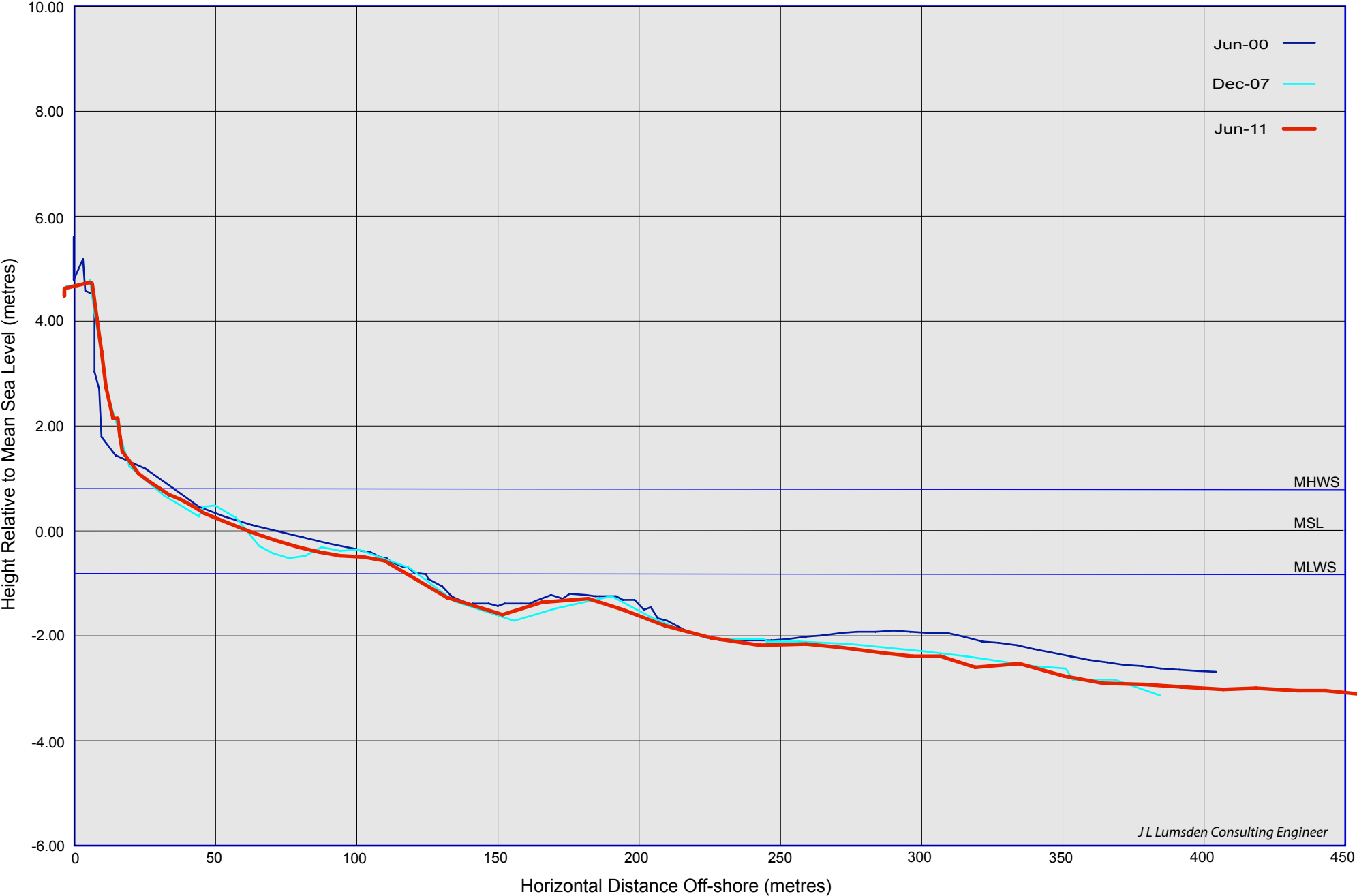


KCDC Profile 280: Tainui Street



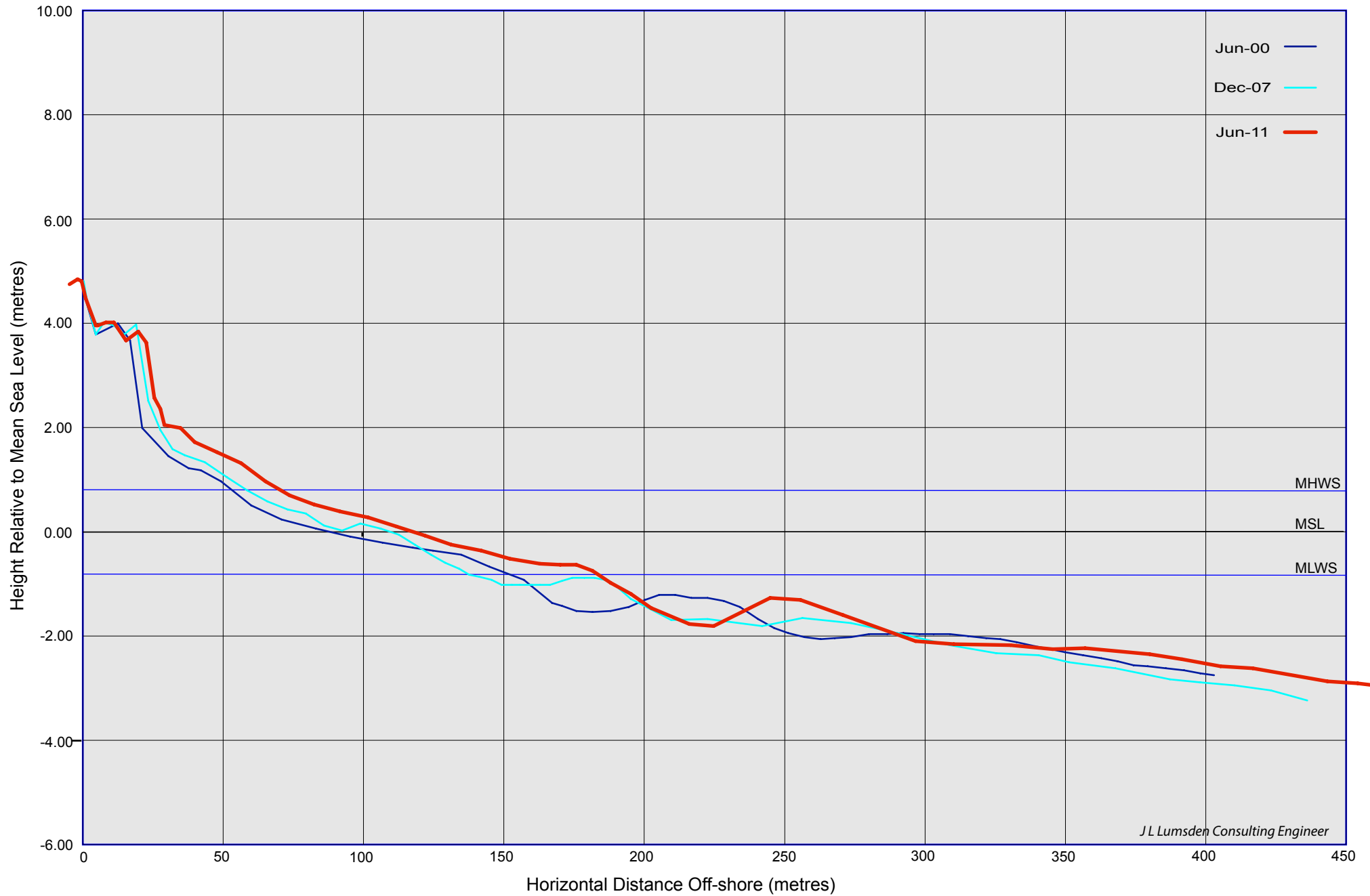
J L Lumsden Consulting Engineer

KCDC Profile 290: Mannson Lane



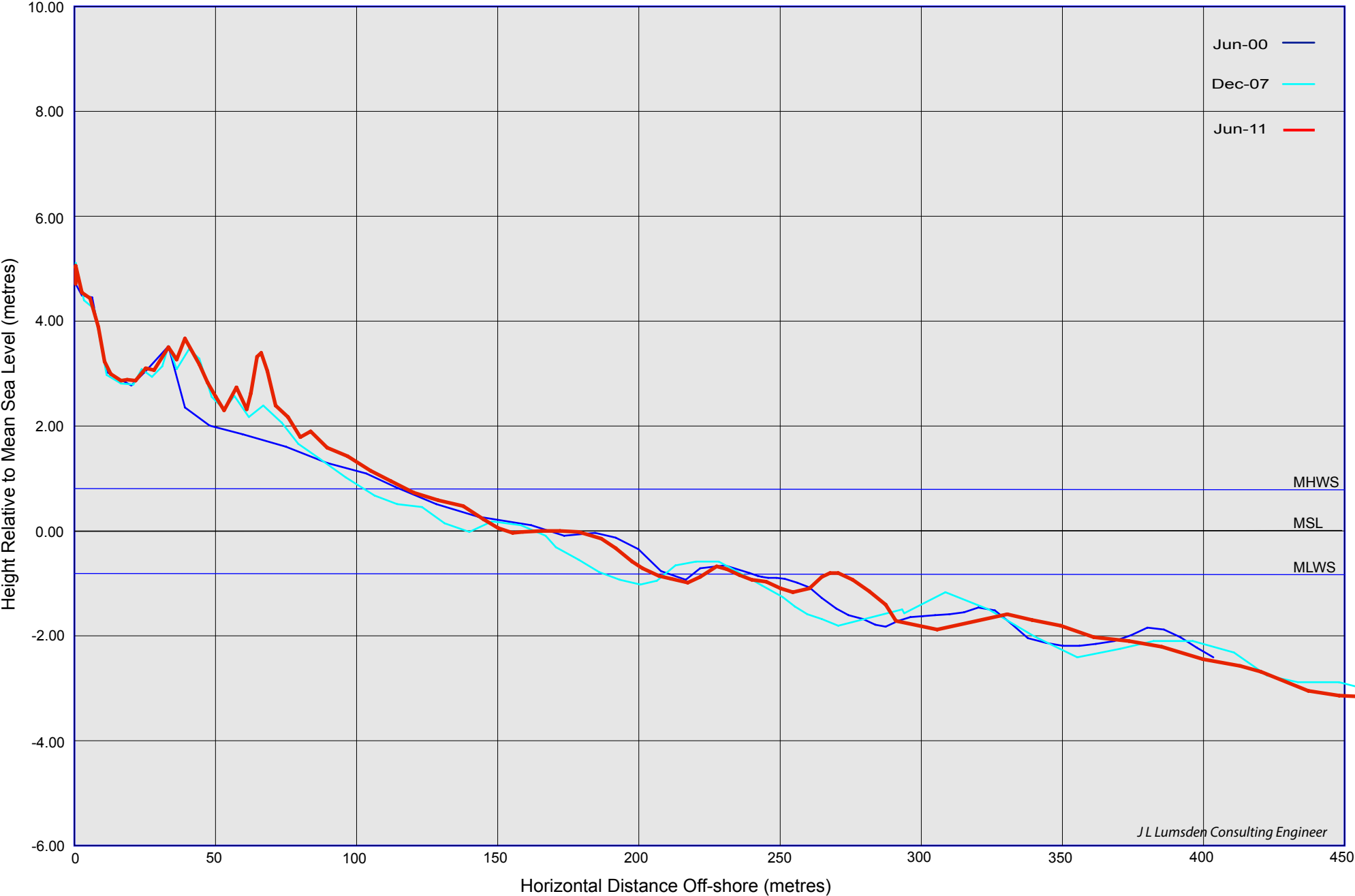
J L Lumsden Consulting Engineer

KCDC Profile 300: Ocean Road



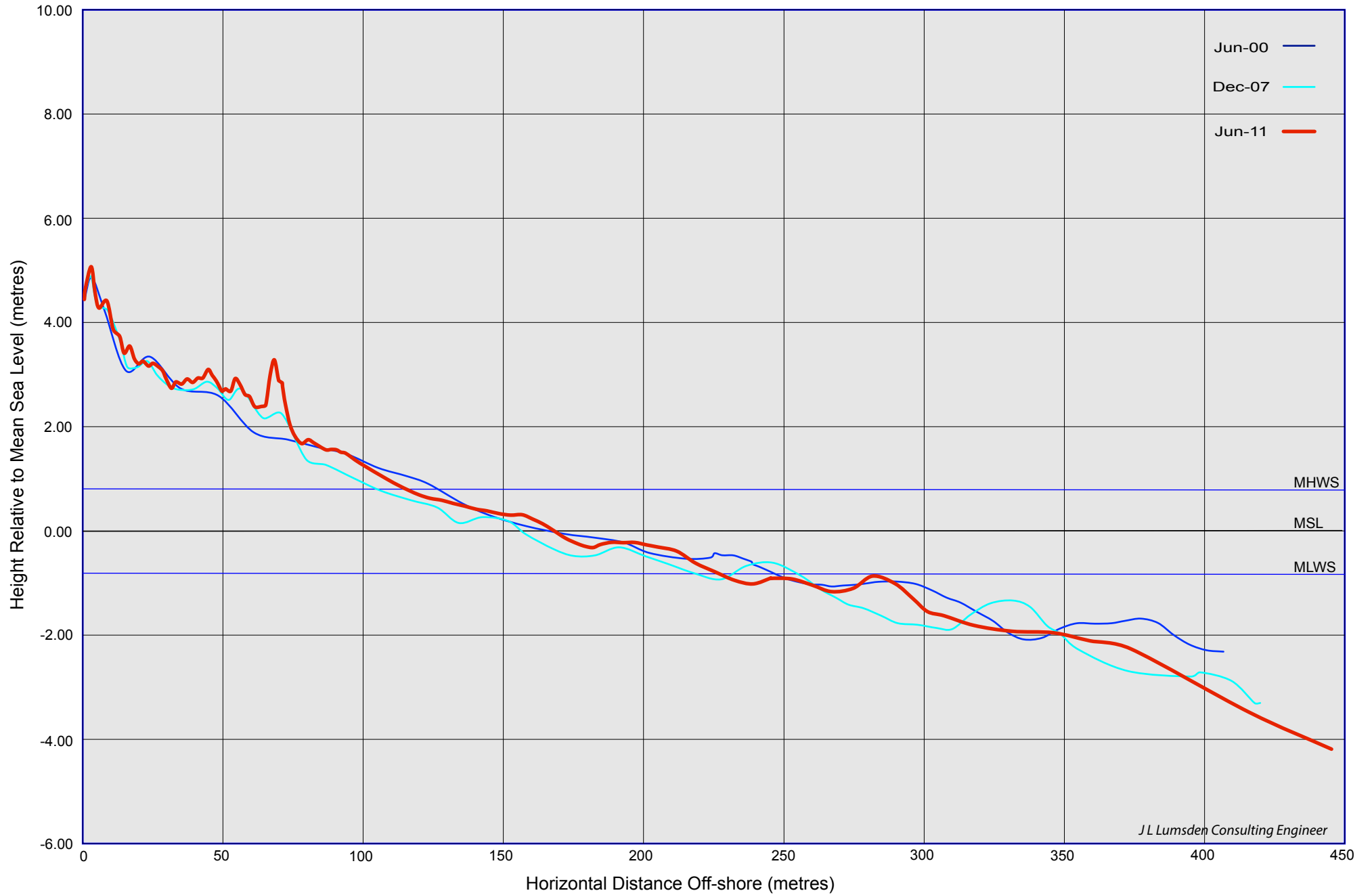
J L Lumsden Consulting Engineer

KCDC Profile 310: 35 Manly Street

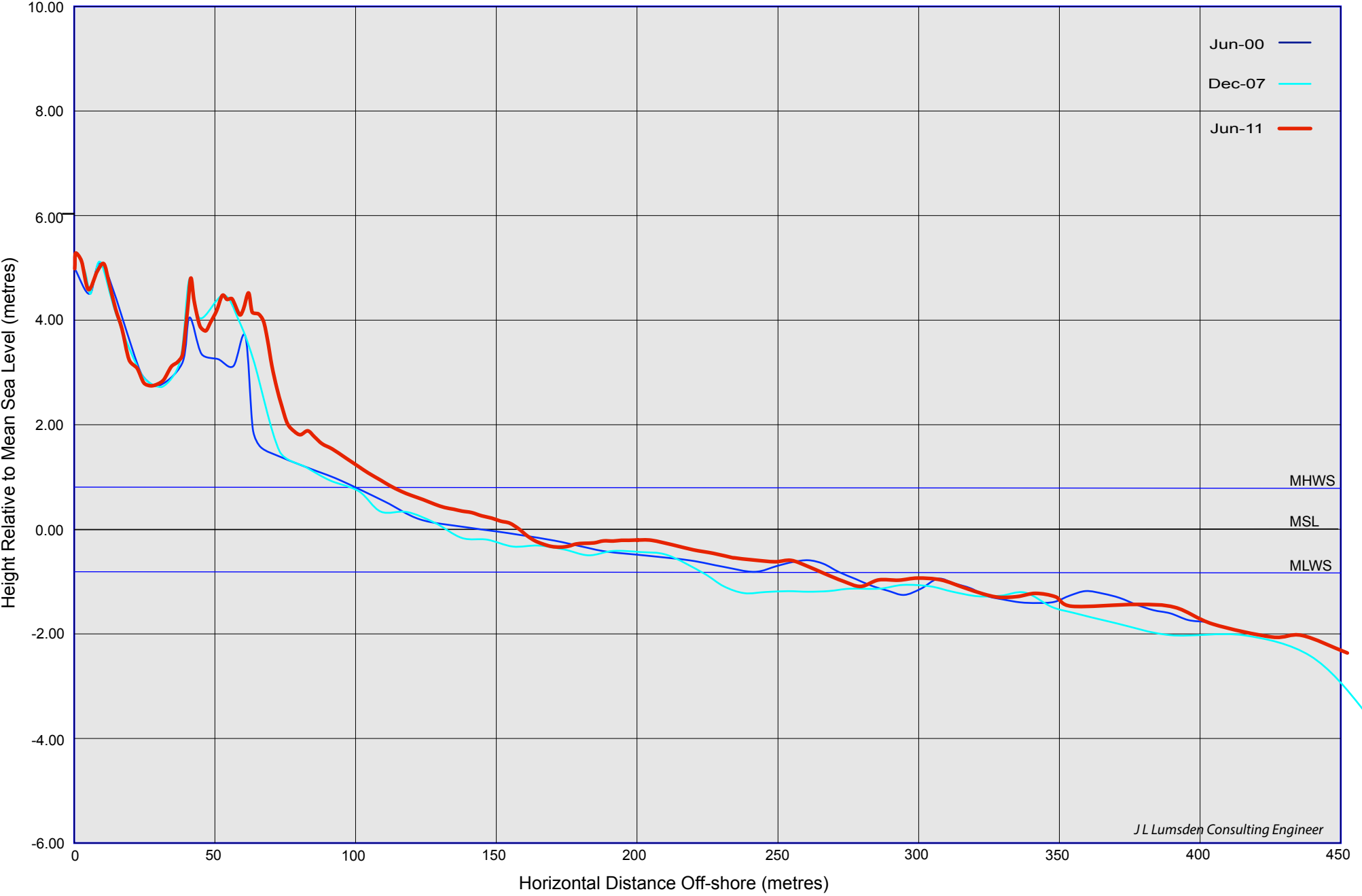


J L Lumsden Consulting Engineer

KCDC Profile 320: 83 Manly Street

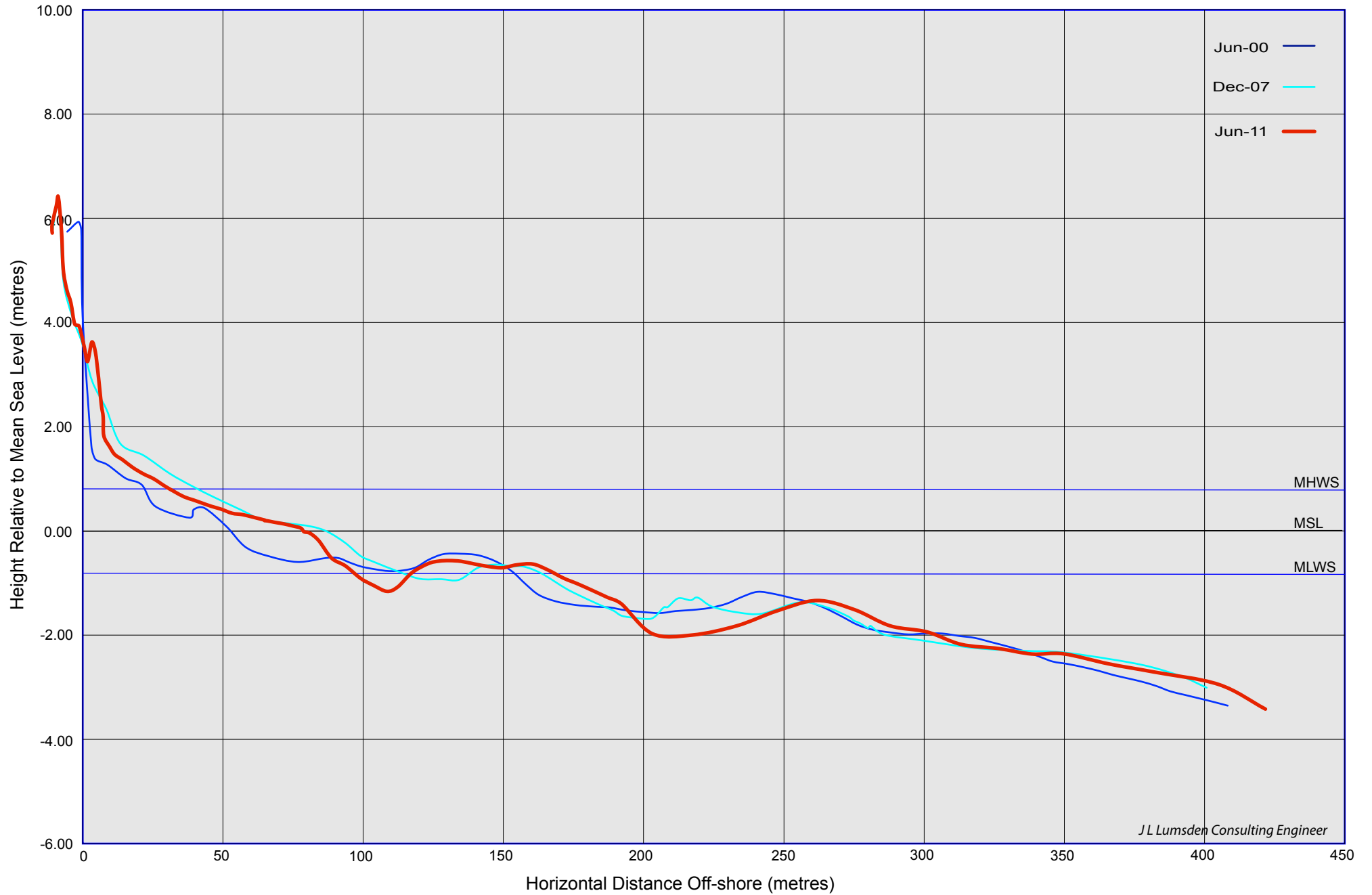


KCDC Profile 330: 131 Manly Street

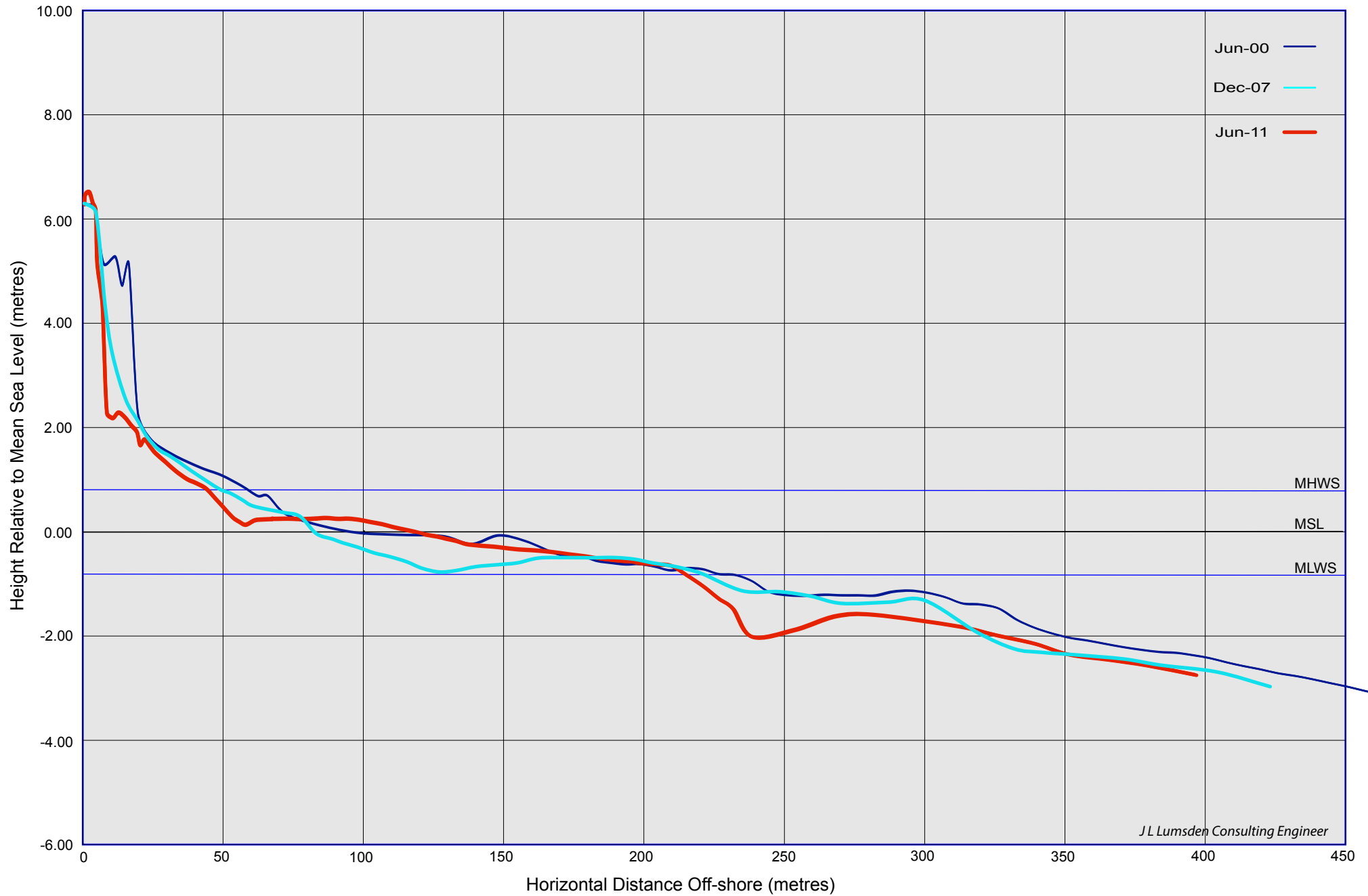


J L Lumsden Consulting Engineer

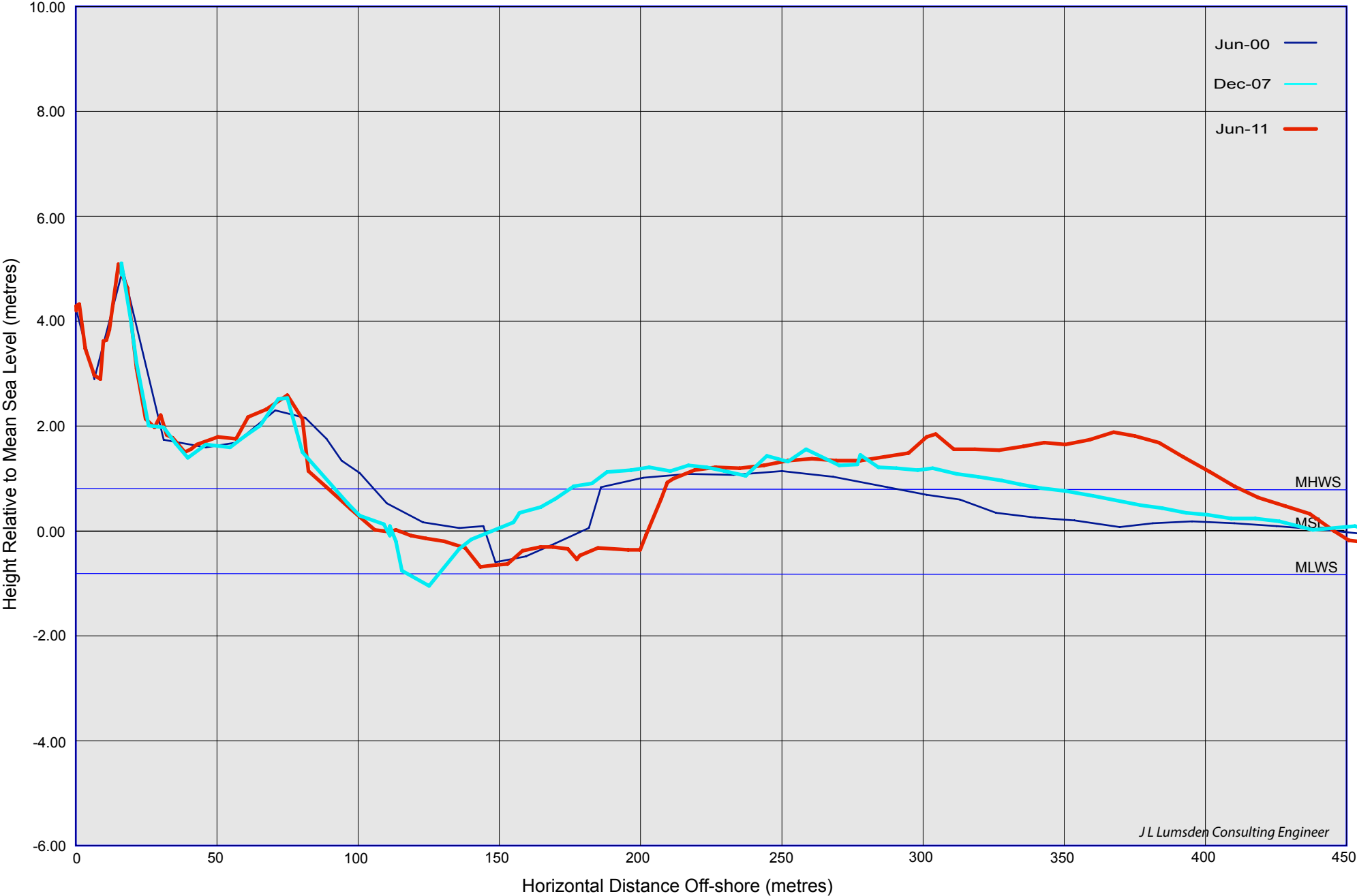
KCDC Profile 340: 201 Manly Street



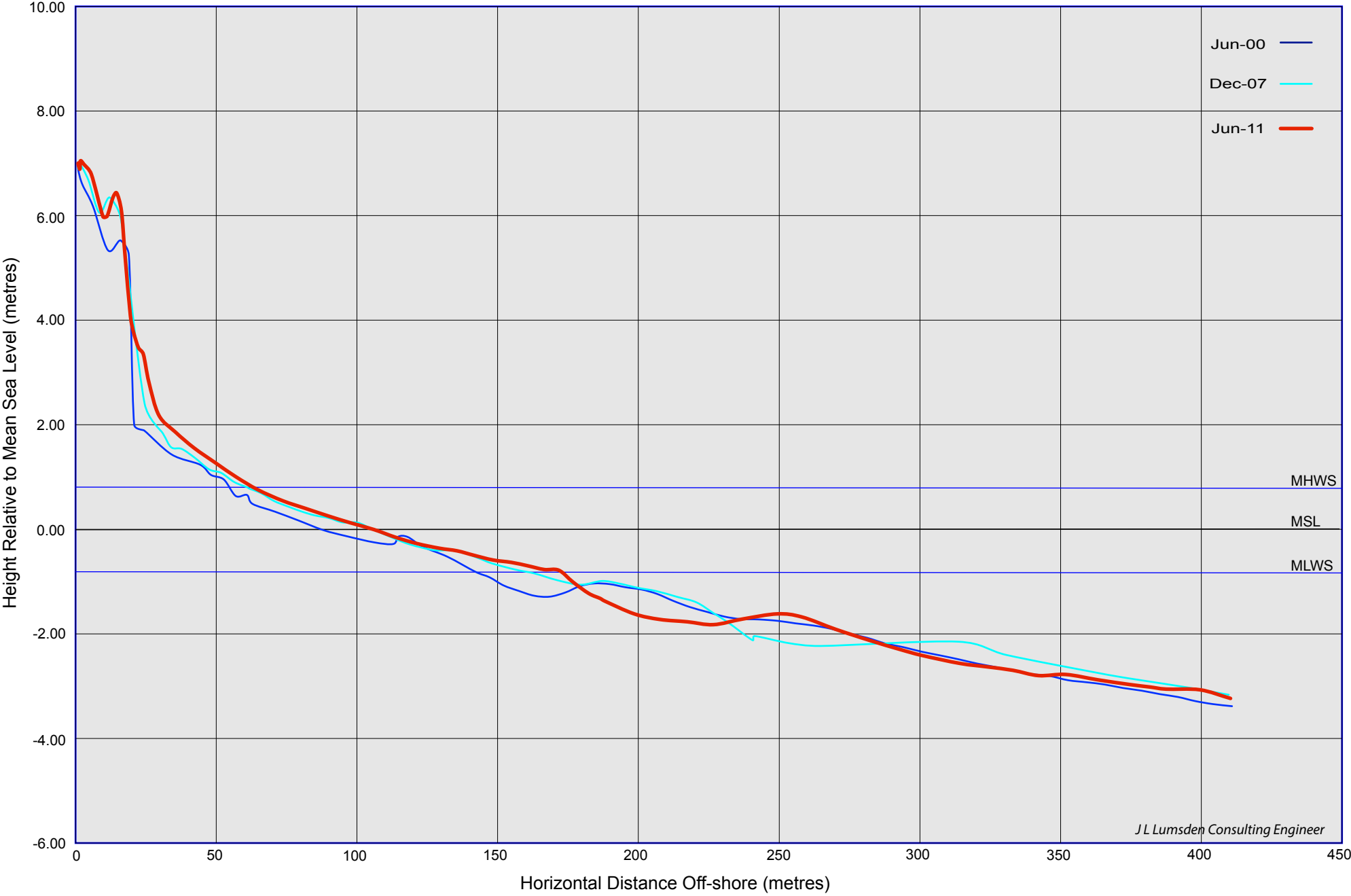
KCDC Profile 350: Marine Reserve Beacon



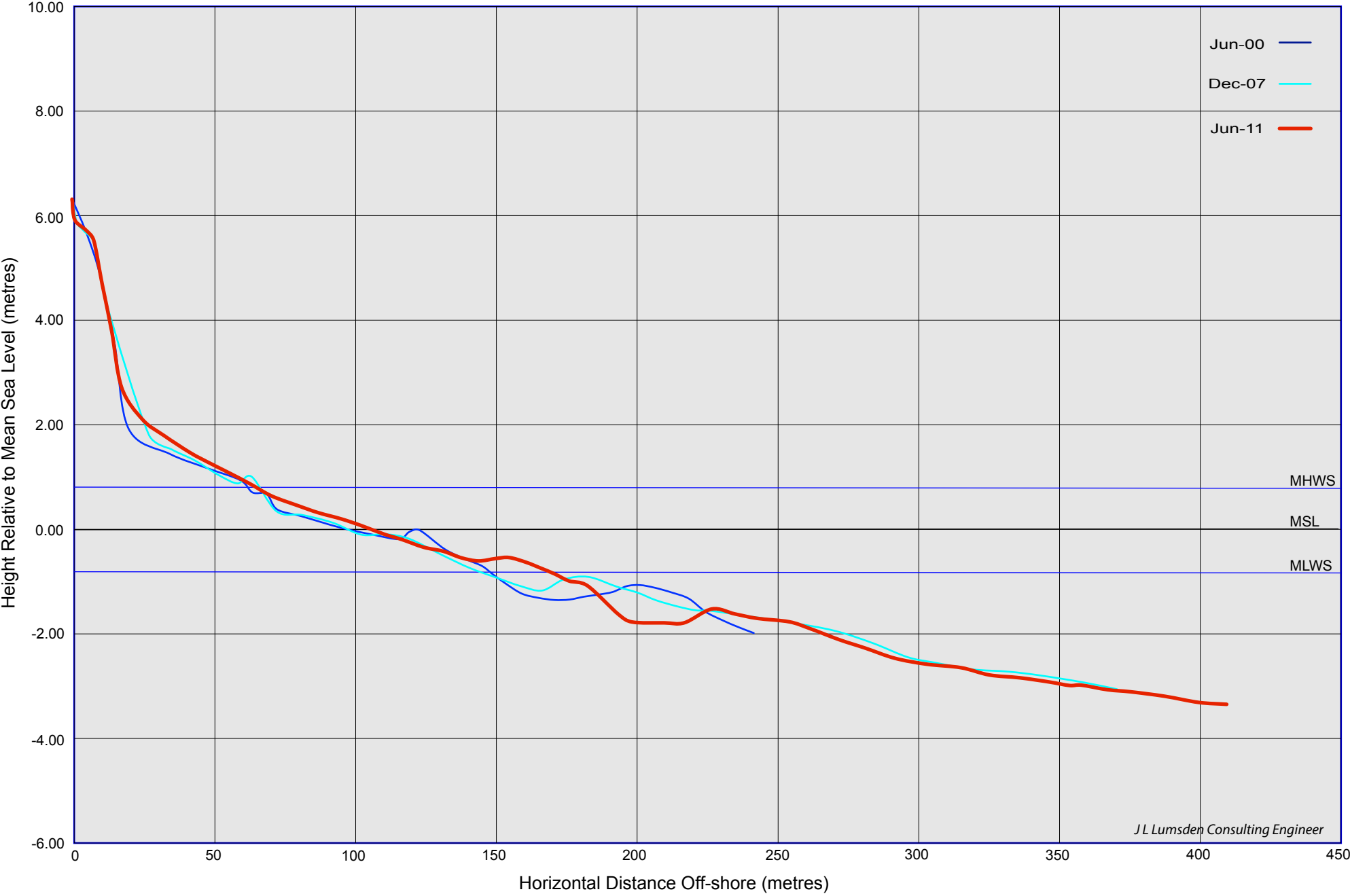
KCDC Profile 360: Otaihanga



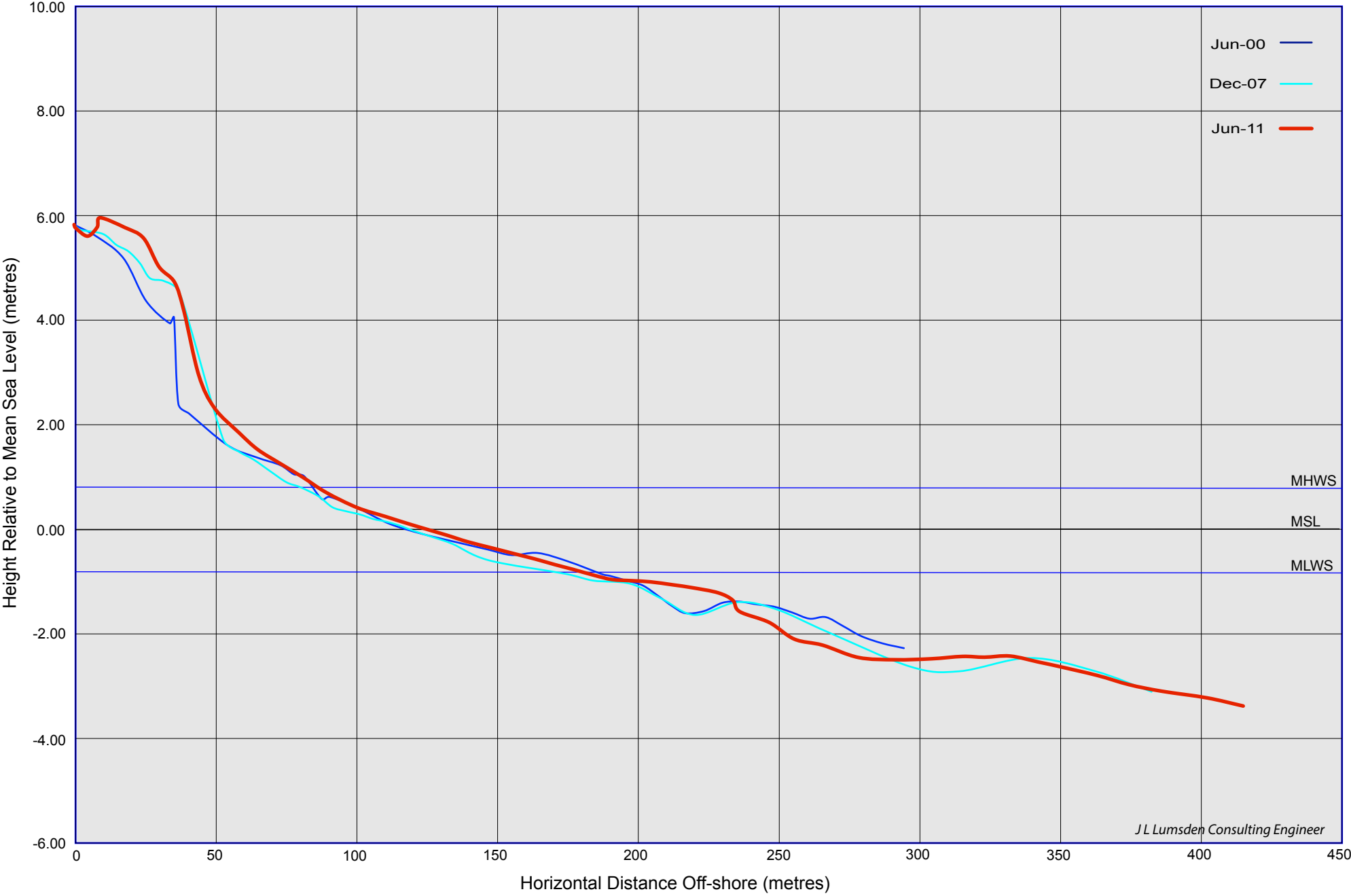
KCDC Profile 370: Ara Kauka Car Park



KCDC Profile 380: Te Moana Road

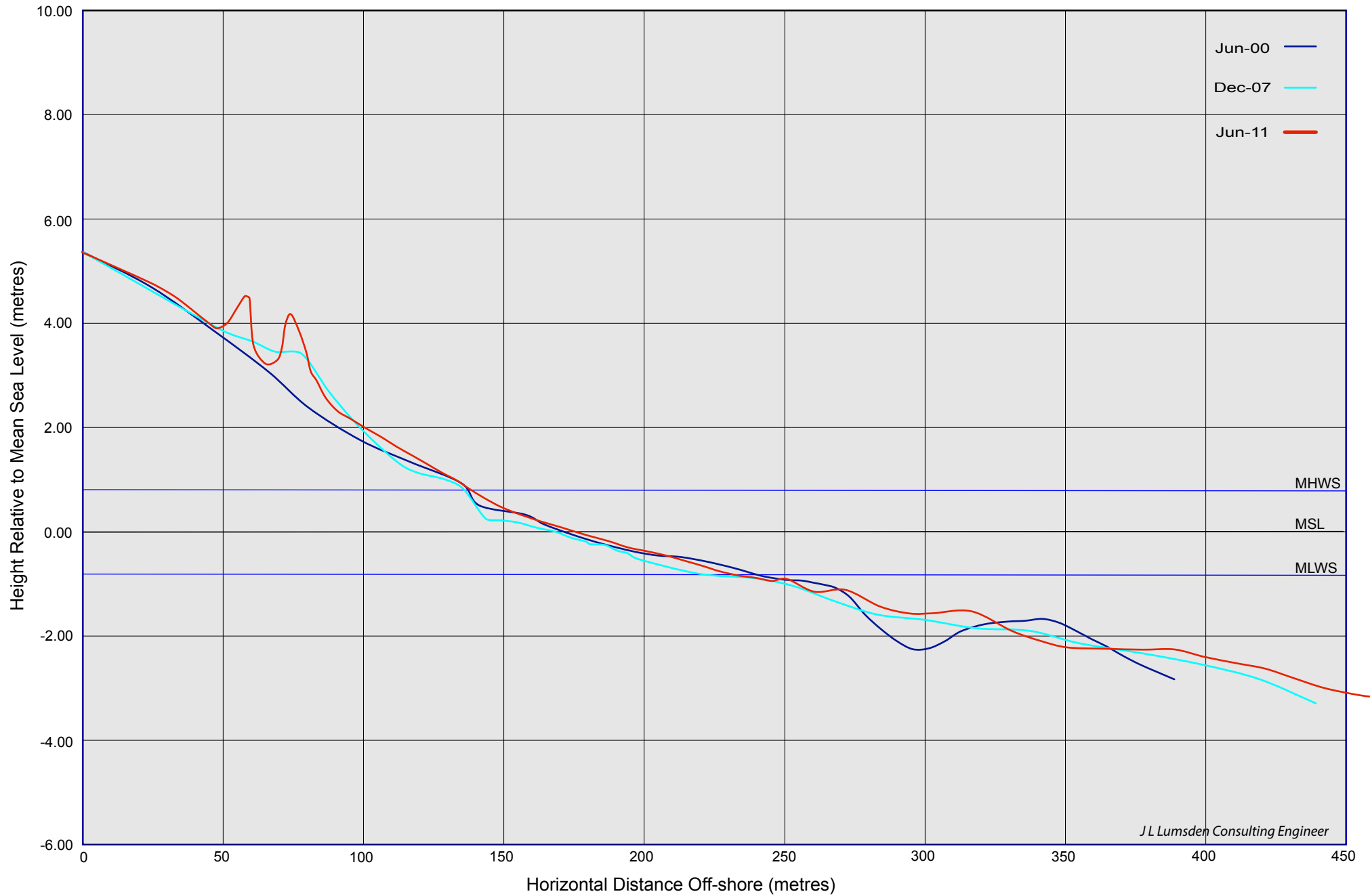


KCDC Profile 390: Tutere Street Car Park



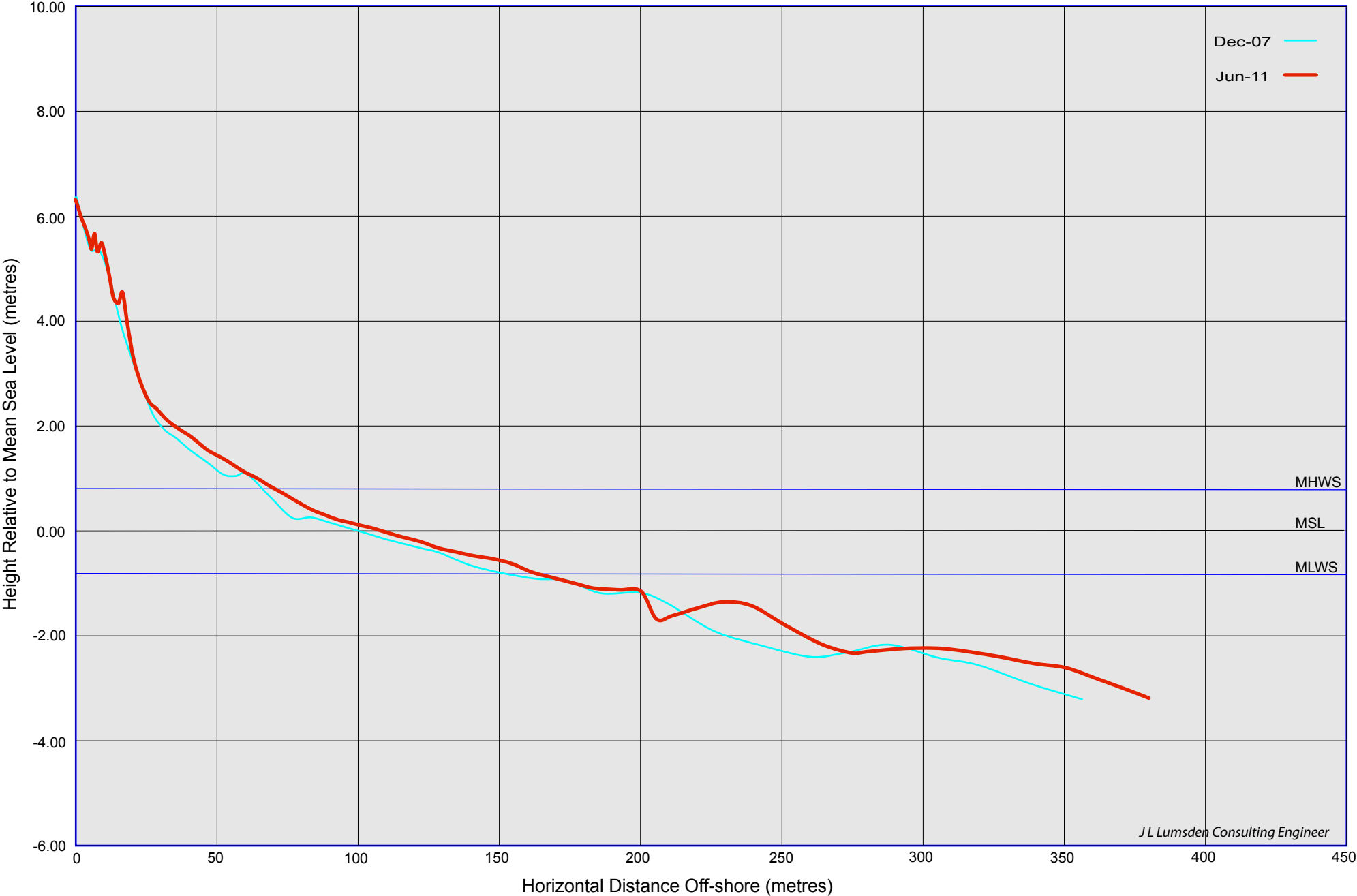
J L Lumsden Consulting Engineer

KCDC Profile 400: Peka Peka Road

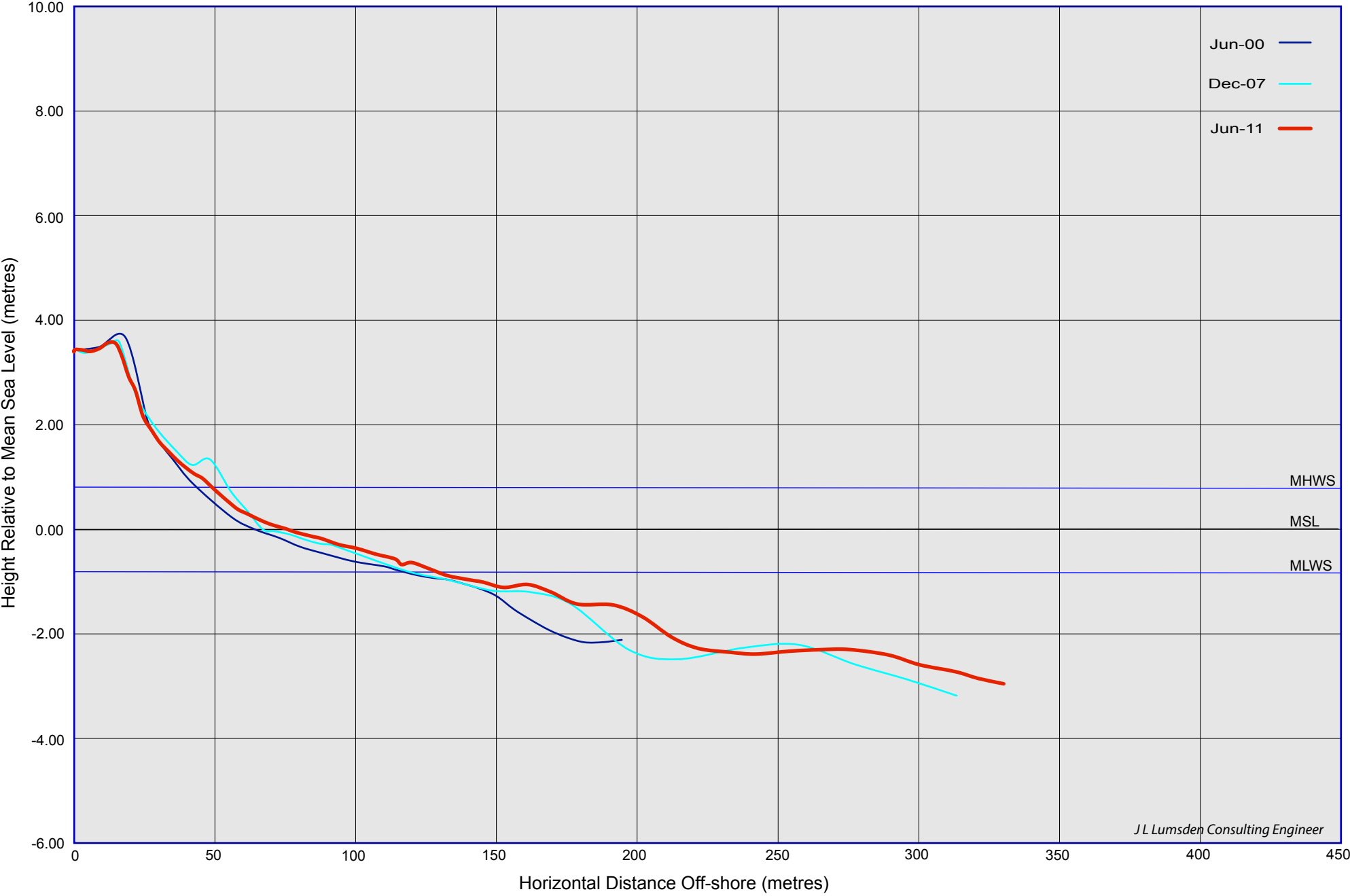


J L Lumsden Consulting Engineer

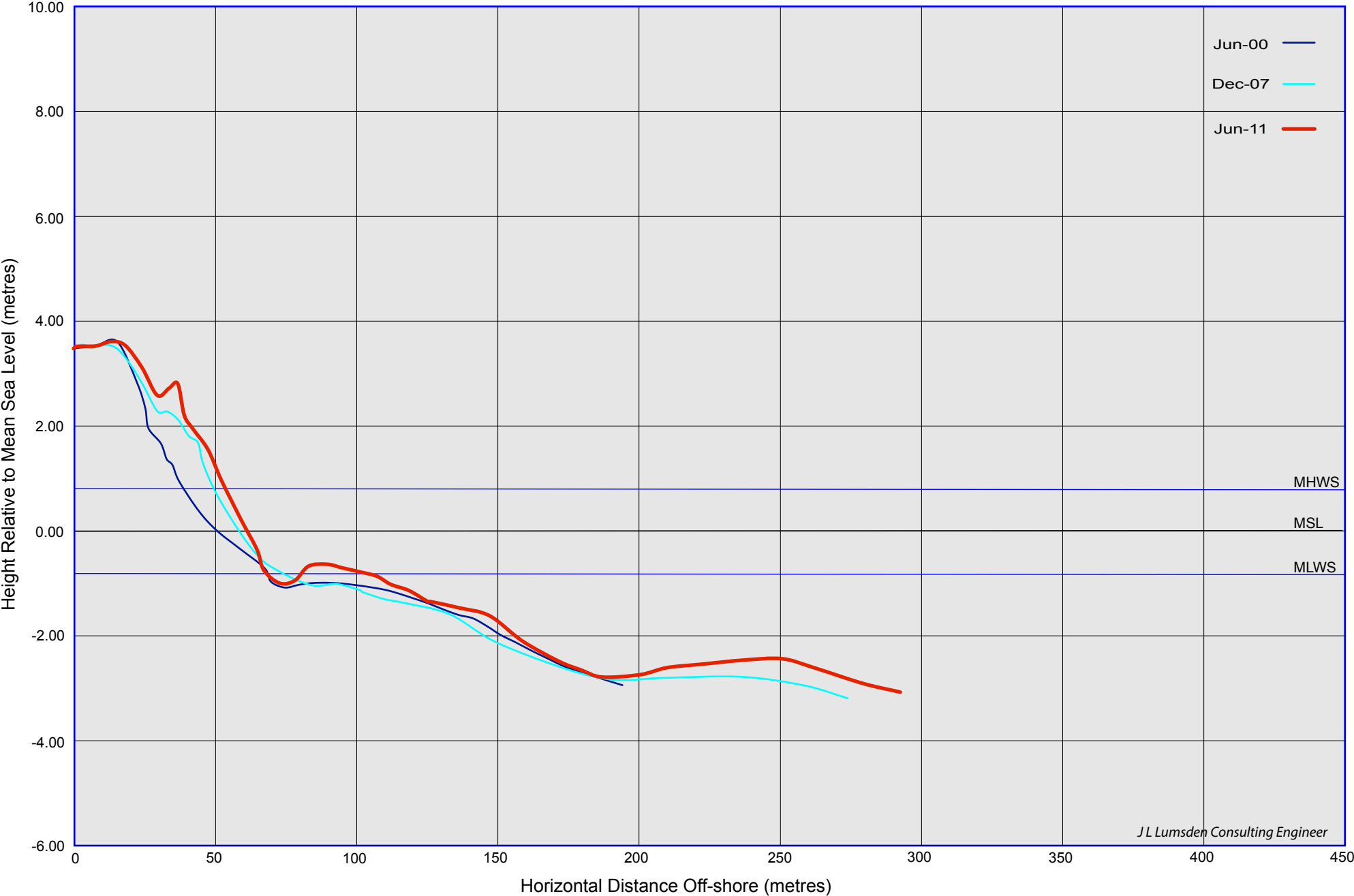
KCDC Profile 410: Te Hapua Road



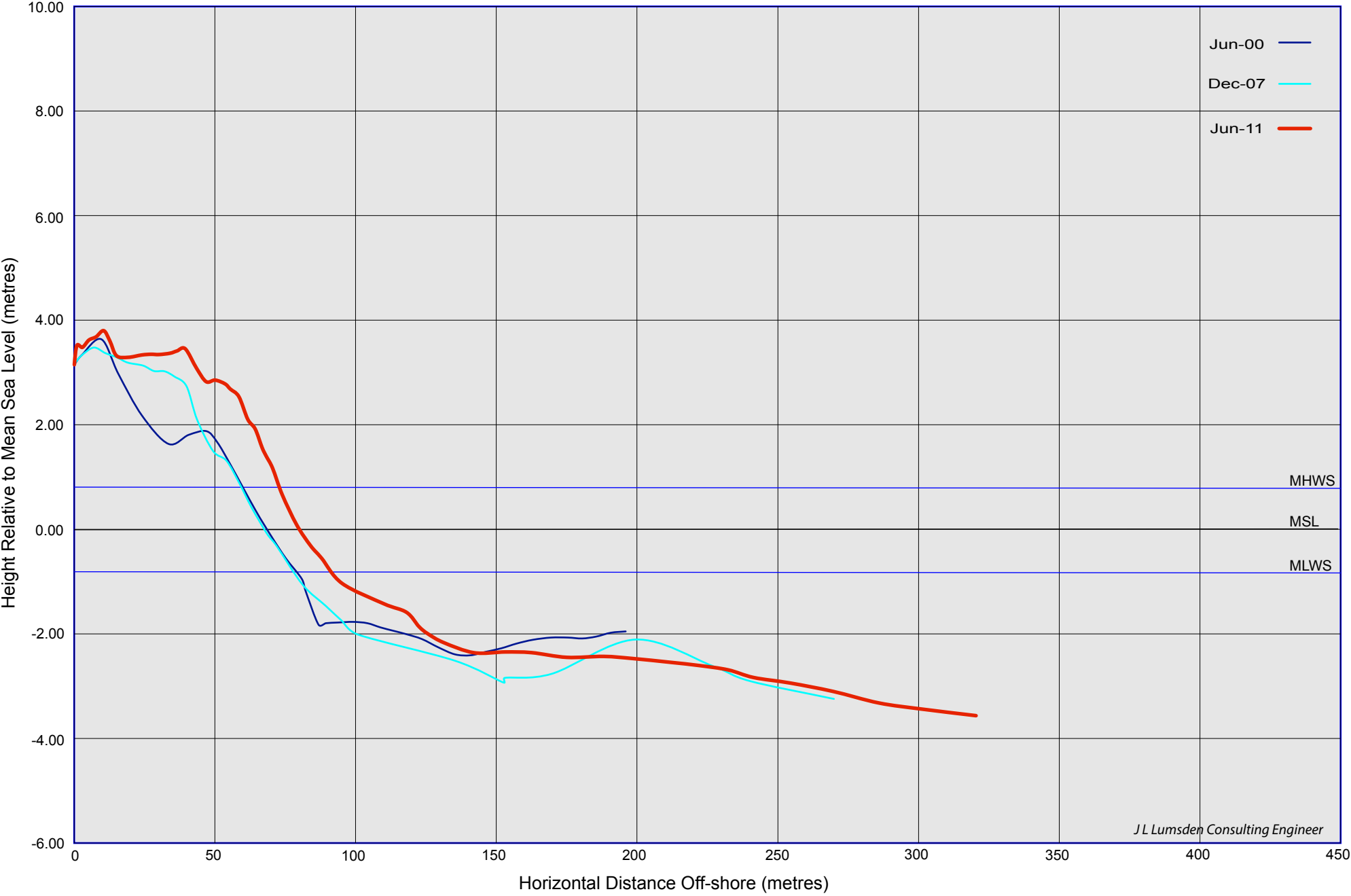
KCDC Profile 420: Te Horo Beach Road



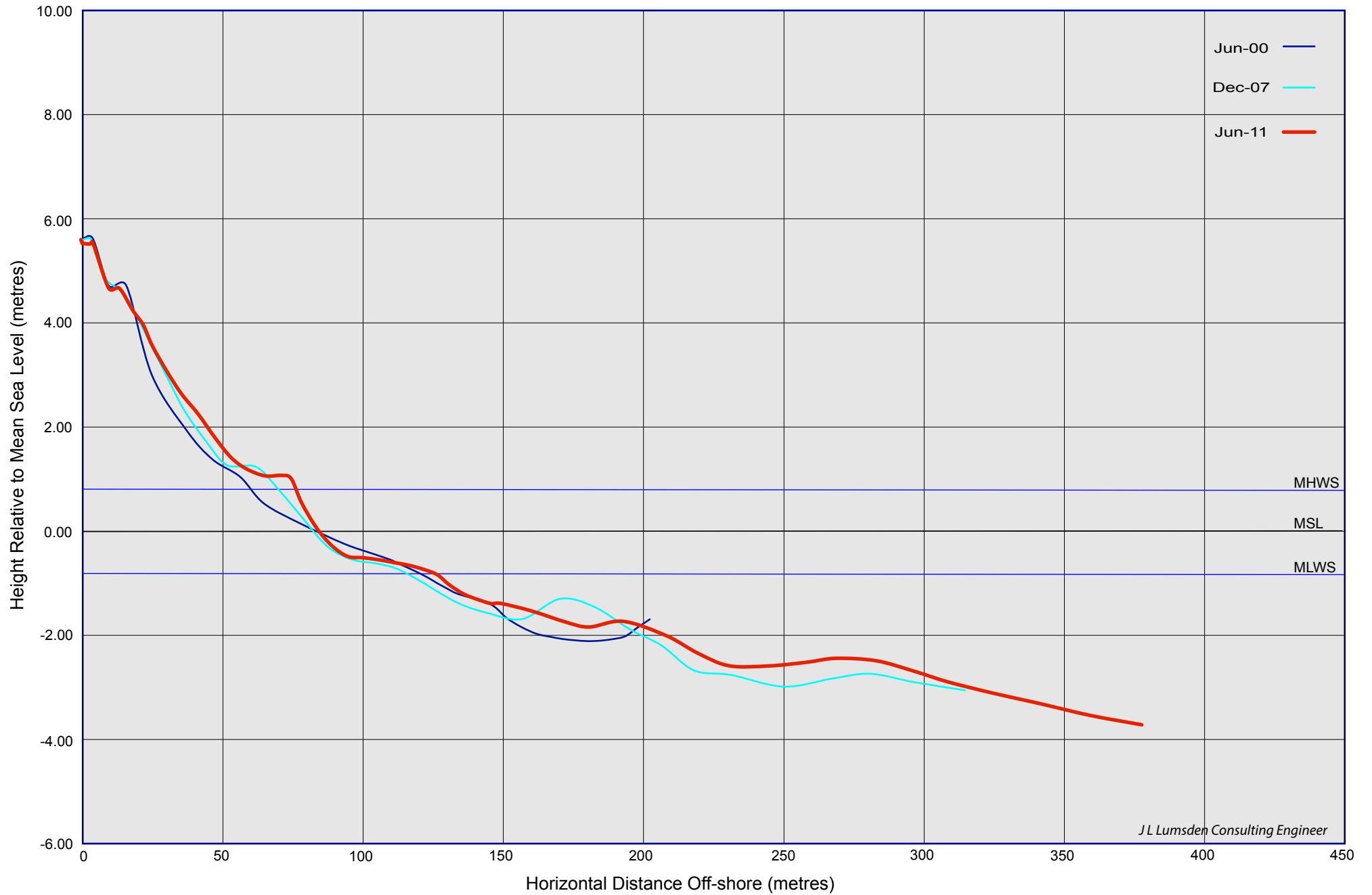
KCDC Profile 430: Sims Road



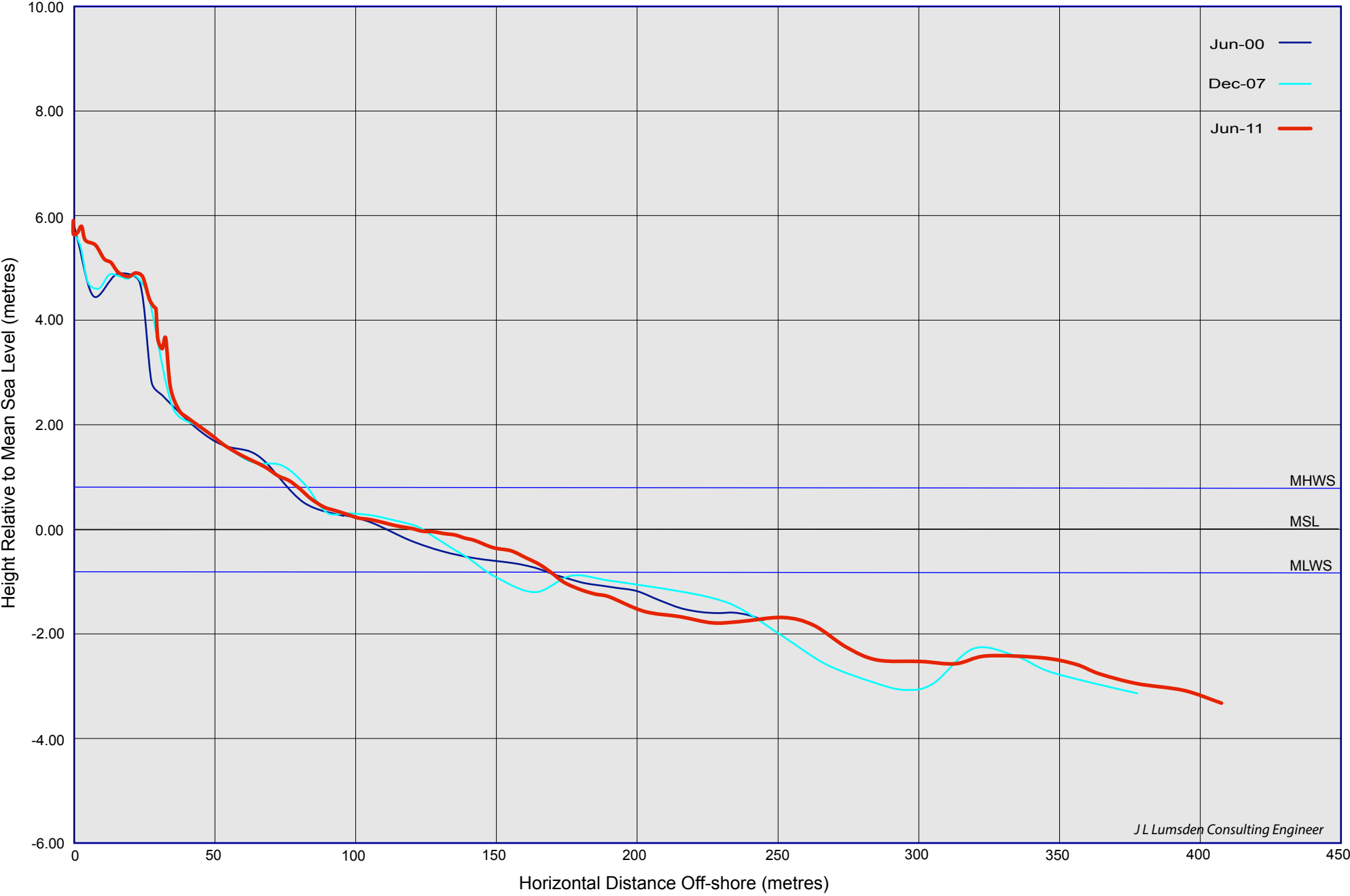
KCDC Profile 440: Te Horo



KCDC Profile 450: South Otaki Beach



KCDC Profile 460: North Otaki Beach



Kapiti Coast District Council

Survey Record Details
June 2011

Kapiti Coast Profile 200 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.85	0.00	5.85	0.00	5.85	0.00	0.00	0.00	0.00	0.00
10.00	1.75	66.77	1.38	66.88	1.34	66.68	-0.03	-0.20	-0.41	-0.09
20.00	0.63	109.32	0.53	105.90	0.55	106.14	0.02	0.24	-0.08	-3.17
30.00	-0.32	140.40	-0.16	136.45	0.06	138.31	0.22	1.85	0.38	-2.10
40.00	-0.97	163.74	-0.42	163.54	-0.29	167.12	0.12	3.58	0.67	3.38
50.00	-1.21	182.58	-0.74	187.82	-0.59	192.81	0.16	4.99	0.62	10.23
60.00	-1.33	199.83	-1.04	208.90	-0.95	215.41	0.09	6.51	0.38	15.58
70.00	-1.56	215.42	-1.60	225.10	-1.33	233.78	0.27	8.68	0.23	18.36
80.00	-1.54	229.99	-1.94	237.31	-1.70	249.01	0.24	11.71	-0.15	19.03
90.00	-1.64	243.94	-2.17	246.57	-1.63	261.82	0.54	15.24	0.02	17.87
100.00	-1.62	257.64	-1.88	256.31	-1.41	276.61	0.47	20.30	0.20	18.97
110.00	-1.40	272.56	-1.70	268.59	-1.20	293.54	0.50	24.96	0.20	20.98
120.00	-1.56	287.76	-1.62	282.15	-1.29	311.24	0.33	29.10	0.27	23.48
130.00	-1.75	301.24	-1.75	295.32	-1.49	327.33	0.25	32.01	0.25	26.09
140.00	-1.91	312.81	-1.93	307.08	-1.70	341.37	0.24	34.29	0.22	28.55
150.00	-2.02	323.15	-2.19	316.43	-1.88	353.43	0.31	37.00	0.14	30.28
160.00	-2.17	332.24	-2.32	323.78	-2.05	363.74	0.27	39.95	0.12	31.49
170.00	-2.37	339.55	-2.35	330.22	-2.22	372.35	0.12	42.12	0.15	32.79
180.00	-2.54	344.97	-2.35	336.97	-2.32	379.52	0.02	42.56	0.22	34.56
190.00	-2.64	348.94	-2.46	342.91	-2.43	385.80	0.03	42.89	0.21	36.87
200.00	-2.62	352.61	-2.59	347.69	-2.56	390.85	0.02	43.17	0.06	38.24
210.00	-2.56	356.61	-2.75	350.99	-2.70	394.55	0.05	43.56	-0.14	37.94
220.00	-2.50	361.35	-2.92	352.59	-2.78	397.06	0.14	44.47	-0.28	35.71
230.00	-2.54	366.16	-2.92	353.38	-2.85	398.89	0.07	45.51	-0.30	32.73
240.00	-2.61	370.41	-2.94	354.14	-2.92	400.06	0.02	45.92	-0.31	29.65
250.00	-2.73	373.73	-3.00	354.44	-3.02	400.32	-0.02	45.88	-0.29	26.59
260.00	-2.90	375.66								
270.00	-3.05	375.83								
280.00										
290.00										
300.00										
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 210 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	3.31	0.00	3.31	0.00	3.31	0.00	0.00	0.00	0.00	0.00
10.00	1.49	50.32	1.44	48.28	1.35	49.36	-0.09	1.09	-0.13	-0.95
20.00	0.81	91.85	0.80	89.36	0.77	89.78	-0.03	0.41	-0.04	-2.07
30.00	0.44	128.73	0.25	124.73	0.30	124.97	0.05	0.24	-0.14	-3.76
40.00	-0.00	161.15	-0.39	154.14	0.07	156.80	0.46	2.67	0.07	-4.35
50.00	-0.71	187.28	-0.62	178.34	-0.48	184.94	0.15	6.61	0.24	-2.34
60.00	-1.07	208.35	-0.92	200.53	-0.74	208.61	0.18	8.08	0.34	0.27
70.00	-1.43	225.84	-1.00	220.86	-0.62	231.74	0.38	10.88	0.80	5.90
80.00	-1.60	240.28	-1.04	240.82	-0.73	255.18	0.30	14.36	0.87	14.90
90.00	-1.36	255.60	-1.24	259.73	-0.91	277.03	0.33	17.30	0.45	21.43
100.00	-1.29	272.59	-1.56	275.73	-1.10	297.08	0.46	21.35	0.20	24.49
110.00	-1.38	289.24	-1.81	288.77	-1.62	313.75	0.19	24.97	-0.25	24.51
120.00	-1.47	305.03	-1.98	299.74	-1.74	326.73	0.24	27.00	-0.28	21.70
130.00	-1.50	320.20	-1.98	309.43	-1.83	338.87	0.15	29.44	-0.33	18.66
140.00	-1.65	334.58	-2.17	318.70	-1.91	350.08	0.25	31.38	-0.27	15.50
150.00	-1.91	346.89	-2.35	326.11	-1.94	360.82	0.41	34.71	-0.03	13.94
160.00	-2.16	356.48	-2.39	332.34	-1.97	371.24	0.42	38.90	0.19	14.77
170.00	-2.31	364.01	-2.34	338.66	-1.98	381.46	0.36	42.80	0.33	17.45
180.00	-2.42	370.27	-2.29	345.51	-2.10	391.06	0.20	45.55	0.33	20.79
190.00	-2.50	375.65	-2.31	352.70	-2.20	399.55	0.11	46.84	0.29	23.89
200.00	-2.55	380.38	-2.47	358.83	-2.31	407.01	0.15	48.17	0.24	26.62
210.00	-2.54	384.88	-2.66	363.23	-2.47	413.08	0.19	49.85	0.08	28.20
220.00	-2.54	389.47	-2.82	365.75	-2.59	417.79	0.23	52.04	-0.05	28.32
230.00	-2.57	393.90	-2.90	367.14	-2.71	421.23	0.18	54.08	-0.14	27.33
240.00	-2.62	397.98	-2.95	367.88	-2.81	423.60	0.14	55.72	-0.19	25.61
250.00	-2.72	401.33	-3.00	368.08	-2.95	424.81	0.06	56.72	-0.22	23.48
260.00	-2.90	403.30								
270.00	-3.04	403.59								
280.00	-3.18	402.48								
290.00										
300.00										
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 220 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	9.76	0.00	9.76	0.00	9.76	0.00	0.00	0.00	0.00	0.00
10.00	6.93	113.47	7.09	115.73	6.04	111.93	-1.05	-3.80	-0.89	-1.54
20.00	4.10	198.61	4.11	201.74	4.23	190.39	0.12	-11.34	0.13	-8.21
30.00	1.13	250.99	0.82	254.91	0.90	246.19	0.08	-8.72	-0.24	-4.81
