APPENDIX B

Oceanic Storm Climatologies

(from DRAFT SEQ Storm Tide Study Review, Systems Engineering Australia)

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DISCLAIMER

There are several classes of large scale oceanic weather systems capable of affecting the South-East Queensland (SEQ) region and generating significant storm tide effects. As the characteristics of these systems vary considerably (frequency, size, strength) it is important that their relative effects are correctly accounted for in any statistical storm tide studies in this region.

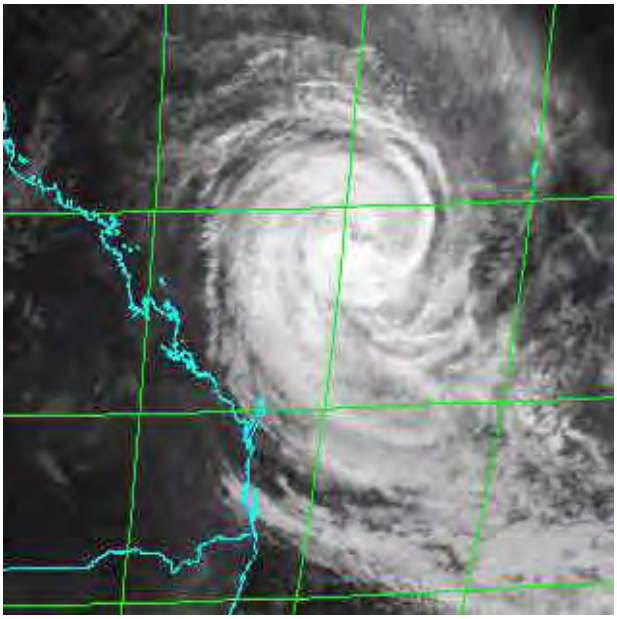
The risk of severe tropical cyclones begins to diminish rapidly with lowering Sea Surface Temperatures (SST) south of Gladstone, meaning that SEQ is on the fringe of exposure to the most intense of these cyclonic storms, at least in current climate conditions. In fact, the majority of "cyclones" that have been officially recorded as affecting the SEQ region would now typically be described as decaying tropical cyclones, transitioning extra-tropical storms, sub-tropical storms or "east coast lows". One of the challenges of modelling the correct climatology of these various storm systems is being to be able to identify their characteristics in the historical records, as the official database has not separated out these events and the definitions of each class are not always clear. Also, individual storms may move through a number of transitions as they approach the SEQ area, with subsequent changes to wind structure and strength.

Tropical Cyclones

The *Tropical Cyclone* (TC) is a large scale and potentially very severe low pressure weather system and represents the principal threat of extreme storm tides. TCs affect the Queensland region typically between November and April, with an average incidence of around 1 storm per year since 1959/60 within a 500 km radius of Brisbane. In the southern hemisphere, TC winds circulate clockwise around the centre. The Bureau of Meteorology (BoM 1999) uses a five-category system classifying tropical cyclone intensity in Australia for public warning purposes. Severe cyclones are those of Category 3 and above (referred to as hurricanes or typhoons in some countries) with average, or sustained, surface wind speeds exceeding 120 kmh^{-1}.

The main structural features of a severe tropical cyclone at the earth's surface are the eye, the eye wall and the spiral rainbands (refer satellite image in Figure 3). The eye is the area at the centre of the cyclone at which the surface atmospheric pressure is lowest. It is typically 20 to 50 km in diameter, skies are often clear and winds are light. The eye wall is an area of cumulonimbus clouds, which swirls around the eye. Tornado-like vortices of even more extreme winds may also occur associated with the eye wall and outer rain bands. The rain bands spiral inwards towards the eye and can extend over 1000 km or more in diameter. The heaviest rainfall and the strongest winds, however, are usually associated with the eye wall.

For any given central pressure, the spatial size of individual tropical cyclones can vary enormously. Generally, smaller cyclones occur close to the Equator, for example, Cape York, and larger cyclones



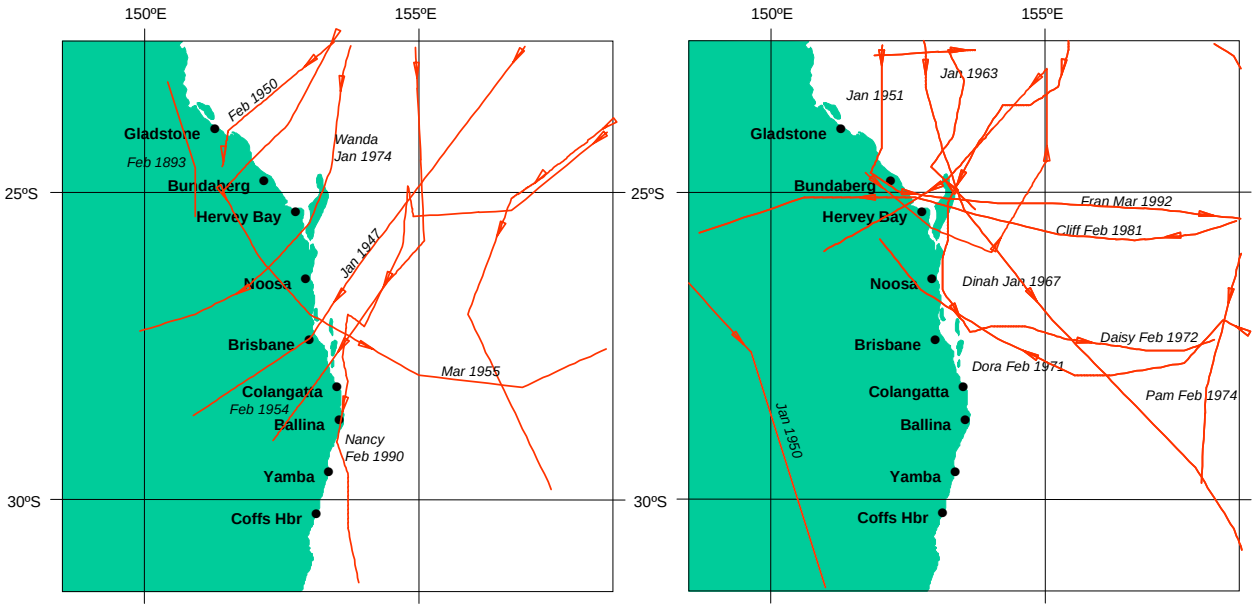
further south, but there are many exceptions. For example, because it is difficult for a cyclone to form south of 25ºS in the Queensland region, the vast majority affecting South-East Queensland have travelled from further north and are likely to be either fully mature, undergoing decay or tending extra-tropical. In those circumstances, small cyclones are relatively rare. Large cyclones can have impacts far from their track, especially on waves and storm tide. For example, David crossed the coast near Yeppoon in 1976 and caused significant coastal impacts in SEQ. This was caused by large scale ridge interaction to the south of the storm, a feature common to TC impacts in SEQ.

Figure 3 TC *Fran* approaching the Queensland coast in March 1992.
(Bureau of Meteorology image)

Given specifically favourable conditions, tropical cyclones can continue to intensify until they are efficiently utilising all of the available energy from the immediate atmospheric and oceanic sources. This Maximum Potential Intensity (MPI) is thought to be a function of the climatology of regional SST and atmospheric temperature and humidity profiles. When applying a thermodynamic MPI model for the Queensland coast (Tonkin et al. 2000), indicative values for the MPI increased northwards from about 960 hPa at Brisbane to 920 hPa at Townsville. However the MPI of coast-threatening storms in SEQ is likely to be higher, with a value of 940 hPa recommended generally for SEQ (Holland 1997, pers. comm.). It is rare for any cyclone to reach its MPI because external environmental conditions such as continental and synoptic influences often act to limit intensities in the Queensland region.

The Bureau of Meteorology National Climate Centre maintains a database of tropical cyclone tracks but care must be taken in interpretation of much of the information (refer Harper 2001). Figure 4 provides a selection of tracks of officially-named cyclones that have resulted in significant impacts in the SEQ region. Figure 3a presents the tracks of 7 cyclones which caused severe flooding impacts. These include the infamous floods of February 1893 (907 mm rainfall at Crohamhurst in 24 h) and January 1974 (TC *Wanda*[1]) in the Brisbane River, as well as a number of smaller but still significant events. Typically, these storms either crossed the coast and decayed inland or spent considerable time near the coast creating strong moist onshore flows. Figure 3b presents a selection of 9 cyclones whose impacts were more concentrated on the coast or caused significant wind damage. These include the January 1950 cyclone which originated in the Gulf of Carpentaria and actually passed 300 km inland but was accompanied by a strong and extensive circulation which created a 0.58 m storm surge in Moreton Bay.

[1] Interestingly, *Wanda* would not now be classified as a TC, but rather as a weaker sub-tropical cyclone as discussed in the next section (J. Callaghan, pers. comm.).



(a) Flood

(b) Wind, wave and surge

Figure 4 Selected tracks of tropical cyclones impacting SE Queensland.

(from Granger and Hayne 2001 – after Harper)

Sub-Tropical Cyclones

Sub-Tropical cyclones (STC) form over water in tropical areas and are normally associated with the monsoon. While appearing similar to a tropical cyclone in some respects, STCs lack the extreme eye-wall winds and are typically large in scale and bring strong and widespread wind and rain on their southern side. If they move southwards, the presence of land can actually lead to their intensification. In certain circumstances, such storms can also transform into the extra-tropical form or the east coast low form and may remain near-stationary for extended periods near the coast.

Figure 5 is an example of a significant STC event in March 2006, which produced a 0.4 m storm surge at the Gold Coast Seaway and significant wave heights typically between 5 and 6 m from Mooloolaba south to Tweed Heads. The maximum single wave height recorded off Brisbane was 17 m. The low pressure centre can be seen deepening as it moves southwards, with satellite-sensed surface winds (where available) further emphasising the severe wind field.

There is no specific database of sub-tropical storm systems available for the Queensland region.

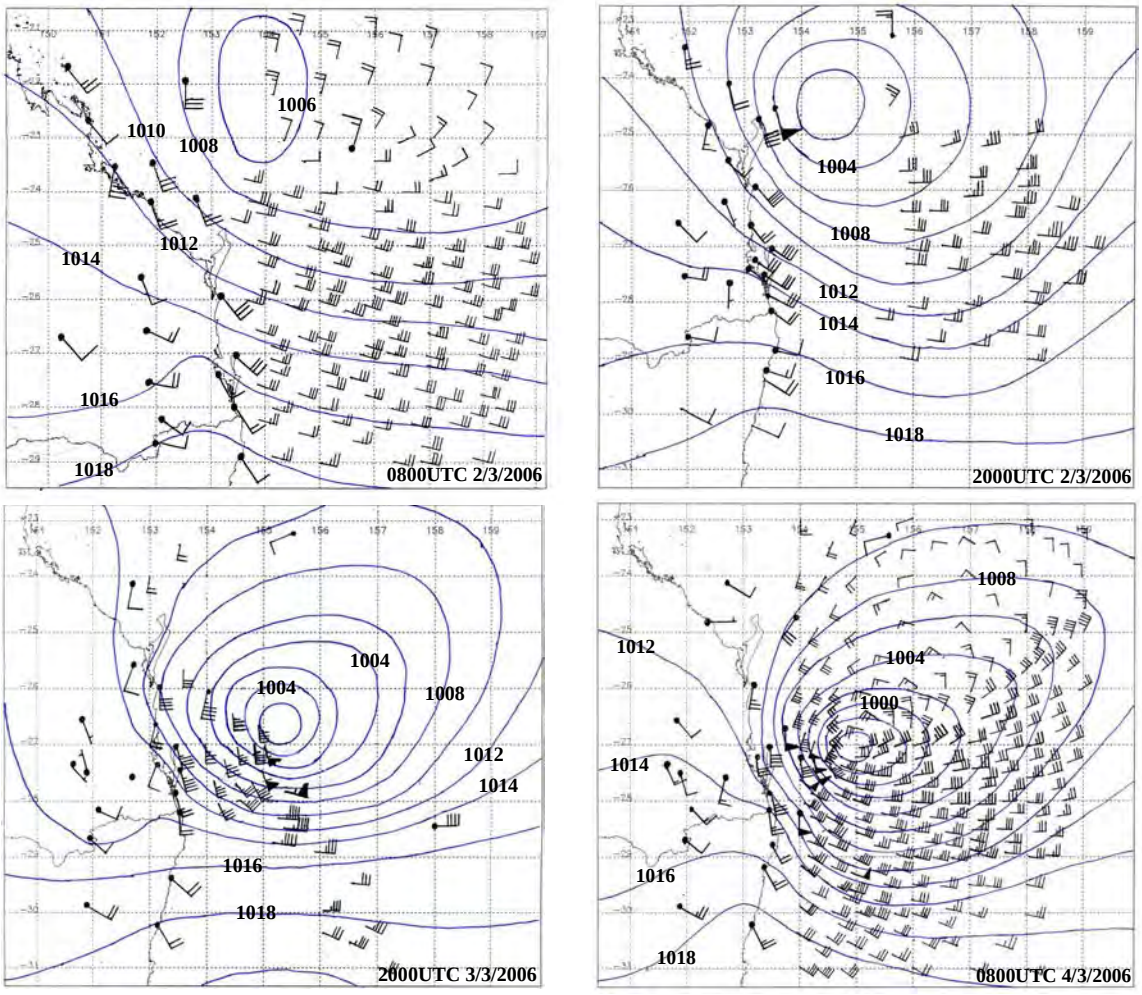


Figure 5 Significant sub-tropical event in March 2006.

(J. Callaghan pers. comm.)

Extra-Tropical Cyclones

Extra-tropical cyclones (ETC) result from a process that a tropical or sub-tropical cyclone can undergo if it moves into higher latitudes before dissipating and begins to interact with larger scale synoptic features. Rather than simply decaying as a tropical cyclone, which largely relies on the ocean heat content to sustain it, a transitioning storm gains energy from the adjacent weather patterns and may maintain its strength or even increase in strength, depending on the circumstances. Other structural changes often mean that the storm typically becomes much larger in extent, thus increasing the available fetch for generating storm surge and high waves. Due to the geometry of SEQ, the tracks of extra-tropical storms will tend to take such storms south and to the east, although impact on the coast is a possibility.

An example of a tropical system undergoing this type of potentially destructive transition at higher latitudes is tropical cyclone Lance in April 1984. History now also records Lance as an “east coast low” in terms of its impact on South East Queensland (refer 0). Figure 6 illustrates the sequence of development of this system whereby Lance had decayed into a low pressure system east of Proserpine late on April 6th, losing its “tropical cyclone” status. However, as it drifted south its remnant circulation interacted with the surrounding synoptic structures and underwent rapid extra-tropical transition to the north and offshore of Brisbane, buffeting parts of the southern coast with 110 km/h winds over the next three days. Fortunately it maintained its distance off the coast, thus avoiding more major impact.

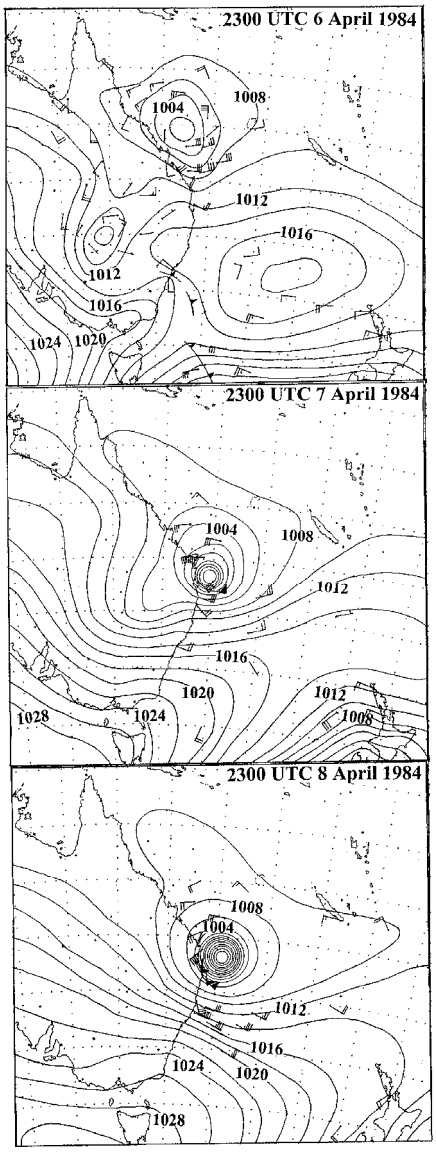
There is no specific database available that identifies storms that have become extra-tropical in structure.

East Coast Lows

East Coast Lows (ECL) are a specific class of large scale cyclonic systems that tend to form just offshore of the east coast anywhere south of Gladstone and can extend southwards along much of the New South Wales coastline. These types of cyclonic storms, which most often develop during the winter months, are also the most common wind, wave and flooding events affecting the SEQ coastline.

These storm systems draw their energy from a combination of strong ocean temperature gradients, coastal convergence, uplift and a supply of moist sub-tropical air at the surface. The East Australian Current and the Great Dividing Range are principal players in the development of these storms, the circulation centres of which often track very close to the coast over considerable distances. Their impacts can extend over considerable distances, as can be seen in the three examples in Figure 7 where the steep gradients in the surface pressure fields and regions of strong onshore winds are indicated. The onshore flow is responsible for the heavy rains and, combined with the extended fetch regions over the ocean, the generation of high waves. Storm surge is also possible, whereby the strong clockwise winds create a net onshore flow at the surface causing a rise in water levels along the coast. The “inverted barometer” pressure effect can also be significant, with some east coast lows having central pressures below 990 hPa. Wave setup caused by breaking wave processes at the coast also contributes to the total storm tide impact.

Figure 6 Extra-tropical transition of tropical cyclone Lance in April 1984.



(from Granger and Hayne 2001 – after Callaghan)

Prior to the introduction of satellite imagery in the early 1960s, many east coast lows were classified as tropical cyclones. While their impacts may be similar or even possibly greater in some cases, the east coast low has a different physical mechanism and a highly asymmetrical pole ward cloud pattern where the heaviest rainfall frequently occurs. Another feature of east coast low development is the tendency for clustering of events when conditions remain favourable. For example, near Brisbane, almost one third of events occur within 20 days of a preceding event (Allen and Callaghan 2000).

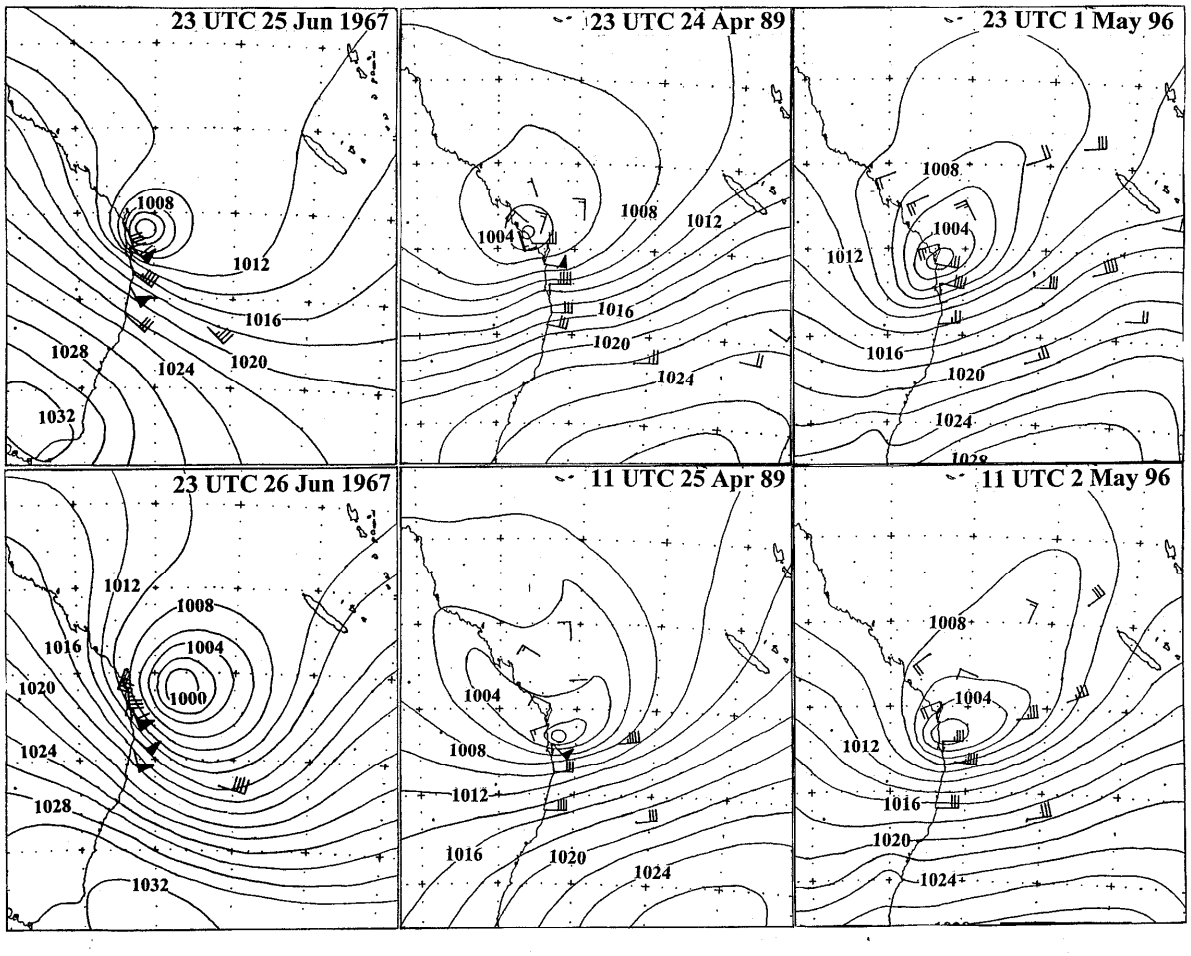


Figure 7 Examples of three east coast low synoptic developments.

(from Granger and Hayne 2001 – after Callaghan)

There have been a number of studies into the frequency of occurrence and relative intensity of ECLs. PWD (1985) addressed the coastal impacts of these systems on the NSW coastline, especially from a storm surge and wave setup perspective. Callaghan (1986) and Holland et al. (1987) considered the synoptic precursors to storm development as an aid to forecasting. Hopkins and Holland (1997) looked at the association between ECLS and heavy-rain days. Allen and Callaghan (2000) considered the impacts of ECLs on extreme wave heights in the SE Queensland coastal region.

Unfortunately, ECLs have not been systematically recorded in the manner that tropical cyclones have been since the turn of the century. They are typically more complex systems which are often difficult to categorise. Accordingly, many of the studies have concentrated on detailed investigations of historical weather charts and station observations to reconstruct a time history of occurrences. The longest assembled record available (1880 to 1980) is from PWD (1985), which considered the region from Tweed Heads south to Gabo Island, near Bass Strait. This study classified the various storm systems into six categories, depending on the synoptic situation, as summarised in Kemp and Douglas (1981). Holland et al. (1987) considered the period 1970-1985 and used three broad classifications. Hopkins and Holland (1997) broadened this to 1958-1992 and Allen and Callaghan (2000) focused on 1976-1997 when wave data was available. A composite SEQ data set was created by Harper (Granger and Hayne 2001) covering the 118 year period 1880 – 1997. The incidence of these types of storms can fluctuate quite widely from one year to the next, with none in some years and the highest incidence being twelve in 1978/79. The long term average annual

occurrence is about 2.5 storms per year but since 1960 the average has increased to 3.7. While the frequency of occurrence prior to 1960 will be affected to some extent by the lack of routine satellite coverage, the approximate doubling of frequency of storms over the past 30 years appears highly significant (Hopkins and Holland, 1997) and to some extent appears linked to broader climatic indices such as the Southern Oscillation Index (SOI). It is noted that the incidence of ECLs is significantly greater than that of TCs in the SE Queensland region.

Hybrid Storms

As mentioned previously, the distinction between the various large scale storm systems is sometimes difficult to classify and this can present problems for the Bureau of Meteorology in formulating a warning strategy. An example of a significant storm that proved difficult to classify was an event in March 2001. Figure 8 shows the storm centred just south of the Queensland border, as depicted by radar. The strongly asymmetric structure is highlighted in this view, whereby the strongest convection, wind and rain is located well to the south and seawards of the "eye" of the storm, with little impact on the northern side. In these cases, highlighting the "centre" of the storm for public warnings is misleading, given that the impacts are far removed from the apparent centre.

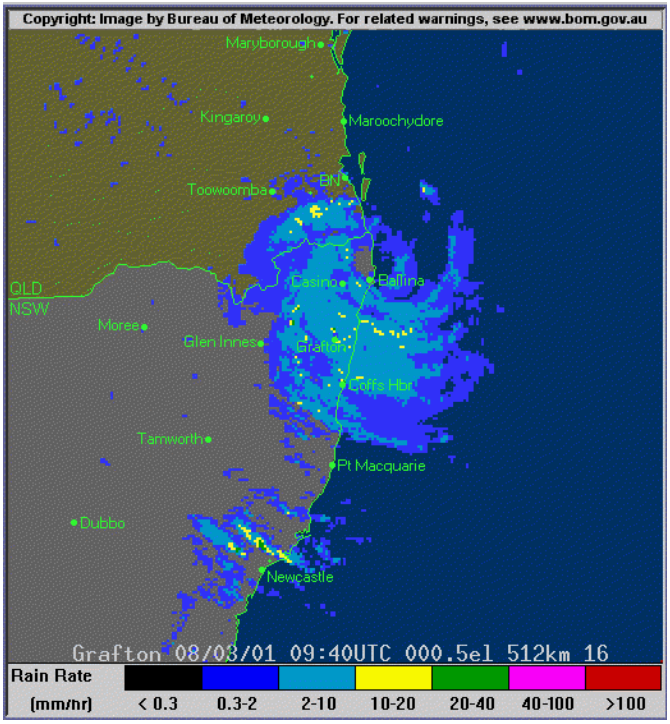
Figure 8 An example of a "hybrid" storm in March 2001, as depicted by radar.

(Bureau of Meteorology image)

Recommended Practice

It is recommended that representative storm climatologies for storm tide studies in SEQ be based on:

- Close consultation with the Bureau of Meteorology;
- Identifying the significant differences between the various storm structures;
- Determining the temporal and spatial distributions of storms;
- Quantifying the intensity and scale of the various storm systems;
- Accessing the manner and extent of synoptic scale interaction with cyclonic storms in SEQ and the degree to which that influences the surface wind and pressure structures.



APPENDIX C

Physical Processes

The purpose of this section is to describe the physical processes that are important to the overall storm tide and wave processes in the Moreton Bay region. These processes are: -

- Waves
- Currents
- Water Levels
- Winds

Wave Processes

Ocean waves may have energy in two distinct frequency bands, leaving aside long period waves. These are principally related to the generation and propagation of ocean swell and local sea. Swell is the term used to describe waves that have propagated beyond the storm that caused the waves to develop. Local sea is the term often ascribed to waves that are are still growing in the storm wind field. Large ocean waves generated by a storm are generally categorised as sea because wind energy is still being transferred to the ocean.

Waves are irregular in height and period and so it is necessary to describe wave conditions using a range of statistical parameters. In this study the following have been used:-

- H_{mo} significant wave height (H_s) based on $4\sqrt{M_o}$ where M_o is the zeroth moment of the wave energy spectrum (rather than the time domain $H_{1/3}$ parameter).

- H_{max}maximum wave height in a specified time period

- T_p wave energy spectral peak period, that is, the wave period related to the highest ordinate in the wave energy spectrum

- T_z average zero crossing period based on upward zero crossings of the still water line. An alternative definition is based on the zeroth and second spectral moments.

Wave heights defined by zero up-crossings of the still water line fulfil the Rayleigh Distribution in deep water and thereby provide a basis for estimating other wave height parameters from H_s. In shallow water, significant wave height defined from the wave spectrum, H_{mo}, is normally larger (typically 5% to 8%) than $H_{1/3}$ defined from a time series analysis.

Water waves also have a dominant direction of wave propagation and directional spread about that direction that can be defined by a Gaussian or generalised cosine ($\cos^n$) distribution (amongst others), and a wave grouping tendency. Directional spread is reduced by refraction as waves propagate into the shallow, nearshore regions and the wave crests become more parallel with each other and the seabed contours. Although neither of these characteristics is addressed explicitly in this study, directional spreading was included in the numerical wave modelling work. Directional spreading causes the sea surface to have a more short-crested wave structure in deep water.

Waves propagating into shallow water may undergo changes caused by refraction, shoaling, bed friction, wave breaking and, to some extent, diffraction.

Wave refraction is caused by differential wave propagation speeds. That part of the shoreward propagating wave which is in the more shallow water has a lower speed than those parts in deeper water. When waves approach a coastline obliquely these differences cause the wave fronts to turn and become more coast parallel. Associated with this

directional change there are changes in wave heights. On irregular seabeds wave refraction becomes a very complex process.

Waves propagating shoreward develop reduced speeds in shallow water. In order to maintain constancy of wave energy flux (ignoring energy dissipation processes) their heights must increase. This phenomenon is termed shoaling and leads to a significant increase in wave height near the shoreline.

A turbulent boundary layer forms above the seabed with associated wave energy losses that are manifested as a continual reduction in wave height in the direction of wave propagation - leaving aside further wind input, refraction, shoaling and wave breaking. The rate of energy dissipation increases non-linearly with greater wave height.

Wave breaking occurs in shallow water when the wave crest speed becomes greater than the wave phase speed. For irregular waves this wave-breaking occurs in different depths so that there is a breaker zone rather than a breaker line. Seabed slope, wave period and water depth are important parameters affecting the wave breaking phenomenon. As a consequence of this energy dissipation, wave set-up (a rise in still water level caused by wave breaking), develops shoreward from the breaker zone in order to maintain conservation of momentum flux. This rise in water level increases non-linearly in the shoreward direction and allows larger waves to propagate shoreward before breaking. Field measurements have shown that the slope of the water surface is normally concave upward. Wave set-up at the shoreline can be in the order of 15% of the equivalent deep-water significant wave height. Smaller set-up occurs in estuarine entrances, but the momentum flux remains the same. Wave set-up is smaller where waves approach a beach obliquely, but then a longshore current can be developed. Wave grouping and the consequent surf beats also cause fluctuations in the still water level.

In a random wave field each wave may be considered to have a period different from its predecessors and successors and the distribution of wave energy is often described by a wave energy spectrum. In fact, the whole wave train structure changes continuously and individual waves appear and disappear until quite shallow water is reached and dispersive processes are reduced. In developed sea states, that is swell, the Bretschneider modified Pierson-Moskowitz spectral form has generally been found to provide a realistic wave energy description. For developing sea states the JONSWAP spectral form, which is generally more ‘peaky’, has been found to provide a better spectral description.

For structural design in the marine environment it may be necessary to define the H_{max} parameter related to storms having average recurrence intervals (ARI) of R years. However, the expected H_{max}, relative to H_s in statistically stationary wave conditions, increases as storm/sea state duration increases. Based on the Rayleigh Distribution the usual relationship is:-

$$H_{max} = H_s \sqrt{(0.5 \ell n Nz)}$$

where Nz is the number of waves occurring during the time period being considered, where individual waves are defined by Tz.
ln is the natural logarithm

This relationship has been found to overestimate H_{max} by about 10% in severe ocean storms. In shallow water the relationship is not fulfilled. In very shallow water H_{max} is replaced by the breaking wave height, H_b, a limiting wave height based on a percentage of the water depth.

Waves propagating through an area affected by a current field are caused to turn in the direction of the current. The extent of this direction change depends on wave celerity, current speed and relative directions. Wave height is also changed. Opposing currents cause wave lengths to shorten and wave heights to increase and may lead to wave breaking. When the current speed is greater than one quarter of the phase speed, the waves are blocked. Conversely, a following current reduces wave heights and extends wave lengths.

Currents

Currents within the region are caused by a range of phenomena, including: -

- Astronomical Tides
- Winds
- Nearshore Wave Processes

The astronomical tides are caused by the relative motions of the Earth, Moon and Sun. The regular rise and fall of the tide level in the sea causes a periodic inflow (flood tide) and outflow (ebb tide) of oceanic water to the estuary. A consequence of this process is the generation of tidal currents. The volume of sea water that enters the estuary or leaves it on flood and ebb tides, respectively, is termed the tidal prism; which parameter varies due to the inequality between tidal ranges. The tidal prism is affected by changes in inter-tidal areas, but not by dredging areas below low tide.

Wind forcing is applied to the water surface as interfacial shear; the drag coefficient and consequent drag force varying with wind speed. Momentum from the wind is gradually transferred down through the water column by vorticity, the maximum depth of this effect being termed the Ekman depth. At the surface, wind caused currents are in the direction of the wind, but in the southern hemisphere they gradually turn to the left of the wind direction until they flow in the opposite direction at the Ekman depth. The Bay is too shallow for this condition to develop fully and wind driven currents are affected more by the seabed boundary layer. Wind driven currents diminish with depth. Because wind forcing is applied at the water surface, the relative effect is greater in shallow water where there is less water column volume per unit plan area. Therefore wind driven currents can be greater in more shallow areas. Maximum surface current speed is in the order of 1% to 3% of the wind speed, depending on water depth. Where water is piled up against a coastline by wind forcing, a reverse flow develops near the seabed.

The propagation of waves into the near shore region leads to wave breaking and energy dissipation. Where waves propagate obliquely to the shoreline this process leads to the generation of a longshore current in the surf zone, and to some extent seaward of that line.

Water Levels

Water level variations in the estuary and at the coastline result from one or more of the following natural causes:-

- Eustatic and Tectonic Changes
- Tides
- Wind Set-up and the Inverse Barometer Effect
- Wave Set-up
- Wave Run-up
- Tsunami
- Greenhouse Effect
- Global Changes in Meteorological Conditions

Eustatic sea level changes are long term world wide changes in sea level relative to the land mass and are generally caused by changes to the polar ice caps. No rapid changes are believed to be occurring at present and this aspect has not been addressed. Nevertheless, a minimum rise of 1mm per annum is now generally accepted. Tectonic changes are caused by movement of the Earth's crust; they may be vertical and/or horizontal.

Tides are caused by the relative motions of the Earth, Moon and Sun and their gravitational attractions. While the vertical tidal fluctuations are generated as a result of these forces, the distribution of land masses, bathymetric variation and the Coriolis force determine the local tidal characteristics.

Wind set-up and the inverse barometer effect are caused by regional meteorological conditions. When the wind blows over an open body of water, drag forces develop between the air and the water surface. These drag forces are proportional to the square of the wind speed. The result is that a wind drift current is generated. This current may transport water towards the coast upon which it piles up causing wind set-up. Wind set-up is inversely proportional to depth.

In addition, the drop in atmospheric pressure, which accompanies severe meteorological events, causes water to flow from high pressure areas on the periphery of the meteorological formation to the low pressure area. This is called the 'inverse barometer effect' and results in water level increases up to 1cm for each hecta-Pascal (hPa) drop in central pressure below the average sea level atmospheric pressure in the area for the particular time of year, typically about 1010 hPa. The actual increase depends on the speed of the meteorological system and 1cm is only achieved if it is moving slowly. The phenomenon causes daily variations from predicted tide levels up to 0.05m. The combined result of wind set-up and the inverse barometer effect is called storm surge.