40.00	0.32	288.04	0.25	290.18	0.24	281.49	-0.01	-8.69	-0.08	-6.55
50.00	-0.15	318.72	-0.32	319.75	-0.19	311.46	0.13	-8.29	-0.04	-7.26
60.00	-0.41	345.87	-0.78	343.78	-0.37	338.37	0.41	-5.41	0.04	-7.50
70.00	-0.59	370.83	-0.88	364.87	-0.43	364.37	0.45	-0.50	0.16	-6.46
80.00	-0.75	394.08	-0.69	387.35	-0.57	389.42	0.12	2.06	0.18	-4.66
90.00	-0.86	416.91	-0.78	409.85	-0.90	411.91	-0.12	2.06	-0.04	-5.00
100.00	-0.96	446.91	-0.87	431.57	-1.06	431.97	-0.18	0.41	-0.10	-14.94
110.00	-1.21	467.56	-1.09	451.81	-0.95	451.87	0.14	0.06	0.25	-15.69
120.00	-1.60	483.38	-1.40	469.33	-1.15	471.87	0.25	2.55	0.45	-11.51
130.00	-1.80	496.33	-1.72	483.75	-1.41	488.88	0.31	5.14	0.40	-7.45
140.00	-1.85	507.77	-2.02	495.06	-1.56	503.94	0.46	8.89	0.28	-3.83
150.00	-1.47	521.03	-2.24	503.56	-1.67	517.79	0.57	14.24	-0.19	-3.24
160.00	-1.32	537.39	-2.53	509.42	-1.66	531.13	0.87	21.71	-0.33	-6.26
170.00	-1.49	553.43	-2.68	513.37	-1.70	544.45	0.98	31.09	-0.21	-8.98
180.00	-1.74	567.37	-2.62	516.63	-1.79	557.12	0.84	40.48	-0.05	-10.25
190.00	-2.04	578.48	-2.43	521.20	-1.96	568.42	0.47	47.22	0.08	-10.06
200.00	-2.31	586.73	-2.19	528.12	-2.15	577.87	0.04	49.74	0.16	-8.87
210.00	-2.53	592.49	-2.14	536.49	-2.36	585.29	-0.23	48.80	0.17	-7.20
220.00	-2.65	596.59	-2.30	544.63	-2.53	590.75	-0.23	46.12	0.12	-5.84
230.00	-2.75	599.64	-2.58	550.29	-2.71	594.62	-0.13	44.33	0.04	-5.02
240.00	-2.82	601.84	-2.90	552.88	-2.84	596.79	0.06	43.91	-0.02	-5.06
250.00	-2.88	603.31			-2.90	597.94			-0.02	-5.37
260.00	-2.91	604.36								
270.00	-2.91	605.27								
280.00	-2.90	606.10								
290.00	-2.87	607.23								
300.00	-2.87	608.51								
310.00	-2.94	609.63								
320.00	-3.13	609.30								
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 230 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.10	0.00	5.10	0.00	5.10	0.00	0.00	0.00	0.00	0.00
10.00	1.66	71.55	2.10	69.85	1.69	72.50	-0.40	2.65	0.04	0.95
20.00	0.86	113.41	0.72	111.85	0.84	114.60	0.12	2.75	-0.02	1.18
30.00	0.24	148.43	0.12	146.00	0.20	149.61	0.08	3.62	-0.04	1.18
40.00	-0.08	179.11	-0.20	175.45	0.10	180.92	0.31	5.47	0.19	1.81
50.00	-0.26	207.31	-0.42	202.32	-0.03	211.45	0.38	9.13	0.22	4.14
60.00	-0.40	234.11	-0.61	227.17	-0.24	240.19	0.37	13.01	0.17	6.07
70.00	-0.59	259.10	-0.72	250.44	-0.63	266.03	0.09	15.59	-0.04	6.93
80.00	-0.75	282.46	-0.86	272.70	-0.94	288.15	-0.08	15.45	-0.20	5.69
90.00	-0.97	304.10	-0.96	293.23	-1.10	307.75	-0.14	14.51	-0.14	3.65
100.00	-1.37	322.43	-1.27	312.05	-0.94	327.29	0.33	15.24	0.44	4.86
110.00	-1.68	336.90	-1.43	328.58	-0.89	348.48	0.53	19.90	0.78	11.58
120.00	-1.70	349.79	-1.63	343.37	-1.40	368.06	0.23	24.69	0.30	18.27
130.00	-1.60	363.24	-1.80	356.09	-1.96	380.40	-0.16	24.31	-0.36	17.16
140.00	-1.41	378.26	-1.94	367.44	-2.13	389.86	-0.18	22.43	-0.72	11.60
150.00	-1.40	394.30	-2.08	377.19	-2.06	398.90	0.01	21.72	-0.67	4.60
160.00	-1.53	409.88	-2.10	386.17	-1.89	409.03	0.21	22.86	-0.36	-0.85
170.00	-1.88	422.84	-1.97	395.82	-1.80	420.83	0.17	25.01	0.08	-2.00
180.00	-2.17	432.44	-1.90	406.46	-1.80	432.84	0.09	26.39	0.37	0.40
190.00	-2.34	439.82	-2.08	416.87	-1.83	444.66	0.24	27.79	0.50	4.84
200.00	-2.37	446.22	-2.34	424.84	-1.99	455.60	0.35	30.76	0.38	9.38
210.00	-2.37	452.47	-2.67	429.71	-2.17	464.85	0.50	35.14	0.21	12.38
220.00	-2.37	458.76	-2.84	432.16	-2.36	472.27	0.49	40.10	0.01	13.50
230.00	-2.37	465.05	-2.92	433.22	-2.55	477.69	0.37	44.47	-0.18	12.63
240.00	-2.43	471.09	-2.98	433.74	-2.71	481.36	0.27	47.62	-0.28	10.28
250.00	-2.55	476.22	-3.00	433.70	-2.82	483.68	0.18	49.98	-0.27	7.46
260.00	-2.69	479.99	-2.92	434.07	-2.91	485.00	0.01	50.93	-0.22	5.01
270.00	-2.85	482.32	-2.88	435.07	-3.00	485.44	-0.12	50.37	-0.15	3.12
280.00	-3.01	482.96	-2.95	435.97						
290.00			-3.01	436.08						
300.00										
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 240 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.78	0.00	5.78	0.00	4.85	0.00	-0.93	0.00	-0.93	0.00
10.00	2.32	75.25	1.85	62.73	1.80	61.00	-0.05	-1.73	-0.51	-14.25
20.00	1.31	122.75	1.03	106.57	0.94	103.78	-0.09	-2.79	-0.36	-18.97
30.00	0.92	163.53	0.67	144.93	0.52	141.18	-0.16	-3.74	-0.40	-22.34
40.00	0.37	199.64	0.33	180.01	0.22	174.45	-0.12	-5.56	-0.15	-25.19
50.00	0.11	231.94	0.01	211.63	0.12	206.14	0.11	-5.49	0.01	-25.80
60.00	-0.08	262.08	-0.19	240.60	0.01	236.83	0.20	-3.77	0.09	-25.24
70.00	-0.22	290.58	-0.39	267.93	-0.16	266.11	0.22	-1.83	0.06	-24.48
80.00	-0.35	317.76	-0.58	292.79	-0.38	293.51	0.20	0.73	-0.03	-24.25
90.00	-0.53	343.39	-0.72	316.48	-0.68	318.59	0.04	2.11	-0.16	-24.81
100.00	-0.68	367.36	-0.78	338.84	-0.99	339.93	-0.21	1.09	-0.31	-27.43
110.00	-0.84	389.75	-0.97	360.50	-1.02	359.66	-0.05	-0.83	-0.18	-30.08
120.00	-1.03	410.45	-1.45	378.57	-0.94	379.75	0.50	1.18	0.08	-30.70
130.00	-1.30	429.00	-1.65	393.08	-0.96	400.58	0.68	7.50	0.34	-28.42
140.00	-1.62	444.13	-1.74	406.13	-1.22	419.19	0.52	13.06	0.40	-24.95
150.00	-1.62	457.66	-1.79	418.40	-1.29	436.66	0.50	18.25	0.33	-21.00
160.00	-1.44	472.34	-1.77	430.63	-1.36	453.40	0.41	22.77	0.08	-18.94
170.00	-1.53	487.26	-1.75	442.98	-1.47	469.24	0.28	26.26	0.06	-18.02
180.00	-1.58	501.89	-1.57	456.35	-1.70	483.55	-0.13	27.20	-0.12	-18.35
190.00	-1.66	515.69	-1.76	469.72	-1.93	495.24	-0.17	25.52	-0.27	-20.46
200.00	-1.75	528.65	-2.04	480.90	-2.05	505.32	-0.01	24.42	-0.30	-23.33
210.00	-1.86	540.60	-2.39	488.79	-2.16	514.23	0.22	25.44	-0.30	-26.38
220.00	-1.96	551.49	-2.67	493.24	-2.30	522.00	0.37	28.76	-0.34	-29.49
230.00	-2.03	561.54	-2.81	495.93	-2.44	528.10	0.36	32.17	-0.41	-33.44
240.00	-2.19	570.30	-2.85	497.32	-2.43	533.75	0.43	36.43	-0.24	-36.56
250.00	-2.28	577.96	-2.83	498.80	-2.44	539.49	0.39	40.69	-0.16	-38.48
260.00	-2.37	584.72	-2.71	501.13	-2.50	544.78	0.21	43.65	-0.13	-39.95
270.00	-2.45	590.64	-2.66	504.35	-2.60	549.07	0.06	44.71	-0.15	-41.57
280.00	-2.54	595.69	-2.60	508.05	-2.49	553.98	0.10	45.93	0.04	-41.72
290.00	-2.62	599.94	-2.62	512.14	-2.81	557.21	-0.19	45.06	-0.19	-42.74
300.00	-2.71	603.34	-2.73	515.48	-2.91	558.61	-0.18	43.13	-0.20	-44.73