Wave run-up is the vertical distance between the maximum height a wave runs up the beach or a coastal structure and the still water level, comprising tide plus storm surge. Additionally, run-up level varies with surf-beat, which arises from wave grouping effects.

Tsunami are caused by sudden crustal movements of the Earth and are commonly, but incorrectly, called 'tidal waves'. They are very infrequent and unlikely to occur during a storm and so have not been included in this study. Nevertheless, in the context of events having recurrence intervals in the order of 100 years, one should keep this point in mind.

Global meteorological and oceanographic changes cause medium term variations in mean sea level. The former phenomenon may persist for a year or more. The causes are not properly understood, but analyses of long term data from tide gauges indicate that annual mean sea level may vary up to 0.1m from the long term trend.

General scientific consensus predicts that under enhanced greenhouse conditions sea levels will rise in response to isothermic expansion and melting of polar ice shelves. Predictions of global sea level rise due to the Greenhouse effect vary considerably. It is impossible to state conclusively by how much the sea may rise, and no policy yet exists regarding the appropriate provision that should be made in the design of new coastal developments.

Based on a number of global greenhouse models, a guide to future ocean level rises is presented in Table C.1.

Table C.1: Predicted Greenhouse Related Mean Sea Level Rises (International Panel on Climate Change (IPCC), 2001)

	Total Sea Level Rise (m) to Year 2100		
Greenhouse Scenario	**Min**	**Max**	**Central**
IP92a	0.11	0.77	0.44
SRES	0.09	0.88	0.48

The 4th IPCC report on climate change published in mid-2007 predicts slightly lower estimates of sea level rise compared to Table C.1. The report range for IPCC 2007 is for a sea level rise of between 0.18m and 0.59m by 2100. This excludes potential sea level rise should recent ice-sheet melting in polar regions continue. If this were to occur, the additional sea-level rise is estimated to be between 0.1 and 0.2m. This results in the IPCC (2001) and IPCC (2007) estimates being broadly similar. From a planning perspective the reported results from IPCC 2007 are consistent with the previous report.

A rise of 0.3m has been included in the results reported in this study for a 50-year planning period. For a 100-year planning period, Council should consult with the EPA so that any adopted 100-year sea-level rise allowance is consistent with general Queensland guidelines.

Winds

Wind causes both the waves and storm tides. Details are discussed in the main sections of the report.

APPENDIX D

Calibration Data – Pumicestone Passage

Report to Caboolture Shire Council on:

Options for the Management of Beach Erosion Along the South-western Foreshore of Bribie Island, Caboolture Shire

December 2003

Table of Contents

List of Figures

Page

List of Tables

Page

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1. Introduction

Since 1999 both the Caboolture Shire Council and the Bribie Island Environmental Protection Association have approached the Environmental Protection Agency (EPA) on several occasions with concerns regarding erosion of the shoreline at Banksia and Sylvan Beaches on the western foreshore of Bribie Island.

The parkland adjacent to the foreshore within the study area has a high public amenity value due to the proximity of residential development and Pumicestone Passage. Currently, a toilet block at Banksia Beach and a boardwalk and amphitheatre at Sylvan Beach may be threatened by erosion in the medium-term. Community concerns have been raised regarding the loss of mature trees and parkland amenity. Caboolture Shire Council has managed erosion along this coast by using beach nourishment to reduce the severity of the erosion and has moves structures further landward to avoid loss.

As a result of discussions between officers of the Caboolture Shire Council and the EPA, the EPA agreed to undertake a study of the beach erosion from Bongaree to Banksia Beach to assist Caboolture Shire Council in managing the erosion problem along this section of coast.

The aims of the study are to:

- describe the coastal processes occurring in the vicinity of Bongaree to Banksia Beach;
- identify the cause and magnitude of erosion problems from Bongaree to Banksia Beach;
- discuss means of managing the erosion problem; and
- provide technical advice on shoreline erosion management for consideration by the Council

Results and analysis of data collected for the study are discussed in section 3 along with the potential causes of coastal recession. Other potential causes of erosion in the area are discussed in Section 4. Possible solutions to the problem are discussed in Section 5.

4. Data collection and analysis

Data used in the study comprised current meter recordings, aerial photography, beach profile survey data and hydrographic survey data.

4.1. Current measurements

Tidal flows are the primary cause of currents within the Passage. Table 1 presents the tidal planes at Bongaree (Queensland Tide Tables 2003) and shows a spring tide range of 1.6m.

Current measurements were undertaken from 19 June 2001 to 19 July 2001 to help assess the tidal flow characteristics in the area. Two Interocean S4 current meters were deployed in Pumicestone Passage, one at Bellara, near Sylvan Beach and one immediately offshore of Banksia Beach. The two recording sites are shown in Figure 2 and the site details for the two recording sites are presented in Appendix A.

The method of deployment consisted of anchoring the current meters at approximately mid depth in a "taut line" mooring configuration. Figure 16 shows a schematic diagram of the field set-up and Figure 17 presents a photograph of the deployed current meter at Banksia Beach.

Table 1. Tidal planes for Bongaree.

Tidal Plane	**Level (m AHD)**
Highest Astronomical Tide	1.23
Mean High Water Spring Tide	0.76
Mean High Water Neap Tide	0.41
Mean Sea Level	0.00
Mean Low Water Neap Tide	-0.45
Mean Low Water Spring Tide	-0.80
Lowest Astronomical Tide	-1.10

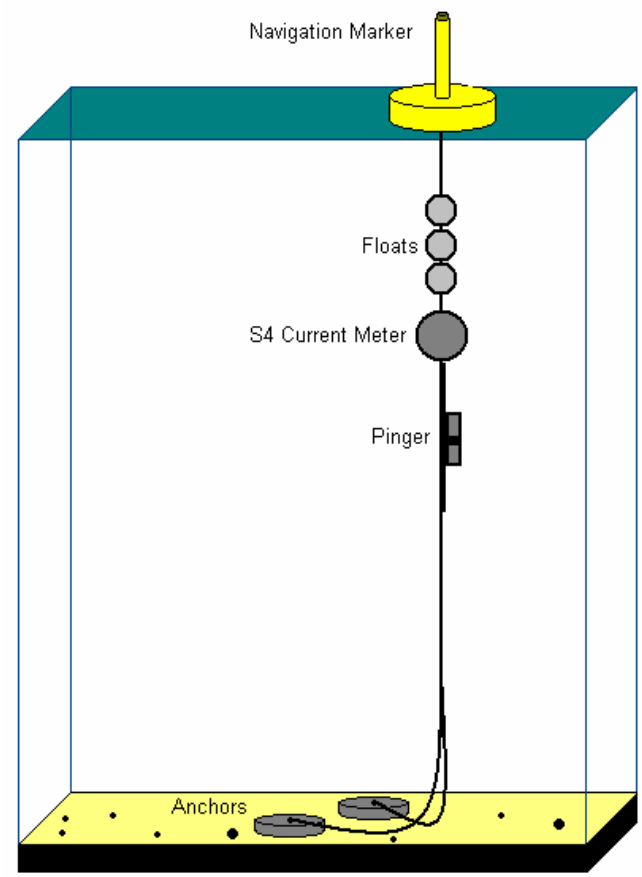


Figure 16. Field set-up of Interocean S4 Current Meter.

Figure 17. Deployed Interocean S4 Current Meter (Banksia Beach).

4.1.1. **Results and analysis**

The current speed and direction data collected as part of this study is summarised in Figures 18 to 20. Figures 18 and 19 present comparative time series plots for the two sites and Figure 20 shows a scatter plot of current speed and direction for both sites. Key characteristics of the tidal flows determined from the data are as follows:

- Tidal currents from Site 1 offshore of Bellara (Sylvan Beach) have higher velocities on the flood tide than the ebb tide. Alternatively, currents offshore from Banksia Beach have higher peak velocities on the ebb tide.
- Figures 18 and 19 also show that flood tides run longer at Bellara compared to flood tides at Banksia Beach.
- Tidal currents tend to run parallel with the shoreline at both sites although the Banksia Beach flood tide shows a greater directional variability than elsewhere, as indicated by the broader shape in Figure 20. The data show that as the flood tide begins, the current directions are in a northerly direction. However, during the flood tide period (as the water levels increase) the flow changes direction toward the north north-west. The current speeds also tend to reduce in the latter part of the flood tide period. This pattern is likely to be influenced by the sand banks located offshore of Banksia Beach. When these banks are exposed at lower water levels, the inflowing currents are constrained to the channel however once the sand banks are inundated, water tends to move in a more north-westerly direction across the entire width of the passage, therefore altering the flow pattern in close to shore.
- A comparison of tidal velocities with corresponding water levels indicates that higher water levels generally coincide with flood tide flows at both sites. Therefore the upper beach is exposed to northerly tidal currents. This effect is more pronounced at the southern (Bellara) site than the Banksia Beach site.

Overall, it is clear that the southern (Bellara) site is flood tide dominated in contrast to the Banksia Beach site, which is more influenced by ebb tidal flows.

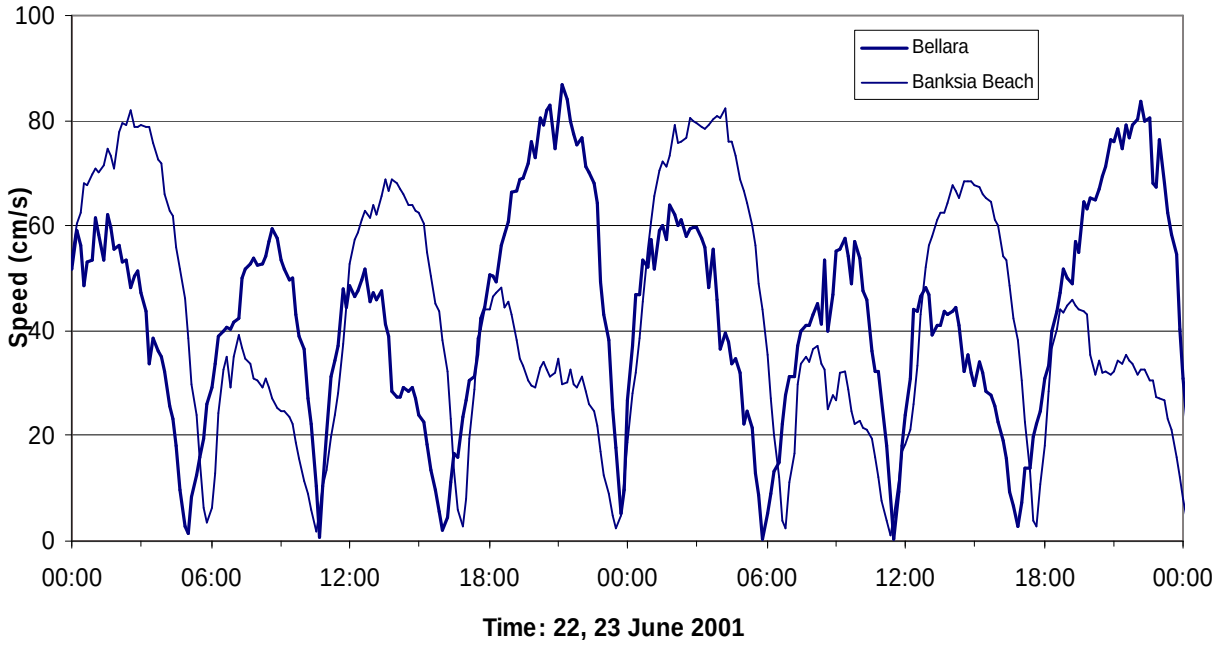


Figure 18. Tidal current speeds at the two sites over two days during a spring tide.

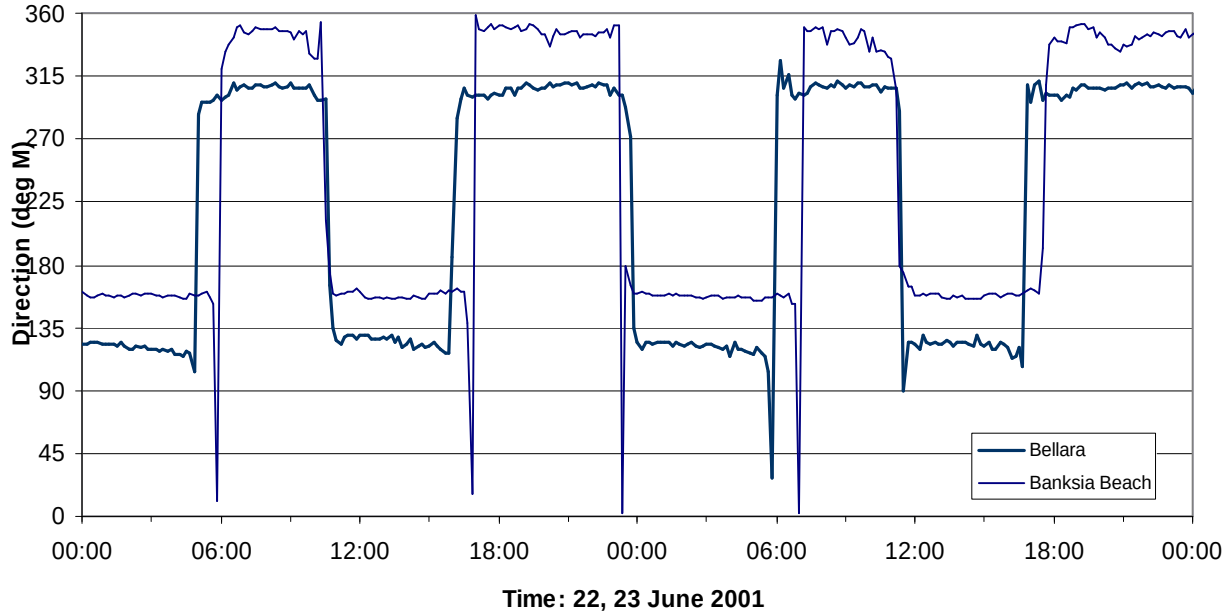


Figure 19. Tidal current directions at the two sites over two days during a spring tide. (Note: values indicate direction in which currents are flowing)

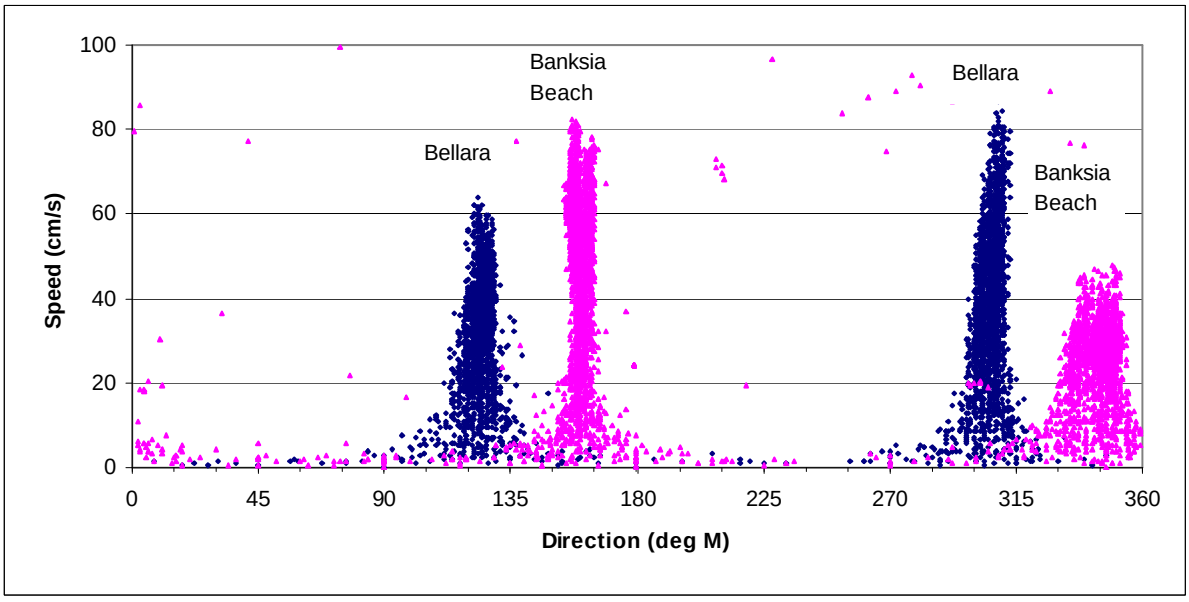


Figure 20. Tidal speed versus direction for all of the data collected at the two sites.

4.2. Wave measurements

The wave conditions within Pumicestone Passage are generally very limited due to the protection afforded by the mainland and Bribie Island. Waves within the passage are comprised of low energy locally generated wind waves, and occasionally higher-energy waves propagated across Moreton Bay entering the passage from southerly directions.

During periods of south to south-easterly winds, considerable wave energy can propagate across Moreton Bay and into the southern section of Pumicestone Passage. Wave energy dissipates rapidly moving northward into the study area. At the northern end of Sylvan Beach the Passage alignment changes to a more north-south axis. Therefore, in the northern part of the study area wave conditions would be limited to local wind waves generated by winds in the south-west to north-west sectors.

4.2.1. Data collection and analysis

The two Interocean S4 current meters used to collect current data were also programmed to record wave data over a one-month period from 19 June 2001 to 19 July 2001. The recorded data enabled estimates of directional wave spectra to be calculated for three-hourly time steps over the recording period.

Standard wave parameters representing the recorded wave spectra were extracted from the data. Due to the generally low wave energy and the limitations of the current meter recording configuration only wave height and period parameters are reported. The depth of the current meters relative to the typical wave length of the incident waves did not allow realistic estimates of wave direction to be determined.

A summary of the wave data obtained from both locations is shown in Figures 21 and 22. In general terms, the recorded wave heights are very small and are close to the limit of resolution of the current meters. Given that the deployment consisted of a one-month record only, the recorded data does not allow any conclusions to be drawn on the local wave climate within the study area.

4.3. Aerial photography

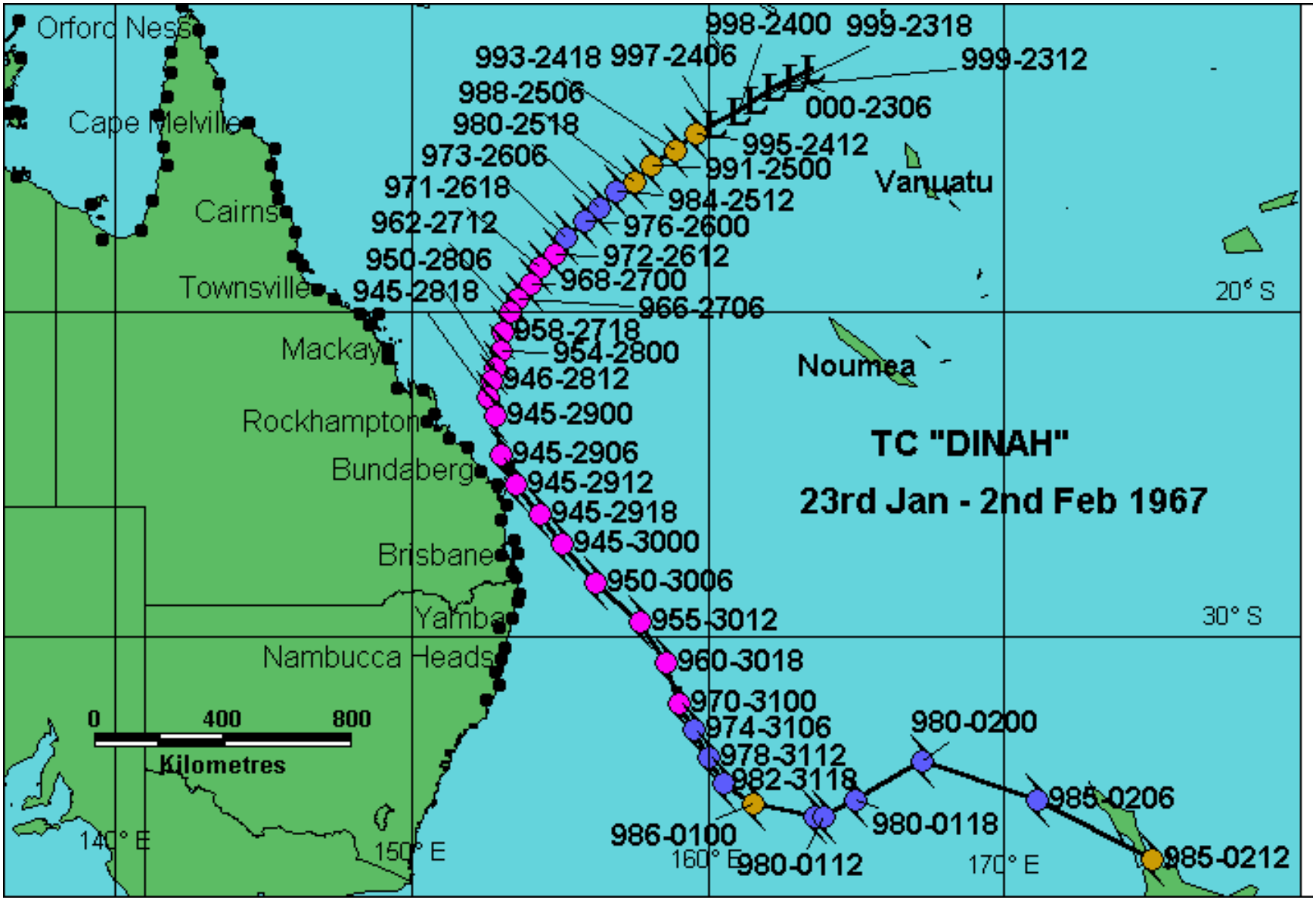
An aerial photograph from 1958 was sourced from the Department of Natural Resources and Mines to determine the state of the coastline at Banksia Beach and Sylvan Beaches before development (Figure 23) as shown on the most recent aerial photography taken in 1999 (Figure24). Aerial photography from 1975, 1982, 1990 and 1999 were rectified and the shorelines plotted and compared to determine the shoreline changes over this 24-year period. Figure 25 presents this photography from 1975, 1982 and 1990.

Aerial photography of the study area taken in 1999 was rectified following the methods outlined in Appendix B. To rectify the 1975, 1982 & 1990 aerial photography, a system known as photo-to-photo rectification was used. This process involved fixing the 1990 aerial photography to the 1999 rectified aerial photography, using stationary features common to each time series such as houses, roads, jetties and bridges. This process was repeated for the 1982 and 1975 photographs. Once all aerial photos in each time series were rectified, all the photos were joined to produce a mosaic for each year.

Spatially referenced data was then obtained from the 1975, 1982, 1990 and 1999 rectified mosaics. The shorelines for each time series were digitised from the rectified aerial photography to help determine coastal processes within the determined study area. Also captured were sand banks situated in Pumicestone Passage adjacent to the wreck offshore from Banksia Beach.

APPENDIX E

Cyclone Dinah Information – Bureau of Meteorology


Orford Ness
Cape Melville
Cairns
Townsville
Mackay
Rockhampton
Bundaberg
Brisbane
Yamba
Nambucca Heads
0
400
800
Kilometres
140° E
150° E
160° E
170° E
20° S
30° S
Vanuatu
Noumea
TC "DINAH"
23rd Jan - 2nd Feb 1967
998-2400
999-2318
999-2312
993-2418
997-2406
988-2506
980-2518
973-2606
971-2618
962-2712
950-2806
945-2818
000-2306
995-2412
991-2500
984-2512
976-2600
972-2612
968-2700
966-2706
958-2718
954-2800
946-2812
945-2900
945-2906
945-2912
945-2918
945-3000
950-3006
955-3012
960-3018
970-3100
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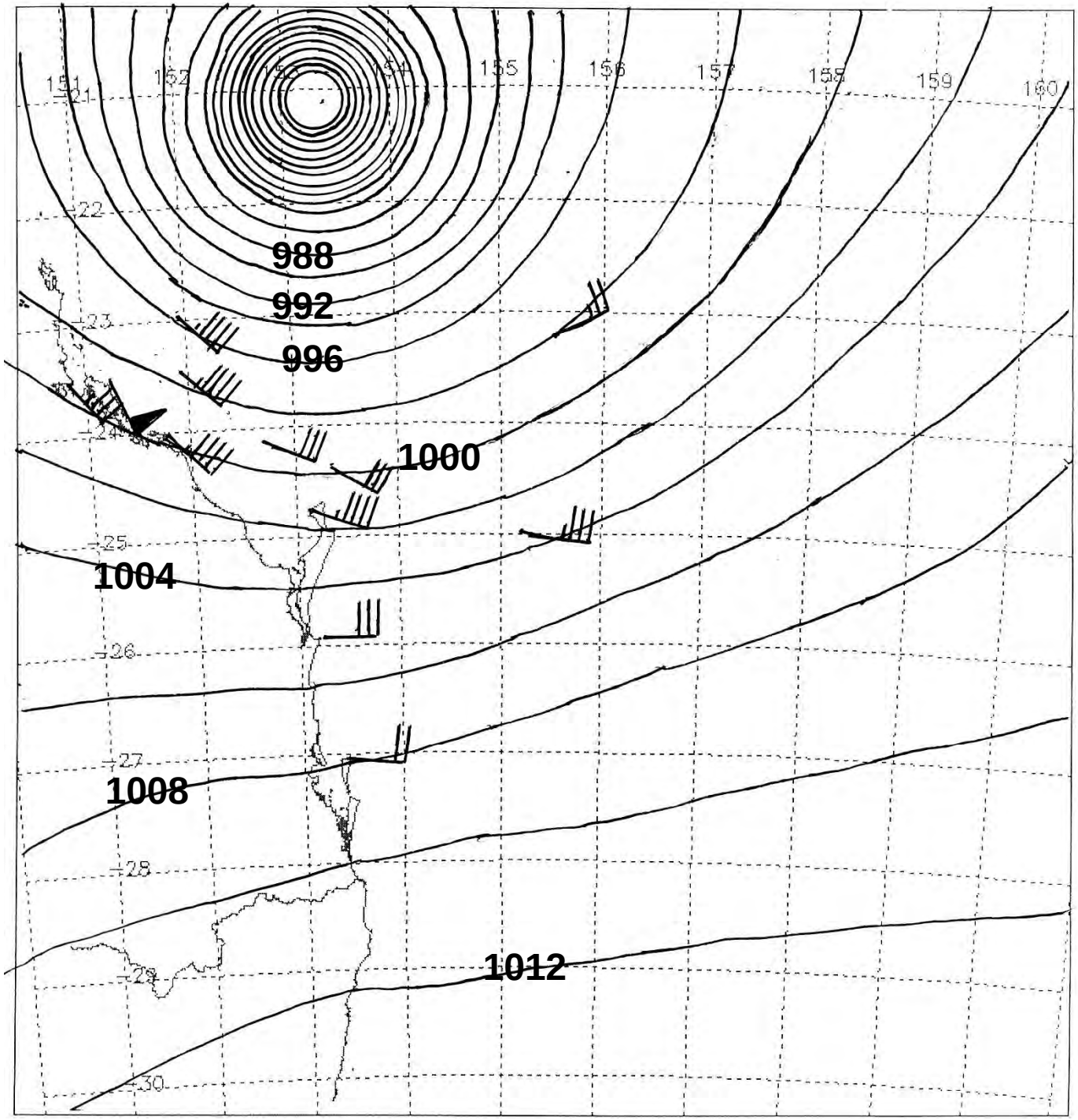
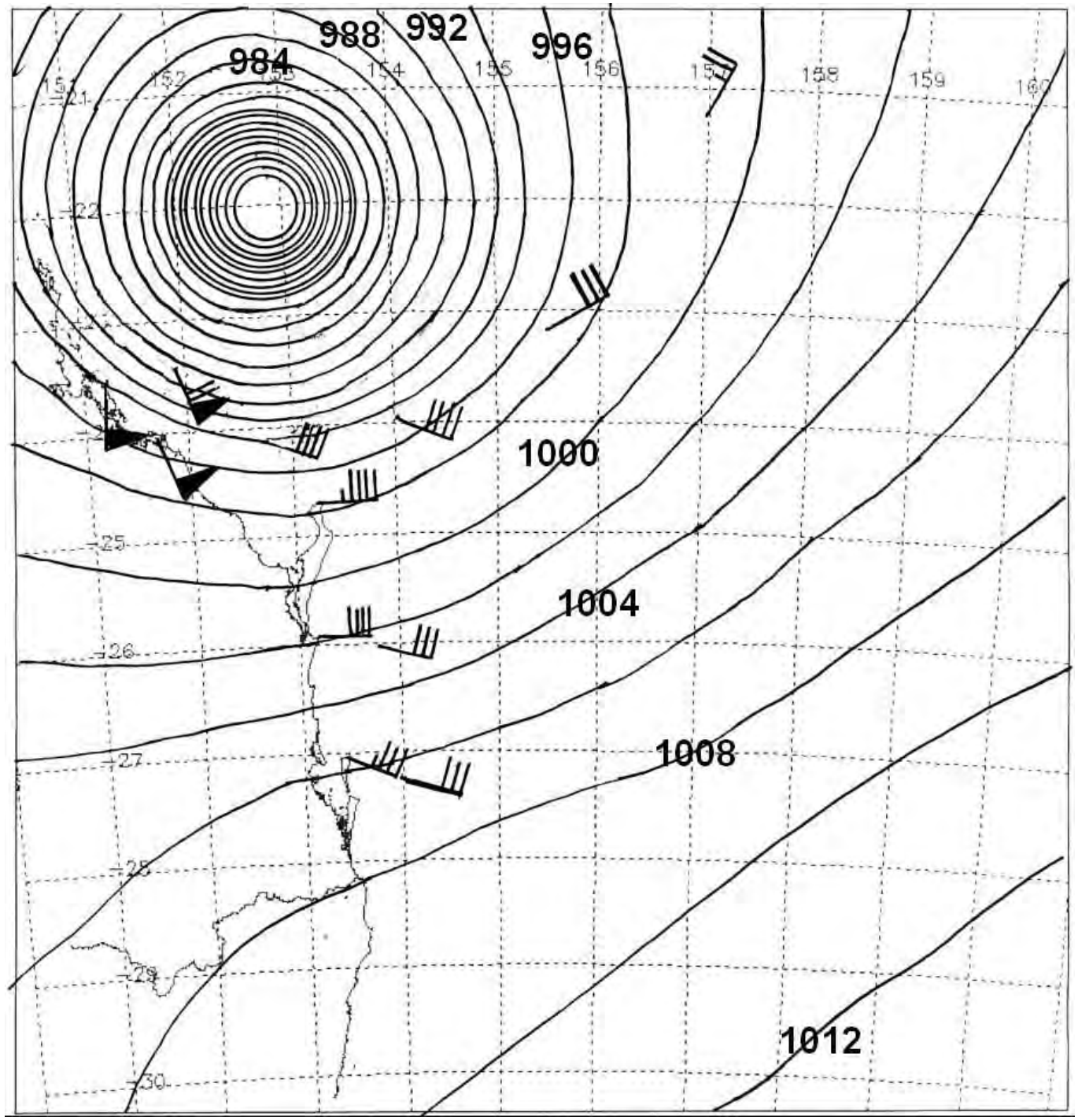
980-0112
985-0212



2300UTC
27/1/1967



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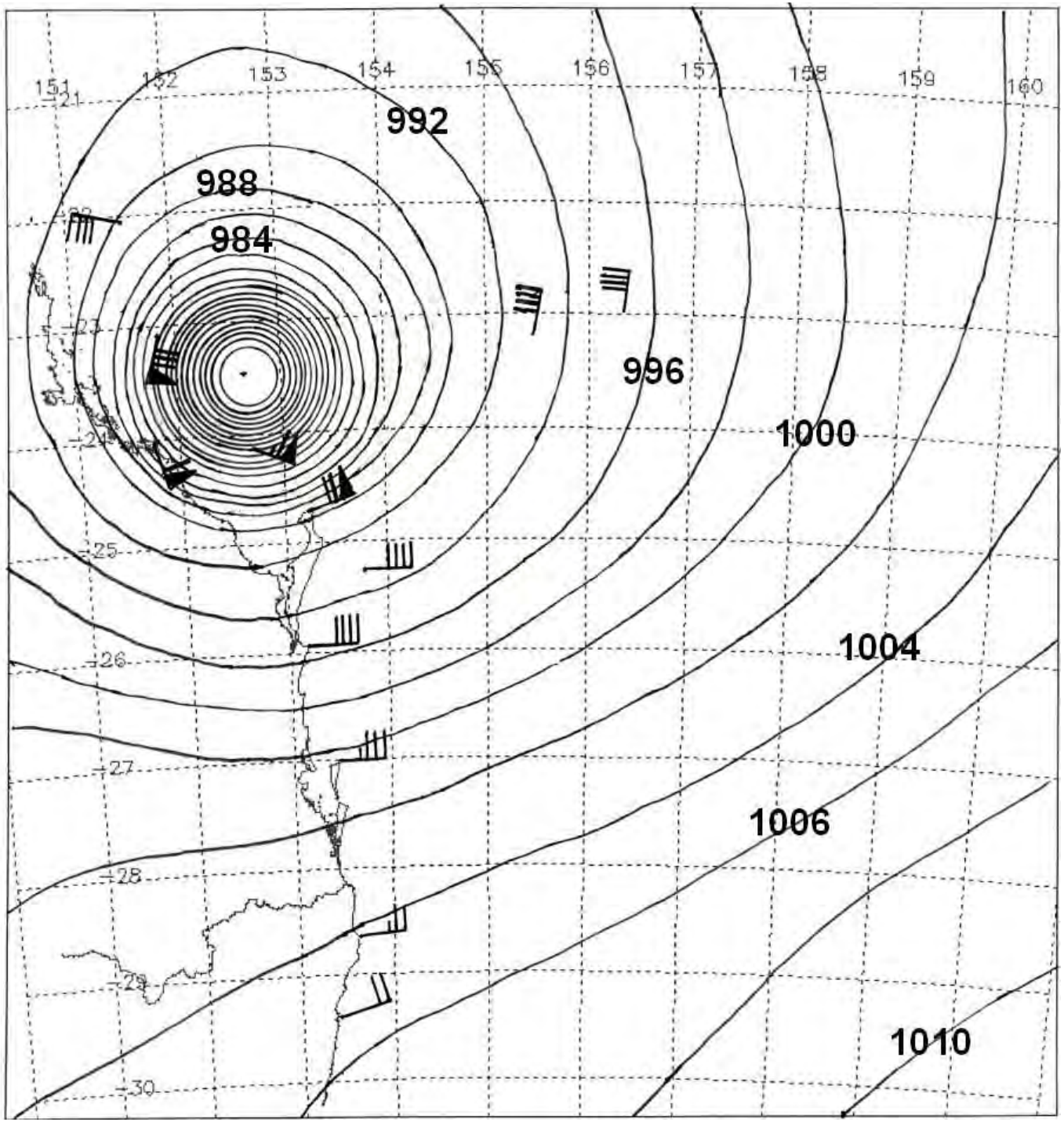
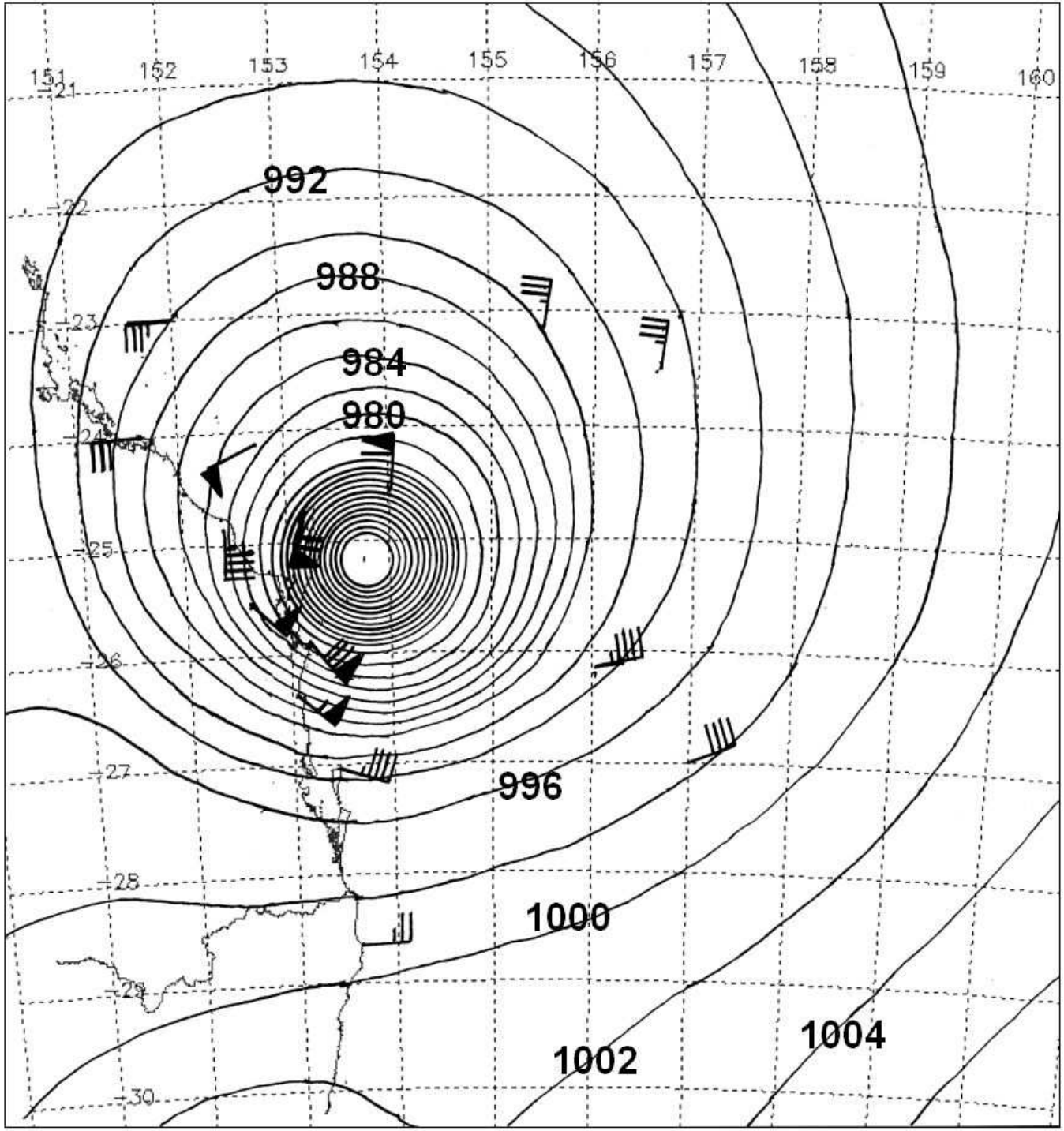
28/1/1967