310.00	-2.84	605.66	-2.88	517.40	-3.03	558.89	-0.15	41.48	-0.19	-46.77
320.00	-3.01	606.45	-3.02	517.92	-3.13	558.06	-0.12	40.14	-0.12	-48.39
330.00	-3.17	605.55			-3.23	556.24				
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 250 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	2.43	0.00	2.43	0.00	2.43	0.00	0.00	0.00	0.00	0.00
10.00	0.55	41.39	0.44	41.15	0.47	40.72	0.03	-0.44	-0.08	-0.67
20.00	0.18	74.42	0.03	73.11	0.17	73.91	0.14	0.80	-0.02	-0.52
30.00	-0.04	105.13	-0.21	102.19	-0.12	104.09	0.09	1.90	-0.08	-1.04
40.00	-0.28	133.47	-0.39	129.22	-0.33	131.79	0.06	2.57	-0.05	-1.68
50.00	-0.48	159.69	-0.43	155.09	-0.43	157.91	0.00	2.82	0.05	-1.78
60.00	-0.64	184.11	-0.74	179.41	-0.63	182.54	0.12	3.13	0.01	-1.57
70.00	-0.78	207.04	-1.05	200.37	-0.60	206.36	0.45	5.99	0.18	-0.68
80.00	-0.87	228.61	-1.25	218.72	-0.71	229.98	0.54	11.26	0.16	1.37
90.00	-1.05	249.12	-1.33	235.67	-0.97	251.84	0.36	16.17	0.07	2.71
100.00	-1.31	267.37	-1.34	252.30	-1.12	270.85	0.22	18.56	0.19	3.48
110.00	-1.48	283.06	-1.31	268.98	-1.14	289.56	0.17	20.57	0.35	6.49
120.00	-1.41	298.75	-1.30	286.08	-1.15	308.15	0.16	22.07	0.26	9.40
130.00	-1.48	314.33	-1.65	301.32	-1.24	326.34	0.40	25.02	0.24	12.01
140.00	-1.51	329.32	-2.00	313.13	-1.46	343.00	0.54	29.87	0.05	13.68
150.00	-1.37	344.82	-2.37	321.31	-1.69	357.13	0.67	35.82	-0.32	12.31
160.00	-1.32	361.47	-2.62	326.25	-1.88	369.29	0.74	43.04	-0.56	7.82
170.00	-1.62	376.71	-2.67	329.52	-2.00	379.77	0.67	50.26	-0.38	3.06
180.00	-1.84	389.28	-2.63	332.95	-2.07	389.36	0.56	56.41	-0.24	0.08
190.00	-1.90	400.62	-2.36	337.84	-2.10	398.47	0.25	60.63	-0.21	-2.14
200.00	-1.95	411.30	-2.14	345.74	-2.13	407.29	0.01	61.54	-0.18	-4.01
210.00	-1.96	421.83	-2.22	353.96	-2.15	415.91	0.07	61.95	-0.19	-5.92
220.00	-2.05	431.85	-2.32	361.30	-2.18	424.29	0.14	62.98	-0.13	-7.57
230.00	-2.15	440.89	-2.48	367.40	-2.35	431.74	0.13	64.35	-0.21	-9.15
240.00	-2.27	448.83	-2.60	371.81	-2.49	437.36	0.11	65.55	-0.22	-11.47
250.00	-2.43	455.29	-2.68	375.43	-2.62	441.88	0.06	66.46	-0.19	-13.41
260.00	-2.55	460.39	-2.82	377.98	-2.77	444.92	0.05	66.94	-0.23	-15.48
270.00	-2.67	464.32	-3.05	378.75	-2.86	446.74	0.19	67.99	-0.19	-17.58
280.00	-2.83	466.82			-2.97	447.65			-0.14	-19.18
290.00	-2.93	467.92								
300.00	-3.05	467.96								
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 260 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	2.40	0.00	2.40	0.00	2.40	0.00	0.00	0.00	0.00	0.00
10.00	0.12	37.07	0.88	42.62	0.23	37.10	-0.65	-5.53	0.11	0.02
20.00	-0.01	67.59	0.32	78.62	0.09	68.51	-0.23	-10.10	0.09	0.93
30.00	-0.27	96.23	-0.20	108.82	-0.08	98.57	0.13	-10.25	0.19	2.35
40.00	-0.46	122.60	-0.23	136.66	-0.29	126.67	-0.07	-9.99	0.17	4.07
50.00	-0.64	147.08	-0.30	164.17	-0.48	152.62	-0.18	-11.55	0.16	5.54
60.00	-0.78	170.02	-0.39	190.69	-0.46	178.36	-0.07	-12.33	0.32	8.34
70.00	-0.92	191.52	-0.47	216.44	-0.73	202.37	-0.26	-14.08	0.18	10.84
80.00	-1.12	211.54	-0.66	240.79	-1.09	223.28	-0.43	-17.51	0.03	11.74
90.00	-1.28	229.34	-0.81	263.36	-1.25	241.57	-0.44	-21.79	0.03	12.22
100.00	-1.12	247.32	-0.94	284.60	-1.41	258.24	-0.47	-26.35	-0.30	10.93
110.00	-1.19	266.16	-1.07	304.54	-1.57	273.32	-0.50	-31.22	-0.38	7.15
120.00	-1.69	281.93	-1.19	323.20	-1.79	286.71	-0.60	-36.50	-0.10	4.78
130.00	-1.98	293.29	-1.35	340.53	-2.15	296.99	-0.81	-43.54	-0.18	3.70
140.00	-2.05	302.94	-1.48	356.28	-2.02	306.01	-0.54	-50.27	0.03	3.06
150.00	-1.92	312.96	-1.40	371.90	-1.87	316.60	-0.47	-55.29	0.06	3.64
160.00	-1.88	324.12	-1.30	388.38	-1.63	328.89	-0.33	-59.49	0.25	4.77
170.00	-1.93	335.05	-1.30	405.67	-1.56	343.73	-0.26	-61.94	0.38	8.68
180.00	-1.81	346.13	-1.46	421.87	-1.88	356.43	-0.42	-65.44	-0.07	10.30
190.00	-1.77	358.45	-1.76	435.76	-2.06	366.74	-0.30	-69.03	-0.29	8.29
200.00	-1.98	369.84	-2.17	446.20	-2.20	375.43	-0.03	-70.77	-0.23	5.59
210.00	-2.19	379.01	-2.58	452.29	-2.42	382.35	0.16	-69.94	-0.23	3.34
220.00	-2.35	386.31	-2.74	455.67	-2.63	387.12	0.12	-68.55	-0.27	0.81
230.00	-2.47	392.14	-2.84	457.75	-2.76	390.17	0.08	-67.57	-0.29	-1.97
240.00	-2.58	396.90	-2.81	459.42	-2.85	392.02	-0.04	-67.39	-0.27	-4.88
250.00	-2.75	400.24	-2.79	461.44	-2.90	393.33	-0.11	-68.10	-0.15	-6.91
260.00	-2.85	402.17	-2.84	463.31	-2.99	393.89	-0.15	-69.42	-0.14	-8.28
270.00	-2.87	403.53	-2.71	465.57	-3.02	393.85	-0.31	-71.72	-0.15	-9.68
280.00	-2.86	404.92	-2.70	468.73	-3.02	393.58	-0.32	-75.15	-0.17	-11.34
290.00	-2.89	406.26	-2.73	471.55	-3.02	393.43	-0.29	-78.12	-0.13	-12.83
300.00	-2.93	407.20	-2.74	474.23	-3.07	392.96	-0.34	-81.27	-0.14	-14.24
310.00	-3.03	407.46	-2.78	476.65	-3.19	391.67	-0.40	-84.98	-0.15	-15.80
320.00			-2.90	478.37	-3.26	389.43	-0.36	-88.94		
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 270 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	2.33	0.00	2.33	0.00	2.33	0.00	0.00	0.00	0.00	0.00
10.00	0.42	37.61	0.69	39.04	0.68	39.52	-0.00	0.47	0.26	1.91
20.00	0.17	70.25	0.48	74.99	0.32	73.92	-0.16	-1.07	0.15	3.67
30.00	-0.04	100.89	-0.02	107.57	0.18	106.52	0.19	-1.05	0.22	5.64
40.00	-0.28	129.32	-0.41	134.84	-0.00	137.39	0.41	2.55	0.28	8.08
50.00	-0.55	155.15	-0.46	160.51	-0.20	166.36	0.26	5.85	0.34	11.21
60.00	-0.72	178.71	-0.55	185.44	-0.33	193.73	0.22	8.28	0.39	15.02
70.00	-0.83	200.97	-0.69	209.33	-0.51	219.57	0.18	10.24	0.31	18.60
80.00	-0.81	222.75	-0.79	232.01	-0.80	243.15	-0.01	11.14	0.01	20.40
90.00	-0.81	244.82	-0.91	253.26	-1.07	263.63	-0.16	10.37	-0.26	18.81
100.00	-0.92	266.19	-0.92	274.14	-1.12	282.70	-0.20	8.56	-0.20	16.51
110.00	-1.10	286.33	-1.25	293.47	-1.17	301.26	0.08	7.79	-0.07	14.93
120.00	-1.49	303.45	-1.50	309.66	-1.22	319.30	0.28	9.64	0.27	15.85
130.00	-1.80	316.85	-1.67	323.67	-1.27	336.83	0.40	13.16	0.53	19.98
140.00	-1.72	328.99	-1.74	336.40	-1.32	353.84	0.42	17.44	0.40	24.85
150.00	-1.70	342.07	-1.70	349.20	-1.38	370.33	0.32	21.13	0.32	28.26
160.00	-1.71	354.89	-1.64	362.51	-1.43	386.31	0.21	23.79	0.28	31.42
170.00	-1.58	368.44	-1.63	376.23	-1.53	401.72	0.10	25.49	0.05	33.27
180.00	-1.77	382.20	-1.81	389.45	-1.80	415.09	0.01	25.64	-0.02	32.89
190.00	-2.20	392.22	-2.19	399.69	-2.01	435.19	0.18	35.50	0.18	42.97
200.00	-2.31	399.36	-2.71	404.77	-2.21	451.69	0.50	46.91	0.10	52.32
210.00	-2.29	406.29	-2.89	406.44	-2.36	458.81	0.52	52.37	-0.07	52.52
220.00	-2.27	413.50	-2.95	407.27	-2.43	464.76	0.51	57.49	-0.16	51.26
230.00	-2.25	420.92	-3.00	407.56	-2.50	470.06	0.49	62.50	-0.25	49.14
240.00	-2.33	428.05			-2.57	474.72			-0.24	46.67
250.00	-2.49	433.95			-2.61	478.81			-0.12	44.86
260.00	-2.61	438.40			-2.67	482.41				
270.00	-2.76	441.61								
280.00	-2.92	443.17								
290.00	-3.04	443.32								
300.00	-3.13	442.43								
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 280 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	2.82	11.21	2.89	11.30	2.93	11.26	0.04	-0.04	0.11	0.05
10.00	1.14	53.80	0.83	52.44	1.10	54.40	0.27	1.96	-0.04	0.60
20.00	0.68	93.12	0.48	88.83	0.79	93.80	0.31	4.97	0.11	0.67
30.00	0.37	128.11	0.29	122.65	0.48	130.17	0.19	7.52	0.11	2.06
40.00	0.16	160.64	0.02	154.14	0.20	163.54	0.19	9.40	0.04	2.90
50.00	0.01	191.52	-0.10	183.69	-0.01	194.50	0.09	10.81	-0.02	2.98
60.00	-0.13	220.84	-0.23	212.10	-0.20	223.36	0.03	11.27	-0.07	2.52
70.00	-0.25	248.89	-0.35	238.85	-0.36	250.57	-0.00	11.72	-0.11	1.68
80.00	-0.36	275.83	-0.50	265.03	-0.51	276.23	-0.01	11.19	-0.15	0.40
90.00	-0.46	301.71	-0.82	288.55	-0.66	300.36	0.17	11.81	-0.19	-1.35
100.00	-0.65	326.14	-1.19	308.04	-0.75	323.33	0.44	15.29	-0.10	-2.80
110.00	-0.81	348.75	-1.30	325.77	-1.02	344.92	0.28	19.14	-0.20	-3.83
120.00	-1.19	369.02	-1.42	342.08	-1.45	362.55	-0.02	20.47	-0.26	-6.47
130.00	-1.45	385.29	-1.44	357.53	-1.77	376.43	-0.33	18.91	-0.33	-8.85
140.00	-1.23	401.70	-1.34	373.64	-1.56	389.36	-0.23	15.72	-0.34	-12.34
150.00	-1.14	420.09	-1.33	390.34	-1.37	405.02	-0.04	14.67	-0.23	-15.08
160.00	-1.15	438.66	-1.35	407.04	-1.35	421.43	0.00	14.39	-0.20	-17.23
170.00	-1.22	456.92	-1.47	423.14	-1.53	437.13	-0.06	14.00	-0.31	-19.78
180.00	-1.43	474.02	-1.84	436.57	-1.72	450.88	0.12	14.31	-0.30	-23.14
190.00	-1.89	487.41	-2.12	446.79	-1.92	462.66	0.20	15.87	-0.03	-24.75
200.00	-2.18	496.81	-2.33	454.32	-2.11	472.50	0.22	18.18	0.06	-24.31
210.00	-2.23	504.66	-2.32	461.06	-2.22	480.59	0.10	19.53	0.01	-24.07
220.00	-2.19	512.44	-2.28	468.03	-2.23	488.34	0.05	20.31	-0.04	-24.10
230.00	-2.12	520.86	-2.24	475.43	-2.24	495.99	0.00	20.56	-0.12	-24.88
240.00	-2.03	530.13	-2.25	482.96	-2.25	503.53	-0.00	20.57	-0.23	-26.60
250.00	-1.98	540.21	-2.27	490.43	-2.32	510.69	-0.05	20.27	-0.34	-29.52
260.00	-2.10	549.94	-2.35	497.33	-2.38	517.12	-0.03	19.79	-0.29	-32.82
270.00	-2.26	558.13	-2.47	503.30	-2.44	523.04	0.03	19.74	-0.18	-35.09
280.00	-2.33	565.17	-2.63	507.81	-2.52	528.24	0.10	20.43	-0.19	-36.93
290.00	-2.45	571.34	-2.77	510.81	-2.60	532.61	0.16	21.80	-0.15	-38.73
300.00	-2.58	576.13	-2.89	512.53	-2.69	536.13	0.20	23.60	-0.11	-40.00
310.00	-2.68	579.86	-2.98	513.15	-2.78	538.79	0.21	25.64	-0.09	-41.07
320.00	-2.77	582.56	-3.06	512.95	-2.86	540.62	0.20	27.66	-0.09	-41.94
330.00	-2.81	584.69			-2.94	541.62			-0.13	-43.07
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 290 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.73	24.74	4.65	24.70	4.63	24.63	-0.02	-0.07	-0.10	-0.11
10.00	1.77	96.60	3.32	98.78	3.43	99.21	0.11	0.43	1.66	2.62
20.00	1.33	141.59	1.22	150.12	1.29	150.32	0.07	0.20	-0.03	8.73
30.00	1.01	183.48	0.75	189.96	0.81	190.50	0.06	0.54	-0.20	7.03
40.00	0.62	221.60	0.39	225.57	0.52	227.12	0.12	1.55	-0.10	5.53
50.00	0.32	256.08	0.48	259.39	0.25	260.87	-0.22	1.47	-0.07	4.78
60.00	0.15	288.37	0.08	292.39	0.03	292.26	-0.04	-0.13	-0.11	3.89
70.00	0.01	319.09	-0.41	320.19	-0.16	321.64	0.26	1.45	-0.16	2.54
80.00	-0.12	348.53	-0.50	345.37	-0.32	349.21	0.17	3.84	-0.21	0.68
90.00	-0.25	376.70	-0.35	371.36	-0.44	375.38	-0.09	4.03	-0.19	-1.32
100.00	-0.36	403.64	-0.38	397.63	-0.50	400.56	-0.13	2.93	-0.14	-3.08
110.00	-0.53	429.21	-0.54	423.18	-0.58	425.20	-0.04	2.02	-0.05	-4.01
120.00	-0.78	452.70	-0.76	446.82	-0.89	447.83	-0.13	1.01	-0.11	-4.87
130.00	-1.06	473.65	-1.16	467.20	-1.21	467.31	-0.05	0.11	-0.15	-6.34
140.00	-1.39	490.99	-1.44	483.94	-1.41	484.08	0.03	0.14	-0.03	-6.91
150.00	-1.44	507.00	-1.62	498.67	-1.58	499.12	0.04	0.44	-0.14	-7.88
160.00	-1.39	522.99	-1.65	511.91	-1.46	513.66	0.19	1.74	-0.07	-9.33
170.00	-1.24	539.89	-1.48	526.28	-1.35	529.80	0.13	3.52	-0.10	-10.09
180.00	-1.22	557.57	-1.37	542.07	-1.31	546.49	0.05	4.42	-0.10	-11.08
190.00	-1.25	575.13	-1.26	558.95	-1.44	562.91	-0.18	3.96	-0.19	-12.23
200.00	-1.43	592.03	-1.53	575.02	-1.63	577.62	-0.10	2.60	-0.19	-14.40
210.00	-1.72	606.18	-1.78	588.41	-1.83	590.33	-0.04	1.92	-0.11	-15.85
220.00	-1.96	617.60	-1.97	599.55	-1.97	601.34	0.01	1.79	-0.01	-16.26
230.00	-2.09	627.27	-2.07	609.16	-2.08	611.03	-0.01	1.87	0.01	-16.24
240.00	-2.10	636.33	-2.07	618.43	-2.16	619.84	-0.08	1.42	-0.06	-16.49
250.00	-2.08	645.44	-2.11	627.49	-2.17	628.14	-0.06	0.65	-0.09	-17.30
260.00	-2.02	654.91	-2.12	636.41	-2.17	636.46	-0.06	0.06	-0.15	-18.45
270.00	-1.96	664.96	-2.15	645.08	-2.23	644.47	-0.08	-0.61	-0.26	-20.49
280.00	-1.93	675.51	-2.19	653.41	-2.29	651.89	-0.10	-1.53	-0.36	-23.62
290.00	-1.91	686.29	-2.24	661.25	-2.35	658.64	-0.11	-2.61	-0.44	-27.65
300.00	-1.93	697.09	-2.30	668.51	-2.39	664.86	-0.08	-3.66	-0.45	-32.23
310.00	-1.97	707.59	-2.36	675.19	-2.45	670.87	-0.10	-4.33	-0.48	-36.72
320.00	-2.09	717.36	-2.43	681.29	-2.60	675.44	-0.18	-5.86	-0.51	-41.92
330.00	-2.16	726.09	-2.50	686.65	-2.55	679.69	-0.05	-6.96	-0.39	-46.41
340.00	-2.26	734.01	-2.58	691.23	-2.62	684.12	-0.04	-7.11	-0.36	-49.90
350.00	-2.36	740.87	-2.63	695.18	-2.78	687.11	-0.15	-8.06	-0.41	-53.76
360.00	-2.48	746.67	-2.84	697.14	-2.87	688.89	-0.03	-8.25	-0.39	-57.78
370.00	-2.55	751.52	-2.89	698.68	-2.92	689.89	-0.03	-8.79	-0.37	-61.63
380.00	-2.58	755.87	-3.07	698.90	-2.94	690.61	0.13	-8.28	-0.36	-65.26
390.00	-2.65	759.68			-2.98	691.01			-0.33	-68.67
400.00	-2.68	762.96			-3.01	691.06			-0.32	-71.89