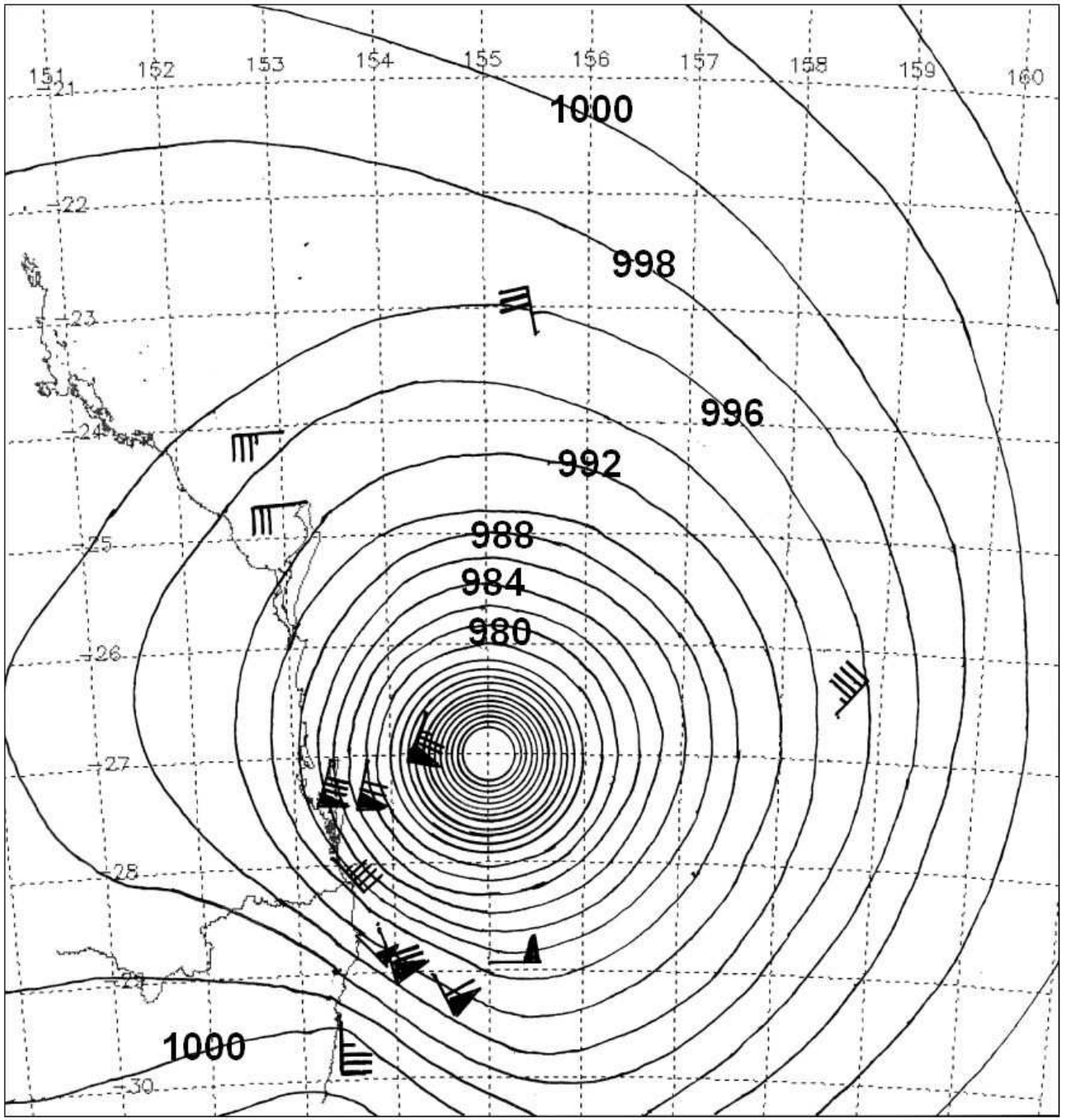


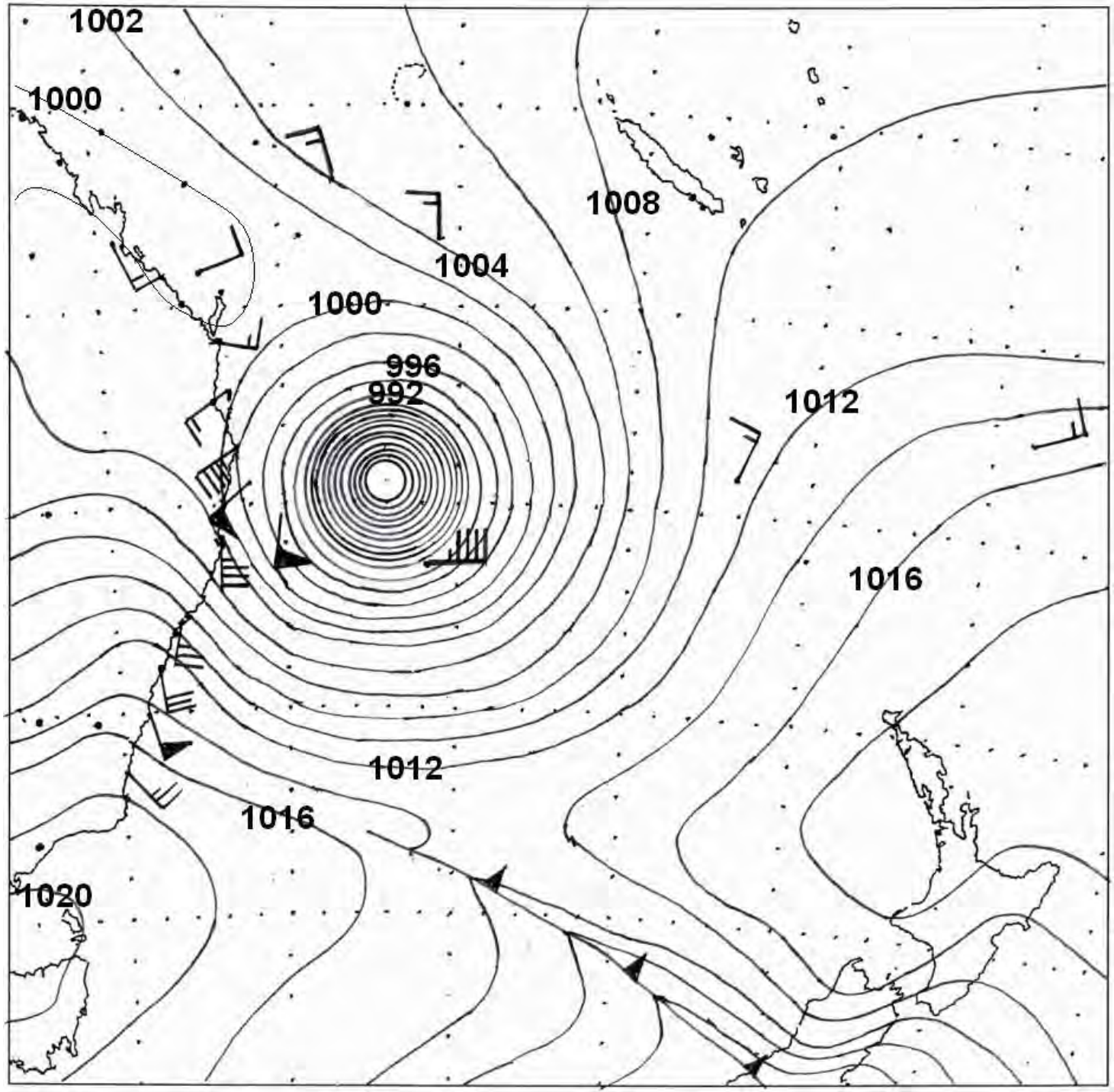
2300UTC
28/1/1967



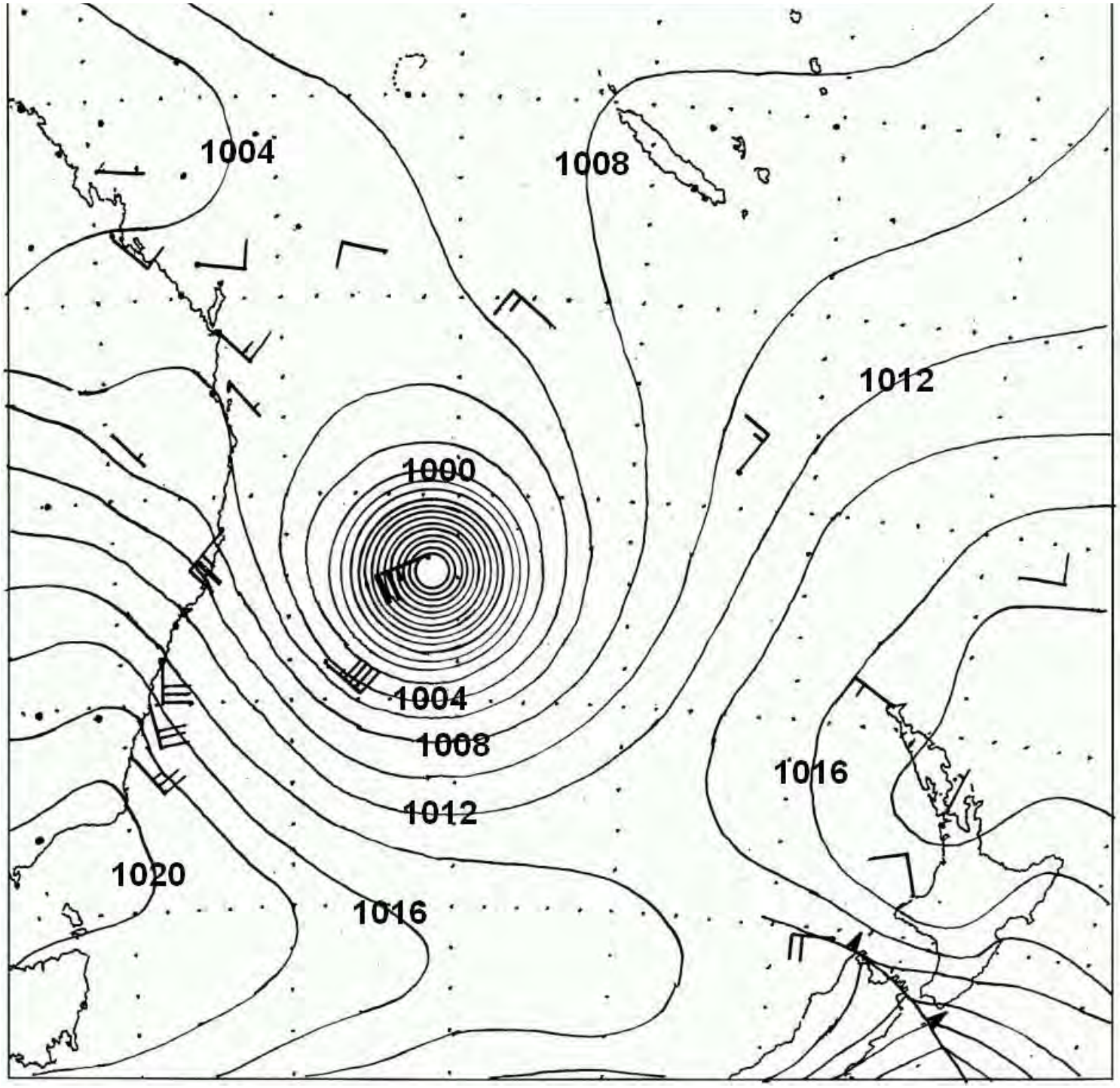
1100UTC
29/1/1967

2300UTC
29/1/1967





1100UTC
30/1/1967



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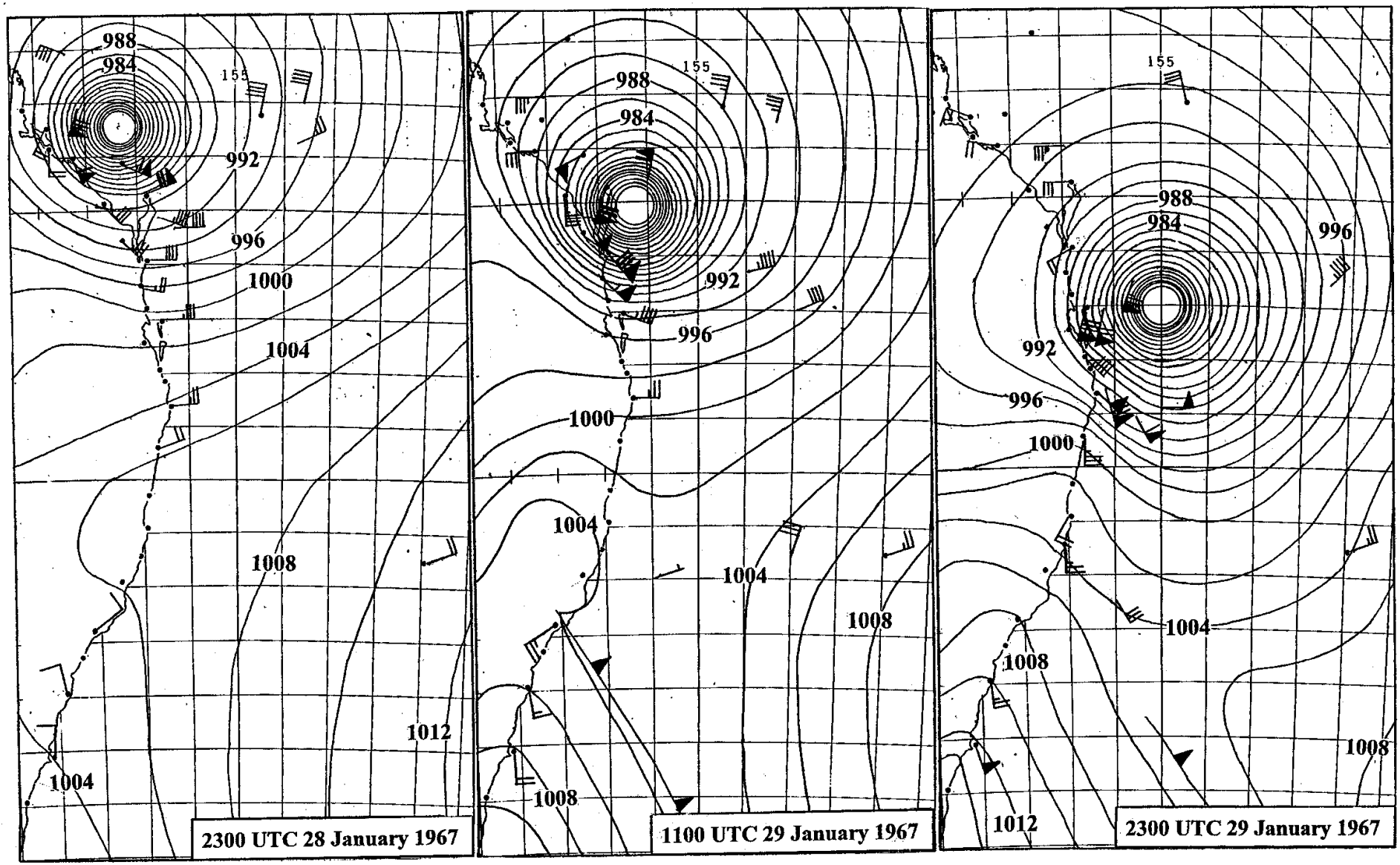
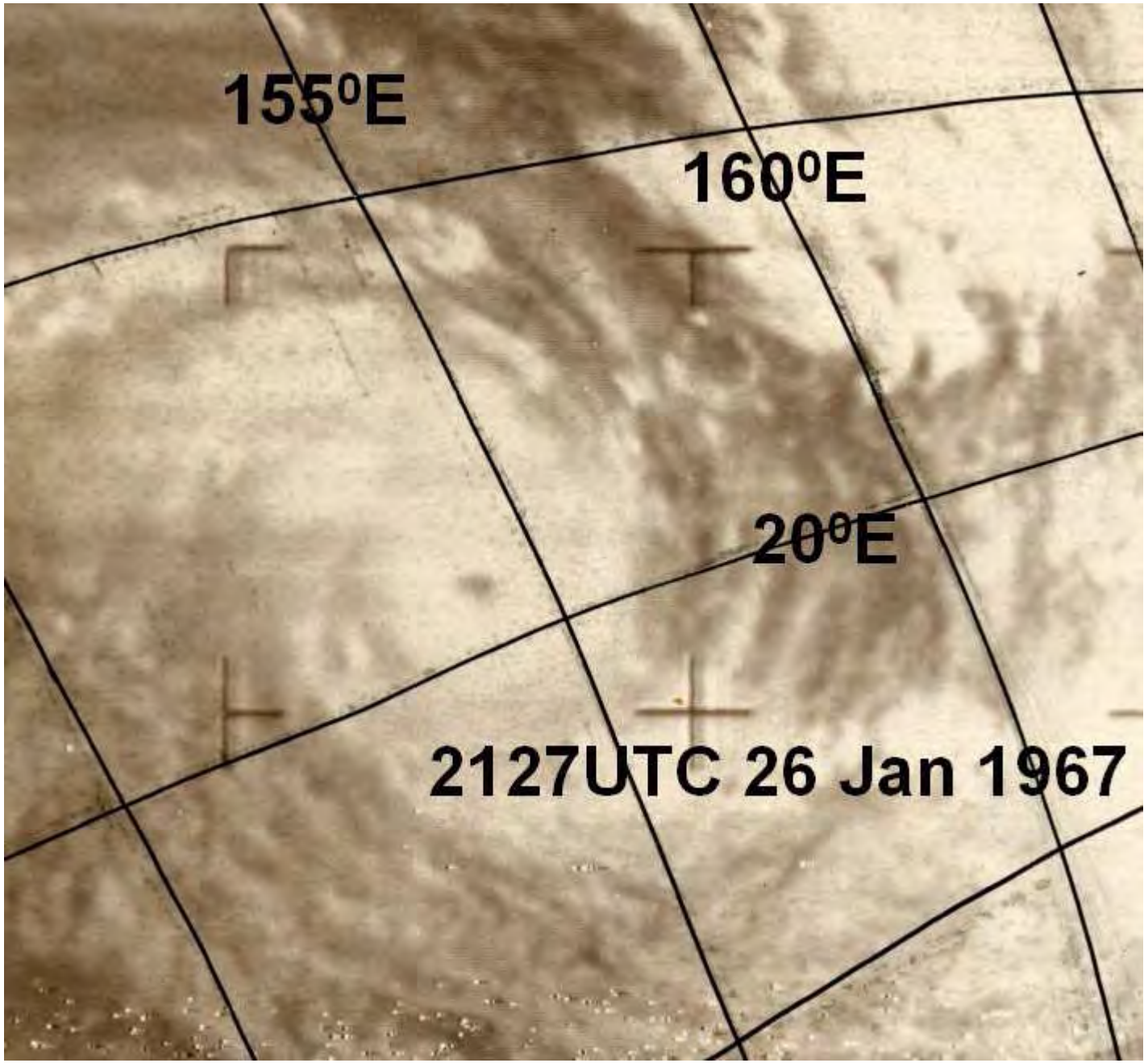
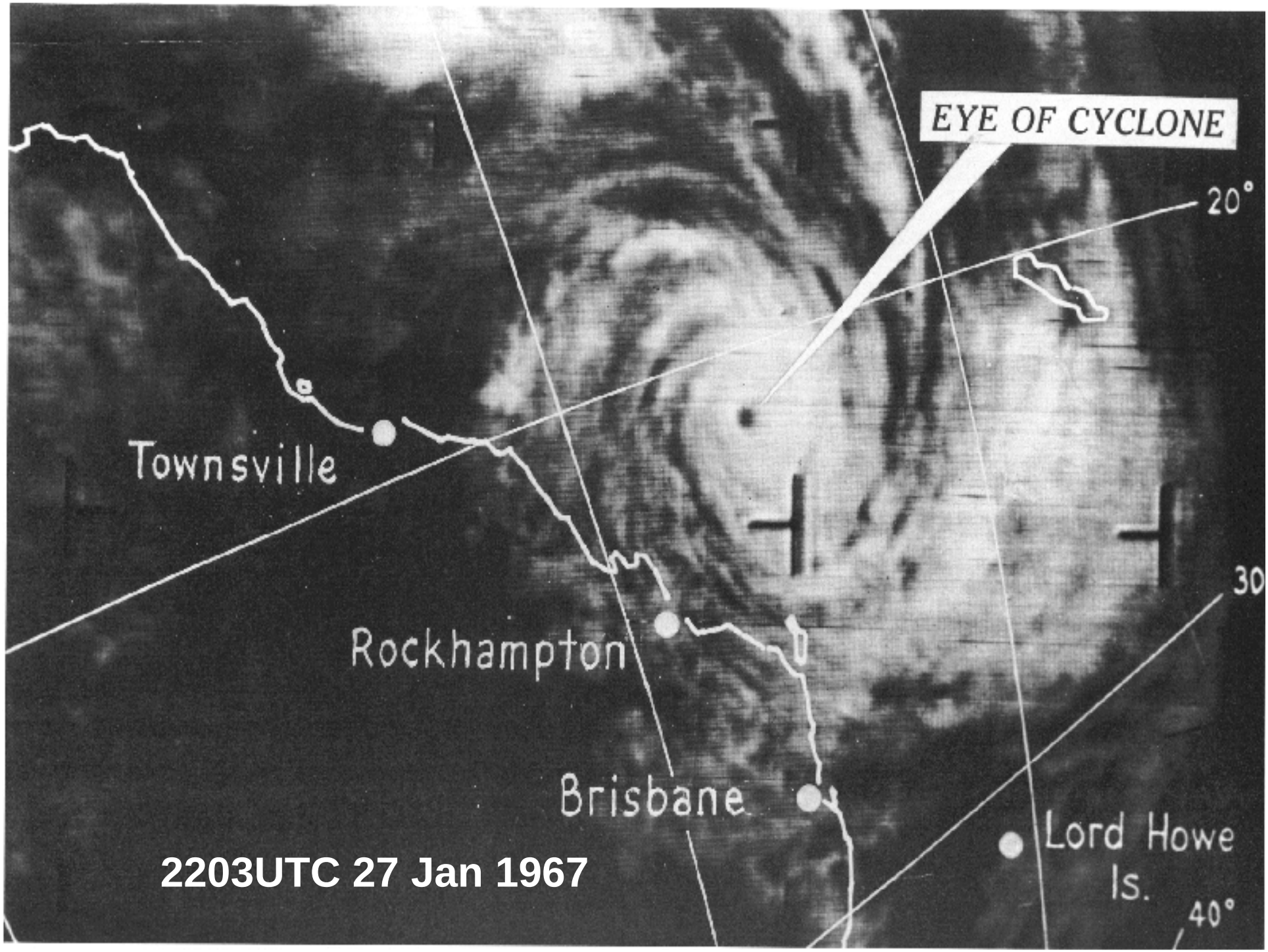
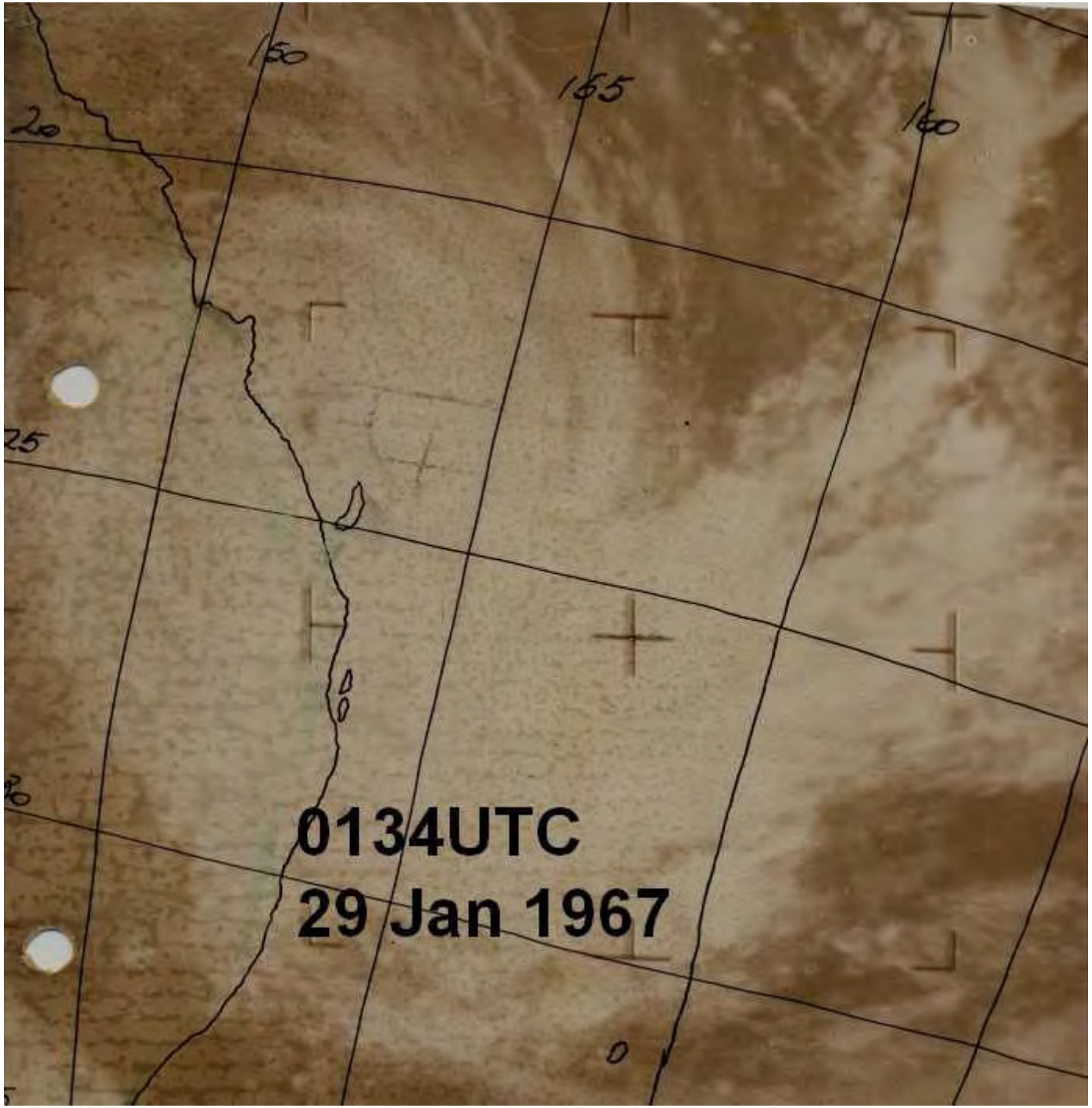
30/1/1967



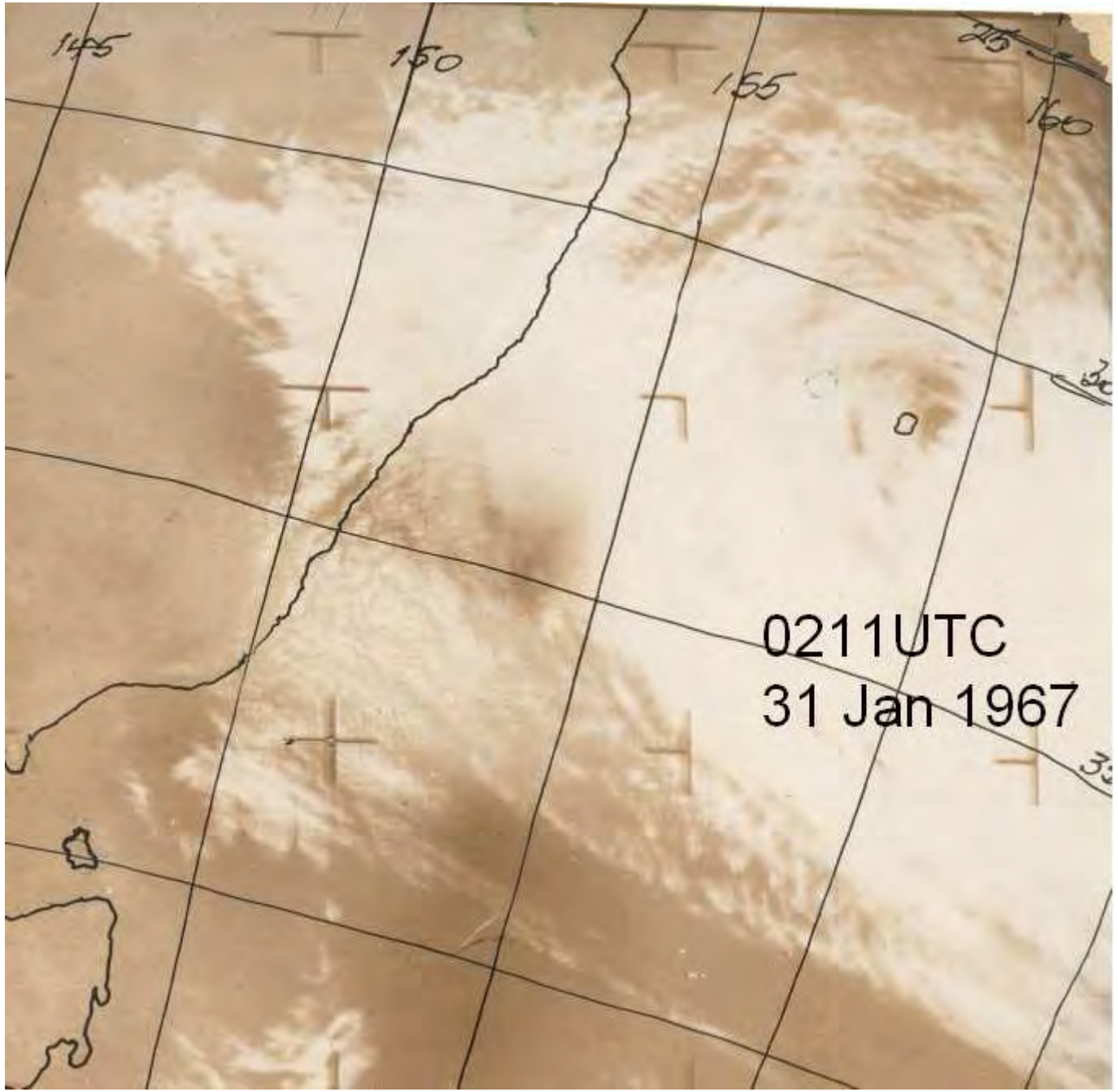
***Dinah* -Storm surge Gold Coast water reached about 1.5 metres above highest astronomical tide on the high tide around 0200UTC 30 January 1967.**

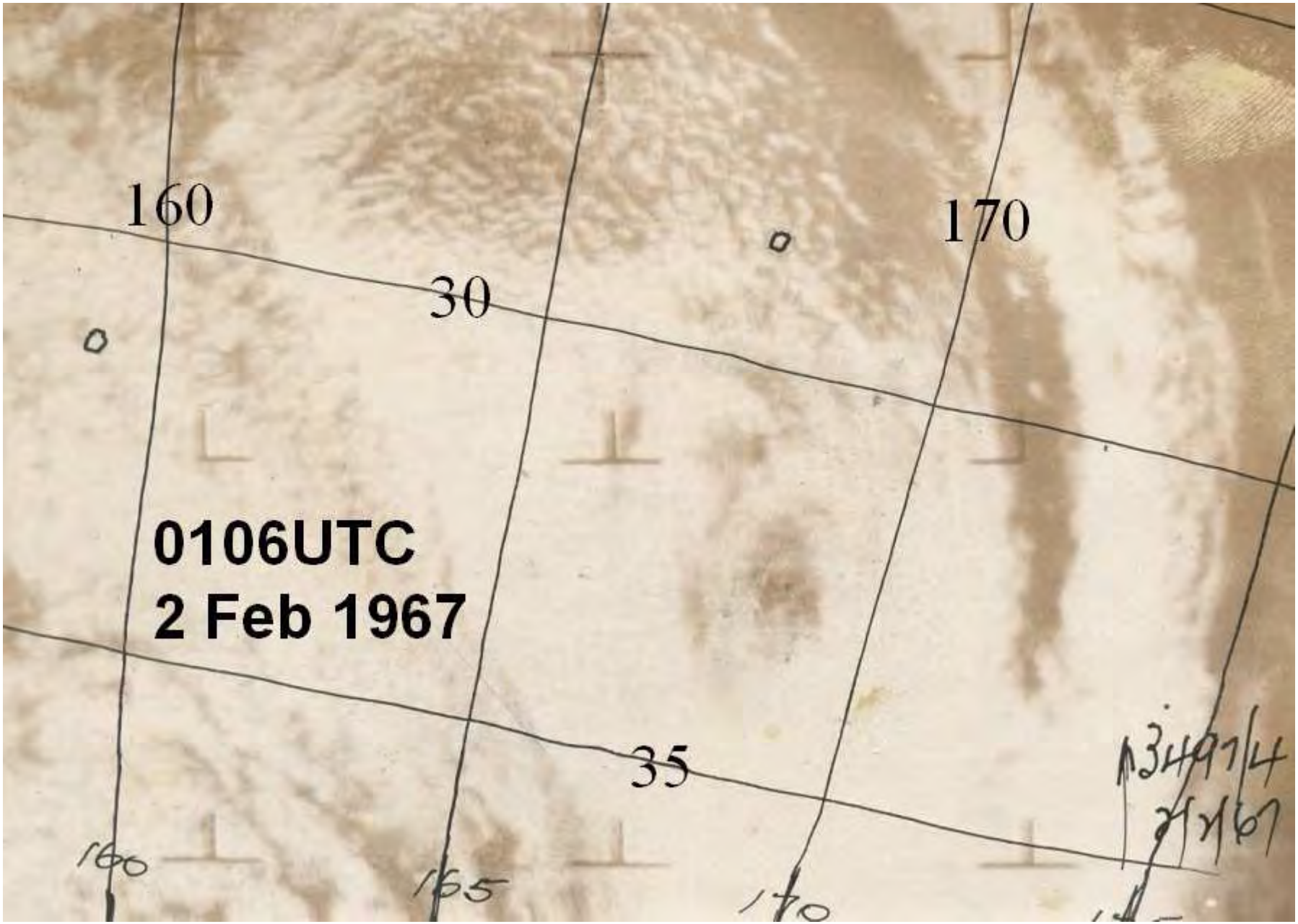

155°E
160°E
20°E
2127UTC 26 Jan 1967

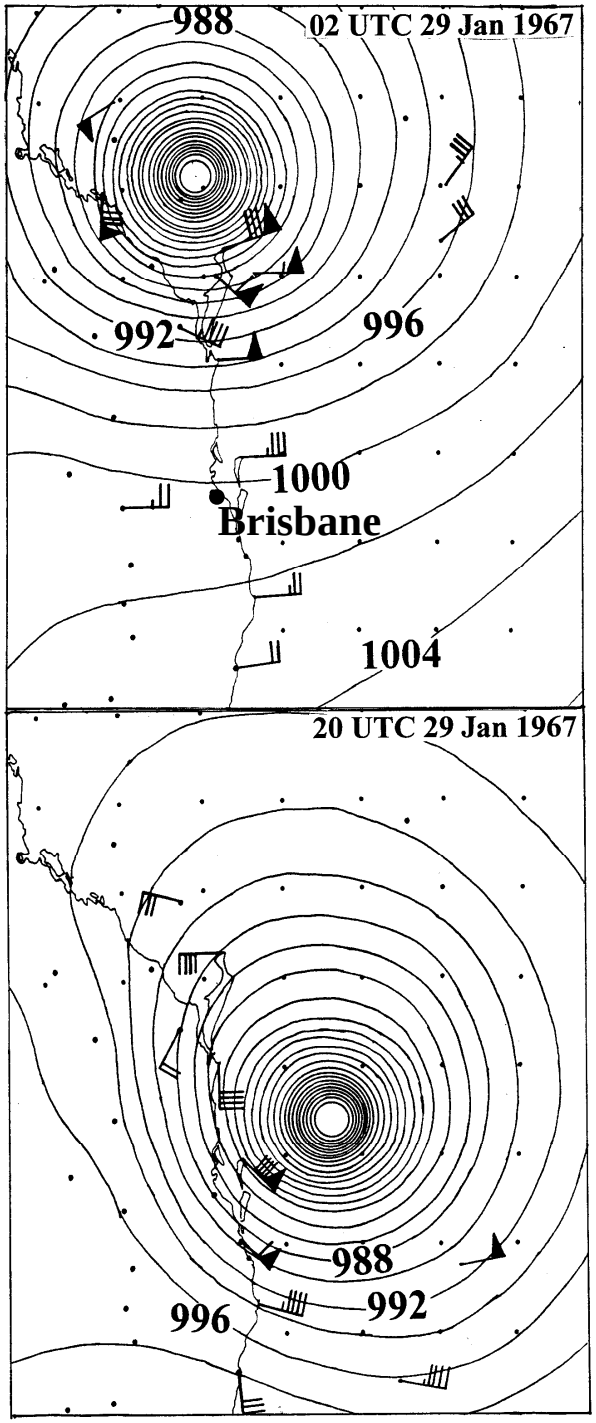

EYE OF CYCLONE
20°
Townsville
Rockhampton
30
Brisbane
Lord Howe
Is.
40°
2203UTC 27 Jan 1967


150
165
160
20
25
0134UTC
29 Jan 1967

2329UTC 29 January 1967
embedded eye east of Brisbane

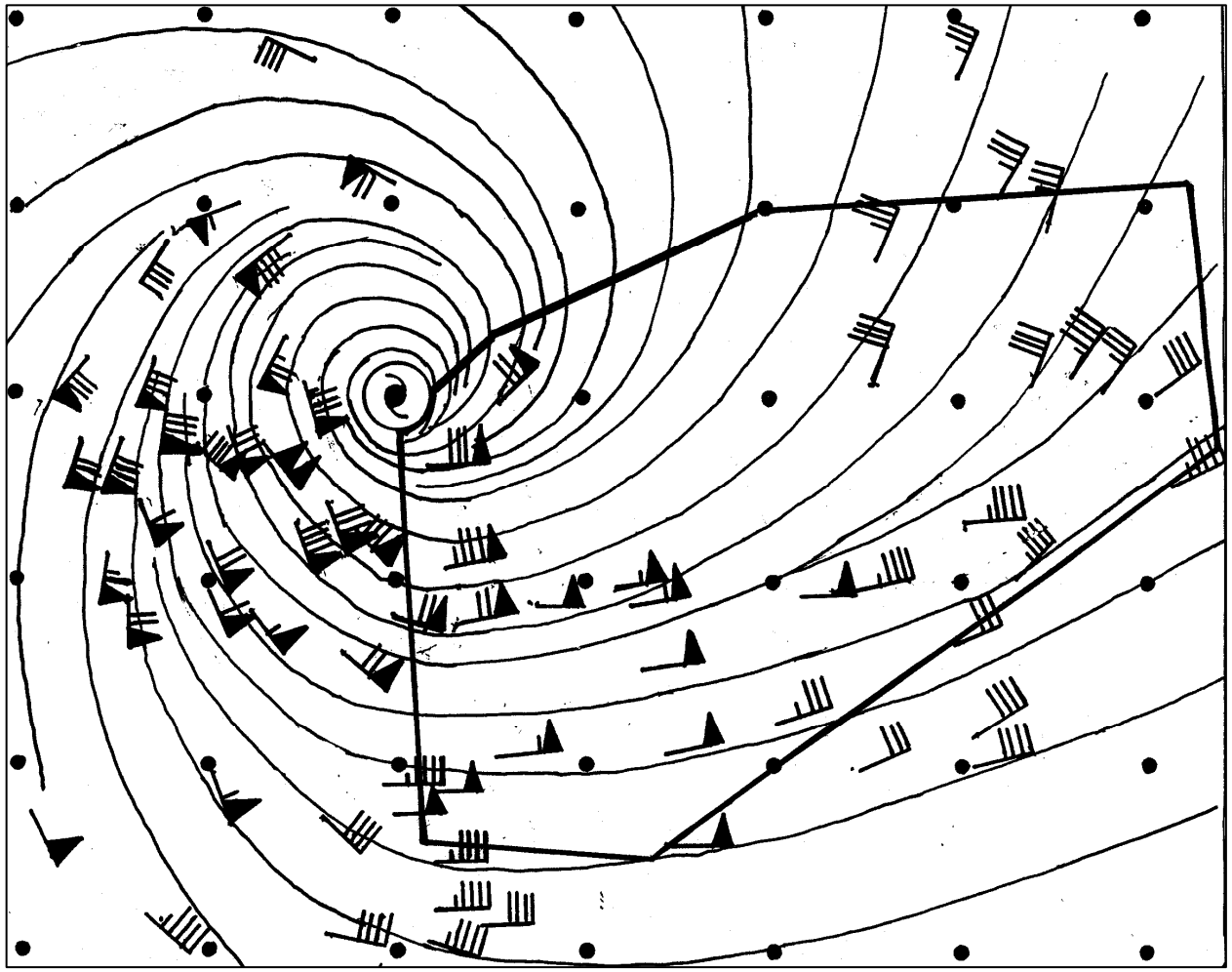

145
150
155
160
0211UTC
31 Jan 1967


160
170
30
35
0106UTC
2 Feb 1967



Tropical cyclone *Dinah* recurved and passed over Sandy Cape which recorded a central pressure of 944.8 hPa. The lighthouse keeper stated ‘ High seas together with very high tides brought the sea level up to within 20 feet of the boatshed, approximately 30 feet higher than usual’

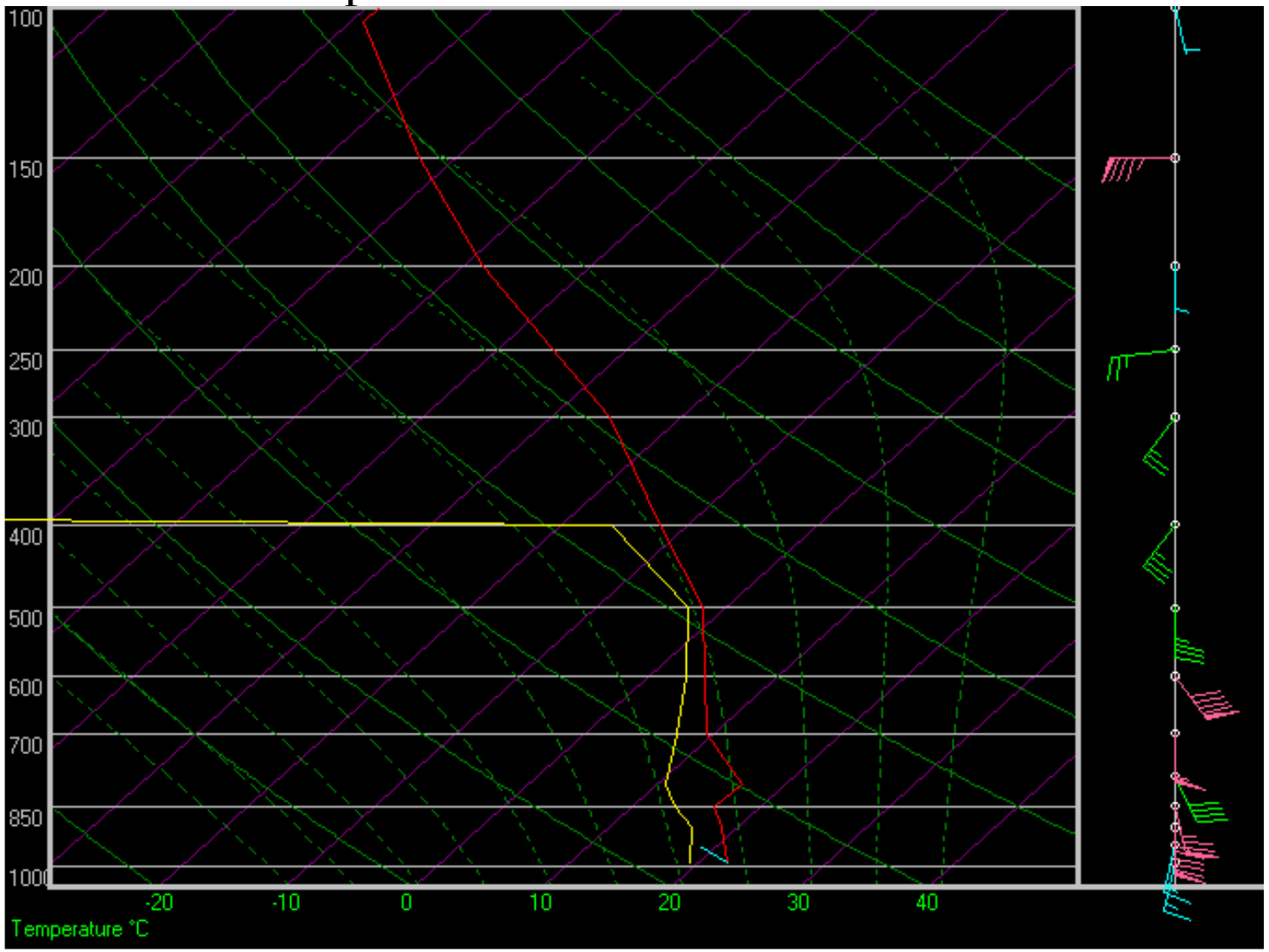
Storm surge flooded the flats behind Double Island Point to 2 metres depth and storm surge inundated cane farms and shops on the Sunshine Coast



Surface wind observations over 48h period from 2300UTC 28/1/1967 to 2300UTC 29/1/1967. Griding denotes one degree latitude and longitude spacing.

29/01/1967 23:00:00	500	180	35.0	-1.3	5710
29/01/1967 23:00:00	600	150	91.5	4.7	4230
29/01/1967 23:00:00	700	180	56.4	9.8	2950
29/01/1967 23:00:00	750	160	38.9		
29/01/1967 23:00:00	850	170	75.9	16.8	1310
29/01/1967 23:00:00	900	180	93.4	19.2	820

Brisbane Airport winds and sonde 2300UTC 29 Jan 1967



Storm surge effects from Dinah SEQ

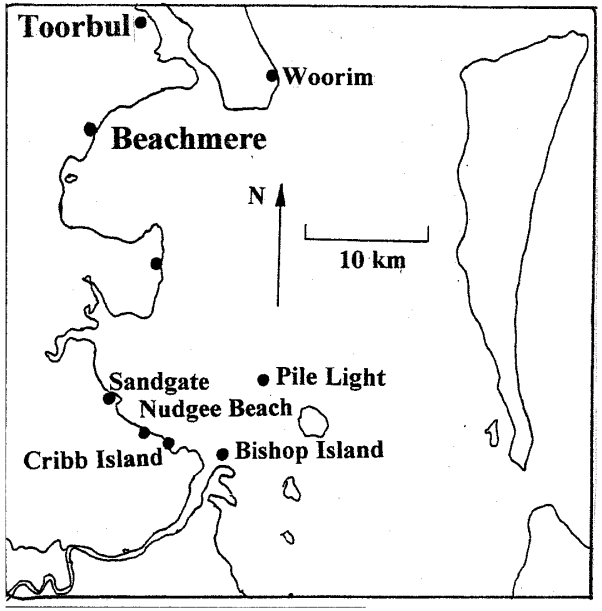
Storm surge inundated cane farms at Bli Bli and was knee deep in Hastings St Noosa. Around Sandgate seawater 1.5 metres deep came into houses. More than one hundred homes were flooded and at Cribb Island one house was washed into the sea.
Storm surge also affected the Gold Coast and water lapped the decking of the Jubilee Bridge which is about 1.5 metres above highest astronomical tide. A similar storm occurred on the Tweed River isolating Fingal. A section of the esplanade collapsed at Surfers Paradise

Storm surge effects from Daisy SEQ

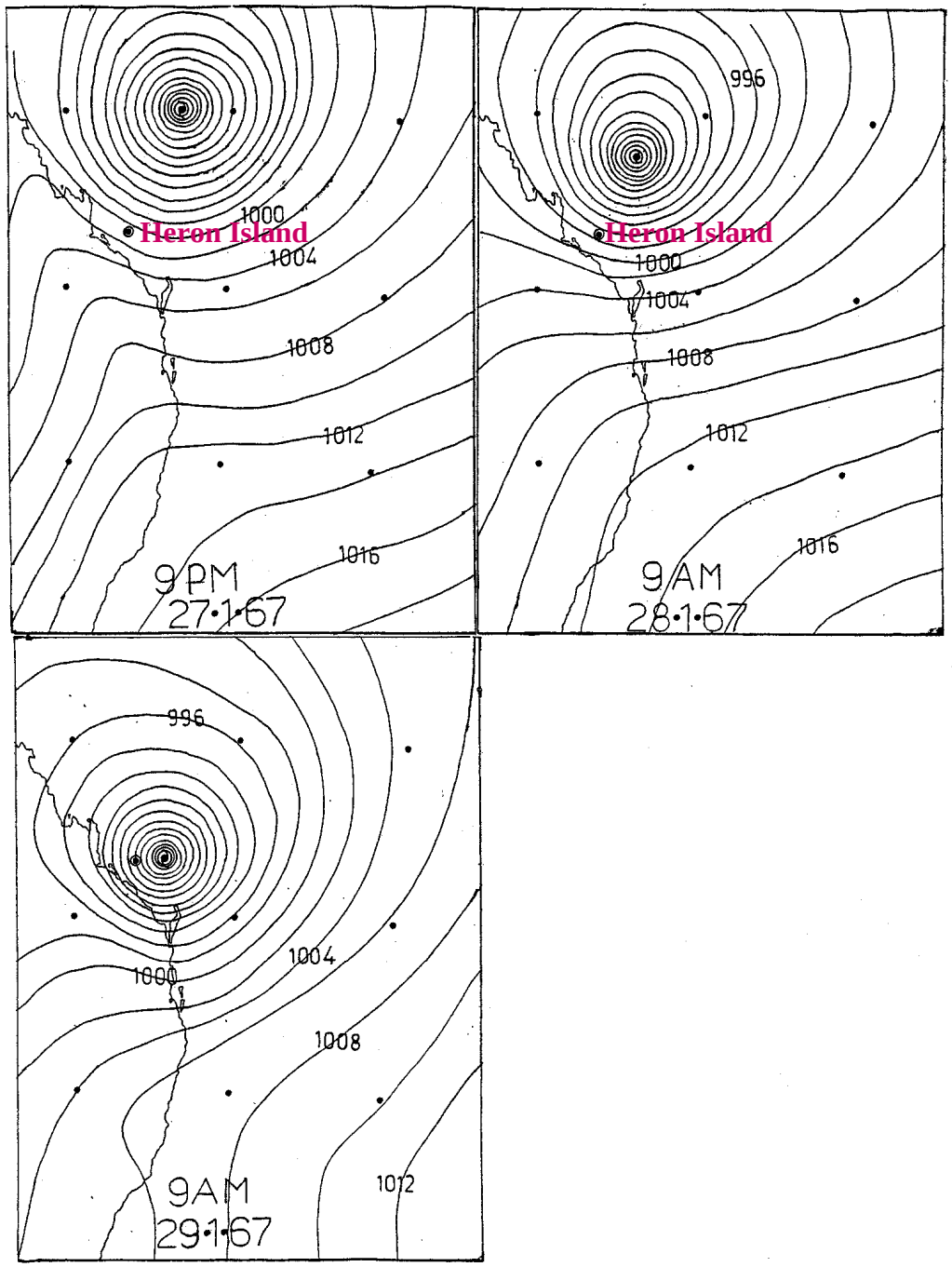
A noticeable storm surge at time of high tide was observed at; Sandy Cape, North Stradbroke, Woorim, Coolum, Tangalooma, Torquay, Sunshine Beach, and Brunswick Heads. At Tweeds Heads the surge brought high water an extra 2 ft (0.6 m) whilst Pumicestone reported a 2 ft 8in surge (0.8m).
A 10 foot (3m) surge was reported on the western side of Fraser Island

Around Moreton Bay the worst inundation from the sea were felt at the high tide around 0200 UTC 29 January 1967. The area from Sandgate to Cribb Island was flooded when wave run up overtopped seawalls and dunes. This brought water up to 1.5 metres deep into some houses. More than one hundred homes were flooded and at Cribb Island one house was washed into the sea while several others were nearly lost. At Cribb Island the water rose over man made barriers 2 metres high. In 1967 tide readings in Moreton Bay were taken at the West Inner Beacon which was located about two hundred metres west of Bishop Island. The tide levels as Dinah passed reached a maximum of only 0.46 metres above predicted levels and this occurred at 0900 UTC 29 January 1967. This was near low tide and hours after the worst inundation. Therefore a seiche appears to be the chief cause of inundation rather than a general rise in sea level over the whole bay.

Observations from the *Eastern Moon* sheltered near the Pile Light indicated that at the time of maximum inundation 1.2 metre waves and 12.5 ms^{-1} winds were being directed towards Sandgate. After this the winds and waves approached from a southeasterly direction, which was parallel to the coast near Sandgate. The strongest winds reported from the ship were at 2000 UTC 29 January 1967 when they reached near hurricane force. By this time the direction had turned southerly and were causing serious inundation and cutting roads around Toorbul in the far northern end of *the Bay*.



Wind								
Wave height (metres)	1.2	1.2	1.5	2.5	2.1	2.5	3.1	3.1
Wave direction								
Time UTC	00	03	06	09	12	15	18	21



Dinah approaching Heron Island

APPENDIX F

March 2004 Storm Event – Queensland EPA

APPENDIX G

Irish J.L., Canizares R., Grosskopf W.G. and Williams B.P. (2004) "The Effect of Hindcasted Waves on Coastal Storm Water Levels During the Blizzard of 2003". *Proceedings of the 8th International Workshop on Wave Hindcasting and Forecasting*

THE EFFECT OF HINDCASTED WAVES ON COASTAL STORM WATER LEVELS DURING THE BLIZZARD OF 2003

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Moffatt and Nichol
New York, New York, USA

William G. Grosskopf
Offshore and Coastal Technologies, Inc. – East Coast
Chadds Ford, Pennsylvania USA

and

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US Army Corps of Engineers New York District
New York, New York, USA

1. INTRODUCTION

A shore protection and storm damage reduction study for the south shore of Long Island, New York, USA, from Fire Island Inlet to Montauk Point is being conducted by the U.S. Army Corps of Engineers. The study area includes the barrier islands, Atlantic Ocean shorelines, and adjacent back bays. These low-lying areas are subject to flooding by tropical and extratropical storm surge from the Atlantic Ocean, surge propagation through tidal inlets, wave setup and runup, and barrier island overwash and breaching. By using meteorological hindcasts and coupling hydrodynamic, wave, and sediment transport models, accurate storm surge levels can be calculated throughout the study area.

This paper discusses the application and performance of hindcasted wind fields and wave models to simulate ocean wave setup and its impact on back-bay water levels during storm events by presenting model simulations and measurements from the blizzard of 2003.

2. STUDY AREA

The project area is located entirely in Suffolk County, Long Island, along the Atlantic and the bay shores of the towns of Babylon, Islip, Brookhaven, Southampton, and East Hampton (Figure 1). The overall study area is approximately 135 km long and includes three large estuarial bays: Great South Bay (connected to the ocean by Fire Island Inlet), Moriches Bay (connected to the ocean by Moriches Inlet), and Shinnecock Bay (connected to the ocean by Shinnecock Inlet). The westernmost portion of the overall study area, the Nassau/Suffolk County border at Great South Bay, is located about 75 km east of The Battery, in New York City.

3. STORM SURGE MODELING METHODOLOGY

Coastal storm water levels are governed by a number of complex physical processes: wind conditions, barometric pressure, astronomic tide, wave conditions, and morphologic response. The numerical modeling strategy for this study addresses all of these processes by combining a number of numerical models, some with external communication and others with integrated dynamic communication. The strategy also employs state-of-the-art meteorological methods. Figure 2 illustrates the complexity of the numerical modeling strategy. The numerical models and methods used to simulate storm water levels resulting from ocean stage, wave setup, surge propagation

Figure 1. Study area.

through the tidal inlets into the bays, and localized wind setup are*:

- Planetary Boundary Layer model (PBL)
- Interactive Kinematic Objective Analysis (IKOA)
- ADvanced CIRCulation model (ADCIRC)
- WISWAVE
- DELFT3D-FLOW
- DELFT3D-WAVE (HISWA)

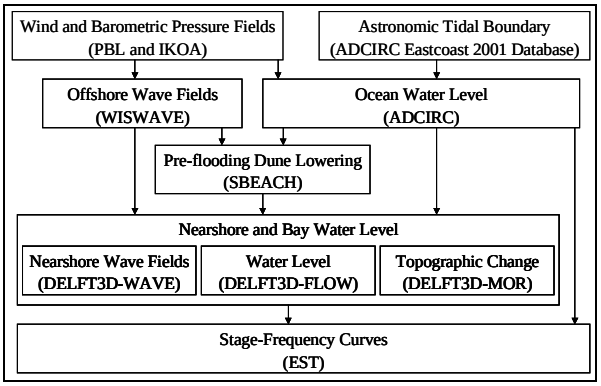

Figure 2. Modeling strategy.

* The impact of morphological response on storm water levels is beyond the scope of this paper. See Cañizares *et al.* (in press) for a discussion of morphological impacts on storm water levels for this study.

3.1 Meteorological Forcing

For this study, Oceanweather, Inc developed meteorological forcing for 37 tropical and extratropical storms. Tropical wind velocity fields, 10-m above the water surface, and barometric pressure fields were developed using PBL, a tropical cyclone model (Thompson and Cardone, 1996). PBL describes the vortex pressure field using existing historical information on storm track, scale radius of the storm radial pressure profile, and other parameters.

Storm tracks and initial estimates of intensity of an historical North Atlantic basin tropical storm to be analyzed were taken, with some modification, from the NOAA Tropical Prediction Center's database (Jarvinen *et al.*, 1984). Surface winds generated from PBL are then imported into a graphical interface at 6-hourly intervals and evaluated against available surface data and aircraft reconnaissance wind observations adjusted to the surface as described by Powell and Black (1989). This process is iterated until a solution for the surface wind fields that is most consistent with all of the available data is achieved. The final wind field is this best fit model solution.

Wind fields, 10-m above the water surface, for extratropical storm events were developed using IKOA. The benefits of IKOA enhancement to the performance of ocean response modeling over wind fields produced by strictly automated methods for extratropical storms are well established (e.g., Cardone *et al.*, 1995). The IKOA starts from a first-guess

background wind field and then proceeds to assimilate observations of surface winds from ships, buoys, coastal stations, and remote sensing sources. If available, background winds were taken from the AES40 hindcast (Swail and Cox, 1999).

For extratropical events, barometric pressure fields were taken directly from NOAA's NCEP (National Center for Environmental Prediction) database (www.ncep.noaa.gov).

Tropical and extratropical wind and pressure fields were produced on a grid domain extending from 30° N to 47° N and from 64° W to 82° W to capture far-field surge and wave field generation (Figure 3). Wind fields were reported at a grid spacing of 0.0625° latitude by 0.0625° longitude (about 7 km) and 0.625° latitude by 0.833° longitude, for tropical and extratropical events respectively. Temporal resolution for tropical and extratropical events was 30 minutes and 3 hours, respectively.

No land effects were considered during wind field development. Therefore, a 30 percent reduction in wind speed for all offshore-directed winds in nearshore areas was adopted for this study (Resio, personal communications).

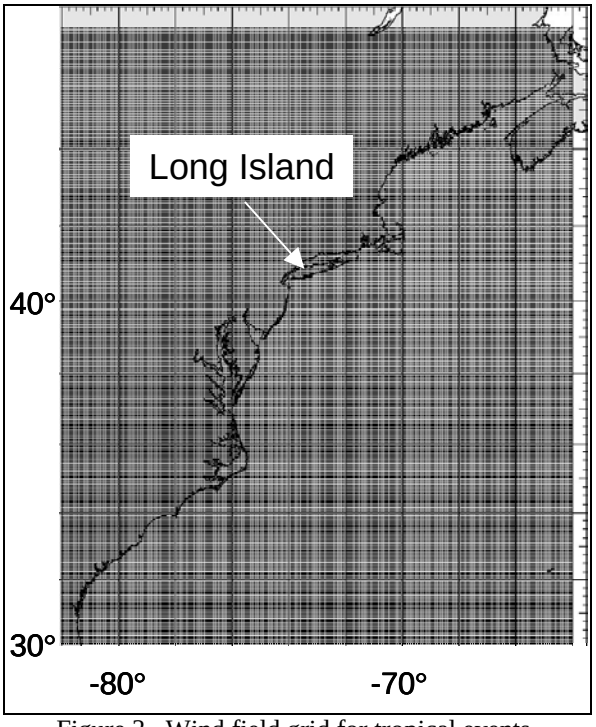

Figure 3. Wind field grid for tropical events.

3.2 Offshore Hydrodynamic Modeling

Using ADCIRC, ocean and nearshore, outside the surf zone, storm water levels for this study were simulated by the US Army Corps of Engineers and Coastal Analysis LLC (Luettich *et al.*, 1992; Irish *et al.*, in press). ADCIRC is a long-wave hydrodynamic numerical model that simulates water surface elevations and currents from astronomic tides, wind, and barometric pressure by solving the two-dimensional, depth-integrated momentum and continuity equations.

The ADCIRC model's finite-element grid is presented in Figure 4. Grid resolution varies from very coarse at the open ocean boundaries to 50-m in some nearshore locations. ADCIRC was forced with the hindcasted storm wind and barometric pressure fields to capture meteorological effects on water levels. ADCIRC was also forced with astronomic tidal constituents from the ADCIRC East Coast 2001 Tidal Constituent Database for seven main tidal constituents (Mukai *et al.*, 2002). Water level time series were output, at 6-minute intervals, at 20-m depths offshore of the study area. These time series were used to force a nearshore hydrodynamic model, DELFT3D-FLOW (WL| Delft Hydraulics, 2001).

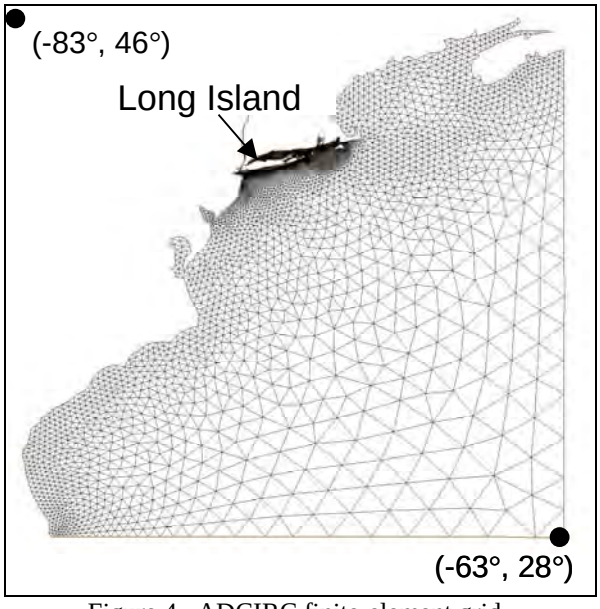

Figure 4. ADCIRC finite-element grid.

3.3 Offshore Wave Modeling

Offshore and Coastal Technologies, Inc, used WISWAVE (also WAVAD), a directional spectral, temporally sensitive wave model, to simulate bulk directional spectra, at hourly intervals, at 30-m depths (Resio and Perrie, 1989; Hubertz, 1992). WISWAVE solves the time-dependent wave action balance equation and simulates wave growth from wind following the combined Phillips and Miles mechanism. The model includes weak nonlinear wave-wave interaction and accounts for linear refraction, shoaling, and dissipation.

For this study, WISWAVE was forced with the hindcasted storm wind fields discussed in section 3.1. WISWAVE computed directional wave spectra using 15 frequency bands, 0.03 to 0.31 Hz, and 16 direction bands. To capture both far-field generation and the spatial resolution desired inshore, a nested-grid approach was adopted. The coarsest grid, at 1° resolution, extended from 50° to 80° west longitude and from 20° to 45° north latitude while the finest grids, at 0.083° resolution, cover inshore areas from west of Fire Island inlet to Montauk Point (Figure 5).

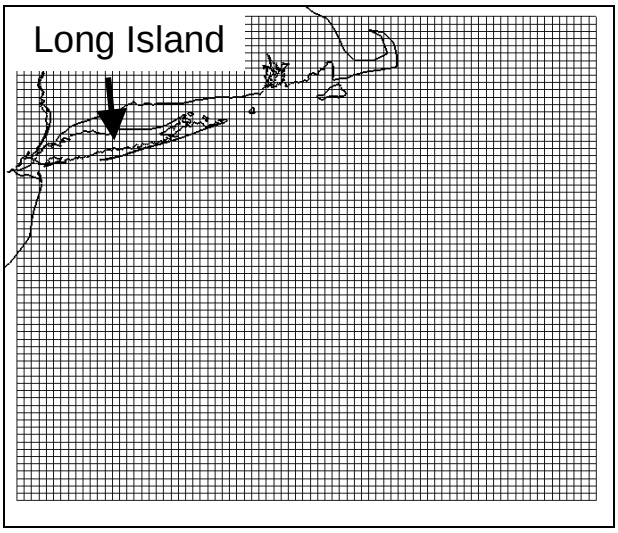

Figure 5. WISWAVE 0.083° fine grid.

3.4 Nearshore Hydrodynamic Modeling

Water levels in the nearshore and in the back bays were computed by Moffatt and Nichol (Cañizares, 2004) using DELFT3D-FLOW (WL| Delft Hydraulics, 2001). DELFT3D-FLOW simulates water level and currents from tidal, meteorological, and wave forcing by solving either the two-dimensional depth-integrated or three-dimensional flow and transport phenomena. The two-dimensional mode was adopted for this study.

The DELFT3D-FLOW orthogonal curvilinear grid for this study extends from East Rockaway Inlet eastward to the east side of Shinnecock Bay (Figure 6). The model grid includes Great South, Moriches, and Shinnecock Bays, and their inlets, and extends up to 5 km from across the nearshore. The model grid (top pane of Figure 6) has variable resolution throughout the domain. The cross-shore resolution varies from values of 15-20 m at the barrier island and the intertidal zone, to around 350 m at the offshore boundary. The typical model's longshore resolution is around 200-300 m. At Moriches and Shinnecock inlets (lower center and right panes of Figure 6) the grid size is in the order of 30 m. Grid resolution is on the order of 75 m at Fire Island inlet (lower left pane of Figure 6). To simulate storm water levels, DELFT3D-FLOW was forced along its offshore boundary with water level time series from ADCIRC, throughout its domain with the storm wind and pressure fields, and with wave radiation stress fields simulated with HISWA (discussed below).