Kapiti Coast Profile 300 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.83	0.00	4.83	0.00	4.83	0.00	0.00	0.00	0.00	0.00
10.00	3.94	70.93	3.99	71.49	4.03	71.93	0.04	0.44	0.10	1.00
20.00	2.64	138.04	3.91	140.53	3.85	140.39	-0.07	-0.14	1.20	2.34
30.00	1.51	186.50	1.80	195.54	2.06	200.36	0.26	4.82	0.55	13.86
40.00	1.22	229.81	1.43	241.12	1.74	249.89	0.32	8.77	0.53	20.08
50.00	0.97	270.97	1.12	284.04	1.50	296.05	0.38	12.01	0.53	25.07
60.00	0.52	308.40	0.77	323.41	1.21	339.78	0.44	16.37	0.70	31.38
70.00	0.27	342.30	0.52	359.72	0.85	379.93	0.33	20.21	0.58	37.63
80.00	0.12	374.17	0.35	394.03	0.60	417.04	0.25	23.01	0.48	42.87
90.00	-0.01	404.69	0.08	425.96	0.43	452.14	0.36	26.18	0.44	47.45
100.00	-0.11	434.06	0.17	456.89	0.31	485.84	0.14	28.95	0.42	51.78
110.00	-0.21	462.42	-0.00	487.75	0.15	518.15	0.15	30.41	0.36	55.73
120.00	-0.31	489.84	-0.27	516.56	-0.02	548.75	0.24	32.20	0.28	58.92
130.00	-0.39	516.35	-0.60	542.15	-0.19	577.66	0.40	35.51	0.20	61.31
140.00	-0.54	541.90	-0.83	564.87	-0.32	605.05	0.51	40.18	0.22	63.14
150.00	-0.75	565.44	-1.00	585.73	-0.46	631.18	0.54	45.45	0.29	65.74
160.00	-1.02	586.81	-1.02	605.69	-0.58	655.96	0.44	50.27	0.44	69.15
170.00	-1.40	604.51	-0.95	625.70	-0.62	679.86	0.33	54.16	0.77	75.35
180.00	-1.52	619.79	-0.87	646.76	-0.69	703.47	0.18	56.70	0.82	83.67
190.00	-1.49	634.64	-1.01	667.64	-1.02	725.03	-0.01	57.38	0.47	90.39
200.00	-1.31	650.49	-1.41	685.28	-1.35	743.30	0.06	58.02	-0.04	92.81
210.00	-1.21	668.15	-1.69	699.79	-1.62	758.31	0.07	58.52	-0.41	90.16
220.00	-1.26	685.75	-1.67	713.00	-1.78	771.12	-0.10	58.12	-0.52	85.37
230.00	-1.34	702.92	-1.72	726.13	-1.66	783.51	0.05	57.38	-0.32	80.60
240.00	-1.63	718.29	-1.79	738.59	-1.39	798.24	0.40	59.65	0.24	79.95
250.00	-1.90	730.49	-1.71	750.94	-1.27	815.31	0.44	64.38	0.63	84.83
260.00	-2.03	740.69	-1.66	764.23	-1.37	832.27	0.29	68.04	0.66	91.58
270.00	-2.03	750.26	-1.72	777.29	-1.56	847.60	0.16	70.31	0.47	97.34
280.00	-1.96	760.23	-1.82	789.66	-1.76	861.00	0.06	71.34	0.20	100.77
290.00	-1.95	770.68	-1.93	800.92	-1.96	872.38	-0.03	71.47	-0.01	101.70
300.00	-1.96	781.20	-2.06	810.97	-2.11	881.85	-0.05	70.87	-0.15	100.65
310.00	-1.96	791.60	-2.18	819.79	-2.15	890.56	0.03	70.76	-0.19	98.96
320.00	-2.02	801.73	-2.27	827.56	-2.16	899.01	0.11	71.45	-0.14	97.28
330.00	-2.08	811.24	-2.33	834.47	-2.17	907.39	0.17	72.92	-0.08	96.15
340.00	-2.19	819.88	-2.36	840.97	-2.21	915.52	0.15	74.55	-0.02	95.64
350.00	-2.30	827.44	-2.47	846.80	-2.24	923.19	0.24	76.39	0.06	95.75
360.00	-2.39	833.98	-2.55	851.63	-2.24	930.85	0.31	79.22	0.15	96.88
370.00	-2.50	839.57	-2.63	855.75	-2.29	938.20	0.34	82.45	0.21	98.63
380.00	-2.57	844.10	-2.74	858.88	-2.34	945.07	0.41	86.18	0.23	100.96
390.00	-2.63	848.10	-2.84	860.91	-2.42	951.28			0.21	103.17
400.00	-2.72	851.40	-2.89	862.26	-2.51	956.60			0.21	105.20

Kapiti Coast Profile 310 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.68	0.00	4.68	0.00	4.68	0.00	0.00	0.00	0.00	0.00
10.00	3.24	72.19	3.37	72.90	3.24	72.86	-0.13	-0.04	0.01	0.67
20.00	2.74	131.07	2.76	131.64	2.84	132.10	0.08	0.46	0.10	1.02
30.00	3.29	191.15	3.06	191.13	3.21	192.16	0.14	1.03	-0.09	1.01
40.00	2.29	251.28	3.42	253.68	3.51	256.18	0.09	2.50	1.22	4.90
50.00	1.96	302.31	2.44	313.79	2.55	316.32	0.11	2.53	0.59	14.01
60.00	1.81	351.14	2.27	367.79	2.35	371.16	0.08	3.37	0.54	20.02
70.00	1.66	398.46	2.20	420.35	2.53	429.89	0.33	9.55	0.87	31.43
80.00	1.47	444.17	1.60	469.54	1.78	481.26	0.18	11.72	0.31	37.09
90.00	1.26	487.77	1.23	513.68	1.55	528.73	0.32	15.05	0.29	40.97
100.00	1.12	529.67	0.86	554.10	1.29	573.07	0.43	18.97	0.17	43.40
110.00	0.91	569.94	0.57	591.05	0.98	614.35	0.42	23.30	0.08	44.41
120.00	0.67	607.81	0.45	625.98	0.71	652.84	0.26	26.85	0.04	45.03
130.00	0.46	643.39	0.16	659.38	0.55	689.12	0.39	29.75	0.09	45.73
140.00	0.29	677.14	-0.03	689.94	0.37	723.91	0.40	33.97	0.08	46.78
150.00	0.19	709.46	0.15	720.82	0.02	755.88	-0.13	35.06	-0.16	46.41
160.00	0.10	740.89	0.05	751.96	-0.04	785.60	-0.09	33.64	-0.14	44.71
170.00	-0.05	771.20	-0.30	781.06	-0.02	815.33	0.27	34.27	0.02	44.13
180.00	-0.08	800.33	-0.61	806.45	-0.06	845.01	0.56	38.56	0.02	44.67
190.00	-0.13	829.50	-0.89	828.76	-0.27	873.60	0.62	44.84	-0.14	44.11
200.00	-0.38	857.01	-1.03	849.11	-0.69	898.73	0.34	49.62	-0.30	41.72
210.00	-0.81	880.81	-0.80	869.48	-0.91	920.61	-0.11	51.12	-0.10	39.80
220.00	-0.79	902.03	-0.61	892.82	-0.93	941.02	-0.32	48.20	-0.14	38.99
230.00	-0.67	924.98	-0.65	916.74	-0.73	963.12	-0.09	46.38	-0.06	38.13
240.00	-0.84	947.45	-0.94	938.85	-0.93	984.76	0.00	45.91	-0.10	37.32
250.00	-0.92	968.55	-1.25	957.93	-1.12	1004.68	0.13	46.75	-0.20	36.12
260.00	-1.09	988.57	-1.60	973.63	-1.10	1023.18	0.50	49.54	-0.01	34.60
270.00	-1.49	1005.67	-1.81	986.63	-0.82	1044.02	0.99	57.39	0.67	38.35
280.00	-1.72	1019.48	-1.69	999.05	-1.10	1064.72	0.59	65.67	0.61	45.24
290.00	-1.77	1031.51	-1.56	1012.79	-1.64	1081.39	-0.08	68.60	0.13	49.88
300.00	-1.65	1044.67	-1.42	1027.64	-1.82	1093.75	-0.41	66.10	-0.18	49.08
310.00	-1.59	1058.43	-1.22	1044.76	-1.83	1105.21	-0.61	60.45	-0.24	46.78
320.00	-1.49	1072.92	-1.43	1061.50	-1.71	1117.50	-0.28	56.00	-0.22	44.58
330.00	-1.69	1087.51	-1.71	1075.96	-1.60	1130.96	0.11	55.01	0.10	43.46
340.00	-2.08	1098.41	-2.02	1087.32	-1.71	1144.43	0.31	57.11	0.37	46.02
350.00	-2.20	1106.87	-2.29	1095.76	-1.83	1156.72	0.46	60.96	0.37	49.84
360.00	-2.18	1114.90	-2.37	1102.00	-2.01	1167.52	0.36	65.52	0.17	52.62
370.00	-2.08	1123.49	-2.27	1108.80	-2.09	1176.96	0.17	68.16	-0.01	53.47
380.00	-1.86	1133.76	-2.14	1116.76	-2.17	1185.64	-0.03	68.88	-0.32	51.89
390.00	-2.00	1144.72	-2.11	1125.61	-2.29	1193.39	-0.18	67.78	-0.30	48.67
400.00	-2.31	1153.24	-2.17	1134.40	-2.45	1199.67	-0.28	65.28	-0.14	46.44

Kapiti Coast Profile 320 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.42	0.00	4.42	0.00	4.42	0.00	0.00	0.00	0.00	0.00
10.00	3.78	74.03	3.99	74.06	3.91	74.83	-0.08	0.76	0.13	0.80
20.00	3.22	136.79	3.17	137.86	3.21	139.86	0.05	2.01	-0.01	3.07
30.00	2.96	198.68	2.78	198.24	2.82	201.08	0.05	2.84	-0.14	2.40
40.00	2.66	256.25	2.74	255.42	2.90	259.44	0.16	4.02	0.24	3.19
50.00	2.46	312.26	2.58	312.99	2.70	318.43	0.11	5.44	0.24	6.17
60.00	1.90	364.10	2.42	368.81	2.46	375.44	0.03	6.64	0.55	11.35
70.00	1.77	412.40	2.24	421.12	2.84	432.28	0.61	11.16	1.07	19.88
80.00	1.64	459.50	1.35	468.93	1.74	482.28	0.39	13.36	0.10	22.79
90.00	1.51	505.26	1.16	511.61	1.55	528.37	0.38	16.76	0.03	23.11
100.00	1.32	549.54	0.91	551.96	1.24	572.44	0.33	20.48	-0.08	22.90
110.00	1.12	591.64	0.69	589.89	0.93	613.27	0.23	23.38	-0.19	21.63
120.00	0.95	632.05	0.53	626.00	0.68	651.23	0.14	25.23	-0.27	19.18
130.00	0.67	670.29	0.29	660.39	0.55	687.32	0.26	26.93	-0.13	17.03
140.00	0.41	705.60	0.23	692.40	0.41	722.11	0.18	29.72	0.01	16.52
150.00	0.21	738.58	0.20	724.72	0.31	755.74	0.12	31.02	0.10	17.17
160.00	0.06	769.90	-0.14	755.09	0.22	788.64	0.36	33.54	0.16	18.74
170.00	-0.05	799.99	-0.40	782.33	-0.08	819.44	0.31	37.12	-0.04	19.46
180.00	-0.12	829.15	-0.47	807.73	-0.31	847.29	0.16	39.56	-0.19	18.15
190.00	-0.20	857.56	-0.33	833.55	-0.22	874.66	0.11	41.11	-0.02	17.09
200.00	-0.39	884.74	-0.48	859.62	-0.26	902.34	0.22	42.72	0.12	17.60
210.00	-0.50	910.23	-0.67	883.88	-0.37	929.17	0.29	45.29	0.12	18.94
220.00	-0.52	935.01	-0.84	906.28	-0.66	954.05	0.18	47.77	-0.14	19.05
230.00	-0.47	960.19	-0.85	927.41	-0.90	976.23	-0.05	48.82	-0.43	16.04
240.00	-0.67	984.78	-0.65	950.17	-0.99	996.50	-0.35	46.34	-0.32	11.72
250.00	-0.90	1006.92	-0.72	973.72	-0.92	1017.20	-0.20	43.48	-0.01	10.28
260.00	-1.03	1027.16	-1.02	995.20	-1.04	1037.54	-0.03	42.34	-0.02	10.38
270.00	-1.05	1046.70	-1.33	1013.37	-1.14	1056.34	0.19	42.97	-0.09	9.64
280.00	-1.00	1066.39	-1.52	1029.00	-0.92	1075.76	0.61	46.76	0.09	9.37
290.00	-0.97	1086.60	-1.76	1042.60	-1.04	1096.39	0.72	53.79	-0.06	9.79
300.00	-1.09	1106.46	-1.82	1054.70	-1.50	1113.74	0.32	59.03	-0.41	7.28
310.00	-1.32	1124.42	-1.87	1066.12	-1.68	1127.73	0.19	61.61	-0.36	3.31
320.00	-1.59	1139.96	-1.49	1079.42	-1.83	1140.10	-0.34	60.68	-0.24	0.14
330.00	-1.96	1152.34	-1.34	1095.49	-1.91	1151.38	-0.57	55.89	0.04	-0.96
340.00	-2.06	1161.93	-1.60	1111.30	-1.94	1162.08	-0.34	50.77	0.12	0.15
350.00	-1.84	1172.33	-2.05	1122.86	-2.00	1172.50	0.05	49.63	-0.16	0.17
360.00	-1.78	1184.45	-2.39	1130.40	-2.12	1181.91	0.28	51.52	-0.34	-2.54
370.00	-1.74	1196.78	-2.62	1135.32	-2.22	1190.23	0.40	54.91	-0.48	-6.56
380.00	-1.72	1209.72	-2.72	1138.43	-2.44	1197.11	0.28	58.68	-0.72	-12.61
390.00	-2.03	1221.24	-2.77	1141.00	-2.73	1201.24	0.04	60.24	-0.70	-20.00
400.00	-2.27	1229.54	-2.73	1143.42	-3.02	1202.50	-0.28	59.08	-0.74	-27.04

Kapiti Coast Profile 330 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.94	0.00	4.94	0.00	4.94	0.00	0.00	0.00	0.00	0.00
10.00	5.01	77.25	4.93	78.94	5.03	79.05	0.11	0.11	0.02	1.81
20.00	3.50	149.89	3.41	149.95	3.18	150.12	-0.24	0.18	-0.32	0.24
30.00	2.75	209.58	2.73	209.53	2.78	208.79	0.04	-0.75	0.02	-0.79
40.00	3.77	270.03	4.40	270.95	4.14	270.35	-0.26	-0.61	0.37	0.32
50.00	3.25	335.04	4.30	343.69	4.11	341.17	-0.19	-2.52	0.86	6.13
60.00	3.58	397.38	3.73	415.65	4.19	413.98	0.46	-1.67	0.61	16.60
70.00	1.45	447.83	2.01	474.80	3.14	484.04	1.13	9.24	1.68	36.21
80.00	1.22	491.15	1.24	519.47	1.80	536.45	0.55	16.98	0.58	45.31
90.00	1.01	532.32	0.94	560.38	1.56	583.80	0.62	23.42	0.55	51.48
100.00	0.78	571.35	0.73	598.73	1.22	627.76	0.48	29.03	0.44	56.41
110.00	0.52	607.87	0.32	633.91	0.89	668.24	0.56	34.32	0.36	60.37
120.00	0.25	641.75	0.28	667.08	0.63	705.71	0.35	38.63	0.38	63.95
130.00	0.11	673.39	0.06	698.83	0.43	741.01	0.38	42.17	0.32	67.62
140.00	0.02	704.04	-0.19	727.95	0.32	774.69	0.50	46.73	0.30	70.65
150.00	-0.05	733.88	-0.26	755.86	0.17	807.15	0.43	51.29	0.22	73.27
160.00	-0.13	762.95	-0.33	782.72	-0.09	837.86	0.24	55.14	0.04	74.91
170.00	-0.22	791.18	-0.36	809.37	-0.34	865.41	0.02	56.04	-0.12	74.24
180.00	-0.34	818.40	-0.47	835.25	-0.28	892.14	0.19	56.89	0.05	73.74
190.00	-0.44	844.50	-0.44	860.47	-0.23	919.53	0.21	59.06	0.21	75.04
200.00	-0.50	869.81	-0.44	886.13	-0.22	947.28	0.23	61.15	0.28	77.47
210.00	-0.55	894.58	-0.50	911.44	-0.28	974.95	0.22	63.51	0.28	80.37
220.00	-0.62	918.76	-0.75	935.31	-0.40	1001.58	0.34	66.27	0.21	82.81
230.00	-0.72	942.09	-1.06	956.34	-0.50	1027.07	0.56	70.73	0.21	84.98
240.00	-0.81	964.46	-1.22	974.68	-0.59	1051.53	0.64	76.85	0.22	87.06
250.00	-0.71	986.71	-1.20	992.58	-0.63	1075.41	0.57	82.83	0.08	88.70
260.00	-0.61	1010.20	-1.20	1010.62	-0.70	1099.07	0.50	88.44	-0.09	88.86
270.00	-0.77	1033.58	-1.18	1028.68	-0.92	1120.94	0.26	92.26	-0.15	87.36
280.00	-1.01	1054.66	-1.14	1047.13	-1.10	1140.73	0.05	93.60	-0.09	86.07
290.00	-1.19	1073.59	-1.11	1065.74	-0.98	1160.59	0.13	94.84	0.21	86.99
300.00	-1.17	1091.38	-1.09	1084.88	-0.94	1180.91	0.14	96.02	0.23	89.53
310.00	-1.00	1110.96	-1.17	1103.72	-1.01	1201.26	0.16	97.53	-0.01	90.30
320.00	-1.16	1130.21	-1.27	1121.47	-1.19	1220.29	0.09	98.82	-0.02	90.09
330.00	-1.34	1147.49	-1.27	1138.65	-1.30	1237.71	-0.03	99.06	0.04	90.22
340.00	-1.41	1163.63	-1.27	1156.19	-1.25	1254.83	0.02	98.64	0.16	91.21
350.00	-1.37	1179.58	-1.52	1172.11	-1.33	1272.18	0.20	100.07	0.04	92.60
360.00	-1.19	1196.89	-1.66	1186.16	-1.47	1287.79	0.19	101.63	-0.28	90.90
370.00	-1.29	1214.54	-1.79	1198.88	-1.46	1303.15	0.34	104.27	-0.16	88.61
380.00	-1.48	1230.68	-1.91	1210.35	-1.45	1318.65	0.46	108.30	0.03	87.97
390.00	-1.61	1245.10	-2.03	1220.65	-1.49	1333.93	0.54	113.28	0.12	88.82
400.00	-1.76	1258.06	-2.03	1230.35	-1.70	1348.11	0.33	117.76	0.06	90.05

Kapiti Coast Profile 340 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.75	65.86	3.63	82.66	3.74	83.92	0.12	1.26	-2.01	18.06
10.00	1.22	133.93	2.17	140.70	1.60	142.87	-0.57	2.17	0.38	8.94
20.00	0.89	157.62	1.48	187.71	1.14	186.19	-0.35	-1.52	0.25	28.56
30.00	0.38	202.93	1.13	230.87	0.83	226.05	-0.31	-4.82	0.45	23.12
40.00	0.38	215.98	0.82	270.56	0.56	262.86	-0.25	-7.71	0.18	46.87
50.00	0.13	260.83	0.55	307.38	0.39	297.57	-0.16	-9.81	0.25	36.74
60.00	-0.37	290.05	0.29	341.61	0.25	330.65	-0.04	-10.95	0.62	40.60
70.00	-0.55	314.09	0.14	373.53	0.13	362.51	-0.01	-11.02	0.68	48.42
80.00	-0.60	338.41	0.07	404.58	-0.05	393.12	-0.12	-11.47	0.55	54.71
90.00	-0.55	351.55	-0.12	434.53	-0.58	420.30	-0.46	-14.23	-0.03	68.75
100.00	-0.72	383.47	-0.52	461.37	-0.96	442.74	-0.43	-18.63	-0.24	59.27
110.00	-0.80	404.64	-0.75	484.96	-1.16	461.81	-0.41	-23.15	-0.36	57.17
120.00	-0.70	428.27	-0.94	506.48	-0.76	482.09	0.18	-24.39	-0.06	53.82
130.00	-0.47	456.43	-0.96	526.93	-0.60	505.57	0.36	-21.36	-0.13	49.14
140.00	-0.49	474.96	-0.78	547.79	-0.67	529.35	0.11	-18.44	-0.17	54.39
150.00	-0.70	497.92	-0.69	570.74	-0.74	552.28	-0.04	-18.46	-0.04	54.35
160.00	-1.13	516.90	-0.77	593.54	-0.67	575.36	0.10	-18.18	0.47	58.46
170.00	-1.39	534.34	-1.06	614.57	-0.89	597.73	0.16	-16.85	0.50	63.39
180.00	-1.47	546.51	-1.34	632.53	-1.13	617.62	0.21	-14.91	0.34	71.11
190.00	-1.52	563.82	-1.58	647.93	-1.38	635.10	0.21	-12.82	0.14	71.28
200.00	-1.59	572.35	-1.72	661.17	-1.84	649.27	-0.12	-11.91	-0.25	76.92
210.00	-1.58	588.39	-1.43	675.08	-2.02	659.44	-0.58	-15.64	-0.44	71.05
220.00	-1.53	606.86	-1.33	691.58	-2.00	669.21	-0.67	-22.37	-0.47	62.36
230.00	-1.42	624.34	-1.55	706.89	-1.89	679.75	-0.34	-27.14	-0.47	55.41
240.00	-1.21	636.57	-1.61	720.96	-1.72	691.61	-0.11	-29.35	-0.51	55.04
250.00	-1.28	656.77	-1.49	735.26	-1.53	705.41	-0.04	-29.86	-0.25	48.64
260.00	-1.42	673.24	-1.45	750.88	-1.39	720.78	0.05	-30.10	0.03	47.54
270.00	-1.66	681.04	-1.61	765.78	-1.48	736.65	0.13	-29.13	0.18	55.61
280.00	-1.90	693.75	-1.90	778.31	-1.66	751.10	0.24	-27.20	0.24	57.35
290.00	-1.99	705.69	-2.06	788.54	-1.87	763.29	0.19	-25.25	0.12	57.60
300.00	-2.00	712.14	-2.14	797.54	-1.96	774.11	0.18	-23.43	0.04	61.97
310.00	-2.03	723.13	-2.22	805.74	-2.15	783.60	0.07	-22.15	-0.12	60.47
320.00	-2.12	733.09	-2.29	813.17	-2.25	791.44	0.04	-21.72	-0.14	58.35
330.00	-2.26	737.31	-2.32	820.13	-2.32	798.60	-0.00	-21.53	-0.07	61.29
340.00	-2.43	742.68	-2.34	826.80	-2.40	804.94	-0.05	-21.86	0.03	62.26
350.00	-2.58	747.11	-2.37	833.26	-2.40	811.00	-0.03	-22.27	0.18	63.89
360.00	-2.69	750.04	-2.45	839.17	-2.52	816.42	-0.07	-22.75	0.18	66.38
370.00	-2.83	751.45	-2.53	844.29	-2.63	820.66	-0.09	-23.63	0.21	69.20
380.00	-2.97	751.30	-2.64	848.44	-2.73	823.89	-0.09	-24.55	0.25	72.59
390.00	-3.15	749.41	-2.80	851.24	-2.83	826.13	-0.03	-25.11	0.32	76.72
400.00			-3.03	852.12	-2.93	827.33	0.10	-24.80		

Kapiti Coast Profile 350 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	6.27	0.00	6.27	0.00	6.27	0.00	0.00	0.00	0.00	0.00
10.00	5.22	87.18	3.39	82.56	2.17	77.44	-1.22	-5.12	-3.06	-9.73
20.00	2.17	160.50	2.02	138.46	1.65	128.26	-0.37	-10.20	-0.53	-32.24
30.00	1.52	208.09	1.44	185.11	1.27	173.47	-0.17	-11.65	-0.25	-34.62
40.00	1.25	251.85	1.08	227.72	0.91	214.12	-0.17	-13.60	-0.34	-37.73
50.00	1.03	293.27	0.76	266.77	0.43	251.14	-0.33	-15.63	-0.61	-42.13
60.00	0.73	332.16	0.47	303.00	0.18	283.32	-0.30	-19.68	-0.55	-48.83
70.00	0.42	368.32	0.35	337.10	0.23	315.47	-0.12	-21.63	-0.19	-52.85
80.00	0.17	401.00	0.09	369.81	0.23	347.74	0.13	-22.07	0.06	-53.26
90.00	0.04	431.98	-0.20	398.93	0.23	380.10	0.43	-18.83	0.19	-51.88
100.00	-0.04	461.87	-0.37	426.09	0.19	412.29	0.56	-13.80	0.23	-49.57
110.00	-0.07	491.28	-0.52	451.58	0.07	443.64	0.59	-7.95	0.15	-47.64
120.00	-0.09	520.44	-0.72	475.48	-0.05	473.76	0.66	-1.72	0.04	-46.69
130.00	-0.14	549.41	-0.78	497.77	-0.17	502.68	0.62	4.91	-0.03	-46.74
140.00	-0.22	577.38	-0.70	520.31	-0.28	530.36	0.42	10.05	-0.06	-47.02
150.00	-0.12	605.93	-0.65	543.59	-0.33	557.32	0.32	13.73	-0.21	-48.61
160.00	-0.26	634.16	-0.56	567.46	-0.38	583.75	0.18	16.29	-0.12	-50.41
170.00	-0.46	660.52	-0.53	592.14	-0.43	609.74	0.09	17.60	0.03	-50.78
180.00	-0.54	685.62	-0.53	616.88	-0.50	635.06	0.02	18.17	0.03	-50.57
190.00	-0.63	709.68	-0.53	641.63	-0.58	659.59	-0.05	17.95	0.05	-50.10
200.00	-0.66	733.25	-0.59	666.10	-0.63	683.54	-0.04	17.44	0.03	-49.71
210.00	-0.75	756.14	-0.69	689.68	-0.70	706.96	-0.01	17.28	0.05	-49.18
220.00	-0.74	778.82	-0.82	712.17	-1.04	728.31	-0.22	16.14	-0.30	-50.50
230.00	-0.84	800.79	-1.05	732.83	-1.45	745.84	-0.40	13.01	-0.60	-54.95
240.00	-1.03	821.66	-1.17	751.48	-2.02	758.08	-0.85	6.61	-0.99	-63.58
250.00	-1.23	840.05	-1.19	769.72	-1.93	768.30	-0.74	-1.41	-0.70	-71.74
260.00	-1.24	857.61	-1.27	787.41	-1.79	779.59	-0.51	-7.82	-0.55	-78.02
270.00	-1.24	875.25	-1.40	804.05	-1.64	792.59	-0.24	-11.47	-0.40	-82.66
280.00	-1.24	892.84	-1.39	820.10	-1.62	806.30	-0.23	-13.80	-0.38	-86.53
290.00	-1.17	910.74	-1.37	836.29	-1.68	819.89	-0.31	-16.39	-0.51	-90.85
300.00	-1.19	929.10	-1.35	852.71	-1.75	832.75	-0.40	-19.96	-0.56	-96.35
310.00	-1.33	946.58	-1.67	867.62	-1.82	844.88	-0.15	-22.74	-0.49	-101.70
320.00	-1.42	962.64	-1.99	879.27	-1.94	856.07	0.05	-23.20	-0.52	-106.56
330.00	-1.62	977.67	-2.23	888.20	-2.06	866.03	0.16	-22.17	-0.44	-111.64
340.00	-1.88	990.01	-2.33	895.28	-2.19	874.79	0.14	-20.49	-0.31	-115.22
350.00	-2.04	1000.37	-2.37	901.73	-2.36	882.05	0.01	-19.68	-0.32	-118.31
360.00	-2.13	1009.51	-2.42	907.78	-2.44	888.00	-0.02	-19.78	-0.31	-121.51
370.00	-2.23	1017.69	-2.46	913.37	-2.52	893.23	-0.05	-20.14	-0.29	-124.47
380.00	-2.31	1024.99	-2.55	918.33	-2.60	897.67	-0.05	-20.67	-0.29	-127.33
390.00	-2.35	1031.68	-2.62	922.44	-2.70	901.16	-0.08	-21.28	-0.35	-130.53
400.00	-2.43	1037.79	-2.69	925.86						