3.5 Nearshore Wave Modeling

Moffatt and Nichol used the stationary wave model HISWA (DELFT3D-WAVE) to compute nearshore wave climate and resulting surf-zone radiation stresses (Holthuijsen ***et al.***, 1989). HISWA is a second generation wave model that computes wave propagation; wave generation by wind; non-linear wave-wave interactions and dissipation for a given bottom topography; and stationary wind, water level, and current field in waters of deep, intermediate and finite depth. The model accounts for the following physics: wave refraction over a bottom of variable depth and/or spatially varying ambient current; depth and current induced shoaling; wave generation by wind; dissipation by depth-induced breaking and/or bottom friction; and wave blocking by strong counter currents. HISWA is based on the action balance equation and wave propagation is based on linear wave theory (including the effect of currents).

HISWA wave computations are carried out on a rectangular grid. A nested grid approach was also used for nearshore wave modeling and spans from East Rockaway Inlet to Montauk Point (Figure 7). The offshore grid, with 250 m alongshore by 50 m across-shore resolution, was forced on its offshore boundary with significant wave height, peak period, and mean wave direction. These inputs were

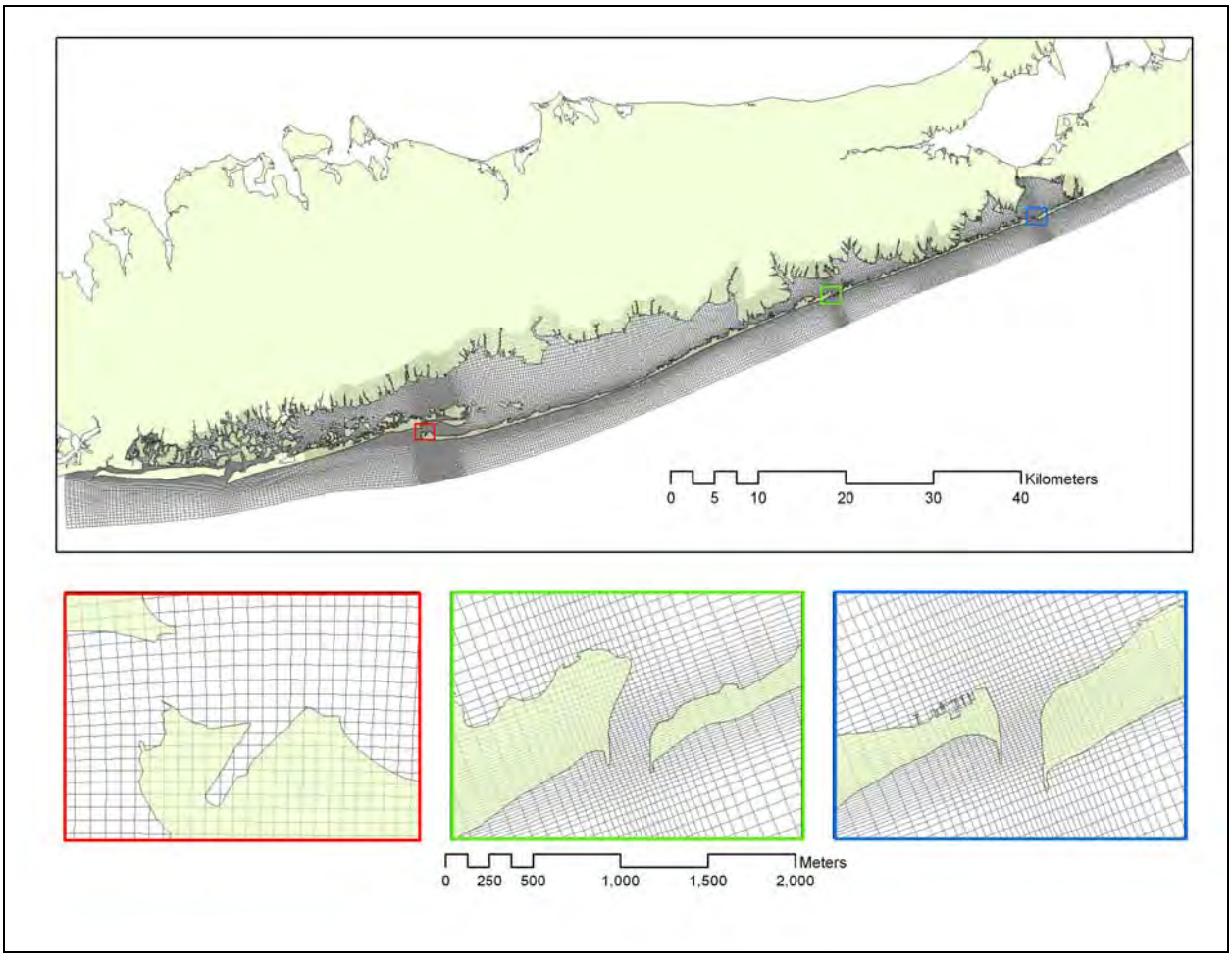

Figure 6. DELFT3D-FLOW computational grid.

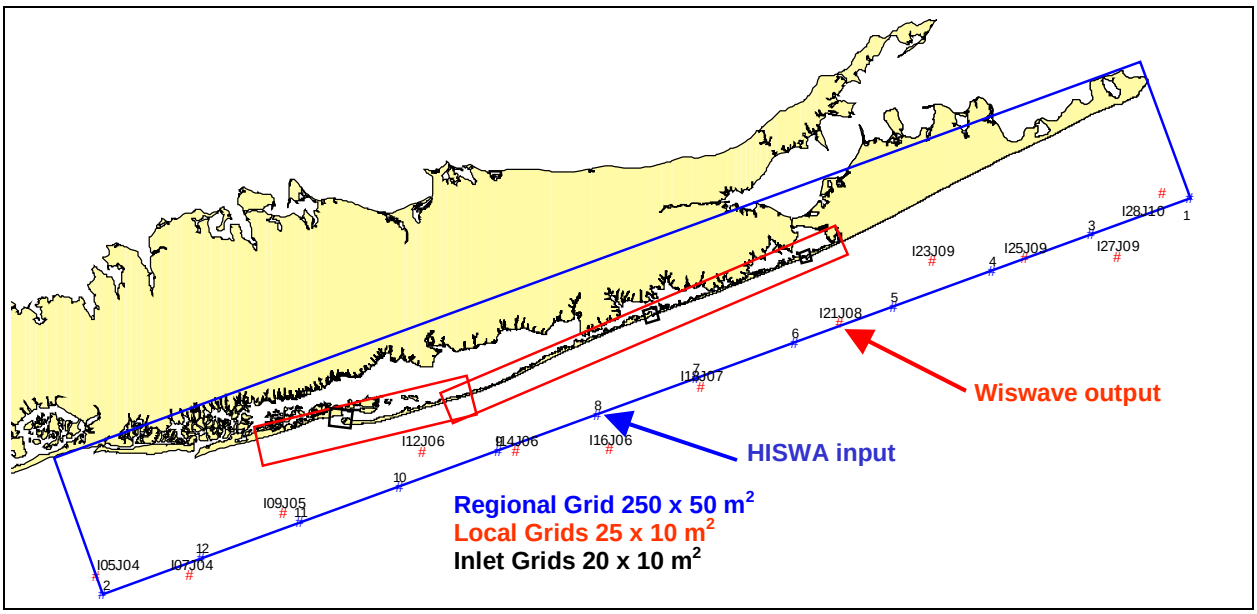

Figure 7. HISWA (DELFT3D-WAV) computational grid.

computed from the bulk spectra from WISWAVE simulations.

Non-stationary conditions may be simulated with HISWA as quasi-stationary with repeated model runs. For this study, HISWA simulated wave conditions for each hourly input condition from WISWAVE.

3.6 Nearshore Wave and Water Level Coupling

The HISWA model has a dynamic interaction with DELFT3D-FLOW (i.e. two way wave-current interaction). By this, the effect of waves on current and the effect of flow on waves, including wave setup, are accounted for. The resulting radiation stresses obtained from the HISWA local rectangular grids are automatically transferred to DELFT3D-FLOW, which simulates the flow on a curvilinear grid. This process allows direct simulation of the impacts of wave setup on hydrodynamics, specifically water level at the coastline and in the estuarial bays.

This modeling strategy uses high quality wind hindcasts to drive offshore wave and hydrodynamic models and coupled nearshore wave and hydrodynamic models. This allows major physical processes, as they impact water level, to be effectively simulated in the study area.

4. BLIZZARD OF 2003 MEASUREMENTS

A field investigation conducted in February 2003, afforded the opportunity to assess the performance of the modeling approach for simulating storm water levels. Offshore and Coastal Technologies, Inc. installed water level gages at six locations in Great South and Moriches Bays (Figure 8). In addition, water level measurements were also available for NOAA stations at Sandy Hook, New Jersey; The Battery, New York; Montauk Fort Pond, New York; and Newport, Rhode Island. Finally, NDBC Buoy 44025, offshore of Long Island, provided measurements of wave characteristics, wind speed, and barometric pressure.

The blizzard in mid-February 2003, impacting the entire northeastern USA, occurred during the field deployment and resulted in minor coastal flooding and significant snowfall. This extratropical event was characterized by peak offshore wind speeds near 20 m/s resulting in elevated ocean water levels that were as much as 0.5 m above astronomical predictions for 1.5 days. Offshore wave heights over 4 m were sustained for 1 day with maximum wave height around 6 m.

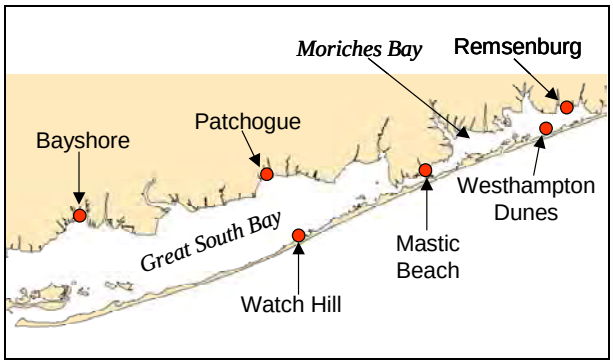

Figure 8. Location of bay water level gages.

5. BLIZZARD OF 2003 SIMULATION COMPARISON TO MEASUREMENTS

Following the meteorological hindcasting and storm surge modeling methodology outlined in Section 3, water levels were simulated for the blizzard of 2003. Computed wind speed, barometric pressure, wave characteristics, and water levels were compared with measurements at a number of locations.

5.1 Meteorology

Wind fields developed using IKOA and barometric pressure from NCEP for the 2003 storm were compared with offshore measurements at NDBC Buoy 44025 (Figure 9 and Figure 10). Wind speed time series shape and magnitude matches well with measured time series, showing that the IKOA performs well for this storm. Peak wind speed comparisons with the offshore buoy are very good, with peak speed differing by less than 1 m/s. NCEP barometric pressure compares very well with measured pressure at the offshore buoy with the peak NCEP pressure only 0.03 m, water, below the measured peak.

5.2 Wave Characteristics

Spectral wave height, period and direction computed with WISWAVE were compared with measurements at NDBC Buoy 44025 (Figure 11, Figure 12, and Figure 13). Time series for all three wave parameters compare well with measurements. Differences in maximum significant wave height and peak period are 0.8 m and 2.5 s, respectively.

5.3 Offshore Water Levels

ADCIRC simulated storm water levels were compared with NOAA measurements at the four NOAA measurement locations near the study area. Time series comparisons at Sandy Hook and Montauk Fort Pond are given in Figure 14 and Figure 15, respectively. ADCIRC performs well for simulating water levels for this storm. Differences between measured and simulated peak water levels are 9 cm (9%) or better at all four locations. Further, hydrograph shape is very similar to measured hydrograph shape at all four locations.

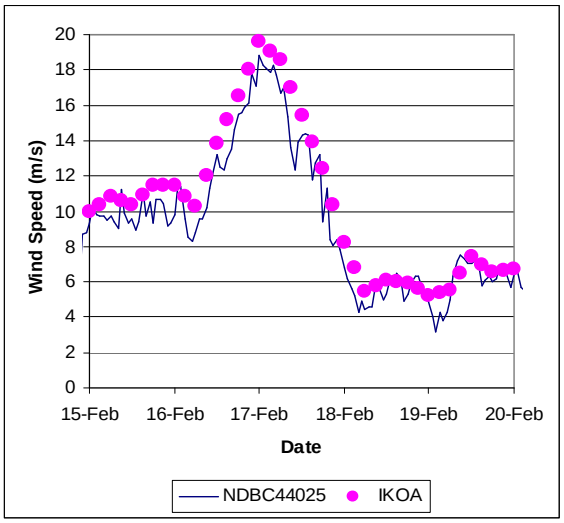

Figure 9. Wind speed comparison at offshore NDBC buoy 44025.

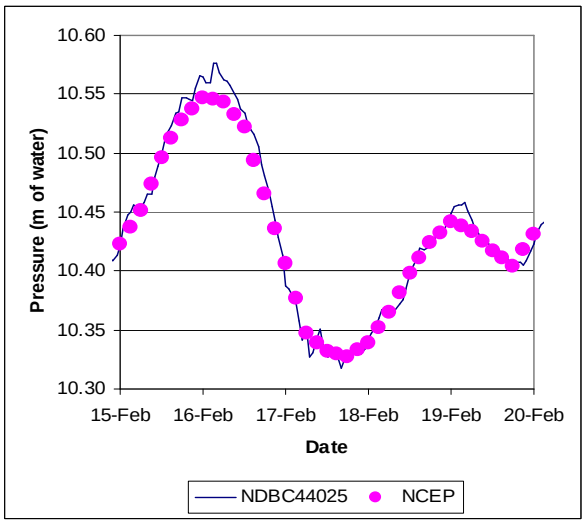

Figure 10. Barometric pressure comparison at offshore NDBC buoy 44025.

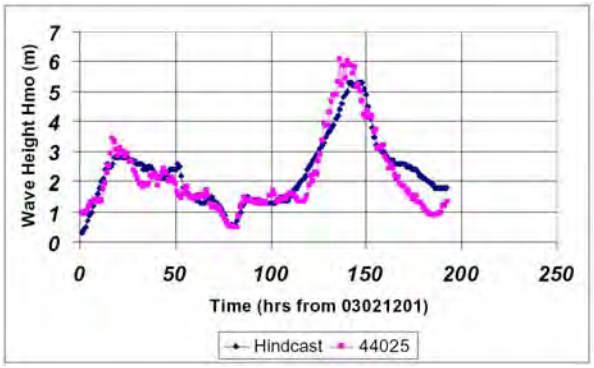

Figure 11. Significant wave height comparison at offshore NDBC buoy 44025.

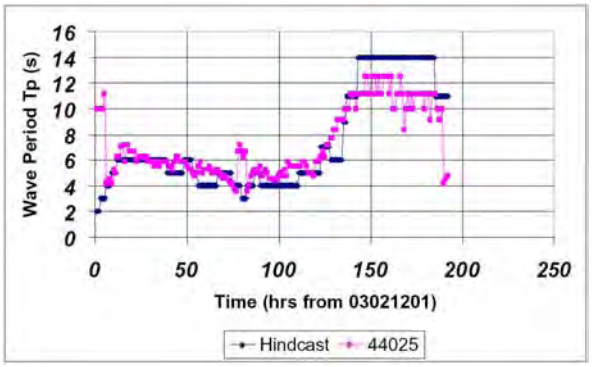

Figure 12. Peak wave period comparison at offshore NDBC buoy 44025.

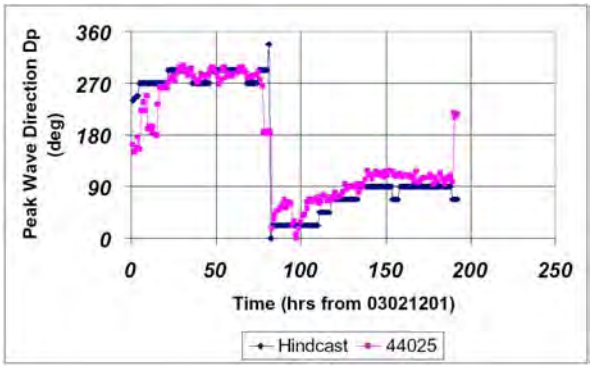

Figure 13. Wave direction comparison at offshore NDBC buoy 44025.

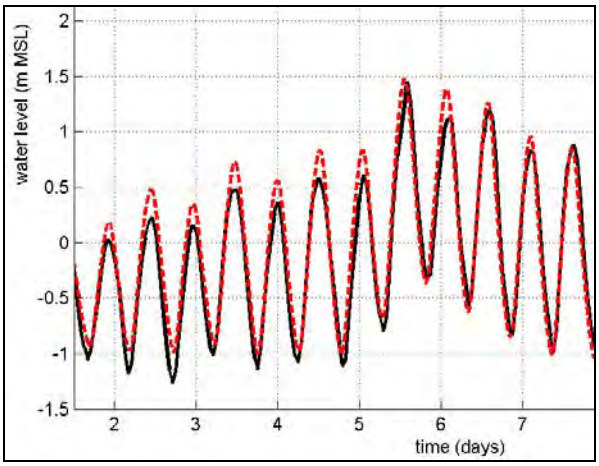

Figure 14. Water level at Sandy Hook, New Jersey starting at 0000 GMT on 12 February 2003.

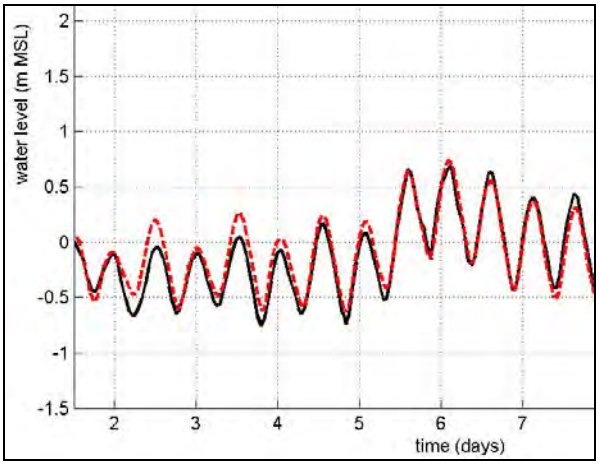

Figure 15. Water level at Montauk Fort Pond, New York starting at 0000 GMT on 12 February 2003.

5.4 Bay Water Levels

The DELFT3D-FLOW simulation of the 2003 blizzard included ocean surge, local wind and pressure fields, and ocean waves. The simulation water levels were compared with the measured water levels at the six bay locations. Figure 16 shows the simulated and measured results at Watch Hill in Great South Bay. Simulated hydrograph shapes at all locations compare well with measured hydrograph shape, showing that DEFLT3D-FLOW performs well for this storm. This storm is characterized by two peak water levels. Simulated peak water levels for the first peak at the three measurement stations in Moriches Bay are within 3 cm, or 4%, of the measured peak water levels. The model also performs well at Watch Hill and Bayshore, in Great South Bay, with simulated peak water levels for the first peak within 5 cm, or 9%, of measured peak water levels. Maximum water level comparisons at Patchogue are within 2 cm, or 4%.

Comparisons between measured data and simulation results for meteorological forcing, wave characteristics, and ocean and bay water levels show that the modeling strategy performs well for the blizzard of 2003.

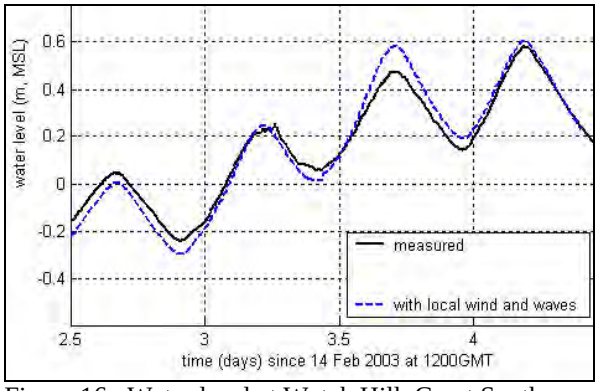

Figure 16. Water level at Watch Hill, Great South Bay, during blizzard of 2003.

6. BAY WATER LEVEL CONTRIBUTIONS

To understand the water level contributions of individual physical processes, a series of DELFT3D-FLOW simulations were performed for the blizzard of 2003:

1. Only offshore boundary forcing with ocean hydrographs from ADCIRC.
2. Simulation 1 plus local wind and barometric pressure forcing throughout the DELFT3D-FLOW model domain.
3. Simulation 2 plus ocean wave forcing from HISWA.

These three simulations allow separation of the effects on bay water levels from: astronomical tide; propagation of ocean surge through tidal inlets; propagation of flow generated by ocean wave setup through tidal inlets; and localized wind setup and setdown.

Figure 17 and Figure 18 compare the water level time series for three test simulations to measured bay water levels, and Figure 19 and Figure 20 summarize water level contributions from each process. For the blizzard of 2003, the combined effect of tidal amplitude and tidally generated superelevation makes

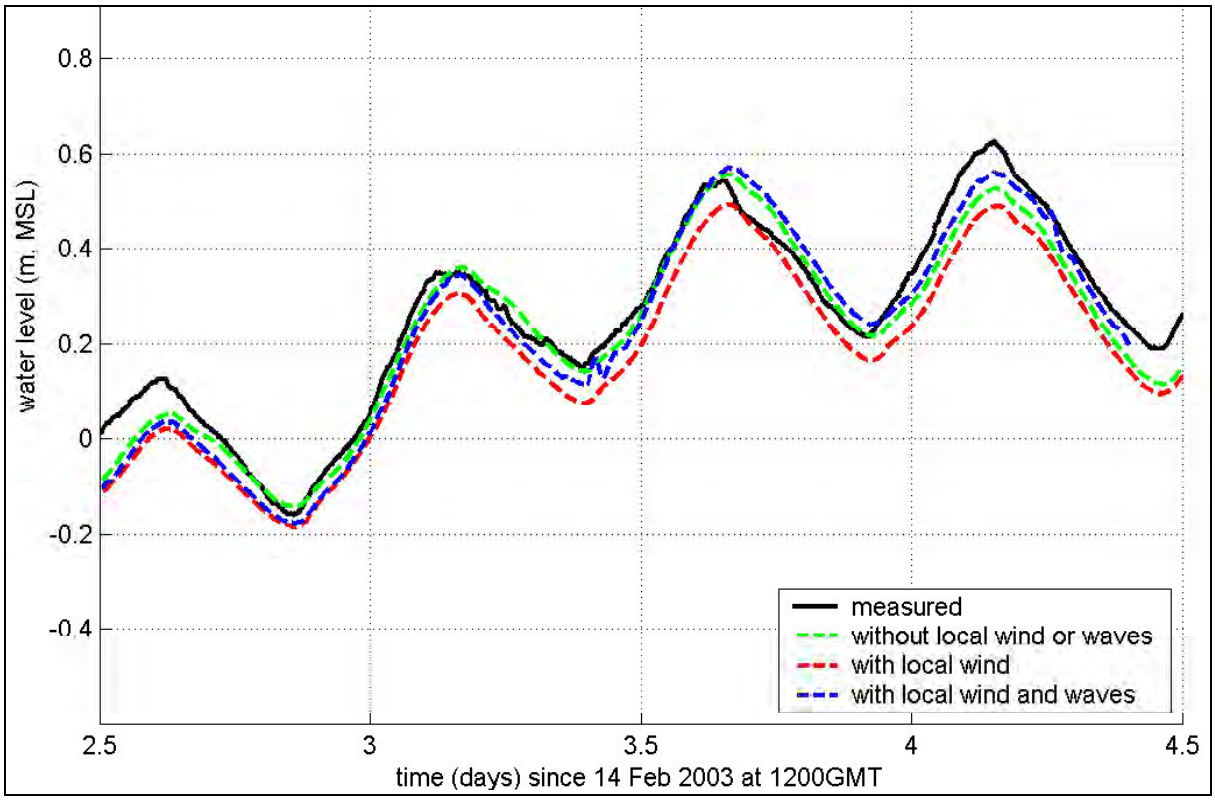

Figure 17. Water level contributions from physical processes at Bayshore, Great South Bay.

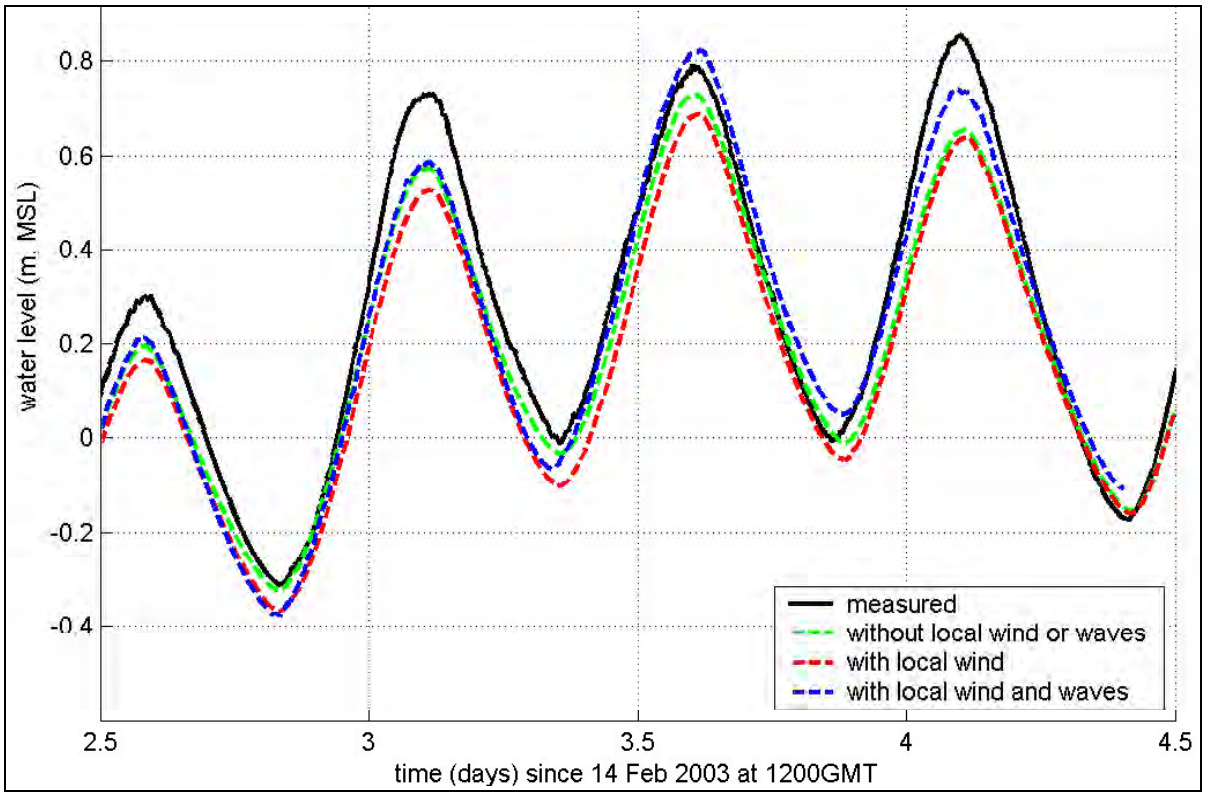

Figure 18. Water level contributions from physical processes at Westhampton Dunes, Moriches Bay.

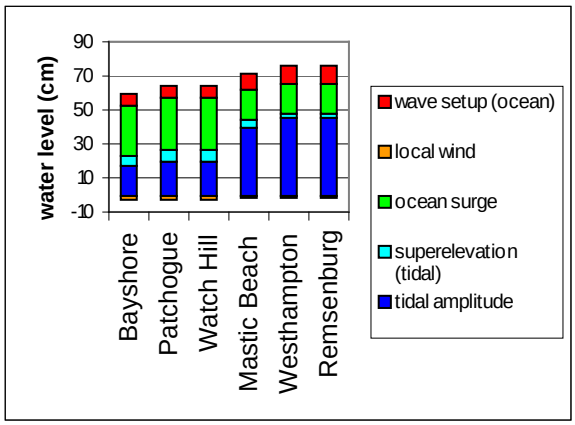

Figure 19. Water level contributions from physical processes for peak occurring 18 February 2003 at 0300 GMT.

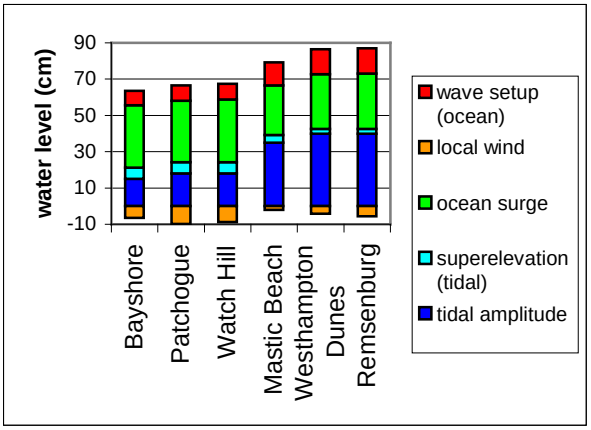

Figure 20. Water level contributions from physical processes for peak occurring 18 February 2003 at 1500 GMT.

up about 40% (25cm) of the total peak water level in Great South Bay and 50% (40 cm) of the peak water level in Moriches Bay. Water level contributions from ocean surge alone are about 35 cm in Great South Bay and 30 cm in Moriches Bay.

The addition of local wind has only a small effect on Moriches Bay water levels: DELFT3D-FLOW predicts a small setdown, on the order of 5 cm, at Westhampton Dunes and Remsenburg, on the eastern side of the bay, while the contribution from local wind at Mastic Beach, on the western side of the bay, is negligible. In contrast, the model predicts setdown of 10 cm at Patchogue and Watch Hill, at the eastern end of Great South Bay, and setdown of 6 cm at Bayshore, near the center of Great South Bay.

Wave setup from ocean waves is a significant contributor to water levels in both Great South and Moriches Bays. At all three measurement locations in Great South Bay, water level contribution from wave setup is around 9 cm. At all three measurement locations in Moriches Bay, water level contributions are around 14 cm. For the same offshore wave height, water level contribution from ocean wave setup is 50% larger in Moriches Bay than in Great South Bay. This indicates that inlet and bay geometry, and its effects on hydrodynamics, are important for accurate prediction of bay water levels associated with ocean wave setup. For the blizzard of 2003, flow through the inlets created by ocean wave setup accounts for 15% of the total water levels in the bays.

7. CONCLUSIONS

Model simulation comparisons with measurements during the blizzard of 2003 prove the modeling strategy, and its individual model components, accurately simulate storm water levels. In particular, high-quality wind and wave hindcasts are essential for accurately simulating storm water levels. This modeling approach was adopted for storm surge analysis of the south shore of Long Island. In total, 14 hurricanes and 23 extratropical storms were simulated using this modeling strategy. Peak simulated water levels will be used for economic analyses and engineering design.

Additionally, model simulations indicate that propagation of ocean wave setup into back bays is a major contributor to total water level within the study area. For the blizzard of 2003, sustained wave heights over 4 m for 1 day, with peak height over 5 m, increased bay water levels by a measurable 10 to 15 cm. For more severe storms, the increase in bay water levels is likely to be even more, perhaps as much as 30 cm. When considering economic damages, an increase as little as 15 cm in bay water level translates to a significant increase in damages. Therefore, small changes in water level for small events are important for economic analyses and design.

The results from the blizzard of 2003 indicate that the impact of ocean wave setup propagation through the tidal inlets is dependent on the inlet and bay geometry. This finding demonstrates the importance of simulating nearshore wave conditions and including the resulting radiation stresses when computing hydrodynamic response in estuarial bays.

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APPENDIX H

Non-Cyclonic Design Water Level and Concurrent Wave Parameters

				Water Level mAHD 20yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{om}
516482	6972941	BrisbaneBar		1.69	1.69		0.60	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.00	1.87	0.13	0.88	2.9	114	0	2.12	2.53	2.39	3.26	2.45	3.41	1.91
507065	6983136	PineRiver-002	MBC-002	1.98	1.86	0.12	0.79	2.9	122	0	2.08	2.46	2.33	3.13	2.38	3.28	2.00
507237	6983516	PineRiver-003	MBC-003	2.00	1.86	0.14	0.89	3.0	118	0	2.11	2.54	2.38	3.29	2.44	3.45	1.99
507198	6984049	PineRiver-004	MBC-004	1.98	1.86	0.12	0.82	2.7	123	0	2.09	2.47	2.35	3.14	2.40	3.29	1.88
506913	6984334	PineRiver-005	MBC-005	1.98	1.88	0.10	0.70	2.5	124	0	2.08	2.40	2.30	2.97	2.34	3.09	1.87
507046	6984696	PineRiver-006	MBC-006	1.97	1.88	0.09	0.63	2.2	139	0	2.06	2.34	2.25	2.83	2.29	2.93	1.75
507522	6984334	PineRiver-007	MBC-007	1.95	1.84	0.11	0.77	2.7	131	0	2.06	2.41	2.30	3.05	2.35	3.18	1.89
507769	6984239	PineRiver-008	MBC-008	1.97	1.83	0.14	0.96	2.9	126	0	2.10	2.54	2.40	3.32	2.46	3.48	1.84
506179	6982661	PineRiver-009	MBC-009	1.98	1.88	0.10	0.70	2.5	124	0	2.08	2.40	2.30	2.97	2.34	3.09	1.87
504927	6992513	Caboolture-001	MBC-010	2.02	1.90	0.12	0.78	2.7	50	0	2.12	2.48	2.36	3.12	2.41	3.25	1.87
504270	6992575	Caboolture-002	MBC-011	2.01	1.91	0.10	0.70	2.5	59	0	2.11	2.43	2.33	2.99	2.37	3.11	1.84
503633	6992841	Caboolture-003	MBC-012	2.07	1.97	0.10	0.67	2.4	71	0	2.16	2.46	2.37	3.00	2.41	3.11	1.82
503346	6993519	Caboolture-004	MBC-013	2.07	1.97	0.10	0.66	2.4	92	0	2.16	2.46	2.36	3.00	2.40	3.11	1.87
503613	6994402	Caboolture-005	MBC-014	2.06	1.95	0.11	0.69	2.6	108	0	2.14	2.47	2.36	3.04	2.41	3.17	1.93
504658	6996186	Caboolture-009	MBC-015	2.03	1.90	0.13	0.85	2.8	115	0	2.14	2.53	2.40	3.24	2.46	3.39	1.90
504477	6996546	Caboolture-010	MBC-016	2.02	1.91	0.11	0.76	2.7	114	0	2.12	2.48	2.36	3.11	2.41	3.24	1.91
504774	6997055	Caboolture-012	MBC-017	2.03	1.90	0.13	0.85	2.8	120	0	2.14	2.53	2.40	3.23	2.46	3.38	1.90
505039	6997331	Caboolture-013	MBC-018	2.02	1.89	0.13	0.83	2.9	121	0	2.12	2.52	2.38	3.23	2.44	3.38	2.00
505442	6998582	Caboolture-016	MBC-019	2.03	1.88	0.15	0.98	3.1	122	0	2.15	2.62	2.45	3.44	2.52	3.62	1.95
505671	6999062	Caboolture-017	MBC-020	2.02	1.87	0.15	0.91	3.2	122	0	2.12	2.58	2.40	3.37	2.46	3.55	2.12
505909	6999567	Caboolture-018	MBC-021	2.03	1.87	0.16	0.95	3.3	124	0	2.12	2.60	2.41	3.43	2.48	3.62	2.10
506361	7000127	Caboolture-019	MBC-022	2.01	1.85	0.16	1.01	3.2	130	0	2.13	2.61	2.43	3.47	2.50	3.65	1.98
506813	7000580	Caboolture-020	MBC-023	1.98	1.83	0.15	0.95	3.2	128	0	2.09	2.56	2.38	3.38	2.44	3.56	2.05
507266	7001010	Caboolture-021	MBC-024	1.98	1.82	0.16	1.02	3.3	129	0	2.09	2.60	2.40	3.47	2.47	3.67	2.03
507718	7001452	Caboolture-022	MBC-025	1.99	1.82	0.17	1.06	3.4	134	0	2.10	2.63	2.42	3.54	2.49	3.74	2.04
508289	7001850	Caboolture-023	MBC-026	1.96	1.79	0.17	1.07	3.4	136	0	2.08	2.61	2.40	3.52	2.47	3.72	2.02
508903	7002206	Caboolture-024	MBC-027	1.96	1.79	0.17	1.10	3.4	139	0	2.08	2.63	2.41	3.57	2.49	3.78	2.03
509355	7002550	Caboolture-025	MBC-028	1.95	1.78	0.17	1.06	3.3	143	0	2.07	2.59	2.39	3.49	2.46	3.69	2.01
509894	7002744	Caboolture-026	MBC-029	1.94	1.77	0.17	1.03	3.3	149	0	2.05	2.56	2.36	3.45	2.43	3.64	2.05
510475	7002852	Caboolture-027	MBC-030	1.93	1.76	0.17	1.02	3.4	150	0	2.03	2.54	2.34	3.43	2.41	3.62	2.07
511067	7003003	Caboolture-028	MBC-031	1.93	1.76	0.17	1.07	3.4	152	0	2.04	2.58	2.37	3.51	2.44	3.72	2.08
511477	7003251	Caboolture-029	MBC-032	1.91	1.75	0.16	0.98	3.4	154	0	2.01	2.51	2.31	3.38	2.37	3.58	2.16
512112	7003326	Caboolture-030	MBC-033	1.91	1.74	0.17	1.06	3.4	156	0	2.02	2.55	2.34	3.47	2.41	3.67	2.06
512694	7003455	Caboolture-031	MBC-034	1.88	1.72	0.16	0.99	3.4	159	0	1.98	2.49	2.28	3.35	2.35	3.55	2.12
513275	7003412	Caboolture-032	MBC-035	1.87	1.71	0.16	1.02	3.3	156	0	1.98	2.49	2.29	3.37	2.36	3.56	2.05
513911	7003746	Caboolture-033	MBC-036	1.88	1.73	0.15	0.91	3.2	148	0	1.98	2.43	2.26	3.22	2.32	3.40	2.09
514481	7004446	Caboolture-034	MBC-037	1.83	1.71	0.12	0.78	2.6	152	0	1.93	2.29	2.17	2.93	2.23	3.06	1.87
516248	7002647	Caboolture-038	MBC-038	1.84	1.68	0.16	0.92	3.4	174	0	1.92	2.40	2.20	3.23	2.26	3.42	2.21
517280	7002397	Caboolture-040	MBC-039	1.91	1.67	0.24	0.64	10.5	156	0	1.78	2.46	1.95	3.64	2.00	4.03	8.21
519611	7002925	Caboolture-044	MBC-040	1.88	1.64	0.24	0.65	10.9	89	0	1.75	2.44	1.92	3.66	1.98	4.06	8.47
520367	7003619	Caboolture-046	MBC-041	1.90	1.65	0.25	0.71	11.3	62	0	1.77	2.53	1.96	3.85	2.02	4.29	8.35
520284	7006303	Caboolture-051	MBC-042	2.02	1.65	0.37	1.20	9.2	71	0	1.87	2.91	2.17	4.65	2.26	5.16	5.22
516778	7013518	Caboolture-060	MBC-043	2.01	1.64	0.37	1.31	10.7	73	0	1.87	3.07	2.20	5.09	2.30	5.70	5.85
516320	7014796	Caboolture-061	MBC-044	2.01	1.64	0.37	1.31	10.7	73	0	1.87	3.07	2.20	5.09	2.30	5.70	5.85
507667	7015461	Caboolture-067	MBC-045	1.99	1.91	0.08	0.52	1.8	163	0	2.05	2.27	2.20	2.66	2.23	2.73	1.56
508591	7014764	Caboolture-069	MBC-046	1.96	1.88	0.08	0.55	1.8	167	0	2.03	2.26	2.19	2.66	2.22	2.74	1.52
509101	7014442	Caboolture-070	MBC-047	1.92	1.84	0.08	0.52	1.9	175	0	1.98	2.21	2.14	2.60	2.17	2.68	1.63
509543	7013236	Caboolture-072	MBC-048	1.91	1.83	0.08	0.47	1.7	231	0	1.96	2.16	2.09	2.51	2.12	2.57	1.57
509623	7012592	Caboolture-073	MBC-049	1.89	1.82	0.07	0.44	1.7	254	0	1.94	2.13	2.07	2.46	2.09	2.53	1.61
510253	7011212	Caboolture-075	MBC-050	1.88	1.80	0.08	0.55	1.9	152	0	1.95	2.18	2.11	2.59	2.14	2.67	1.56
510669	7010917	Caboolture-076	MBC-051	1.86	1.78	0.08	0.56	1.9	152	0	1.94	2.17	2.10	2.58	2.13	2.67	1.56
511138	7010769	Caboolture-077	MBC-052	1.85	1.77	0.08	0.58	1.9	156	0	1.93	2.18	2.10	2.61	2.13	2.69	1.57
511701	7010475	Caboolture-078	MBC-053	1.84	1.76	0.08	0.57	1.9	166	0	1.92	2.16	2.08	2.59	2.12	2.67	1.59
512076	7010032	Caboolture-079	MBC-054	1.82	1.74	0.08	0.47	2.0	166	0	1.87	2.08	2.01	2.46	2.04	2.54	1.79
513283	7007901	Caboolture-083	MBC-055	1.79	1.71	0.08	0.47	1.7	174	0	1.84	2.03	1.97	2.37	2.00	2.44	1.50

				Water Level mAHD 20yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{om}
513390	7007284	Caboolture-084	MBC-056	1.79	1.71	0.08	0.49	1.7	252	0	1.84	2.05	1.98	2.41	2.01	2.47	1.49
513444	7006735	Caboolture-085	MBC-057	1.79	1.71	0.08	0.50	1.7	267	0	1.85	2.05	1.99	2.42	2.02	2.49	1.50
514141	7006547	Caboolture-086	MBC-058	1.77	1.70	0.07	0.43	1.5	166	0	1.82	2.00	1.94	2.31	1.96	2.36	1.47
514958	7005756	Caboolture-088	MBC-059	1.76	1.70	0.06	0.38	1.5	172	0	1.80	1.96	1.91	2.24	1.93	2.29	1.51
515374	7005260	Caboolture-089	MBC-060	1.75	1.69	0.06	0.38	1.6	311	0	1.79	1.96	1.90	2.24	1.92	2.30	1.59
514730	7005140	Caboolture-090	MBC-061	1.76	1.70	0.06	0.39	1.6	337	0	1.81	1.97	1.92	2.26	1.94	2.31	1.55
514328	7005394	Caboolture-091	MBC-062	1.76	1.69	0.07	0.41	1.7	339	0	1.80	1.98	1.92	2.29	1.94	2.35	1.61
513269	7006199	Caboolture-093	MBC-063	1.79	1.71	0.08	0.47	1.7	199	0	1.84	2.04	1.97	2.39	2.00	2.45	1.57
511621	7007284	Caboolture-096	MBC-064	1.85	1.77	0.08	0.48	1.8	115	0	1.90	2.11	2.04	2.47	2.07	2.54	1.60
511339	7008048	Caboolture-097	MBC-065	1.86	1.78	0.08	0.48	1.7	120	0	1.91	2.12	2.05	2.47	2.08	2.54	1.57
511648	7008558	Caboolture-098	MBC-066	1.85	1.77	0.08	0.52	1.8	140	0	1.91	2.13	2.06	2.52	2.09	2.59	1.56
511835	7009040	Caboolture-099	MBC-067	1.83	1.75	0.08	0.53	1.8	147	0	1.90	2.12	2.05	2.51	2.08	2.58	1.54
511446	7009456	Caboolture-100	MBC-068	1.84	1.76	0.08	0.51	1.8	143	0	1.90	2.11	2.05	2.49	2.08	2.56	1.55
511058	7009456	Caboolture-101	MBC-069	1.85	1.77	0.08	0.50	1.8	135	0	1.91	2.12	2.05	2.49	2.08	2.56	1.55
510321	7009818	Caboolture-102	MBC-070	1.88	1.80	0.08	0.49	1.8	122	0	1.93	2.14	2.08	2.51	2.11	2.58	1.59
509784	7010233	Caboolture-103	MBC-071	1.87	1.80	0.07	0.46	1.8	109	0	1.93	2.13	2.06	2.47	2.09	2.54	1.63
509369	7010796	Caboolture-104	MBC-072	1.90	1.82	0.08	0.48	1.8	108	0	1.95	2.16	2.09	2.52	2.12	2.59	1.62
509034	7011198	Caboolture-105	MBC-073	1.93	1.85	0.08	0.49	1.8	114	0	1.98	2.19	2.13	2.56	2.16	2.63	1.59
508833	7011587	Caboolture-106	MBC-074	1.93	1.85	0.08	0.50	1.9	119	0	1.99	2.21	2.13	2.59	2.16	2.67	1.66
508752	7011869	Caboolture-107	MBC-075	1.95	1.87	0.08	0.53	1.9	125	0	2.02	2.24	2.17	2.64	2.20	2.72	1.62
508471	7012110	Caboolture-108	MBC-076	1.95	1.88	0.07	0.45	1.8	119	0	2.00	2.20	2.13	2.54	2.16	2.61	1.63
508926	7012177	Caboolture-109	MBC-077	1.93	1.85	0.08	0.55	1.9	137	0	2.00	2.24	2.16	2.65	2.20	2.73	1.59
509020	7012767	Caboolture-110	MBC-078	1.92	1.84	0.08	0.54	1.8	149	0	1.99	2.22	2.15	2.61	2.18	2.69	1.56
508565	7013276	Caboolture-111	MBC-079	1.93	1.85	0.08	0.47	1.7	143	0	1.98	2.18	2.11	2.52	2.14	2.59	1.53
508069	7013611	Caboolture-112	MBC-080	1.96	1.89	0.07	0.46	1.7	141	0	2.02	2.21	2.15	2.54	2.17	2.61	1.52
507667	7013960	Caboolture-113	MBC-081	1.99	1.91	0.08	0.48	1.7	135	0	2.04	2.24	2.18	2.59	2.21	2.66	1.52
507157	7014067	Caboolture-114	MBC-082	2.00	1.93	0.07	0.45	1.6	120	0	2.05	2.24	2.18	2.57	2.21	2.63	1.53
507171	7014777	Caboolture-115	MBC-083	2.01	1.93	0.08	0.51	1.8	129	0	2.07	2.29	2.22	2.67	2.25	2.74	1.58
507063	7015595	Caboolture-116	MBC-084	2.01	1.93	0.08	0.49	1.8	132	0	2.06	2.27	2.21	2.64	2.23	2.71	1.57
509121	6984944	Redcliffe-005	MBC-085	1.93	1.80	0.13	0.84	2.9	149	0	2.03	2.43	2.30	3.14	2.35	3.29	1.96
509533	6984891	Redcliffe-006	MBC-086	1.92	1.78	0.14	0.91	2.8	159	0	2.04	2.45	2.32	3.20	2.38	3.35	1.86
509892	6984691	Redcliffe-007	MBC-087	1.90	1.77	0.13	0.90	2.9	159	0	2.02	2.44	2.30	3.18	2.36	3.34	1.88
510464	6984279	Redcliffe-009	MBC-088	1.94	1.76	0.18	1.06	3.5	122	0	2.04	2.58	2.35	3.52	2.43	3.73	2.15
510783	6984638	Redcliffe-010	MBC-089	1.94	1.75	0.19	1.23	3.5	122	0	2.08	2.67	2.44	3.70	2.52	3.92	1.94
510969	6985516	Redcliffe-012	MBC-090	1.92	1.74	0.18	1.19	3.5	115	0	2.06	2.64	2.41	3.64	2.48	3.86	1.98
511076	6985889	Redcliffe-013	MBC-091	1.92	1.74	0.18	1.19	3.5	118	0	2.05	2.65	2.41	3.66	2.48	3.88	2.01
511488	6987365	Redcliffe-016	MBC-092	1.90	1.72	0.18	1.15	3.4	121	0	2.03	2.59	2.37	3.57	2.45	3.79	2.00
511768	6988017	Redcliffe-018	MBC-093	1.90	1.72	0.18	1.14	3.5	119	0	2.02	2.59	2.36	3.58	2.43	3.80	2.06
511648	6988496	Redcliffe-019	MBC-094	1.90	1.72	0.18	1.11	3.6	113	0	2.01	2.58	2.34	3.56	2.41	3.77	2.12
511741	6989254	Redcliffe-021	MBC-095	1.91	1.72	0.19	1.24	3.6	120	0	2.04	2.66	2.41	3.72	2.49	3.95	2.01
511874	6990079	Redcliffe-023	MBC-096	1.93	1.73	0.20	1.36	3.6	125	0	2.09	2.75	2.49	3.88	2.57	4.12	1.92
511648	6990451	Redcliffe-024	MBC-097	1.90	1.72	0.18	1.09	3.6	111	0	2.00	2.57	2.33	3.54	2.40	3.75	2.16
511661	6991063	Redcliffe-025	MBC-098	1.93	1.74	0.19	1.27	3.5	123	0	2.08	2.70	2.45	3.76	2.53	3.99	1.96
511568	6992087	Redcliffe-027	MBC-099	1.93	1.74	0.19	1.18	3.6	115	0	2.05	2.65	2.40	3.67	2.47	3.89	2.06
511475	6992513	Redcliffe-028	MBC-100	1.91	1.73	0.18	1.09	3.5	120	0	2.02	2.57	2.34	3.53	2.41	3.74	2.11
510916	6992713	Redcliffe-029	MBC-101	1.89	1.74	0.15	0.94	3.1	65	0	2.00	2.45	2.29	3.25	2.35	3.43	2.00
510531	6992472	Redcliffe-030	MBC-102	1.88	1.75	0.13	0.90	2.7	13	0	2.01	2.41	2.28	3.13	2.34	3.28	1.79
510161	6992164	Redcliffe-031	MBC-103	1.87	1.76	0.11	0.78	2.5	319	0	1.98	2.33	2.23	2.95	2.28	3.08	1.79
509833	6991712	Redcliffe-032	MBC-104	1.88	1.77	0.11	0.76	2.4	329	0	1.99	2.32	2.22	2.92	2.27	3.04	1.74
509525	6991322	Redcliffe-033	MBC-105	1.89	1.78	0.11	0.75	2.4	348	0	1.99	2.32	2.22	2.91	2.27	3.02	1.72
509155	6991199	Redcliffe-034	MBC-106	1.90	1.79	0.11	0.78	2.4	12	0	2.01	2.35	2.25	2.96	2.30	3.08	1.71
508478	6991343	Redcliffe-035	MBC-107	1.92	1.80	0.12	0.83	2.6	18	0	2.04	2.40	2.29	3.06	2.35	3.19	1.75
507965	6991487	Redcliffe-036	MBC-108	1.93	1.81	0.12	0.85	2.6	20	0	2.05	2.43	2.32	3.10	2.37	3.23	1.75
507205	6991589	Redcliffe-037	MBC-109	1.95	1.83	0.12	0.83	2.6	20	0	2.07	2.44	2.32	3.09	2.38	3.23	1.78
506548	6991836	Redcliffe-038	MBC-110	1.97	1.85	0.12	0.81	2.6	27	0	2.08	2.44	2.33	3.08	2.38	3.22	1.77
505830	6992082	Redcliffe-039	MBC-111	1.99	1.87	0.12	0.81	2.6	32	0	2.10	2.46	2.35	3.10	2.40	3.24	1.78

				Water Level mAHD 20yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
505358	6992267	Redcliffe-040	MBC-112	2.00	1.88	0.12	0.78	2.6	35	0	2.10	2.46	2.34	3.09	2.40	3.23	1.86

				Water Level mAHD 50yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar		1.74	1.74		0.61	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.07	1.94	0.13	0.90	2.9	114	0	2.19	2.61	2.47	3.35	2.53	3.51	1.89
507065	6983136	PineRiver-002	MBC-002	2.07	1.94	0.13	0.81	2.9	122	0	2.17	2.55	2.42	3.24	2.47	3.39	1.98
507237	6983516	PineRiver-003	MBC-003	2.08	1.94	0.14	0.92	3.0	118	0	2.20	2.63	2.48	3.41	2.54	3.57	1.96
507198	6984049	PineRiver-004	MBC-004	2.06	1.94	0.12	0.84	2.7	123	0	2.18	2.56	2.44	3.25	2.49	3.39	1.86
506913	6984334	PineRiver-005	MBC-005	2.07	1.96	0.11	0.72	2.5	124	0	2.16	2.49	2.39	3.08	2.44	3.20	1.84
507046	6984696	PineRiver-006	MBC-006	2.04	1.95	0.09	0.66	2.2	139	0	2.14	2.42	2.33	2.94	2.38	3.04	1.71
507522	6984334	PineRiver-007	MBC-007	2.03	1.91	0.12	0.80	2.7	131	0	2.14	2.50	2.38	3.15	2.44	3.29	1.86
507769	6984239	PineRiver-008	MBC-008	2.06	1.91	0.15	1.00	2.9	126	0	2.19	2.64	2.50	3.45	2.56	3.61	1.80
506179	6982661	PineRiver-009	MBC-009	2.07	1.96	0.11	0.72	2.5	124	0	2.16	2.49	2.39	3.08	2.44	3.20	1.84
504927	6992513	Caboolture-001	MBC-010	2.09	1.97	0.12	0.81	2.7	50	0	2.20	2.57	2.45	3.22	2.50	3.36	1.84
504270	6992575	Caboolture-002	MBC-011	2.11	2.00	0.11	0.73	2.5	59	0	2.21	2.53	2.44	3.12	2.48	3.24	1.80
503633	6992841	Caboolture-003	MBC-012	2.15	2.05	0.10	0.70	2.4	71	0	2.25	2.56	2.46	3.12	2.51	3.23	1.78
503346	6993519	Caboolture-004	MBC-013	2.16	2.06	0.10	0.68	2.4	92	0	2.25	2.56	2.46	3.11	2.51	3.23	1.84
503613	6994402	Caboolture-005	MBC-014	2.16	2.05	0.11	0.71	2.6	108	0	2.25	2.58	2.47	3.17	2.52	3.29	1.90
504658	6996186	Caboolture-009	MBC-015	2.11	1.98	0.13	0.89	2.8	115	0	2.23	2.64	2.51	3.37	2.56	3.52	1.86
504477	6996546	Caboolture-010	MBC-016	2.12	2.00	0.12	0.79	2.7	114	0	2.22	2.59	2.47	3.23	2.52	3.37	1.87
504774	6997055	Caboolture-012	MBC-017	2.11	1.98	0.13	0.88	2.8	120	0	2.23	2.63	2.50	3.35	2.56	3.50	1.86
505039	6997331	Caboolture-013	MBC-018	2.10	1.97	0.13	0.86	2.9	121	0	2.21	2.62	2.48	3.34	2.54	3.50	1.97
505442	6998582	Caboolture-016	MBC-019	2.11	1.96	0.15	1.02	3.1	122	0	2.24	2.72	2.55	3.57	2.62	3.75	1.91
505671	6999062	Caboolture-017	MBC-020	2.10	1.95	0.15	0.94	3.2	122	0	2.20	2.67	2.49	3.49	2.56	3.67	2.09
505909	6999567	Caboolture-018	MBC-021	2.10	1.94	0.16	0.99	3.3	124	0	2.21	2.70	2.51	3.55	2.57	3.74	2.06
506361	7000127	Caboolture-019	MBC-022	2.09	1.93	0.16	1.05	3.2	130	0	2.22	2.72	2.54	3.60	2.61	3.79	1.94
506813	7000580	Caboolture-020	MBC-023	2.07	1.91	0.16	0.98	3.2	128	0	2.18	2.66	2.48	3.49	2.54	3.68	2.02
507266	7001010	Caboolture-021	MBC-024	2.06	1.89	0.17	1.06	3.3	129	0	2.18	2.69	2.50	3.59	2.57	3.79	2.00
507718	7001452	Caboolture-022	MBC-025	2.06	1.89	0.17	1.10	3.4	134	0	2.18	2.73	2.51	3.66	2.58	3.86	2.00
508289	7001850	Caboolture-023	MBC-026	2.04	1.87	0.17	1.12	3.4	136	0	2.17	2.72	2.50	3.66	2.58	3.87	1.98
508903	7002206	Caboolture-024	MBC-027	2.03	1.85	0.18	1.15	3.4	139	0	2.16	2.72	2.50	3.69	2.58	3.91	1.99
509355	7002550	Caboolture-025	MBC-028	2.02	1.85	0.17	1.11	3.3	143	0	2.15	2.69	2.48	3.62	2.56	3.83	1.97
509894	7002744	Caboolture-026	MBC-029	2.00	1.83	0.17	1.06	3.3	149	0	2.12	2.64	2.44	3.54	2.51	3.74	2.02
510475	7002852	Caboolture-027	MBC-030	1.99	1.82	0.17	1.05	3.4	150	0	2.10	2.62	2.41	3.53	2.48	3.72	2.04
511067	7003003	Caboolture-028	MBC-031	1.99	1.81	0.18	1.11	3.4	152	0	2.11	2.66	2.44	3.61	2.51	3.82	2.04
511477	7003251	Caboolture-029	MBC-032	1.98	1.81	0.17	1.01	3.4	154	0	2.08	2.59	2.38	3.48	2.45	3.68	2.13
512112	7003326	Caboolture-030	MBC-033	1.96	1.79	0.17	1.10	3.4	156	0	2.08	2.63	2.41	3.57	2.49	3.78	2.02
512694	7003455	Caboolture-031	MBC-034	1.95	1.78	0.17	1.02	3.4	159	0	2.05	2.57	2.36	3.45	2.43	3.65	2.08
513275	7003412	Caboolture-032	MBC-035	1.94	1.77	0.17	1.05	3.3	156	0	2.05	2.57	2.37	3.47	2.44	3.67	2.02
513911	7003746	Caboolture-033	MBC-036	1.93	1.78	0.15	0.93	3.2	148	0	2.03	2.49	2.32	3.30	2.38	3.48	2.07
514481	7004446	Caboolture-034	MBC-037	1.89	1.77	0.12	0.81	2.6	152	0	2.00	2.37	2.25	3.02	2.30	3.16	1.83
516248	7002647	Caboolture-038	MBC-038	1.88	1.72	0.16	0.96	3.4	174	0	1.97	2.47	2.26	3.32	2.33	3.51	2.17
517280	7002397	Caboolture-040	MBC-039	1.90	1.71	0.19	1.27	3.6	156	0	2.04	2.67	2.42	3.74	2.50	3.97	1.97
519611	7002925	Caboolture-044	MBC-040	1.94	1.68	0.26	0.71	10.9	89	0	1.80	2.54	1.99	3.84	2.05	4.26	8.10
520367	7003619	Caboolture-046	MBC-041	1.96	1.68	0.28	0.81	11.3	62	0	1.82	2.66	2.03	4.12	2.10	4.59	7.81
520284	7006303	Caboolture-051	MBC-042	2.06	1.68	0.38	1.26	9.2	71	0	1.91	2.99	2.23	4.80	2.32	5.32	5.09
516778	7013518	Caboolture-060	MBC-043	2.08	1.68	0.40	1.48	10.7	73	0	1.95	3.27	2.32	5.47	2.43	6.13	5.50
516320	7014796	Caboolture-061	MBC-044	2.08	1.68	0.40	1.48	10.7	73	0	1.95	3.27	2.32	5.47	2.43	6.13	5.50
507667	7015461	Caboolture-067	MBC-045	2.07	1.99	0.08	0.54	1.8	163	0	2.14	2.36	2.30	2.76	2.33	2.84	1.53
508591	7014764	Caboolture-069	MBC-046	2.03	1.95	0.08	0.57	1.8	167	0	2.11	2.35	2.27	2.76	2.30	2.83	1.49
509101	7014442	Caboolture-070	MBC-047	1.99	1.91	0.08	0.54	1.9	175	0	2.06	2.29	2.22	2.69	2.25	2.77	1.60
509543	7013236	Caboolture-072	MBC-048	1.99	1.91	0.08	0.49	1.7	231	0	2.04	2.25	2.18	2.61	2.21	2.68	1.53
509623	7012592	Caboolture-073	MBC-049	1.96	1.89	0.07	0.46	1.7	254	0	2.02	2.21	2.15	2.55	2.17	2.62	1.57
510253	7011212	Caboolture-075	MBC-050	1.95	1.87	0.08	0.57	1.9	152	0	2.03	2.27	2.19	2.68	2.23	2.76	1.53
510669	7010917	Caboolture-076	MBC-051	1.93	1.85	0.08	0.58	1.9	152	0	2.01	2.25	2.18	2.68	2.21	2.76	1.53
511138	7010769	Caboolture-077	MBC-052	1.92	1.83	0.09	0.61	1.9	156	0	2.00	2.25	2.18	2.70	2.21	2.79	1.54
511701	7010475	Caboolture-078	MBC-053	1.90	1.81	0.09	0.60	1.9	166	0	1.98	2.23	2.15	2.67	2.19	2.75	1.55
512076	7010032	Caboolture-079	MBC-054	1.88	1.80	0.08	0.49	2.0	166	0	1.93	2.16	2.08	2.54	2.11	2.62	1.76
513283	7007901	Caboolture-083	MBC-055	1.85	1.77	0.08	0.49	1.7	174	0	1.90	2.11	2.04	2.46	2.07	2.52	1.47
513390	7007284	Caboolture-084	MBC-056	1.84	1.76	0.08	0.51	1.7	252	0	1.90	2.11	2.05	2.47	2.07	2.53	1.46

				Water Level mAHD 50yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	1.84	1.76	0.08	0.51	1.7	267	0	1.90	2.12	2.05	2.49	2.07	2.55	1.49
514141	7006547	Caboolture-086	MBC-058	1.82	1.75	0.07	0.46	1.5	166	0	1.87	2.06	2.00	2.38	2.02	2.43	1.42
514958	7005756	Caboolture-088	MBC-059	1.81	1.74	0.07	0.40	1.5	172	0	1.85	2.02	1.96	2.30	1.98	2.35	1.47
515374	7005260	Caboolture-089	MBC-060	1.80	1.73	0.07	0.39	1.6	311	0	1.84	2.00	1.95	2.29	1.97	2.35	1.57
514730	7005140	Caboolture-090	MBC-061	1.81	1.74	0.07	0.40	1.6	337	0	1.85	2.02	1.96	2.31	1.98	2.37	1.53
514328	7005394	Caboolture-091	MBC-062	1.81	1.74	0.07	0.42	1.7	339	0	1.85	2.04	1.98	2.35	2.00	2.41	1.59
513269	7006199	Caboolture-093	MBC-063	1.84	1.76	0.08	0.48	1.7	199	0	1.89	2.09	2.03	2.45	2.06	2.52	1.55
511621	7007284	Caboolture-096	MBC-064	1.91	1.83	0.08	0.50	1.8	115	0	1.97	2.18	2.11	2.55	2.14	2.62	1.57
511339	7008048	Caboolture-097	MBC-065	1.93	1.85	0.08	0.49	1.7	120	0	1.98	2.19	2.12	2.55	2.15	2.62	1.55
511648	7008558	Caboolture-098	MBC-066	1.91	1.83	0.08	0.54	1.8	140	0	1.98	2.20	2.14	2.60	2.17	2.68	1.53
511835	7009040	Caboolture-099	MBC-067	1.89	1.81	0.08	0.55	1.8	147	0	1.96	2.19	2.12	2.59	2.15	2.67	1.52
511446	7009456	Caboolture-100	MBC-068	1.90	1.82	0.08	0.53	1.8	143	0	1.97	2.19	2.12	2.57	2.15	2.65	1.52
511058	7009456	Caboolture-101	MBC-069	1.91	1.83	0.08	0.52	1.8	135	0	1.97	2.19	2.12	2.57	2.15	2.64	1.52
510321	7009818	Caboolture-102	MBC-070	1.94	1.86	0.08	0.51	1.8	122	0	2.00	2.22	2.15	2.59	2.18	2.67	1.56
509784	7010233	Caboolture-103	MBC-071	1.95	1.87	0.08	0.48	1.8	109	0	2.00	2.21	2.14	2.57	2.17	2.64	1.60
509369	7010796	Caboolture-104	MBC-072	1.97	1.89	0.08	0.50	1.8	108	0	2.03	2.24	2.17	2.61	2.20	2.69	1.59
509034	7011198	Caboolture-105	MBC-073	2.01	1.93	0.08	0.51	1.8	114	0	2.07	2.29	2.22	2.66	2.25	2.74	1.56
508833	7011587	Caboolture-106	MBC-074	2.01	1.93	0.08	0.51	1.9	119	0	2.07	2.29	2.22	2.68	2.25	2.76	1.64
508752	7011869	Caboolture-107	MBC-075	2.02	1.94	0.08	0.54	1.9	125	0	2.09	2.32	2.25	2.73	2.28	2.81	1.61
508471	7012110	Caboolture-108	MBC-076	2.02	1.95	0.07	0.46	1.8	119	0	2.08	2.27	2.21	2.62	2.24	2.69	1.61
508926	7012177	Caboolture-109	MBC-077	2.00	1.92	0.08	0.57	1.9	137	0	2.08	2.32	2.24	2.74	2.28	2.82	1.56
509020	7012767	Caboolture-110	MBC-078	1.99	1.91	0.08	0.56	1.8	149	0	2.06	2.30	2.23	2.71	2.26	2.79	1.53
508565	7013276	Caboolture-111	MBC-079	2.01	1.93	0.08	0.48	1.7	143	0	2.06	2.26	2.20	2.61	2.23	2.68	1.51
508069	7013611	Caboolture-112	MBC-080	2.05	1.97	0.08	0.48	1.7	141	0	2.10	2.31	2.24	2.66	2.26	2.71	1.49
507667	7013960	Caboolture-113	MBC-081	2.07	1.99	0.08	0.50	1.7	135	0	2.13	2.34	2.27	2.71	2.29	2.77	1.49
507157	7014067	Caboolture-114	MBC-082	2.08	2.01	0.07	0.46	1.6	120	0	2.13	2.33	2.27	2.66	2.29	2.73	1.51
507171	7014777	Caboolture-116	MBC-083	2.10	2.02	0.08	0.53	1.8	129	0	2.17	2.39	2.32	2.78	2.35	2.86	1.55
507063	7015595	Caboolture-116	MBC-084	2.09	2.01	0.08	0.51	1.8	132	0	2.15	2.36	2.30	2.74	2.33	2.81	1.54
509121	6984944	Redcliffe-005	MBC-085	1.99	1.86	0.13	0.88	2.9	149	0	2.11	2.52	2.38	3.25	2.44	3.40	1.91
509533	6984891	Redcliffe-006	MBC-086	1.99	1.85	0.14	0.96	2.8	159	0	2.12	2.55	2.42	3.33	2.48	3.49	1.81
509892	6984691	Redcliffe-007	MBC-087	1.97	1.83	0.14	0.94	2.9	159	0	2.09	2.52	2.38	3.29	2.45	3.45	1.84
510464	6984279	Redcliffe-009	MBC-088	2.00	1.82	0.18	1.09	3.5	122	0	2.11	2.66	2.43	3.62	2.50	3.83	2.12
510783	6984638	Redcliffe-010	MBC-089	2.00	1.81	0.19	1.28	3.5	122	0	2.15	2.77	2.53	3.82	2.61	4.05	1.90
510969	6985516	Redcliffe-012	MBC-090	1.99	1.80	0.19	1.24	3.5	115	0	2.13	2.73	2.50	3.77	2.57	3.99	1.93
511076	6985889	Redcliffe-013	MBC-091	1.99	1.80	0.19	1.23	3.5	118	0	2.13	2.73	2.49	3.77	2.57	3.99	1.98
511488	6987365	Redcliffe-016	MBC-092	1.96	1.78	0.18	1.20	3.4	121	0	2.10	2.69	2.46	3.69	2.54	3.91	1.96
511768	6988017	Redcliffe-018	MBC-093	1.96	1.78	0.18	1.18	3.5	119	0	2.09	2.68	2.44	3.69	2.52	3.91	2.02
511648	6988496	Redcliffe-019	MBC-094	1.96	1.78	0.18	1.15	3.6	113	0	2.08	2.67	2.42	3.67	2.49	3.89	2.08
511741	6989254	Redcliffe-021	MBC-095	1.98	1.78	0.20	1.29	3.6	120	0	2.12	2.76	2.50	3.84	2.58	4.08	1.97
511874	6990079	Redcliffe-023	MBC-096	1.99	1.78	0.21	1.42	3.6	125	0	2.16	2.84	2.57	4.00	2.66	4.25	1.88
511648	6990451	Redcliffe-024	MBC-097	1.96	1.78	0.18	1.13	3.6	111	0	2.07	2.66	2.41	3.65	2.48	3.87	2.12
511661	6991063	Redcliffe-025	MBC-098	1.99	1.79	0.20	1.33	3.5	123	0	2.14	2.78	2.54	3.89	2.62	4.12	1.91
511568	6992087	Redcliffe-027	MBC-099	1.98	1.79	0.19	1.23	3.6	115	0	2.11	2.73	2.47	3.78	2.55	4.01	2.02
511475	6992513	Redcliffe-028	MBC-100	1.97	1.79	0.18	1.13	3.5	120	0	2.09	2.66	2.42	3.64	2.50	3.86	2.07
510916	6992713	Redcliffe-029	MBC-101	1.94	1.79	0.15	0.98	3.1	65	0	2.06	2.53	2.36	3.35	2.43	3.53	1.96
510531	6992472	Redcliffe-030	MBC-102	1.93	1.80	0.13	0.93	2.7	13	0	2.06	2.48	2.35	3.21	2.41	3.36	1.76
510161	6992164	Redcliffe-031	MBC-103	1.92	1.81	0.11	0.81	2.5	319	0	2.04	2.40	2.29	3.04	2.35	3.17	1.76
509833	6991712	Redcliffe-032	MBC-104	1.94	1.83	0.11	0.80	2.4	329	0	2.06	2.40	2.30	3.02	2.35	3.15	1.70
509525	6991322	Redcliffe-033	MBC-105	1.95	1.84	0.11	0.78	2.4	348	0	2.06	2.40	2.30	3.00	2.35	3.12	1.68
509155	6991199	Redcliffe-034	MBC-106	1.96	1.85	0.11	0.81	2.4	12	0	2.08	2.43	2.33	3.05	2.38	3.18	1.68
508478	6991343	Redcliffe-035	MBC-107	1.98	1.86	0.12	0.86	2.6	18	0	2.11	2.48	2.37	3.15	2.43	3.29	1.72
507965	6991487	Redcliffe-036	MBC-108	2.00	1.88	0.12	0.89	2.6	20	0	2.13	2.52	2.41	3.21	2.47	3.35	1.71
507205	6991589	Redcliffe-037	MBC-109	2.03	1.91	0.12	0.87	2.6	20	0	2.16	2.54	2.43	3.22	2.48	3.36	1.73
506548	6991836	Redcliffe-038	MBC-110	2.04	1.92	0.12	0.84	2.6	27	0	2.16	2.53	2.42	3.19	2.47	3.32	1.74
505830	6992082	Redcliffe-039	MBC-111	2.06	1.94	0.12	0.84	2.6	32	0	2.18	2.55	2.44	3.21	2.49	3.35	1.74
505358	6992267	Redcliffe-040	MBC-112	2.08	1.96	0.12	0.82	2.6	35	0	2.19	2.56	2.45	3.22	2.50	3.36	1.81