Kapiti Coast Profile 360 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	4.22	0.00	4.22	0.00	4.22	0.00	0.00	0.00	-0.01	0.00
10.00	3.72	64.66	3.67	64.02	3.64	64.27	-0.04	0.25	-0.09	-0.39
20.00	4.16	139.24	3.69	138.62	3.67	138.27	-0.02	-0.35	-0.49	-0.97
30.00	1.98	199.93	1.99	192.74	2.07	192.55	0.08	-0.19	0.09	-7.37
40.00	1.67	247.18	1.45	239.38	1.57	239.70	0.12	0.32	-0.09	-7.48
50.00	1.64	293.50	1.63	285.41	1.80	286.73	0.17	1.32	0.16	-6.77
60.00	1.85	340.55	1.84	332.16	2.10	335.17	0.26	3.01	0.25	-5.38
70.00	2.30	391.26	2.44	383.15	2.44	388.00	-0.00	4.85	0.14	-3.27
80.00	2.18	443.79	1.50	435.41	1.93	442.15	0.43	6.74	-0.25	-1.64
90.00	1.61	493.16	0.91	477.48	0.76	483.11	-0.15	5.64	-0.85	-10.04
100.00	1.11	536.30	0.29	513.55	0.29	518.40	-0.00	4.85	-0.82	-17.90
110.00	0.52	574.37	-0.03	545.44	0.01	549.34	0.04	3.90	-0.51	-25.03
120.00	0.25	608.21	-0.90	570.33	-0.09	579.18	0.81	8.85	-0.34	-29.03
130.00	0.11	639.83	-0.68	591.29	-0.18	607.81	0.50	16.53	-0.29	-32.01
140.00	0.09	670.66	-0.14	617.41	-0.47	634.97	-0.33	17.56	-0.56	-35.69
150.00	-0.57	699.03	0.08	647.12	-0.63	658.75	-0.72	11.63	-0.06	-40.29
160.00	-0.44	723.91	0.41	679.54	-0.34	683.81	-0.75	4.27	0.10	-40.10
170.00	-0.21	750.65	0.65	714.64	-0.31	710.74	-0.95	-3.91	-0.10	-39.92
180.00	0.04	779.81	0.90	752.62	-0.42	736.79	-1.31	-15.83	-0.45	-43.02
190.00	0.90	815.48	1.15	792.93	-0.33	763.38	-1.48	-29.55	-1.23	-52.10
200.00	1.02	855.04	1.21	834.65	-0.29	789.97	-1.50	-44.68	-1.31	-65.07
210.00	1.07	895.50	1.16	876.66	0.95	823.90	-0.21	-52.77	-0.11	-71.60
220.00	1.09	936.33	1.25	918.90	1.17	864.62	-0.07	-54.27	0.08	-71.70
230.00	1.09	977.23	1.15	960.98	1.22	906.72	0.07	-54.27	0.13	-70.52
240.00	1.12	1018.23	1.22	1002.18	1.24	948.93	0.02	-53.25	0.12	-69.31
250.00	1.16	1059.64	1.36	1045.91	1.32	991.66	-0.04	-54.25	0.17	-67.97
260.00	1.09	1100.87	1.53	1090.42	1.38	1035.23	-0.15	-55.19	0.29	-65.64
270.00	1.02	1141.45	1.26	1134.38	1.35	1078.89	0.09	-55.49	0.33	-62.56
280.00	0.92	1181.11	1.38	1177.51	1.38	1122.44	-0.00	-55.07	0.46	-58.67
290.00	0.82	1219.76	1.21	1219.99	1.46	1166.64	0.25	-53.35	0.65	-53.12
300.00	0.72	1257.46	1.19	1261.90	1.75	1212.26	0.56	-49.64	1.02	-45.20
310.00	0.63	1294.21	1.12	1303.65	1.61	1259.98	0.49	-43.67	0.98	-34.23
320.00	0.47	1329.77	1.04	1344.40	1.57	1305.70	0.53	-38.71	1.10	-24.08
330.00	0.33	1363.66	0.95	1384.35	1.58	1351.26	0.63	-33.09	1.25	-12.40
340.00	0.26	1396.62	0.84	1423.30	1.67	1397.52	0.82	-25.77	1.41	0.90
350.00	0.22	1429.03	0.78	1461.38	1.66	1444.28	0.88	-17.10	1.44	15.25
360.00	0.16	1460.96	0.68	1498.71	1.77	1491.37	1.08	-7.34	1.61	30.41
370.00	0.09	1492.19	0.58	1535.01	1.87	1539.81	1.30	4.80	1.79	47.62
380.00	0.15	1523.39	0.48	1570.26	1.74	1587.94	1.26	17.68	1.59	64.55
390.00	0.18	1555.07	0.40	1604.67	1.48	1634.26	1.08	29.60	1.30	79.19
400.00	0.18	1586.90	0.33	1638.27	1.17	1677.49	0.84	39.22	0.99	90.59

Kapiti Coast Profile 370 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	6.90	0.00	6.90	0.00	7.02	0.00	0.12	0.00	0.12	0.00
10.00	5.47	92.04	6.24	95.18	6.00	96.27	-0.25	1.09	0.52	4.23
20.00	2.28	173.40	4.04	181.62	3.77	182.21	-0.27	0.60	1.48	8.81
30.00	1.60	221.68	1.87	237.23	2.13	241.53	0.26	4.30	0.53	19.85
40.00	1.31	265.93	1.44	283.18	1.63	290.23	0.19	7.05	0.32	24.30
50.00	1.00	307.55	1.10	325.64	1.24	334.55	0.14	8.91	0.25	27.00
60.00	0.66	345.38	0.82	365.16	0.90	375.19	0.08	10.03	0.23	29.81
70.00	0.35	379.97	0.55	402.08	0.62	412.69	0.08	10.61	0.28	32.72
80.00	0.15	412.44	0.34	436.49	0.43	447.87	0.08	11.38	0.28	35.43
90.00	-0.05	442.88	0.21	469.21	0.26	479.43	0.05	10.23	0.30	36.55
100.00	-0.18	471.75	0.12	500.73	0.09	512.89	-0.04	12.16	0.26	41.14
110.00	-0.26	499.44	-0.11	530.80	-0.09	542.93	0.02	12.13	0.18	43.49
120.00	-0.23	527.51	-0.30	558.67	-0.25	571.19	0.05	12.53	-0.03	43.68
130.00	-0.48	553.82	-0.40	585.04	-0.37	598.05	0.03	13.01	0.12	44.23
140.00	-0.76	577.65	-0.50	610.79	-0.48	623.91	0.02	13.12	0.28	46.26
150.00	-1.02	598.82	-0.68	634.86	-0.60	648.49	0.09	13.63	0.42	49.66
160.00	-1.22	617.51	-0.81	657.35	-0.69	672.10	0.12	14.76	0.53	54.59
170.00	-1.26	634.84	-0.96	678.56	-0.78	694.66	0.18	16.10	0.48	59.82
180.00	-1.07	653.17	-1.05	698.44	-1.15	715.23	-0.10	16.79	-0.07	62.06
190.00	-1.05	672.74	-1.01	718.35	-1.42	732.29	-0.41	13.94	-0.37	59.55
200.00	-1.14	691.74	-1.12	737.73	-1.64	746.91	-0.52	9.18	-0.49	55.17
210.00	-1.32	709.57	-1.24	756.01	-1.73	760.00	-0.50	3.99	-0.42	50.43
220.00	-1.51	725.35	-1.39	772.89	-1.78	772.44	-0.39	-0.45	-0.27	47.09
230.00	-1.66	739.47	-1.72	787.36	-1.78	784.43	-0.06	-2.93	-0.12	44.96
240.00	-1.72	752.49	-2.11	798.24	-1.69	797.11	0.42	-1.13	0.03	44.63
250.00	-1.75	765.18	-2.14	807.36	-1.62	810.64	0.52	3.27	0.13	45.46
260.00	-1.82	777.28	-2.21	815.57	-1.72	824.07	0.49	8.50	0.11	46.79
270.00	-1.92	788.60	-2.22	823.36	-1.91	835.94	0.31	12.58	0.01	47.34
280.00	-2.06	798.67	-2.21	831.24	-2.09	845.95	0.12	14.71	-0.03	47.28
290.00	-2.21	807.31	-2.19	839.26	-2.25	854.26	-0.06	14.99	-0.04	46.94
300.00	-2.33	814.65	-2.18	847.44	-2.40	860.99	-0.22	13.55	-0.07	46.34
310.00	-2.44	820.79	-2.16	855.79	-2.52	866.41	-0.36	10.62	-0.07	45.62
320.00	-2.56	825.78	-2.24	864.00	-2.60	870.77	-0.36	6.77	-0.04	44.99
330.00	-2.67	829.64	-2.39	870.84	-2.67	874.41	-0.28	3.57	-0.00	44.76
340.00	-2.77	832.43	-2.50	876.38	-2.77	877.23	-0.27	0.85	-0.00	44.80
350.00	-2.85	834.41	-2.60	880.86	-2.78	879.37	-0.17	-1.50	0.07	44.96
360.00	-2.93	835.45	-2.71	884.29	-2.85	881.32	-0.14	-2.97	0.08	45.87
370.00	-3.01	835.81	-2.81	886.69	-2.93	882.42	-0.12	-4.27	0.08	46.62
380.00	-3.10	835.27	-2.90	888.16	-3.00	882.75	-0.11	-5.41	0.09	47.48
390.00	-3.19	833.82	-2.98	888.78	-3.06	882.40	-0.08	-6.38	0.13	48.58
400.00	-3.30	831.36	-3.07	888.56	-3.07	881.78	-0.01	-6.79	0.23	50.42

Kapiti Coast Profile 380 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	6.32	0.00	6.32	0.00	6.32	0.00	0.00	0.00	0.00	0.00
10.00	4.80	86.15	4.89	86.32	4.83	86.26	-0.06	-0.06	0.03	0.11
20.00	1.93	150.54	3.00	154.89	2.50	151.25	-0.49	-3.65	0.58	0.71
30.00	1.60	198.17	1.72	207.10	1.90	202.75	0.18	-4.35	0.30	4.57
40.00	1.34	242.71	1.41	252.63	1.54	249.88	0.12	-2.75	0.20	7.17
50.00	1.14	285.08	1.11	295.32	1.24	293.71	0.13	-1.61	0.10	8.63
60.00	0.92	325.45	0.92	335.11	0.96	334.74	0.04	-0.37	0.04	9.29
70.00	0.60	362.85	0.53	373.55	0.67	372.92	0.13	-0.63	0.07	10.07
80.00	0.28	396.61	0.30	407.10	0.46	408.54	0.17	1.44	0.18	11.93
90.00	0.12	428.63	0.17	439.46	0.29	442.25	0.12	2.79	0.16	13.62
100.00	-0.01	459.11	-0.04	470.20	0.13	474.36	0.16	4.16	0.14	15.25
110.00	-0.12	488.39	-0.08	499.38	-0.07	504.66	0.01	5.28	0.05	16.26
120.00	-0.04	517.10	-0.18	528.13	-0.24	533.11	-0.06	4.98	-0.21	16.01
130.00	-0.28	546.05	-0.45	554.96	-0.39	559.83	0.06	4.87	-0.11	13.78
140.00	-0.57	571.66	-0.70	579.18	-0.55	585.09	0.15	5.91	0.02	13.43
150.00	-0.88	594.63	-0.90	601.12	-0.55	609.36	0.35	8.24	0.33	14.73
160.00	-1.23	613.98	-1.08	621.14	-0.60	633.83	0.48	12.70	0.62	19.85
170.00	-1.33	631.11	-1.07	639.94	-0.82	656.77	0.25	16.83	0.52	25.66
180.00	-1.29	647.83	-0.92	660.29	-1.03	677.41	-0.11	17.13	0.26	29.58
190.00	-1.20	665.33	-1.03	680.83	-1.43	695.49	-0.40	14.66	-0.22	30.16
200.00	-1.06	684.11	-1.19	699.71	-1.76	709.15	-0.57	9.44	-0.70	25.03
210.00	-1.16	703.17	-1.39	716.75	-1.78	721.45	-0.39	4.69	-0.62	18.28
220.00	-1.37	720.72	-1.52	732.14	-1.70	733.79	-0.18	1.66	-0.33	13.07
230.00	-1.71	735.16	-1.57	746.67	-1.55	747.97	0.03	1.29	0.16	12.81
240.00	-1.93	746.90	-1.65	760.54	-1.66	761.92	-0.01	1.38	0.27	15.02
250.00	-2.04	756.87	-1.73	773.62	-1.73	774.92	0.00	1.29	0.31	18.04
260.00	-2.01	766.49	-1.82	785.88	-1.85	787.13	-0.03	1.25	0.16	20.64
270.00	-1.97	776.58	-1.92	797.15	-2.05	797.60	-0.13	0.46	-0.08	21.02
280.00	-1.99	786.84	-2.09	807.08	-2.24	806.13	-0.14	-0.95	-0.24	19.29
290.00	-2.09	796.50	-2.29	815.21	-2.42	812.87	-0.13	-2.34	-0.33	16.37
300.00			-2.47	821.27	-2.53	818.04				
310.00			-2.58	826.02	-2.60	822.29				
320.00			-2.67	829.79	-2.70	825.89				
330.00			-2.70	832.94	-2.80	828.31				
340.00			-2.76	835.66	-2.86	830.09				
350.00			-2.84	837.70	-2.94	831.14				
360.00			-2.93	838.88	-2.99	831.48				
370.00			-3.04	839.06	-3.07	831.17				
380.00					-3.13	830.23				
390.00					-3.20	828.62				
400.00					-3.30	826.11				

Kapiti Coast Profile 390 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.84	0.00	5.84	0.00	5.84	0.00	0.00	0.00	0.00	0.00
10.00	5.52	86.93	5.67	87.23	5.96	87.48	0.29	0.25	0.43	0.55
20.00	4.94	169.80	5.29	171.93	5.72	175.96	0.44	4.03	0.78	6.16
30.00	4.15	244.66	4.78	251.81	5.04	260.66	0.26	8.84	0.89	16.00
40.00	2.27	308.63	4.07	327.66	3.94	337.25	-0.13	9.58	1.67	28.62
50.00	1.82	359.07	2.25	389.25	2.32	397.01	0.07	7.76	0.50	37.94
60.00	1.50	405.41	1.46	436.31	1.79	447.56	0.33	11.25	0.29	42.14
70.00	1.30	449.37	1.11	479.27	1.38	493.23	0.27	13.97	0.08	43.87
80.00	1.05	491.12	0.83	518.76	1.05	535.39	0.22	16.62	-0.00	44.27
90.00	0.63	529.21	0.51	555.65	0.71	574.17	0.20	18.52	0.08	44.96
100.00	0.44	564.66	0.32	589.59	0.45	609.94	0.12	20.35	0.01	45.28
110.00	0.17	597.75	0.17	622.03	0.27	643.52	0.10	21.49	0.10	45.77
120.00	-0.01	628.51	-0.00	652.97	0.10	675.39	0.10	22.42	0.11	46.88
130.00	-0.15	657.67	-0.18	682.08	-0.06	705.63	0.12	23.55	0.10	47.96
140.00	-0.28	685.50	-0.40	709.26	-0.22	734.23	0.18	24.97	0.06	48.73
150.00	-0.41	712.07	-0.60	734.13	-0.36	761.32	0.24	27.19	0.05	49.25
160.00	-0.45	737.58	-0.69	757.67	-0.50	787.02	0.20	29.36	-0.05	49.45
170.00	-0.51	762.99	-0.79	780.26	-0.65	811.32	0.14	31.07	-0.13	48.33
180.00	-0.69	787.05	-0.90	801.84	-0.79	834.15	0.11	32.32	-0.10	47.11
190.00	-0.87	809.18	-0.99	822.29	-0.93	855.54	0.06	33.25	-0.06	46.35
200.00	-1.02	829.74	-1.09	842.13	-0.97	876.02	0.12	33.89	0.06	46.28
210.00	-1.36	847.98	-1.35	859.95	-1.02	896.12	0.33	36.17	0.34	48.14
220.00	-1.56	862.90	-1.61	875.16	-1.10	915.52	0.51	40.36	0.46	52.62
230.00	-1.38	877.98	-1.46	889.79	-1.23	933.95	0.22	44.16	0.15	55.97
240.00	-1.39	894.25	-1.42	905.75	-1.63	949.53	-0.21	43.78	-0.23	55.28
250.00	-1.49	909.90	-1.53	921.08	-1.88	962.16	-0.35	41.08	-0.39	52.27
260.00	-1.67	924.15	-1.77	934.61	-2.13	971.82	-0.36	37.21	-0.46	47.67
270.00	-1.75	937.32	-2.00	945.76	-2.27	979.89	-0.27	34.14	-0.52	42.57
280.00	-2.03	948.38	-2.23	954.62	-2.43	986.24	-0.21	31.62	-0.40	37.86
290.00	-2.20	957.16	-2.45	961.23	-2.47	991.75	-0.01	30.52	-0.27	34.59
300.00	-2.31	964.61	-2.62	965.68	-2.46	997.11	0.16	31.43	-0.15	32.50
310.00	-2.35	971.27	-2.67	969.23	-2.43	1002.65	0.24	33.42	-0.08	31.38
320.00	-2.39	977.61	-2.63	972.54	-2.42	1008.50	0.21	35.96	-0.03	30.89
330.00	-2.44	983.43	-2.53	976.75	-2.40	1014.35	0.12	37.60	0.04	30.92
340.00	-2.50	988.72	-2.45	981.96	-2.49	1019.99	-0.04	38.03	0.01	31.26
350.00	-2.62	993.21	-2.56	986.94	-2.61	1024.51	-0.05	37.57	0.01	31.30
360.00	-2.74	996.41	-2.66	990.83	-2.73	1027.81	-0.07	36.98	0.00	31.40
370.00	-2.83	998.60	-2.84	993.38	-2.88	1029.78	-0.04	36.40	-0.05	31.18
380.00	-2.92	999.87	-3.04	993.98	-3.01	1030.28	0.03	36.30	-0.08	30.41
390.00	-3.01	1000.22			-3.10	1029.68			-0.09	29.46
400.00	-3.11	999.59								

Kapiti Coast Profile 400 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.35	0.00	5.35	0.00	5.35	0.00	0.00	0.00	-0.00	0.00
10.00	5.08	82.20	5.13	82.39	5.11	82.30	-0.02	-0.10	0.03	0.10
20.00	4.80	161.61	4.88	162.45	4.86	162.15	-0.02	-0.30	0.06	0.54
30.00	4.47	238.08	4.53	239.49	4.59	239.48	0.06	-0.02	0.12	1.40
40.00	4.09	310.87	4.16	312.94	4.19	313.49	0.03	0.55	0.10	2.62
50.00	3.70	379.87	3.85	382.91	3.96	383.59	0.11	0.68	0.25	3.71
60.00	3.30	444.90	3.65	450.38	3.97	456.12	0.32	5.74	0.67	11.22
70.00	2.86	505.81	3.44	515.66	3.42	519.63	-0.02	3.97	0.55	13.82
80.00	2.38	562.02	3.23	579.65	3.29	587.73	0.06	8.08	0.91	25.71
90.00	2.04	614.11	2.52	638.29	2.33	644.92	-0.18	6.63	0.29	30.81
100.00	1.71	662.81	1.91	690.31	1.99	696.50	0.08	6.20	0.28	33.69
110.00	1.48	708.76	1.42	736.85	1.67	744.87	0.26	8.02	0.20	36.11
120.00	1.25	752.36	1.11	779.20	1.36	790.01	0.25	10.81	0.11	37.65
130.00	1.02	793.70	0.96	819.60	1.06	832.07	0.10	12.47	0.03	38.37
140.00	0.55	832.12	0.47	857.27	0.72	871.02	0.26	13.75	0.17	38.89
150.00	0.40	866.64	0.20	889.88	0.44	906.72	0.24	16.84	0.04	40.08
160.00	0.24	899.98	0.09	921.40	0.24	940.03	0.15	18.63	-0.00	40.05
170.00	0.01	931.14	-0.05	951.61	0.07	971.56	0.13	19.94	0.06	40.42
180.00	-0.17	960.33	-0.24	980.17	-0.09	1001.46	0.15	21.28	0.08	41.13
190.00	-0.31	987.89	-0.37	1007.32	-0.25	1029.81	0.13	22.48	0.07	41.92
200.00	-0.43	1014.13	-0.57	1032.64	-0.38	1056.60	0.19	23.96	0.05	42.46
210.00	-0.49	1039.49	-0.70	1056.28	-0.51	1082.19	0.19	25.91	-0.02	42.70
220.00	-0.57	1064.28	-0.82	1078.63	-0.66	1106.34	0.16	27.71	-0.09	42.06
230.00	-0.69	1088.01	-0.86	1100.20	-0.81	1128.90	0.05	28.70	-0.12	40.88
240.00	-0.84	1110.38	-0.92	1121.33	-0.90	1150.27	0.01	28.94	-0.06	39.89
250.00	-0.93	1131.45	-1.02	1141.61	-0.92	1170.93	0.11	29.32	0.01	39.48
260.00	-0.99	1151.91	-1.20	1160.57	-1.16	1190.57	0.04	30.00	-0.17	38.66
270.00	-1.17	1171.31	-1.39	1177.58	-1.13	1209.11	0.26	31.53	0.04	37.80
280.00	-1.70	1187.10	-1.56	1192.83	-1.36	1226.81	0.20	33.98	0.34	39.71
290.00	-2.13	1197.82	-1.65	1206.70	-1.53	1242.21	0.12	35.52	0.60	44.39
300.00	-2.25	1205.56	-1.71	1219.94	-1.58	1256.53	0.13	36.59	0.67	50.98
310.00	-1.99	1214.18	-1.80	1232.42	-1.55	1270.87	0.24	38.45	0.44	56.69
320.00	-1.79	1225.42	-1.87	1244.04	-1.65	1285.22	0.22	41.19	0.15	59.81
330.00	-1.73	1237.84	-1.90	1255.22	-1.91	1297.45	-0.01	42.23	-0.18	59.61
340.00	-1.69	1250.70	-1.96	1266.07	-2.10	1307.41	-0.14	41.34	-0.41	56.71
350.00	-1.83	1263.31	-2.09	1275.81	-2.23	1315.75	-0.14	39.94	-0.40	52.44
360.00	-2.11	1273.59	-2.20	1284.27	-2.25	1323.35	-0.05	39.08	-0.14	49.76
370.00	-2.40	1281.09	-2.29	1291.83	-2.26	1330.78	0.02	38.94	0.14	49.69
380.00	-2.66	1285.74	-2.38	1298.53	-2.27	1338.08	0.11	39.55	0.39	52.34
390.00	-2.87	1288.01	-2.48	1304.24	-2.30	1345.35	0.18	41.11	0.58	57.34
400.00	-2.98	1288.63	-2.59	1308.92	-2.43	1351.72	0.16	42.80	0.56	63.09