				Water Level mAHD 100yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar		1.78	1.78		0.62	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.14	2.00	0.14	0.92	2.9	114	0	2.26	2.68	2.54	3.44	2.60	3.59	1.87
507065	6983136	PineRiver-002	MBC-002	2.12	1.99	0.13	0.83	2.9	122	0	2.22	2.62	2.48	3.31	2.54	3.46	1.95
507237	6983516	PineRiver-003	MBC-003	2.13	1.99	0.14	0.94	3.0	118	0	2.25	2.70	2.54	3.48	2.61	3.65	1.94
507198	6984049	PineRiver-004	MBC-004	2.12	1.99	0.13	0.86	2.7	123	0	2.23	2.62	2.50	3.32	2.56	3.47	1.84
506913	6984334	PineRiver-005	MBC-005	2.13	2.02	0.11	0.74	2.5	124	0	2.23	2.56	2.46	3.16	2.51	3.28	1.81
507046	6984696	PineRiver-006	MBC-006	2.11	2.01	0.10	0.67	2.2	139	0	2.20	2.49	2.40	3.01	2.44	3.11	1.69
507522	6984334	PineRiver-007	MBC-007	2.09	1.97	0.12	0.82	2.7	131	0	2.20	2.57	2.46	3.24	2.51	3.38	1.83
507769	6984239	PineRiver-008	MBC-008	2.11	1.96	0.15	1.03	2.9	126	0	2.25	2.71	2.57	3.53	2.63	3.70	1.78
506179	6982661	PineRiver-009	MBC-009	2.13	2.02	0.11	0.74	2.5	124	0	2.23	2.56	2.46	3.16	2.51	3.28	1.81
504927	6992513	Caboolture-001	MBC-010	2.15	2.03	0.12	0.84	2.7	50	0	2.27	2.65	2.53	3.32	2.58	3.46	1.81
504270	6992575	Caboolture-002	MBC-011	2.17	2.06	0.11	0.75	2.5	59	0	2.27	2.61	2.51	3.20	2.56	3.33	1.77
503633	6992841	Caboolture-003	MBC-012	2.22	2.12	0.10	0.72	2.4	71	0	2.32	2.64	2.55	3.21	2.59	3.33	1.75
503346	6993519	Caboolture-004	MBC-013	2.22	2.12	0.10	0.70	2.4	92	0	2.32	2.63	2.53	3.20	2.58	3.31	1.81
503613	6994402	Caboolture-005	MBC-014	2.22	2.11	0.11	0.73	2.6	108	0	2.32	2.65	2.54	3.25	2.59	3.38	1.88
504658	6996186	Caboolture-009	MBC-015	2.17	2.04	0.13	0.91	2.8	115	0	2.30	2.71	2.58	3.45	2.64	3.60	1.84
504477	6996546	Caboolture-010	MBC-016	2.19	2.07	0.12	0.80	2.7	114	0	2.30	2.66	2.54	3.31	2.60	3.45	1.86
504774	6997055	Caboolture-012	MBC-017	2.17	2.04	0.13	0.90	2.8	120	0	2.29	2.70	2.57	3.44	2.63	3.59	1.84
505039	6997331	Caboolture-013	MBC-018	2.16	2.03	0.13	0.88	2.9	121	0	2.28	2.69	2.55	3.43	2.61	3.59	1.94
505442	6998582	Caboolture-016	MBC-019	2.18	2.02	0.16	1.05	3.1	122	0	2.31	2.80	2.63	3.66	2.70	3.85	1.88
505671	6999062	Caboolture-017	MBC-020	2.17	2.01	0.16	0.97	3.2	122	0	2.27	2.75	2.57	3.59	2.64	3.77	2.05
505909	6999567	Caboolture-018	MBC-021	2.16	2.00	0.16	1.01	3.3	124	0	2.27	2.77	2.58	3.64	2.64	3.83	2.04
506361	7000127	Caboolture-019	MBC-022	2.14	1.98	0.16	1.07	3.2	130	0	2.27	2.78	2.60	3.67	2.67	3.86	1.93
506813	7000580	Caboolture-020	MBC-023	2.12	1.96	0.16	1.00	3.2	128	0	2.23	2.72	2.54	3.57	2.60	3.75	2.00
507266	7001010	Caboolture-021	MBC-024	2.12	1.95	0.17	1.09	3.3	129	0	2.24	2.77	2.57	3.69	2.64	3.89	1.97
507718	7001452	Caboolture-022	MBC-025	2.11	1.94	0.17	1.13	3.4	134	0	2.24	2.79	2.58	3.75	2.65	3.95	1.97
508289	7001850	Caboolture-023	MBC-026	2.09	1.92	0.17	1.15	3.4	136	0	2.23	2.79	2.57	3.75	2.65	3.96	1.95
508903	7002206	Caboolture-024	MBC-027	2.08	1.90	0.18	1.18	3.4	139	0	2.22	2.79	2.57	3.78	2.64	4.00	1.96
509355	7002550	Caboolture-025	MBC-028	2.06	1.89	0.17	1.14	3.3	143	0	2.20	2.75	2.54	3.70	2.62	3.90	1.94
509894	7002744	Caboolture-026	MBC-029	2.05	1.88	0.17	1.09	3.3	149	0	2.17	2.71	2.50	3.63	2.58	3.83	1.99
510475	7002852	Caboolture-027	MBC-030	2.03	1.86	0.17	1.08	3.4	150	0	2.15	2.68	2.47	3.60	2.54	3.80	2.01
511067	7003003	Caboolture-028	MBC-031	2.04	1.86	0.18	1.14	3.4	152	0	2.16	2.73	2.51	3.70	2.58	3.91	2.01
511477	7003251	Caboolture-029	MBC-032	2.02	1.85	0.17	1.03	3.4	154	0	2.12	2.65	2.43	3.55	2.50	3.75	2.10
512112	7003326	Caboolture-030	MBC-033	2.01	1.83	0.18	1.12	3.4	156	0	2.13	2.68	2.46	3.64	2.54	3.84	2.01
512694	7003455	Caboolture-031	MBC-034	1.99	1.82	0.17	1.04	3.4	159	0	2.10	2.62	2.41	3.52	2.48	3.72	2.06
513275	7003412	Caboolture-032	MBC-035	1.98	1.81	0.17	1.07	3.3	156	0	2.10	2.62	2.42	3.53	2.49	3.73	2.00
513911	7003746	Caboolture-033	MBC-036	1.97	1.82	0.15	0.94	3.2	148	0	2.08	2.54	2.36	3.35	2.43	3.53	2.05
514481	7004446	Caboolture-034	MBC-037	1.93	1.81	0.12	0.83	2.6	152	0	2.05	2.42	2.30	3.09	2.36	3.23	1.81
516248	7002647	Caboolture-038	MBC-038	1.91	1.75	0.16	0.99	3.4	174	0	2.01	2.52	2.31	3.39	2.38	3.59	2.13
517280	7002397	Caboolture-040	MBC-039	1.94	1.74	0.20	1.30	3.6	156	0	2.08	2.72	2.46	3.81	2.54	4.04	1.95
519611	7002925	Caboolture-044	MBC-040	1.98	1.71	0.27	0.76	10.9	89	0	1.84	2.62	2.04	3.99	2.10	4.43	7.83
520367	7003619	Caboolture-046	MBC-041	2.02	1.72	0.30	0.89	11.3	62	0	1.87	2.78	2.10	4.34	2.18	4.84	7.45
520284	7006303	Caboolture-051	MBC-042	2.11	1.72	0.39	1.30	9.2	71	0	1.96	3.07	2.29	4.91	2.38	5.45	5.01
516778	7013518	Caboolture-060	MBC-043	2.13	1.71	0.42	1.61	10.7	73	0	2.00	3.41	2.40	5.76	2.52	6.45	5.28
516320	7014796	Caboolture-061	MBC-044	2.13	1.71	0.42	1.61	10.7	73	0	2.00	3.41	2.40	5.76	2.52	6.45	5.28
507667	7015461	Caboolture-067	MBC-045	2.14	2.06	0.08	0.56	1.8	163	0	2.21	2.45	2.38	2.85	2.41	2.93	1.50
508591	7014764	Caboolture-069	MBC-046	2.10	2.01	0.09	0.59	1.8	167	0	2.17	2.42	2.34	2.84	2.37	2.91	1.46
509101	7014442	Caboolture-070	MBC-047	2.05	1.97	0.08	0.56	1.9	175	0	2.12	2.36	2.29	2.78	2.32	2.86	1.57
509543	7013236	Caboolture-072	MBC-048	2.04	1.96	0.08	0.50	1.7	231	0	2.10	2.31	2.24	2.67	2.27	2.74	1.52
509623	7012592	Caboolture-073	MBC-049	2.03	1.95	0.08	0.47	1.7	254	0	2.08	2.28	2.21	2.62	2.24	2.69	1.56
510253	7011212	Caboolture-075	MBC-050	2.02	1.93	0.09	0.59	1.9	152	0	2.09	2.34	2.27	2.76	2.30	2.85	1.50
510669	7010917	Caboolture-076	MBC-051	1.98	1.89	0.09	0.60	1.9	152	0	2.06	2.30	2.23	2.74	2.27	2.82	1.51
511138	7010769	Caboolture-077	MBC-052	1.97	1.88	0.09	0.62	1.9	156	0	2.05	2.31	2.23	2.76	2.27	2.85	1.52
511701	7010475	Caboolture-078	MBC-053	1.95	1.86	0.09	0.62	1.9	166	0	2.03	2.29	2.21	2.74	2.25	2.83	1.52
512076	7010032	Caboolture-079	MBC-054	1.92	1.84	0.08	0.51	2.0	166	0	1.98	2.21	2.13	2.61	2.16	2.69	1.72
513283	7007901	Caboolture-083	MBC-055	1.89	1.81	0.08	0.51	1.7	174	0	1.95	2.16	2.10	2.52	2.12	2.58	1.44
513390	7007284	Caboolture-084	MBC-056	1.88	1.80	0.08	0.53	1.7	252	0	1.95	2.16	2.10	2.53	2.12	2.59	1.43

				Water Level mAHD 100yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	1.88	1.80	0.08	0.53	1.7	267	0	1.95	2.16	2.10	2.54	2.12	2.60	1.46
514141	7006547	Caboolture-086	MBC-058	1.87	1.79	0.08	0.47	1.5	166	0	1.92	2.10	2.05	2.42	2.07	2.48	1.40
514958	7005756	Caboolture-088	MBC-059	1.84	1.77	0.07	0.41	1.5	172	0	1.88	2.05	2.00	2.34	2.01	2.39	1.45
515374	7005260	Caboolture-089	MBC-060	1.84	1.77	0.07	0.40	1.6	311	0	1.88	2.05	1.99	2.34	2.01	2.40	1.55
514730	7005140	Caboolture-090	MBC-061	1.85	1.78	0.07	0.41	1.6	337	0	1.89	2.06	2.01	2.36	2.03	2.42	1.51
514328	7005394	Caboolture-091	MBC-062	1.85	1.78	0.07	0.43	1.7	339	0	1.90	2.08	2.02	2.40	2.05	2.46	1.57
513269	7006199	Caboolture-093	MBC-063	1.88	1.80	0.08	0.50	1.7	199	0	1.94	2.15	2.08	2.51	2.11	2.58	1.52
511621	7007284	Caboolture-096	MBC-064	1.96	1.88	0.08	0.51	1.8	115	0	2.02	2.24	2.17	2.61	2.20	2.69	1.56
511339	7008048	Caboolture-097	MBC-065	1.97	1.89	0.08	0.51	1.7	120	0	2.03	2.24	2.18	2.61	2.20	2.69	1.52
511648	7008558	Caboolture-098	MBC-066	1.96	1.88	0.08	0.56	1.8	140	0	2.03	2.27	2.20	2.67	2.23	2.75	1.50
511835	7009040	Caboolture-099	MBC-067	1.93	1.85	0.08	0.57	1.8	147	0	2.01	2.25	2.17	2.66	2.20	2.73	1.49
511446	7009456	Caboolture-100	MBC-068	1.94	1.86	0.08	0.54	1.8	143	0	2.01	2.23	2.17	2.62	2.20	2.70	1.50
511058	7009456	Caboolture-101	MBC-069	1.96	1.88	0.08	0.53	1.8	135	0	2.03	2.25	2.18	2.63	2.21	2.70	1.51
510321	7009818	Caboolture-102	MBC-070	1.98	1.90	0.08	0.52	1.8	122	0	2.04	2.26	2.19	2.64	2.22	2.72	1.54
509784	7010233	Caboolture-103	MBC-071	2.01	1.93	0.08	0.49	1.8	109	0	2.06	2.27	2.21	2.64	2.23	2.71	1.58
509369	7010796	Caboolture-104	MBC-072	2.03	1.95	0.08	0.51	1.8	108	0	2.09	2.31	2.24	2.69	2.27	2.76	1.57
509034	7011198	Caboolture-105	MBC-073	2.06	1.98	0.08	0.52	1.8	114	0	2.12	2.34	2.27	2.72	2.30	2.80	1.54
508833	7011587	Caboolture-106	MBC-074	2.06	1.98	0.08	0.53	1.9	119	0	2.13	2.35	2.28	2.75	2.31	2.83	1.61
508752	7011869	Caboolture-107	MBC-075	2.08	2.00	0.08	0.56	1.9	125	0	2.15	2.39	2.32	2.81	2.35	2.89	1.58
508471	7012110	Caboolture-108	MBC-076	2.09	2.01	0.08	0.47	1.8	119	0	2.14	2.34	2.28	2.69	2.30	2.76	1.59
508926	7012177	Caboolture-109	MBC-077	2.05	1.97	0.08	0.58	1.9	137	0	2.13	2.37	2.30	2.80	2.33	2.88	1.55
509020	7012767	Caboolture-110	MBC-078	2.04	1.96	0.08	0.58	1.8	149	0	2.12	2.36	2.29	2.78	2.32	2.86	1.50
508565	7013276	Caboolture-111	MBC-079	2.07	1.99	0.08	0.50	1.7	143	0	2.13	2.34	2.27	2.70	2.29	2.76	1.48
508069	7013611	Caboolture-112	MBC-080	2.11	2.03	0.08	0.49	1.7	141	0	2.16	2.37	2.30	2.72	2.33	2.78	1.47
507667	7013960	Caboolture-113	MBC-081	2.14	2.06	0.08	0.51	1.7	135	0	2.20	2.41	2.35	2.78	2.37	2.84	1.48
507157	7014067	Caboolture-114	MBC-082	2.16	2.08	0.08	0.47	1.6	120	0	2.21	2.41	2.34	2.75	2.36	2.81	1.49
507171	7014777	Caboolture-116	MBC-083	2.17	2.09	0.08	0.54	1.8	129	0	2.24	2.47	2.40	2.86	2.43	2.94	1.54
507063	7015595	Caboolture-116	MBC-084	2.16	2.08	0.08	0.52	1.8	132	0	2.22	2.44	2.37	2.82	2.40	2.89	1.52
509121	6984944	Redcliffe-005	MBC-085	2.04	1.91	0.13	0.90	2.9	149	0	2.16	2.58	2.44	3.32	2.50	3.48	1.89
509533	6984891	Redcliffe-006	MBC-086	2.03	1.89	0.14	0.99	2.8	159	0	2.17	2.61	2.48	3.40	2.54	3.57	1.78
509892	6984691	Redcliffe-007	MBC-087	2.02	1.88	0.14	0.97	2.9	159	0	2.15	2.59	2.45	3.37	2.52	3.54	1.81
510464	6984279	Redcliffe-009	MBC-088	2.04	1.86	0.18	1.12	3.5	122	0	2.15	2.72	2.49	3.70	2.56	3.91	2.09
510783	6984638	Redcliffe-010	MBC-089	2.04	1.85	0.19	1.32	3.5	122	0	2.20	2.83	2.59	3.91	2.67	4.14	1.88
510969	6985516	Redcliffe-012	MBC-090	2.03	1.84	0.19	1.28	3.5	115	0	2.18	2.80	2.56	3.85	2.64	4.08	1.90
511076	6985889	Redcliffe-013	MBC-091	2.03	1.84	0.19	1.27	3.5	118	0	2.18	2.80	2.55	3.86	2.63	4.09	1.95
511488	6987365	Redcliffe-016	MBC-092	2.01	1.82	0.19	1.24	3.4	121	0	2.15	2.75	2.52	3.78	2.60	4.00	1.93
511768	6988017	Redcliffe-018	MBC-093	2.01	1.82	0.19	1.21	3.5	119	0	2.14	2.74	2.50	3.77	2.58	3.99	2.00
511648	6988496	Redcliffe-019	MBC-094	2.01	1.82	0.19	1.18	3.6	113	0	2.13	2.72	2.48	3.74	2.55	3.97	2.06
511741	6989254	Redcliffe-021	MBC-095	2.02	1.82	0.20	1.33	3.6	120	0	2.17	2.82	2.56	3.93	2.64	4.17	1.94
511874	6990079	Redcliffe-023	MBC-096	2.03	1.82	0.21	1.46	3.6	125	0	2.21	2.90	2.63	4.09	2.72	4.34	1.86
511648	6990451	Redcliffe-024	MBC-097	2.01	1.82	0.19	1.16	3.6	111	0	2.12	2.71	2.46	3.73	2.54	3.95	2.09
511661	6991063	Redcliffe-025	MBC-098	2.03	1.83	0.20	1.37	3.5	123	0	2.20	2.85	2.60	3.97	2.68	4.21	1.88
511568	6992087	Redcliffe-027	MBC-099	2.02	1.83	0.19	1.26	3.6	115	0	2.16	2.79	2.53	3.86	2.61	4.09	2.00
511475	6992513	Redcliffe-028	MBC-100	2.02	1.84	0.18	1.16	3.5	120	0	2.15	2.73	2.49	3.73	2.57	3.95	2.05
510916	6992713	Redcliffe-029	MBC-101	1.98	1.83	0.15	1.01	3.1	65	0	2.11	2.59	2.42	3.43	2.49	3.61	1.93
510531	6992472	Redcliffe-030	MBC-102	1.99	1.85	0.14	0.96	2.7	13	0	2.12	2.54	2.42	3.30	2.48	3.45	1.73
510161	6992164	Redcliffe-031	MBC-103	1.98	1.86	0.12	0.84	2.5	319	0	2.10	2.47	2.36	3.12	2.41	3.26	1.72
509833	6991712	Redcliffe-032	MBC-104	1.99	1.88	0.11	0.82	2.4	329	0	2.11	2.47	2.37	3.10	2.42	3.22	1.68
509525	6991322	Redcliffe-033	MBC-105	1.99	1.88	0.11	0.80	2.4	348	0	2.11	2.45	2.35	3.06	2.40	3.19	1.66
509155	6991199	Redcliffe-034	MBC-106	2.00	1.89	0.11	0.84	2.4	12	0	2.13	2.49	2.39	3.13	2.44	3.26	1.65
508478	6991343	Redcliffe-035	MBC-107	2.03	1.91	0.12	0.88	2.6	18	0	2.16	2.54	2.43	3.23	2.49	3.37	1.70
507965	6991487	Redcliffe-036	MBC-108	2.07	1.94	0.13	0.92	2.6	20	0	2.20	2.60	2.49	3.31	2.54	3.45	1.68
507205	6991589	Redcliffe-037	MBC-109	2.08	1.96	0.12	0.89	2.6	20	0	2.21	2.60	2.49	3.29	2.55	3.44	1.71
506548	6991836	Redcliffe-038	MBC-110	2.09	1.97	0.12	0.87	2.6	27	0	2.22	2.60	2.49	3.27	2.54	3.41	1.71
505830	6992082	Redcliffe-039	MBC-111	2.12	2.00	0.12	0.87	2.6	32	0	2.25	2.63	2.52	3.30	2.57	3.44	1.71
505358	6992267	Redcliffe-040	MBC-112	2.14	2.02	0.12	0.84	2.6	35	0	2.26	2.63	2.52	3.31	2.57	3.45	1.79

				Water Level mAHD 200yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar		1.82	1.82		0.63	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.20	2.06	0.14	0.94	2.9	114	0	2.32	2.76	2.61	3.52	2.68	3.68	1.85
507065	6983136	PineRiver-002	MBC-002	2.18	2.05	0.13	0.85	2.9	122	0	2.29	2.69	2.55	3.40	2.61	3.55	1.93
507237	6983516	PineRiver-003	MBC-003	2.20	2.05	0.15	0.96	3.0	118	0	2.32	2.77	2.61	3.57	2.68	3.74	1.92
507198	6984049	PineRiver-004	MBC-004	2.18	2.05	0.13	0.88	2.7	123	0	2.30	2.70	2.57	3.41	2.63	3.55	1.82
506913	6984334	PineRiver-005	MBC-005	2.19	2.08	0.11	0.76	2.5	124	0	2.30	2.64	2.53	3.24	2.58	3.37	1.79
507046	6984696	PineRiver-006	MBC-006	2.17	2.07	0.10	0.69	2.2	139	0	2.26	2.56	2.47	3.09	2.51	3.20	1.67
507522	6984334	PineRiver-007	MBC-007	2.15	2.03	0.12	0.84	2.7	131	0	2.27	2.65	2.53	3.32	2.58	3.46	1.81
507769	6984239	PineRiver-008	MBC-008	2.16	2.01	0.15	1.06	2.9	126	0	2.31	2.78	2.64	3.62	2.70	3.79	1.75
506179	6982661	PineRiver-009	MBC-009	2.19	2.08	0.11	0.76	2.5	124	0	2.30	2.64	2.53	3.24	2.58	3.37	1.79
504927	6992513	Caboolture-001	MBC-010	2.20	2.08	0.12	0.86	2.7	50	0	2.32	2.71	2.59	3.39	2.65	3.54	1.78
504270	6992575	Caboolture-002	MBC-011	2.24	2.13	0.11	0.77	2.5	59	0	2.35	2.69	2.59	3.30	2.64	3.42	1.75
503633	6992841	Caboolture-003	MBC-012	2.29	2.19	0.10	0.74	2.4	71	0	2.40	2.72	2.63	3.30	2.67	3.42	1.73
503346	6993519	Caboolture-004	MBC-013	2.29	2.19	0.10	0.72	2.4	92	0	2.39	2.72	2.62	3.29	2.66	3.41	1.79
503613	6994402	Caboolture-005	MBC-014	2.29	2.18	0.11	0.75	2.6	108	0	2.39	2.74	2.63	3.35	2.68	3.47	1.85
504658	6996186	Caboolture-009	MBC-015	2.24	2.10	0.14	0.93	2.8	115	0	2.36	2.78	2.65	3.53	2.71	3.69	1.82
504477	6996546	Caboolture-010	MBC-016	2.26	2.14	0.12	0.82	2.7	114	0	2.37	2.74	2.63	3.41	2.68	3.55	1.83
504774	6997055	Caboolture-012	MBC-017	2.23	2.10	0.13	0.92	2.8	120	0	2.36	2.78	2.64	3.52	2.70	3.67	1.82
505039	6997331	Caboolture-013	MBC-018	2.22	2.08	0.14	0.90	2.9	121	0	2.33	2.75	2.61	3.50	2.67	3.66	1.92
505442	6998582	Caboolture-016	MBC-019	2.24	2.08	0.16	1.07	3.1	122	0	2.38	2.87	2.70	3.75	2.77	3.93	1.87
505671	6999062	Caboolture-017	MBC-020	2.22	2.06	0.16	0.99	3.2	122	0	2.33	2.82	2.63	3.67	2.70	3.85	2.03
505909	6999567	Caboolture-018	MBC-021	2.22	2.06	0.16	1.04	3.3	124	0	2.34	2.85	2.65	3.74	2.72	3.93	2.01
506361	7000127	Caboolture-019	MBC-022	2.21	2.04	0.17	1.10	3.2	130	0	2.34	2.86	2.68	3.77	2.75	3.96	1.90
506813	7000580	Caboolture-020	MBC-023	2.17	2.01	0.16	1.02	3.2	128	0	2.29	2.78	2.60	3.64	2.67	3.83	1.98
507266	7001010	Caboolture-021	MBC-024	2.17	2.00	0.17	1.12	3.3	129	0	2.30	2.84	2.64	3.78	2.71	3.98	1.94
507718	7001452	Caboolture-022	MBC-025	2.17	1.99	0.18	1.16	3.4	134	0	2.30	2.86	2.65	3.83	2.72	4.04	1.95
508289	7001850	Caboolture-023	MBC-026	2.15	1.97	0.18	1.18	3.4	136	0	2.29	2.85	2.64	3.84	2.71	4.05	1.93
508903	7002206	Caboolture-024	MBC-027	2.12	1.94	0.18	1.21	3.4	139	0	2.26	2.85	2.63	3.86	2.70	4.08	1.94
509355	7002550	Caboolture-025	MBC-028	2.12	1.94	0.18	1.17	3.3	143	0	2.26	2.82	2.61	3.79	2.68	3.99	1.92
509894	7002744	Caboolture-026	MBC-029	2.09	1.92	0.17	1.12	3.3	149	0	2.22	2.77	2.56	3.71	2.63	3.91	1.97
510475	7002852	Caboolture-027	MBC-030	2.08	1.91	0.17	1.11	3.4	150	0	2.21	2.75	2.54	3.69	2.61	3.89	1.99
511067	7003003	Caboolture-028	MBC-031	2.08	1.90	0.18	1.16	3.4	152	0	2.21	2.78	2.56	3.76	2.63	3.98	1.99
511477	7003251	Caboolture-029	MBC-032	2.06	1.89	0.17	1.05	3.4	154	0	2.17	2.70	2.48	3.61	2.55	3.81	2.08
512112	7003326	Caboolture-030	MBC-033	2.05	1.87	0.18	1.15	3.4	156	0	2.18	2.74	2.52	3.71	2.60	3.92	1.98
512694	7003455	Caboolture-031	MBC-034	2.04	1.87	0.17	1.07	3.4	159	0	2.16	2.69	2.48	3.61	2.55	3.81	2.03
513275	7003412	Caboolture-032	MBC-035	2.02	1.85	0.17	1.09	3.3	156	0	2.14	2.68	2.47	3.60	2.54	3.80	1.99
513911	7003746	Caboolture-033	MBC-036	2.01	1.86	0.15	0.95	3.2	148	0	2.12	2.59	2.41	3.40	2.47	3.58	2.04
514481	7004446	Caboolture-034	MBC-037	1.97	1.85	0.12	0.85	2.6	152	0	2.09	2.47	2.36	3.15	2.41	3.29	1.79
516248	7002647	Caboolture-038	MBC-038	1.95	1.78	0.17	1.02	3.4	174	0	2.05	2.57	2.36	3.46	2.43	3.66	2.10
517280	7002397	Caboolture-040	MBC-039	1.98	1.78	0.20	1.34	3.6	156	0	2.13	2.78	2.52	3.90	2.61	4.14	1.92
519611	7002925	Caboolture-044	MBC-040	2.03	1.75	0.28	0.81	10.9	89	0	1.89	2.71	2.10	4.14	2.17	4.60	7.58
520367	7003619	Caboolture-046	MBC-041	2.07	1.75	0.32	0.97	11.3	62	0	1.92	2.89	2.17	4.55	2.25	5.08	7.14
520284	7006303	Caboolture-051	MBC-042	2.15	1.75	0.40	1.34	9.2	71	0	2.00	3.13	2.33	5.02	2.43	5.56	4.94
516778	7013518	Caboolture-060	MBC-043	2.17	1.74	0.43	1.73	10.7	73	0	2.05	3.54	2.49	6.02	2.61	6.74	5.09
516320	7014796	Caboolture-061	MBC-044	2.17	1.74	0.43	1.73	10.7	73	0	2.05	3.54	2.49	6.02	2.61	6.74	5.09
507667	7015461	Caboolture-067	MBC-045	2.20	2.12	0.08	0.58	1.8	163	0	2.28	2.52	2.45	2.94	2.47	3.01	1.48
508591	7014764	Caboolture-069	MBC-046	2.16	2.07	0.09	0.61	1.8	167	0	2.24	2.48	2.41	2.91	2.44	2.98	1.44
509101	7014442	Caboolture-070	MBC-047	2.11	2.03	0.08	0.58	1.9	175	0	2.19	2.43	2.36	2.86	2.39	2.94	1.54
509543	7013236	Caboolture-072	MBC-048	2.09	2.01	0.08	0.52	1.7	231	0	2.15	2.37	2.30	2.75	2.33	2.82	1.49
509623	7012592	Caboolture-073	MBC-049	2.08	2.00	0.08	0.48	1.7	254	0	2.13	2.33	2.27	2.69	2.30	2.75	1.54
510253	7011212	Caboolture-075	MBC-050	2.07	1.98	0.09	0.60	1.9	152	0	2.15	2.40	2.32	2.84	2.35	2.91	1.49
510669	7010917	Caboolture-076	MBC-051	2.03	1.94	0.09	0.62	1.9	152	0	2.11	2.37	2.29	2.82	2.32	2.90	1.48
511138	7010769	Caboolture-077	MBC-052	2.01	1.92	0.09	0.64	1.9	156	0	2.10	2.37	2.28	2.84	2.31	2.92	1.50
511701	7010475	Caboolture-078	MBC-053	1.99	1.90	0.09	0.64	1.9	166	0	2.08	2.35	2.26	2.82	2.29	2.90	1.50
512076	7010032	Caboolture-079	MBC-054	1.96	1.88	0.08	0.53	2.0	166	0	2.03	2.26	2.18	2.67	2.22	2.75	1.69
513283	7007901	Caboolture-083	MBC-055	1.93	1.85	0.08	0.52	1.7	174	0	1.99	2.20	2.14	2.56	2.17	2.62	1.43
513390	7007284	Caboolture-084	MBC-056	1.92	1.84	0.08	0.54	1.7	252	0	1.99	2.20	2.14	2.58	2.17	2.64	1.42