Kapiti Coast Profile 410 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00			6.38	0.00	6.38	0.00	-0.00	0.00		
10.00			5.17	86.52	5.39	87.23	0.22	0.71		
20.00			3.35	159.05	3.51	162.12	0.16	3.06		
30.00			2.07	215.36	2.28	219.21	0.21	3.85		
40.00			1.59	263.47	1.84	269.57	0.26	6.11		
50.00			1.19	307.33	1.46	315.98	0.27	8.65		
60.00			1.09	348.23	1.14	359.01	0.04	10.78		
70.00			0.61	386.95	0.83	398.91	0.22	11.96		
80.00			0.26	420.76	0.53	435.72	0.26	14.97		
90.00			0.17	453.12	0.28	469.67	0.11	16.54		
100.00			0.01	484.04	0.13	501.67	0.12	17.64		
110.00			-0.15	513.36	-0.01	532.29	0.13	18.93		
120.00			-0.29	541.18	-0.16	561.38	0.12	20.19		
130.00			-0.43	567.66	-0.33	588.89	0.10	21.23		
140.00			-0.65	592.24	-0.45	614.96	0.19	22.72		
150.00			-0.78	615.07	-0.55	639.96	0.23	24.88		
160.00			-0.88	636.78	-0.74	663.60	0.13	26.82		
170.00			-0.92	657.72	-0.90	685.36	0.03	27.63		
180.00			-1.06	678.03	-1.04	705.69	0.02	27.66		
190.00			-1.18	696.60	-1.11	724.87	0.07	28.27		
200.00			-1.17	714.88	-1.14	743.63	0.03	28.75		
210.00			-1.39	732.10	-1.62	758.56	-0.23	26.47		
220.00			-1.71	746.61	-1.47	773.09	0.24	26.48		
230.00			-1.97	758.05	-1.35	789.08	0.62	31.03		
240.00			-2.13	767.56	-1.44	805.20	0.69	37.64		
250.00			-2.27	775.52	-1.75	819.24	0.52	43.72		
260.00			-2.39	782.24	-2.04	830.28	0.35	48.04		
270.00			-2.33	788.60	-2.25	838.71	0.08	50.10		
280.00			-2.24	795.71	-2.30	845.73	-0.05	50.03		
290.00			-2.19	803.73	-2.25	853.00	-0.06	49.27		
300.00			-2.33	811.10	-2.23	860.64	0.10	49.54		
310.00			-2.46	817.09	-2.26	868.27	0.20	51.19		
320.00			-2.56	822.02	-2.33	875.36	0.23	53.34		
330.00			-2.76	825.43	-2.42	881.60	0.33	56.17		
340.00			-2.94	826.92	-2.53	886.83	0.42	59.91		
350.00			-3.10	826.69	-2.60	891.20	0.50	64.51		
360.00					-2.78	894.30				
370.00										
380.00										
390.00										
400.00										

Note: Profile 410 was first surveyed in November 2005.

Kapiti Coast Profile 420 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	3.39	0.00	3.39	0.00	3.39	0.00	0.00	0.00	0.00	0.00
10.00	3.47	64.29	3.46	63.91	3.46	64.00	0.00	0.09	-0.02	-0.29
20.00	3.32	129.75	2.91	127.95	2.84	127.60	-0.06	-0.35	-0.47	-2.15
30.00	1.68	183.48	1.88	181.06	1.69	179.58	-0.19	-1.48	0.01	-3.90
40.00	1.01	226.86	1.31	226.82	1.15	223.60	-0.16	-3.22	0.15	-3.26
50.00	0.50	264.23	1.19	269.41	0.74	263.23	-0.44	-6.18	0.24	-1.00
60.00	0.11	297.04	0.44	307.32	0.32	298.37	-0.12	-8.95	0.22	1.33
70.00	-0.12	326.83	-0.04	338.77	0.08	330.31	0.12	-8.45	0.20	3.48
80.00	-0.34	354.56	-0.17	367.78	-0.09	360.26	0.08	-7.51	0.25	5.71
90.00	-0.50	380.36	-0.30	395.27	-0.23	388.70	0.07	-6.57	0.26	8.34
100.00	-0.63	404.70	-0.47	421.48	-0.37	415.58	0.10	-5.90	0.26	10.88
110.00	-0.72	427.93	-0.66	445.84	-0.53	441.07	0.13	-4.77	0.19	13.14
120.00	-0.87	449.98	-0.83	468.33	-0.65	464.92	0.18	-3.41	0.21	14.94
130.00	-0.96	470.80	-0.95	489.43	-0.84	487.47	0.10	-1.96	0.11	16.67
140.00	-1.08	490.70	-1.07	509.36	-0.97	508.28	0.10	-1.07	0.11	17.58
150.00	-1.28	508.97	-1.19	527.99	-1.09	528.03	0.10	0.04	0.20	19.05
160.00	-1.66	524.17	-1.21	545.99	-1.08	547.00	0.13	1.01	0.59	22.84
170.00	-1.96	535.97	-1.34	563.38	-1.22	565.64	0.11	2.26	0.74	29.68
180.00	-2.15	545.31	-1.58	579.06	-1.44	582.19	0.14	3.13	0.71	36.88
190.00	-2.15	553.65	-2.01	591.10	-1.46	597.69	0.55	6.59	0.70	44.04
200.00	-2.04	562.56	-2.34	599.04	-1.64	612.33	0.70	13.30	0.40	49.77
210.00	-1.84	573.11	-2.45	605.09	-1.98	624.33	0.46	19.25	-0.15	51.22
220.00	-1.66	585.75	-2.44	610.40	-2.25	633.05	0.20	22.65	-0.58	47.30
230.00	-1.73	598.98	-2.35	616.44	-2.34	640.01	0.01	23.57	-0.61	41.03
240.00	-1.94	610.74	-2.27	623.41	-2.39	646.35	-0.12	22.94	-0.45	35.61
250.00	-2.18	620.16	-2.24	630.86	-2.36	652.55	-0.12	21.69	-0.17	32.39
260.00	-2.40	627.21	-2.27	638.55	-2.32	659.15	-0.06	20.61	0.08	31.95
270.00	-2.60	632.18	-2.45	644.97	-2.31	666.01	0.14	21.05	0.29	33.83
280.00	-2.75	635.43	-2.63	649.53	-2.34	672.85	0.29	23.32	0.41	37.42
290.00	-2.86	637.43	-2.79	652.46	-2.42	679.06	0.36	26.60	0.43	41.62
300.00	-2.91	638.50	-2.95	653.81	-2.59	683.99	0.36	30.18	0.32	45.49
310.00	-2.92	639.28	-3.12	653.45	-2.70	687.53	0.43	34.08	0.23	48.25
320.00	-2.96	639.88			-2.84	689.91			0.12	50.03
330.00	-3.00	640.09			-2.96	690.91			0.05	50.82
340.00	-3.07	639.74								
350.00	-3.14	638.75								
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 430 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	3.45	0.00	3.45	0.00	3.45	0.00	0.00	0.00	0.00	0.00
10.00	3.52	64.79	3.50	64.86	3.52	64.91	0.02	0.04	0.01	0.12
20.00	3.08	129.28	3.15	128.87	3.39	130.18	0.23	1.32	0.31	0.91
30.00	1.71	182.83	2.25	185.96	2.57	190.11	0.31	4.14	0.86	7.28
40.00	0.72	224.88	1.86	237.38	2.12	246.04	0.26	8.67	1.40	21.16
50.00	0.04	258.41	0.78	281.39	1.25	293.21	0.47	11.82	1.21	34.79
60.00	-0.39	286.58	-0.11	314.55	0.14	330.00	0.25	15.45	0.54	43.41
70.00	-0.97	310.37	-0.68	340.25	-0.87	356.02	-0.19	15.77	0.10	45.65
80.00	-1.04	329.89	-0.96	361.94	-0.87	376.45	0.09	14.51	0.16	46.56
90.00	-1.00	349.80	-1.04	381.70	-0.65	399.43	0.39	17.73	0.35	49.63
100.00	-1.04	369.65	-1.12	401.16	-0.77	422.33	0.34	21.17	0.27	52.68
110.00	-1.13	388.83	-1.30	419.02	-0.95	443.89	0.36	24.87	0.18	55.06
120.00	-1.28	406.83	-1.42	435.44	-1.18	463.19	0.24	27.74	0.11	56.36
130.00	-1.48	423.05	-1.55	450.61	-1.39	480.07	0.15	29.46	0.08	57.02
140.00	-1.65	437.32	-1.81	464.03	-1.52	495.53	0.29	31.50	0.13	58.22
150.00	-1.94	449.54	-2.13	474.33	-1.73	509.57	0.40	35.24	0.21	60.03
160.00	-2.22	458.73	-2.33	482.02	-2.13	520.26	0.21	38.24	0.09	61.53
170.00	-2.48	465.21	-2.54	487.68	-2.42	527.50	0.11	39.83	0.06	62.30
180.00	-2.69	469.24	-2.70	491.40	-2.65	532.05	0.05	40.64	0.04	62.81
190.00	-2.86	471.45	-2.82	493.82	-2.78	534.70	0.04	40.88	0.09	63.25
200.00	-3.01	472.03	-2.82	495.52	-2.74	537.10	0.08	41.58	0.27	65.07
210.00	-3.08	471.44	-2.80	497.40	-2.61	540.27	0.19	42.86	0.47	68.83
220.00	-3.08	470.52	-2.79	499.42	-2.56	544.44	0.24	45.01	0.52	73.92
230.00	-2.97	470.16	-2.79	501.51	-2.50	549.14	0.28	47.62	0.47	78.97
240.00	-2.87	471.02	-2.80	503.64	-2.46	554.35	0.35	50.71	0.41	83.33
250.00	-2.76	473.03	-2.88	505.22	-2.44	559.85	0.44	54.63	0.32	86.82
260.00	-2.89	474.85	-2.96	506.07	-2.57	564.89	0.39	58.83	0.32	90.04
270.00	-2.97	475.54	-3.12	505.69	-2.74	568.38	0.38	62.69	0.23	92.84
280.00	-3.07	475.37			-2.91	570.16			0.16	94.79
290.00	-3.16	474.22			-3.04	570.25			0.12	96.03
300.00										
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 440 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	3.12	0.00	3.12	0.00	3.12	0.00	0.00	0.00	0.00	0.00
10.00	3.58	63.96	3.38	63.45	3.75	65.56	0.37	2.12	0.17	1.61
20.00	2.55	124.42	3.16	126.08	3.27	129.87	0.12	3.78	0.72	5.44
30.00	1.82	175.82	3.00	186.91	3.32	192.95	0.32	6.04	1.50	17.13
40.00	1.77	222.84	2.71	245.90	3.38	256.61	0.67	10.71	1.61	33.77
50.00	1.70	270.91	1.46	295.79	2.83	316.58	1.37	20.79	1.13	45.68
60.00	0.79	313.56	0.73	337.48	2.32	373.22	1.59	35.73	1.53	59.66
70.00	-0.14	346.71	-0.19	369.87	1.21	420.87	1.40	51.00	1.34	74.16
80.00	-0.89	371.40	-0.97	394.14	0.00	456.47	0.97	62.33	0.89	85.07
90.00	-1.80	386.48	-1.50	411.63	-0.70	482.80	0.80	71.16	1.10	96.31
100.00	-1.78	398.63	-1.98	424.20	-1.17	502.98	0.81	78.78	0.61	104.34
110.00	-1.90	410.39	-2.15	433.44	-1.43	520.00	0.72	86.56	0.47	109.62
120.00	-2.04	420.71	-2.29	441.23	-1.71	534.62	0.58	93.40	0.33	113.91
130.00	-2.27	429.24	-2.44	447.57	-2.13	545.08	0.31	97.52	0.14	115.85
140.00	-2.41	435.58	-2.63	452.35	-2.33	552.73	0.30	100.38	0.08	117.16
150.00	-2.30	441.98	-2.87	454.87	-2.35	559.18	0.52	104.32	-0.05	117.21
160.00	-2.15	449.72	-2.81	456.39	-2.36	565.67	0.45	109.28	-0.20	115.94
170.00	-2.07	458.66	-2.76	458.52	-2.42	571.86	0.34	113.34	-0.34	113.19
180.00	-2.09	467.89	-2.54	462.05	-2.44	577.45	0.09	115.41	-0.35	109.56
190.00	-1.99	477.38	-2.32	467.78	-2.44	583.07	-0.12	115.29	-0.45	105.69
200.00	-2.01	487.61	-2.12	475.70	-2.48	588.47	-0.36	112.77	-0.47	100.87
210.00	-2.11	496.90	-2.31	483.54	-2.54	593.39	-0.23	109.85	-0.43	96.48
220.00	-2.20	505.40	-2.49	489.54	-2.59	597.74	-0.10	108.19	-0.40	92.34
230.00	-2.34	512.77	-2.68	493.70	-2.67	601.43	0.01	107.72	-0.33	88.65
240.00	-2.52	518.42	-2.90	495.77	-2.81	604.08	0.09	108.31	-0.29	85.66
250.00	-2.69	522.43	-3.02	496.18	-2.90	605.44	0.11	109.26	-0.22	83.01
260.00			-3.13	495.45	-3.00	605.95	0.13	110.49		
270.00			-3.24	493.61	-3.11	605.43	0.14	111.82		
280.00										
290.00										
300.00										
310.00										
320.00										
330.00										
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 450 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.62	0.00	5.62	0.00	5.62	0.00	0.00	0.00	0.00	0.00
10.00	4.73	83.60	4.80	83.21	4.70	82.93	-0.10	-0.28	-0.04	-0.67
20.00	3.98	159.44	4.09	158.39	4.13	157.97	0.04	-0.41	0.15	-1.47
30.00	2.60	221.06	3.03	224.01	3.13	224.34	0.10	0.33	0.53	3.28
40.00	1.80	272.83	2.08	279.30	2.37	281.62	0.29	2.32	0.57	8.78
50.00	1.29	317.98	1.40	326.53	1.65	331.74	0.25	5.21	0.37	13.76
60.00	0.85	358.97	1.26	369.40	1.19	375.56	-0.07	6.16	0.34	16.59
70.00	0.40	394.87	0.83	410.28	1.09	416.69	0.26	6.41	0.69	21.82
80.00	0.11	427.43	0.19	445.39	0.42	455.45	0.23	10.05	0.31	28.01
90.00	-0.13	457.33	-0.37	474.26	-0.29	485.67	0.08	11.41	-0.15	28.34
100.00	-0.34	484.87	-0.56	499.43	-0.49	511.37	0.07	11.94	-0.15	26.51
110.00	-0.53	510.49	-0.67	523.34	-0.57	536.10	0.10	12.76	-0.04	25.61
120.00	-0.78	533.95	-0.92	545.51	-0.69	559.87	0.23	14.36	0.09	25.92
130.00	-1.08	554.67	-1.24	564.73	-0.97	581.91	0.27	17.17	0.11	27.23
140.00	-1.28	572.75	-1.47	581.07	-1.27	600.52	0.20	19.44	0.01	27.77
150.00	-1.58	588.84	-1.60	595.61	-1.38	617.08	0.23	21.48	0.20	28.24
160.00	-1.90	601.23	-1.58	609.27	-1.51	632.64	0.07	23.37	0.39	31.41
170.00	-2.04	611.39	-1.29	624.89	-1.68	646.67	-0.39	21.78	0.36	35.28
180.00	-2.09	620.67	-1.40	641.49	-1.81	659.11	-0.41	17.63	0.28	38.44
190.00	-2.04	629.89	-1.69	656.25	-1.74	671.26	-0.05	15.01	0.30	41.38
200.00	-1.76	640.56	-2.00	667.75	-1.84	683.64	0.16	15.89	-0.08	43.07
210.00	-1.69	653.74	-2.32	676.31	-2.04	694.31	0.28	18.00	-0.35	40.57
220.00	-1.68	666.93	-2.67	681.10	-2.34	702.41	0.33	21.30	-0.66	35.48
230.00	-2.01	678.86	-2.74	684.08	-2.55	707.95	0.18	23.87	-0.54	29.08
240.00	-2.34	687.00	-2.85	686.19	-2.57	712.26	0.28	26.08	-0.23	25.26
250.00	-2.56	692.41	-2.97	687.10	-2.54	716.62	0.42	29.52	0.02	24.22
260.00	-2.70	696.05	-2.88	687.86	-2.49	721.45	0.39	33.59	0.21	25.40
270.00	-2.79	698.53	-2.80	689.49	-2.43	726.92	0.37	37.43	0.36	28.39
280.00	-2.87	700.14	-2.73	691.87	-2.46	732.47	0.27	40.59	0.41	32.33
290.00	-2.85	701.59	-2.82	694.22	-2.58	737.40	0.24	43.18	0.28	35.81
300.00	-2.93	702.69	-2.91	695.55	-2.73	740.89	0.18	45.34	0.20	38.20
310.00	-2.95	703.24	-3.00	695.99	-2.90	742.73	0.10	46.74	0.05	39.49
320.00	-2.99	703.56			-3.03	743.08			-0.04	39.52
330.00	-3.02	703.43								
340.00										
350.00										
360.00										
370.00										
380.00										
390.00										
400.00										

Kapiti Coast Profile 460 ~ Beach Changes June 2000 - June 2011

Distance (Offset) (m)	Jun 2000		Dec 2007		Jun 2011		Dec 07-Jun 11		Jun 00-Jun 11	
	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	RL (m)	Accrued Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)	Variation RL (m)	Variation Volume (cu. m)
0.00	5.91	0.00	5.91	0.00	5.91	0.00	0.00	0.00	0.00	0.00
10.00	4.60	80.02	4.67	80.29	5.28	85.60	0.60	5.31	0.68	5.58
20.00	4.81	157.94	4.81	158.55	4.86	165.81	0.04	7.26	0.05	7.87
30.00	2.69	227.24	3.68	233.68	3.74	242.20	0.06	8.52	1.05	14.96
40.00	2.14	281.29	2.16	290.31	2.18	300.87	0.01	10.56	0.03	19.57
50.00	1.73	330.47	1.78	340.04	1.78	350.63	-0.01	10.59	0.05	20.16
60.00	1.54	376.57	1.41	385.98	1.42	396.48	0.02	10.50	-0.11	19.91
70.00	1.20	420.64	1.27	429.12	1.14	439.34	-0.13	10.22	-0.06	18.70
80.00	0.63	459.78	0.97	470.74	0.81	479.12	-0.16	8.38	0.18	19.34
90.00	0.38	494.52	0.36	507.37	0.42	515.02	0.07	7.65	0.04	20.50
100.00	0.23	527.50	0.31	540.50	0.25	548.38	-0.06	7.88	0.02	20.88
110.00	0.04	558.95	0.23	573.27	0.14	580.35	-0.09	7.08	0.10	21.40
120.00	-0.21	588.08	0.10	604.94	0.03	611.15	-0.07	6.22	0.24	23.07
130.00	-0.39	615.10	-0.20	634.57	-0.06	640.96	0.14	6.38	0.33	25.86
140.00	-0.51	640.56	-0.53	660.90	-0.17	669.93	0.36	9.03	0.34	29.37
150.00	-0.59	664.99	-0.90	683.73	-0.35	697.36	0.55	13.64	0.24	32.37
160.00	-0.68	688.69	-1.11	703.66	-0.52	723.24	0.59	19.58	0.16	34.55
170.00	-0.84	711.20	-1.04	722.37	-0.83	746.63	0.21	24.26	0.01	35.43
180.00	-1.00	731.99	-0.90	743.03	-1.14	766.55	-0.24	23.53	-0.14	34.56
190.00	-1.09	751.53	-0.97	763.70	-1.28	784.39	-0.31	20.68	-0.19	32.85
200.00	-1.17	770.26	-1.05	783.62	-1.50	800.50	-0.45	16.88	-0.33	30.24
210.00	-1.39	787.46	-1.13	802.73	-1.62	814.78	-0.49	12.05	-0.23	27.32
220.00	-1.54	802.70	-1.23	820.95	-1.71	828.18	-0.48	7.24	-0.17	25.49
230.00	-1.59	816.95	-1.37	838.05	-1.77	840.66	-0.40	2.61	-0.18	23.71
240.00	-1.64	830.97	-1.62	853.24	-1.73	853.11	-0.11	-0.13	-0.10	22.14
250.00	-1.82	843.69	-1.98	865.25	-1.68	866.03	0.29	0.78	0.14	22.34
260.00	-2.04	854.38	-2.32	873.75	-1.79	878.81	0.54	5.07	0.25	24.43
270.00	-2.18	863.21	-2.63	878.81	-2.09	889.64	0.54	10.83	0.09	26.43
280.00	-2.28	870.88	-2.84	881.47	-2.37	897.16	0.46	15.70	-0.09	26.29
290.00	-2.33	877.79	-3.00	882.22	-2.50	902.56	0.50	20.34	-0.17	24.77
300.00	-2.30	884.66	-3.00	881.94	-2.51	907.51	0.48	25.57	-0.21	22.86
310.00	-2.43	891.21	-2.70	883.00	-2.55	912.21	0.15	29.21	-0.12	21.00
320.00	-2.65	895.82	-2.28	888.31	-2.46	916.99	-0.18	28.68	0.19	21.16
330.00	-2.86	898.22	-2.37	895.08	-2.42	922.76	-0.05	27.67	0.44	24.54
340.00	-3.06	898.56	-2.56	900.65	-2.44	928.46	0.12	27.82	0.62	29.90
350.00	-3.15	897.46	-2.76	903.91	-2.51	933.81	0.25	29.90	0.64	36.35
360.00	-3.17	895.78	-2.91	905.56	-2.67	938.06	0.24	32.50	0.50	42.28
370.00	-3.08	894.39	-3.03	905.86	-2.84	940.45	0.20	34.59	0.25	46.06
380.00					-2.96	941.39				
390.00					-3.04	941.39				
400.00										