				Water Level mAHD 200yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	1.92	1.84	0.08	0.54	1.7	267	0	1.99	2.21	2.14	2.59	2.17	2.65	1.44
514141	7006547	Caboolture-086	MBC-058	1.91	1.83	0.08	0.49	1.5	166	0	1.96	2.15	2.10	2.48	2.12	2.53	1.37
514958	7005756	Caboolture-088	MBC-059	1.87	1.80	0.07	0.43	1.5	172	0	1.92	2.09	2.04	2.39	2.06	2.43	1.42
515374	7005260	Caboolture-089	MBC-060	1.87	1.80	0.07	0.41	1.6	311	0	1.91	2.08	2.03	2.38	2.05	2.44	1.53
514730	7005140	Caboolture-090	MBC-061	1.88	1.81	0.07	0.42	1.6	337	0	1.92	2.10	2.04	2.41	2.06	2.46	1.49
514328	7005394	Caboolture-091	MBC-062	1.89	1.82	0.07	0.44	1.7	339	0	1.94	2.13	2.07	2.45	2.09	2.51	1.55
513269	7006199	Caboolture-093	MBC-063	1.92	1.84	0.08	0.51	1.7	199	0	1.98	2.19	2.13	2.56	2.15	2.63	1.50
511621	7007284	Caboolture-096	MBC-064	2.00	1.92	0.08	0.52	1.8	115	0	2.06	2.28	2.21	2.66	2.24	2.74	1.54
511339	7008048	Caboolture-097	MBC-065	2.02	1.94	0.08	0.52	1.7	120	0	2.08	2.30	2.23	2.67	2.26	2.75	1.51
511648	7008558	Caboolture-098	MBC-066	2.00	1.92	0.08	0.57	1.8	140	0	2.08	2.32	2.24	2.73	2.27	2.80	1.49
511835	7009040	Caboolture-099	MBC-067	1.98	1.89	0.09	0.59	1.8	147	0	2.05	2.30	2.22	2.72	2.25	2.79	1.46
511446	7009456	Caboolture-100	MBC-068	1.99	1.91	0.08	0.56	1.8	143	0	2.06	2.30	2.23	2.70	2.25	2.77	1.48
511058	7009456	Caboolture-101	MBC-069	2.00	1.92	0.08	0.54	1.8	135	0	2.07	2.30	2.23	2.70	2.25	2.76	1.50
510321	7009818	Caboolture-102	MBC-070	2.03	1.95	0.08	0.53	1.8	122	0	2.10	2.32	2.25	2.70	2.28	2.78	1.53
509784	7010233	Caboolture-103	MBC-071	2.06	1.98	0.08	0.50	1.8	109	0	2.12	2.33	2.26	2.70	2.29	2.77	1.56
509369	7010796	Caboolture-104	MBC-072	2.08	2.00	0.08	0.52	1.8	108	0	2.14	2.36	2.29	2.75	2.32	2.82	1.56
509034	7011198	Caboolture-105	MBC-073	2.12	2.04	0.08	0.53	1.8	114	0	2.19	2.41	2.34	2.79	2.37	2.87	1.53
508833	7011587	Caboolture-106	MBC-074	2.12	2.04	0.08	0.54	1.9	119	0	2.19	2.42	2.35	2.82	2.38	2.90	1.60
508752	7011869	Caboolture-107	MBC-075	2.14	2.06	0.08	0.57	1.9	125	0	2.22	2.46	2.38	2.88	2.42	2.96	1.56
508471	7012110	Caboolture-108	MBC-076	2.15	2.07	0.08	0.49	1.8	119	0	2.20	2.41	2.35	2.77	2.37	2.84	1.56
508926	7012177	Caboolture-109	MBC-077	2.12	2.03	0.09	0.60	1.9	137	0	2.20	2.45	2.37	2.88	2.41	2.97	1.52
509020	7012767	Caboolture-110	MBC-078	2.11	2.02	0.09	0.59	1.8	149	0	2.18	2.43	2.35	2.86	2.38	2.93	1.49
508565	7013276	Caboolture-111	MBC-079	2.13	2.05	0.08	0.51	1.7	143	0	2.19	2.40	2.34	2.77	2.36	2.83	1.47
508069	7013611	Caboolture-112	MBC-080	2.16	2.08	0.08	0.50	1.7	141	0	2.22	2.42	2.36	2.78	2.38	2.84	1.46
507667	7013960	Caboolture-113	MBC-081	2.20	2.12	0.08	0.52	1.7	135	0	2.26	2.48	2.41	2.85	2.44	2.91	1.46
507157	7014067	Caboolture-114	MBC-082	2.22	2.14	0.08	0.48	1.6	120	0	2.27	2.47	2.41	2.82	2.43	2.88	1.48
507171	7014777	Caboolture-115	MBC-083	2.23	2.15	0.08	0.56	1.8	129	0	2.30	2.54	2.47	2.94	2.50	3.02	1.51
507063	7015595	Caboolture-116	MBC-084	2.22	2.14	0.08	0.54	1.8	132	0	2.29	2.52	2.45	2.92	2.47	2.98	1.50
509121	6984944	Redcliffe-005	MBC-085	2.09	1.95	0.14	0.93	2.9	149	0	2.21	2.64	2.50	3.40	2.56	3.56	1.86
509533	6984891	Redcliffe-006	MBC-086	2.09	1.94	0.15	1.02	2.8	159	0	2.23	2.68	2.54	3.49	2.61	3.65	1.76
509892	6984691	Redcliffe-007	MBC-087	2.06	1.92	0.14	1.00	2.9	159	0	2.20	2.65	2.51	3.45	2.57	3.61	1.79
510464	6984279	Redcliffe-009	MBC-088	2.09	1.91	0.18	1.15	3.5	122	0	2.21	2.79	2.56	3.79	2.63	4.01	2.06
510783	6984638	Redcliffe-010	MBC-089	2.08	1.89	0.19	1.36	3.5	122	0	2.25	2.90	2.65	4.00	2.74	4.23	1.85
510969	6985516	Redcliffe-012	MBC-090	2.07	1.88	0.19	1.32	3.5	115	0	2.23	2.86	2.62	3.94	2.70	4.17	1.88
511076	6985889	Redcliffe-013	MBC-091	2.07	1.88	0.19	1.30	3.5	118	0	2.23	2.85	2.61	3.93	2.69	4.17	1.92
511488	6987365	Redcliffe-016	MBC-092	2.06	1.87	0.19	1.28	3.4	121	0	2.21	2.83	2.60	3.88	2.68	4.11	1.90
511768	6988017	Redcliffe-018	MBC-093	2.06	1.87	0.19	1.24	3.5	119	0	2.20	2.81	2.57	3.85	2.65	4.08	1.97
511648	6988496	Redcliffe-019	MBC-094	2.06	1.87	0.19	1.21	3.6	113	0	2.19	2.79	2.54	3.83	2.62	4.06	2.03
511741	6989254	Redcliffe-021	MBC-095	2.07	1.87	0.20	1.36	3.6	120	0	2.23	2.89	2.63	4.02	2.71	4.26	1.92
511874	6990079	Redcliffe-023	MBC-096	2.07	1.86	0.21	1.51	3.6	125	0	2.26	2.97	2.70	4.19	2.79	4.45	1.82
511648	6990451	Redcliffe-024	MBC-097	2.06	1.87	0.19	1.19	3.6	111	0	2.18	2.78	2.53	3.81	2.61	4.04	2.07
511661	6991063	Redcliffe-025	MBC-098	2.07	1.87	0.20	1.41	3.5	123	0	2.25	2.91	2.66	4.06	2.75	4.31	1.86
511568	6992087	Redcliffe-027	MBC-099	2.07	1.87	0.20	1.30	3.6	115	0	2.21	2.85	2.59	3.95	2.67	4.18	1.97
511475	6992513	Redcliffe-028	MBC-100	2.07	1.88	0.19	1.19	3.5	120	0	2.19	2.79	2.55	3.80	2.62	4.03	2.02
510916	6992713	Redcliffe-029	MBC-101	2.03	1.87	0.16	1.04	3.1	65	0	2.16	2.65	2.48	3.51	2.54	3.69	1.90
510531	6992472	Redcliffe-030	MBC-102	2.03	1.89	0.14	0.99	2.7	13	0	2.17	2.60	2.48	3.37	2.54	3.53	1.71
510161	6992164	Redcliffe-031	MBC-103	2.02	1.90	0.12	0.86	2.5	319	0	2.15	2.52	2.41	3.19	2.47	3.32	1.70
509833	6991712	Redcliffe-032	MBC-104	2.03	1.92	0.11	0.84	2.4	329	0	2.16	2.52	2.42	3.16	2.47	3.29	1.66
509525	6991322	Redcliffe-033	MBC-105	2.04	1.93	0.11	0.82	2.4	348	0	2.16	2.51	2.42	3.14	2.47	3.26	1.64
509155	6991199	Redcliffe-034	MBC-106	2.06	1.94	0.12	0.86	2.4	12	0	2.19	2.55	2.45	3.20	2.50	3.33	1.63
508478	6991343	Redcliffe-035	MBC-107	2.08	1.96	0.12	0.91	2.6	18	0	2.22	2.61	2.50	3.31	2.56	3.45	1.68
507965	6991487	Redcliffe-036	MBC-108	2.12	1.99	0.13	0.94	2.6	20	0	2.26	2.66	2.55	3.38	2.61	3.52	1.66
507205	6991589	Redcliffe-037	MBC-109	2.14	2.01	0.13	0.92	2.6	20	0	2.27	2.67	2.56	3.38	2.62	3.52	1.69
506548	6991836	Redcliffe-038	MBC-110	2.15	2.03	0.12	0.89	2.6	27	0	2.28	2.67	2.56	3.35	2.62	3.49	1.69
505830	6992082	Redcliffe-039	MBC-111	2.18	2.06	0.12	0.90	2.6	32	0	2.32	2.70	2.60	3.40	2.65	3.54	1.69
505358	6992267	Redcliffe-040	MBC-112	2.20	2.08	0.12	0.87	2.6	35	0	2.33	2.71	2.60	3.40	2.65	3.54	1.76

				Water Level mAHD 500yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar		1.88	1.88		0.64	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.27	2.13	0.14	0.97	2.9	114	0	2.40	2.84	2.70	3.62	2.77	3.79	1.82
507065	6983136	PineRiver-002	MBC-002	2.25	2.12	0.13	0.87	2.9	122	0	2.36	2.77	2.63	3.49	2.69	3.64	1.91
507237	6983516	PineRiver-003	MBC-003	2.27	2.12	0.15	0.99	3.0	118	0	2.40	2.86	2.70	3.67	2.77	3.85	1.89
507198	6984049	PineRiver-004	MBC-004	2.25	2.12	0.13	0.91	2.7	123	0	2.38	2.79	2.66	3.51	2.72	3.66	1.79
506913	6984334	PineRiver-005	MBC-005	2.27	2.16	0.11	0.78	2.5	124	0	2.38	2.73	2.63	3.35	2.68	3.47	1.77
507046	6984696	PineRiver-006	MBC-006	2.24	2.14	0.10	0.71	2.2	139	0	2.34	2.64	2.55	3.18	2.60	3.29	1.65
507522	6984334	PineRiver-007	MBC-007	2.22	2.10	0.12	0.87	2.7	131	0	2.35	2.74	2.62	3.43	2.67	3.57	1.78
507769	6984239	PineRiver-008	MBC-008	2.23	2.08	0.15	1.10	2.9	126	0	2.39	2.87	2.73	3.73	2.80	3.91	1.72
506179	6982661	PineRiver-009	MBC-009	2.27	2.16	0.11	0.78	2.5	124	0	2.38	2.73	2.63	3.35	2.68	3.47	1.77
504927	6992513	Caboolture-001	MBC-010	2.29	2.16	0.13	0.90	2.7	50	0	2.42	2.81	2.69	3.52	2.75	3.67	1.74
504270	6992575	Caboolture-002	MBC-011	2.32	2.21	0.11	0.80	2.5	59	0	2.44	2.79	2.69	3.41	2.74	3.54	1.72
503633	6992841	Caboolture-003	MBC-012	2.39	2.28	0.11	0.77	2.4	71	0	2.50	2.83	2.74	3.43	2.78	3.55	1.69
503346	6993519	Caboolture-004	MBC-013	2.39	2.28	0.11	0.75	2.4	92	0	2.49	2.82	2.72	3.42	2.77	3.54	1.75
503613	6994402	Caboolture-005	MBC-014	2.38	2.27	0.11	0.77	2.6	108	0	2.49	2.84	2.73	3.46	2.78	3.59	1.83
504658	6996186	Caboolture-009	MBC-015	2.32	2.18	0.14	0.96	2.8	115	0	2.45	2.88	2.75	3.65	2.81	3.81	1.79
504477	6996546	Caboolture-010	MBC-016	2.35	2.23	0.12	0.85	2.7	114	0	2.47	2.85	2.73	3.53	2.79	3.68	1.80
504774	6997055	Caboolture-012	MBC-017	2.31	2.17	0.14	0.95	2.8	120	0	2.44	2.87	2.73	3.62	2.79	3.78	1.79
505039	6997331	Caboolture-013	MBC-018	2.30	2.16	0.14	0.93	2.9	121	0	2.42	2.85	2.71	3.62	2.77	3.78	1.89
505442	6998582	Caboolture-016	MBC-019	2.32	2.16	0.16	1.11	3.1	122	0	2.47	2.98	2.81	3.88	2.88	4.06	1.83
505671	6999062	Caboolture-017	MBC-020	2.30	2.14	0.16	1.02	3.2	122	0	2.42	2.92	2.73	3.78	2.80	3.97	2.00
505909	6999567	Caboolture-018	MBC-021	2.30	2.13	0.17	1.08	3.3	124	0	2.42	2.95	2.75	3.86	2.82	4.05	1.97
506361	7000127	Caboolture-019	MBC-022	2.28	2.11	0.17	1.14	3.2	130	0	2.42	2.96	2.77	3.89	2.84	4.08	1.87
506813	7000580	Caboolture-020	MBC-023	2.25	2.09	0.16	1.05	3.2	128	0	2.38	2.88	2.70	3.76	2.77	3.95	1.95
507266	7001010	Caboolture-021	MBC-024	2.24	2.07	0.17	1.15	3.3	129	0	2.38	2.93	2.73	3.88	2.80	4.09	1.92
507718	7001452	Caboolture-022	MBC-025	2.24	2.06	0.18	1.20	3.4	134	0	2.38	2.96	2.74	3.95	2.82	4.17	1.92
508289	7001850	Caboolture-023	MBC-026	2.22	2.04	0.18	1.22	3.4	136	0	2.37	2.95	2.73	3.95	2.81	4.17	1.89
508903	7002206	Caboolture-024	MBC-027	2.19	2.01	0.18	1.25	3.4	139	0	2.35	2.94	2.72	3.98	2.80	4.20	1.90
509355	7002550	Caboolture-025	MBC-028	2.18	2.00	0.18	1.22	3.3	143	0	2.33	2.91	2.70	3.91	2.78	4.12	1.88
509894	7002744	Caboolture-026	MBC-029	2.15	1.98	0.17	1.16	3.3	149	0	2.29	2.85	2.64	3.82	2.72	4.02	1.93
510475	7002852	Caboolture-027	MBC-030	2.14	1.97	0.17	1.14	3.4	150	0	2.28	2.83	2.62	3.79	2.69	3.99	1.96
511067	7003003	Caboolture-028	MBC-031	2.14	1.96	0.18	1.20	3.4	152	0	2.28	2.87	2.64	3.87	2.72	4.09	1.96
511477	7003251	Caboolture-029	MBC-032	2.12	1.95	0.17	1.08	3.4	154	0	2.24	2.78	2.56	3.71	2.63	3.91	2.06
512112	7003326	Caboolture-030	MBC-033	2.11	1.93	0.18	1.19	3.4	156	0	2.25	2.83	2.60	3.82	2.68	4.04	1.95
512694	7003455	Caboolture-031	MBC-034	2.09	1.92	0.17	1.10	3.4	159	0	2.21	2.76	2.54	3.69	2.61	3.90	2.01
513275	7003412	Caboolture-032	MBC-035	2.08	1.91	0.17	1.12	3.3	156	0	2.21	2.75	2.55	3.70	2.62	3.90	1.96
513911	7003746	Caboolture-033	MBC-036	2.07	1.92	0.15	0.97	3.2	148	0	2.18	2.66	2.48	3.49	2.54	3.67	2.02
514481	7004446	Caboolture-034	MBC-037	2.02	1.90	0.12	0.87	2.6	152	0	2.15	2.53	2.42	3.22	2.47	3.37	1.77
516248	7002647	Caboolture-038	MBC-038	2.00	1.83	0.17	1.06	3.4	174	0	2.11	2.64	2.43	3.56	2.50	3.76	2.06
517280	7002397	Caboolture-040	MBC-039	2.02	1.82	0.20	1.39	3.6	156	0	2.19	2.85	2.59	4.00	2.68	4.24	1.89
519611	7002925	Caboolture-044	MBC-040	2.08	1.79	0.29	0.87	10.9	89	0	1.94	2.82	2.17	4.33	2.24	4.81	7.29
520367	7003619	Caboolture-046	MBC-041	2.13	1.79	0.34	1.07	11.3	62	0	1.98	3.02	2.25	4.81	2.34	5.37	6.80
520284	7006303	Caboolture-051	MBC-042	2.20	1.79	0.41	1.40	9.2	71	0	2.05	3.22	2.40	5.17	2.50	5.73	4.83
516778	7013518	Caboolture-060	MBC-043	2.23	1.78	0.45	1.90	10.7	73	0	2.13	3.73	2.60	6.38	2.73	7.14	4.86
516320	7014796	Caboolture-061	MBC-044	2.23	1.78	0.45	1.90	10.7	73	0	2.13	3.73	2.60	6.38	2.73	7.14	4.86
507667	7015461	Caboolture-067	MBC-045	2.30	2.21	0.09	0.60	1.8	163	0	2.38	2.62	2.55	3.05	2.58	3.12	1.45
508591	7014764	Caboolture-069	MBC-046	2.23	2.14	0.09	0.63	1.8	167	0	2.31	2.56	2.50	3.00	2.53	3.07	1.42
509101	7014442	Caboolture-070	MBC-047	2.19	2.10	0.09	0.60	1.9	175	0	2.27	2.51	2.44	2.95	2.48	3.03	1.52
509543	7013236	Caboolture-072	MBC-048	2.16	2.08	0.08	0.54	1.7	231	0	2.23	2.45	2.38	2.84	2.41	2.90	1.46
509623	7012592	Caboolture-073	MBC-049	2.15	2.07	0.08	0.50	1.7	254	0	2.21	2.42	2.35	2.78	2.38	2.85	1.51
510253	7011212	Caboolture-075	MBC-050	2.14	2.05	0.09	0.63	1.9	152	0	2.23	2.48	2.41	2.93	2.44	3.00	1.46
510669	7010917	Caboolture-076	MBC-051	2.09	2.00	0.09	0.64	1.9	152	0	2.18	2.44	2.36	2.90	2.39	2.97	1.46
511138	7010769	Caboolture-077	MBC-052	2.07	1.98	0.09	0.67	1.9	156	0	2.17	2.44	2.36	2.92	2.39	3.00	1.46
511701	7010475	Caboolture-078	MBC-053	2.05	1.96	0.09	0.66	1.9	166	0	2.14	2.42	2.34	2.90	2.37	2.97	1.48
512076	7010032	Caboolture-079	MBC-054	2.02	1.94	0.08	0.55	2.0	166	0	2.09	2.33	2.26	2.75	2.29	2.84	1.66
513283	7007901	Caboolture-083	MBC-055	1.98	1.90	0.08	0.54	1.7	174	0	2.05	2.26	2.20	2.63	2.23	2.69	1.40
513390	7007284	Caboolture-084	MBC-056	1.97	1.89	0.08	0.56	1.7	252	0	2.04	2.26	2.20	2.64	2.23	2.70	1.39

				Water Level mAHD 500yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	1.98	1.90	0.08	0.56	1.7	267	0	2.05	2.27	2.21	2.66	2.24	2.73	1.42
514141	7006547	Caboolture-086	MBC-058	1.96	1.88	0.08	0.51	1.5	166	0	2.02	2.20	2.16	2.54	2.18	2.59	1.35
514958	7005756	Caboolture-088	MBC-059	1.92	1.85	0.07	0.45	1.5	172	0	1.97	2.14	2.10	2.45	2.12	2.50	1.39
515374	7005260	Caboolture-089	MBC-060	1.91	1.84	0.07	0.43	1.6	311	0	1.96	2.14	2.08	2.46	2.10	2.51	1.50
514730	7005140	Caboolture-090	MBC-061	1.92	1.85	0.07	0.43	1.6	337	0	1.97	2.15	2.09	2.46	2.11	2.51	1.48
514328	7005394	Caboolture-091	MBC-062	1.94	1.87	0.07	0.45	1.7	339	0	1.99	2.18	2.12	2.51	2.15	2.58	1.54
513269	7006199	Caboolture-093	MBC-063	1.98	1.90	0.08	0.52	1.7	199	0	2.04	2.26	2.19	2.64	2.22	2.71	1.49
511621	7007284	Caboolture-096	MBC-064	2.06	1.98	0.08	0.54	1.8	115	0	2.13	2.35	2.29	2.74	2.32	2.82	1.51
511339	7008048	Caboolture-097	MBC-065	2.08	2.00	0.08	0.54	1.7	120	0	2.15	2.38	2.30	2.77	2.33	2.83	1.48
511648	7008558	Caboolture-098	MBC-066	2.07	1.98	0.09	0.59	1.8	140	0	2.14	2.39	2.31	2.81	2.34	2.88	1.46
511835	7009040	Caboolture-099	MBC-067	2.04	1.95	0.09	0.61	1.8	147	0	2.12	2.36	2.29	2.79	2.32	2.86	1.44
511446	7009456	Caboolture-100	MBC-068	2.05	1.97	0.08	0.58	1.8	143	0	2.13	2.37	2.30	2.78	2.32	2.85	1.45
511058	7009456	Caboolture-101	MBC-069	2.06	1.98	0.08	0.56	1.8	135	0	2.13	2.37	2.30	2.77	2.32	2.84	1.47
510321	7009818	Caboolture-102	MBC-070	2.08	2.00	0.08	0.55	1.8	122	0	2.15	2.39	2.31	2.79	2.34	2.86	1.50
509784	7010233	Caboolture-103	MBC-071	2.14	2.06	0.08	0.52	1.8	109	0	2.20	2.42	2.35	2.80	2.38	2.87	1.53
509369	7010796	Caboolture-104	MBC-072	2.15	2.07	0.08	0.53	1.8	108	0	2.22	2.44	2.37	2.83	2.40	2.90	1.54
509034	7011198	Caboolture-105	MBC-073	2.19	2.11	0.08	0.55	1.8	114	0	2.26	2.50	2.42	2.90	2.45	2.97	1.50
508833	7011587	Caboolture-106	MBC-074	2.19	2.11	0.08	0.56	1.9	119	0	2.26	2.50	2.43	2.92	2.46	3.00	1.57
508752	7011869	Caboolture-107	MBC-075	2.22	2.13	0.09	0.59	1.9	125	0	2.29	2.54	2.47	2.97	2.50	3.06	1.54
508471	7012110	Caboolture-108	MBC-076	2.22	2.14	0.08	0.50	1.8	119	0	2.28	2.49	2.42	2.85	2.45	2.93	1.55
508926	7012177	Caboolture-109	MBC-077	2.19	2.10	0.09	0.62	1.9	137	0	2.27	2.54	2.45	2.99	2.48	3.07	1.50
509020	7012767	Caboolture-110	MBC-078	2.18	2.09	0.09	0.62	1.8	149	0	2.26	2.51	2.44	2.95	2.47	3.03	1.45
508565	7013276	Caboolture-111	MBC-079	2.20	2.12	0.08	0.52	1.7	143	0	2.26	2.48	2.41	2.85	2.44	2.91	1.45
508069	7013611	Caboolture-112	MBC-080	2.24	2.16	0.08	0.52	1.7	141	0	2.30	2.51	2.45	2.87	2.48	2.93	1.43
507667	7013960	Caboolture-113	MBC-081	2.29	2.21	0.08	0.54	1.7	135	0	2.36	2.57	2.51	2.95	2.54	3.02	1.44
507157	7014067	Caboolture-114	MBC-082	2.31	2.23	0.08	0.50	1.6	120	0	2.37	2.57	2.51	2.93	2.53	2.98	1.45
507171	7014777	Caboolture-115	MBC-083	2.32	2.24	0.08	0.58	1.8	129	0	2.40	2.64	2.57	3.07	2.59	3.14	1.48
507063	7015595	Caboolture-116	MBC-084	2.31	2.23	0.08	0.56	1.8	132	0	2.38	2.62	2.55	3.02	2.57	3.09	1.47
509121	6984944	Redcliffe-005	MBC-085	2.16	2.02	0.14	0.97	2.9	149	0	2.29	2.73	2.59	3.51	2.66	3.68	1.82
509533	6984891	Redcliffe-006	MBC-086	2.15	2.00	0.15	1.06	2.8	159	0	2.30	2.77	2.63	3.59	2.69	3.76	1.72
509892	6984691	Redcliffe-007	MBC-087	2.13	1.98	0.15	1.05	2.9	159	0	2.28	2.74	2.60	3.57	2.67	3.74	1.74
510464	6984279	Redcliffe-009	MBC-088	2.16	1.97	0.19	1.18	3.5	122	0	2.28	2.87	2.63	3.88	2.71	4.11	2.04
510783	6984638	Redcliffe-010	MBC-089	2.15	1.95	0.20	1.41	3.5	122	0	2.33	2.99	2.74	4.12	2.83	4.36	1.81
510969	6985516	Redcliffe-012	MBC-090	2.14	1.94	0.20	1.37	3.5	115	0	2.31	2.95	2.71	4.06	2.79	4.30	1.84
511076	6985889	Redcliffe-013	MBC-091	2.14	1.94	0.20	1.35	3.5	118	0	2.30	2.95	2.70	4.06	2.78	4.29	1.89
511488	6987365	Redcliffe-016	MBC-092	2.11	1.92	0.19	1.33	3.4	121	0	2.28	2.91	2.67	3.99	2.76	4.22	1.86
511768	6988017	Redcliffe-018	MBC-093	2.11	1.92	0.19	1.28	3.5	119	0	2.26	2.88	2.64	3.95	2.72	4.18	1.94
511648	6988496	Redcliffe-019	MBC-094	2.11	1.92	0.19	1.25	3.6	113	0	2.25	2.87	2.61	3.93	2.69	4.16	2.00
511741	6989254	Redcliffe-021	MBC-095	2.12	1.92	0.20	1.41	3.6	120	0	2.29	2.97	2.70	4.13	2.79	4.38	1.89
511874	6990079	Redcliffe-023	MBC-096	2.14	1.92	0.22	1.56	3.6	125	0	2.33	3.06	2.79	4.31	2.88	4.57	1.80
511648	6990451	Redcliffe-024	MBC-097	2.11	1.92	0.19	1.23	3.6	111	0	2.24	2.86	2.60	3.91	2.68	4.15	2.03
511661	6991063	Redcliffe-025	MBC-098	2.14	1.93	0.21	1.46	3.5	123	0	2.32	3.00	2.75	4.18	2.84	4.43	1.82
511568	6992087	Redcliffe-027	MBC-099	2.13	1.93	0.20	1.35	3.6	115	0	2.29	2.94	2.68	4.07	2.76	4.31	1.93
511475	6992513	Redcliffe-028	MBC-100	2.13	1.94	0.19	1.23	3.5	120	0	2.27	2.87	2.63	3.91	2.71	4.14	1.99
510916	6992713	Redcliffe-029	MBC-101	2.09	1.93	0.16	1.07	3.1	65	0	2.23	2.73	2.55	3.60	2.62	3.79	1.88
510531	6992472	Redcliffe-030	MBC-102	2.08	1.94	0.14	1.03	2.7	13	0	2.23	2.68	2.55	3.47	2.62	3.63	1.67
510161	6992164	Redcliffe-031	MBC-103	2.08	1.96	0.12	0.89	2.5	319	0	2.22	2.60	2.49	3.28	2.55	3.42	1.67
509833	6991712	Redcliffe-032	MBC-104	2.10	1.98	0.12	0.87	2.4	329	0	2.23	2.60	2.50	3.25	2.55	3.39	1.63
509525	6991322	Redcliffe-033	MBC-105	2.10	1.99	0.11	0.85	2.4	348	0	2.23	2.59	2.49	3.23	2.55	3.36	1.61
509155	6991199	Redcliffe-034	MBC-106	2.12	2.00	0.12	0.89	2.4	12	0	2.26	2.63	2.53	3.29	2.58	3.43	1.60
508478	6991343	Redcliffe-035	MBC-107	2.15	2.02	0.13	0.94	2.6	18	0	2.29	2.69	2.58	3.40	2.64	3.55	1.65
507965	6991487	Redcliffe-036	MBC-108	2.19	2.06	0.13	0.98	2.6	20	0	2.34	2.75	2.64	3.49	2.70	3.64	1.63
507205	6991589	Redcliffe-037	MBC-109	2.21	2.08	0.13	0.96	2.6	20	0	2.36	2.76	2.65	3.49	2.71	3.64	1.65
506548	6991836	Redcliffe-038	MBC-110	2.23	2.10	0.13	0.93	2.6	27	0	2.37	2.76	2.65	3.47	2.71	3.61	1.65
505830	6992082	Redcliffe-039	MBC-111	2.26	2.13	0.13	0.93	2.6	32	0	2.40	2.79	2.68	3.50	2.74	3.65	1.66
505358	6992267	Redcliffe-040	MBC-112	2.29	2.16	0.13	0.90	2.6	35	0	2.42	2.81	2.70	3.52	2.75	3.66	1.73

				Water Level mAHD 1000yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.92	1.92		0.65	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.33	2.19	0.14	0.99	2.9	114	0	2.47	2.92	2.77	3.71	2.84	3.87	1.80
507065	6983136	PineRiver-002	MBC-002	2.31	2.18	0.13	0.88	2.9	122	0	2.43	2.84	2.70	3.56	2.76	3.72	1.90
507237	6983516	PineRiver-003	MBC-003	2.32	2.17	0.15	1.01	3.0	118	0	2.45	2.92	2.76	3.75	2.83	3.92	1.87
507198	6984049	PineRiver-004	MBC-004	2.30	2.17	0.13	0.93	2.7	123	0	2.43	2.85	2.72	3.58	2.78	3.74	1.77
506913	6984334	PineRiver-005	MBC-005	2.33	2.22	0.11	0.79	2.5	124	0	2.45	2.79	2.69	3.42	2.74	3.55	1.76
507046	6984696	PineRiver-006	MBC-006	2.30	2.20	0.10	0.73	2.2	139	0	2.41	2.72	2.63	3.27	2.67	3.38	1.62
507522	6984334	PineRiver-007	MBC-007	2.29	2.16	0.13	0.89	2.7	131	0	2.41	2.81	2.69	3.51	2.74	3.66	1.76
507769	6984239	PineRiver-008	MBC-008	2.29	2.14	0.15	1.13	2.9	126	0	2.46	2.95	2.81	3.83	2.88	4.01	1.70
506179	6982661	PineRiver-009	MBC-009	2.33	2.22	0.11	0.79	2.5	124	0	2.45	2.79	2.69	3.42	2.74	3.55	1.76
504927	6992513	Caboolture-001	MBC-010	2.34	2.21	0.13	0.92	2.7	50	0	2.47	2.87	2.76	3.59	2.81	3.74	1.73
504270	6992575	Caboolture-002	MBC-011	2.39	2.28	0.11	0.82	2.5	59	0	2.52	2.87	2.77	3.50	2.82	3.63	1.70
503633	6992841	Caboolture-003	MBC-012	2.45	2.34	0.11	0.79	2.4	71	0	2.57	2.90	2.81	3.51	2.86	3.63	1.67
503346	6993519	Caboolture-004	MBC-013	2.46	2.35	0.11	0.76	2.4	92	0	2.57	2.90	2.80	3.50	2.85	3.62	1.74
503613	6994402	Caboolture-005	MBC-014	2.45	2.34	0.11	0.79	2.6	108	0	2.56	2.92	2.81	3.55	2.86	3.69	1.81
504658	6996186	Caboolture-009	MBC-015	2.38	2.24	0.14	0.99	2.8	115	0	2.52	2.96	2.83	3.74	2.89	3.91	1.76
504477	6996546	Caboolture-010	MBC-016	2.42	2.30	0.12	0.86	2.7	114	0	2.54	2.93	2.81	3.62	2.87	3.76	1.79
504774	6997055	Caboolture-012	MBC-017	2.37	2.23	0.14	0.97	2.8	120	0	2.50	2.94	2.80	3.71	2.87	3.87	1.78
505039	6997331	Caboolture-013	MBC-018	2.36	2.22	0.14	0.95	2.9	121	0	2.49	2.93	2.78	3.70	2.84	3.87	1.87
505442	6998582	Caboolture-016	MBC-019	2.38	2.22	0.16	1.14	3.1	122	0	2.54	3.06	2.88	3.97	2.96	4.16	1.81
505671	6999062	Caboolture-017	MBC-020	2.36	2.20	0.16	1.05	3.2	122	0	2.49	2.99	2.81	3.88	2.88	4.07	1.97
505909	6999567	Caboolture-018	MBC-021	2.36	2.19	0.17	1.11	3.3	124	0	2.49	3.02	2.82	3.95	2.90	4.15	1.94
506361	7000127	Caboolture-019	MBC-022	2.34	2.17	0.17	1.16	3.2	130	0	2.49	3.03	2.84	3.97	2.91	4.17	1.85
506813	7000580	Caboolture-020	MBC-023	2.30	2.14	0.16	1.08	3.2	128	0	2.44	2.95	2.76	3.85	2.83	4.04	1.92
507266	7001010	Caboolture-021	MBC-024	2.30	2.13	0.17	1.18	3.3	129	0	2.45	3.01	2.80	3.98	2.88	4.19	1.89
507718	7001452	Caboolture-022	MBC-025	2.30	2.12	0.18	1.23	3.4	134	0	2.45	3.04	2.82	4.05	2.89	4.27	1.89
508289	7001850	Caboolture-023	MBC-026	2.28	2.10	0.18	1.26	3.4	136	0	2.44	3.03	2.81	4.06	2.89	4.28	1.86
508903	7002206	Caboolture-024	MBC-027	2.24	2.05	0.19	1.28	3.4	139	0	2.39	3.00	2.78	4.05	2.86	4.28	1.88
509355	7002550	Caboolture-025	MBC-028	2.22	2.04	0.18	1.25	3.3	143	0	2.38	2.97	2.76	3.98	2.83	4.20	1.85
509894	7002744	Caboolture-026	MBC-029	2.21	2.03	0.18	1.18	3.3	149	0	2.35	2.91	2.70	3.89	2.78	4.10	1.91
510475	7002852	Caboolture-027	MBC-030	2.19	2.01	0.18	1.17	3.4	150	0	2.32	2.89	2.67	3.86	2.75	4.07	1.93
511067	7003003	Caboolture-028	MBC-031	2.18	2.00	0.18	1.23	3.4	152	0	2.33	2.92	2.70	3.95	2.78	4.17	1.94
511477	7003251	Caboolture-029	MBC-032	2.17	2.00	0.17	1.10	3.4	154	0	2.29	2.84	2.62	3.79	2.70	3.99	2.04
512112	7003326	Caboolture-030	MBC-033	2.15	1.97	0.18	1.22	3.4	156	0	2.30	2.88	2.66	3.90	2.74	4.12	1.92
512694	7003455	Caboolture-031	MBC-034	2.13	1.96	0.17	1.13	3.4	159	0	2.26	2.82	2.60	3.77	2.67	3.98	1.98
513275	7003412	Caboolture-032	MBC-035	2.12	1.95	0.17	1.15	3.3	156	0	2.26	2.81	2.61	3.77	2.68	3.98	1.93
513911	7003746	Caboolture-033	MBC-036	2.11	1.96	0.15	0.98	3.2	148	0	2.23	2.71	2.53	3.54	2.59	3.72	2.01
514481	7004446	Caboolture-034	MBC-037	2.07	1.94	0.13	0.89	2.6	152	0	2.19	2.59	2.47	3.29	2.53	3.43	1.75
516248	7002647	Caboolture-038	MBC-038	2.03	1.86	0.17	1.09	3.4	174	0	2.15	2.69	2.48	3.63	2.55	3.83	2.03
517280	7002397	Caboolture-040	MBC-039	2.05	1.85	0.20	1.43	3.6	156	0	2.23	2.91	2.64	4.08	2.73	4.32	1.86
519611	7002925	Caboolture-044	MBC-040	2.13	1.82	0.31	0.92	10.9	89	0	1.98	2.89	2.22	4.47	2.29	4.97	7.09
520367	7003619	Caboolture-046	MBC-041	2.18	1.82	0.36	1.15	11.3	62	0	2.02	3.13	2.32	5.02	2.41	5.60	6.56
520284	7006303	Caboolture-051	MBC-042	2.24	1.82	0.42	1.44	9.2	71	0	2.09	3.29	2.45	5.27	2.55	5.84	4.76
516778	7013518	Caboolture-060	MBC-043	2.28	1.81	0.47	2.03	10.7	73	0	2.18	3.87	2.69	6.65	2.83	7.44	4.70
516320	7014796	Caboolture-061	MBC-044	2.28	1.81	0.47	2.03	10.7	73	0	2.18	3.87	2.69	6.65	2.83	7.44	4.70
507667	7015461	Caboolture-067	MBC-045	2.36	2.27	0.09	0.62	1.8	163	0	2.44	2.69	2.62	3.12	2.65	3.19	1.43
508591	7014764	Caboolture-069	MBC-046	2.29	2.20	0.09	0.65	1.8	167	0	2.38	2.63	2.57	3.07	2.60	3.14	1.39
509101	7014442	Caboolture-070	MBC-047	2.25	2.16	0.09	0.62	1.9	175	0	2.33	2.59	2.51	3.05	2.54	3.12	1.49
509543	7013236	Caboolture-072	MBC-048	2.22	2.14	0.08	0.55	1.7	231	0	2.29	2.51	2.45	2.90	2.47	2.97	1.45
509623	7012592	Caboolture-073	MBC-049	2.21	2.13	0.08	0.51	1.7	254	0	2.27	2.49	2.42	2.86	2.44	2.92	1.50
510253	7011212	Caboolture-075	MBC-050	2.19	2.10	0.09	0.65	1.9	152	0	2.28	2.54	2.47	2.99	2.50	3.07	1.43
510669	7010917	Caboolture-076	MBC-051	2.13	2.04	0.09	0.66	1.9	152	0	2.22	2.49	2.42	2.95	2.45	3.03	1.44
511138	7010769	Caboolture-077	MBC-052	2.12	2.03	0.09	0.69	1.9	156	0	2.22	2.50	2.42	2.99	2.46	3.07	1.44
511701	7010475	Caboolture-078	MBC-053	2.09	2.00	0.09	0.68	1.9	166	0	2.19	2.46	2.39	2.95	2.42	3.03	1.45
512076	7010032	Caboolture-079	MBC-054	2.06	1.98	0.08	0.57	2.0	166	0	2.14	2.38	2.31	2.81	2.34	2.90	1.63
513283	7007901	Caboolture-083	MBC-055	2.02	1.94	0.08	0.56	1.7	174	0	2.09	2.30	2.25	2.68	2.28	2.74	1.38
513390	7007284	Caboolture-084	MBC-056	2.01	1.93	0.08	0.58	1.7	252	0	2.09	2.30	2.25	2.69	2.28	2.76	1.37

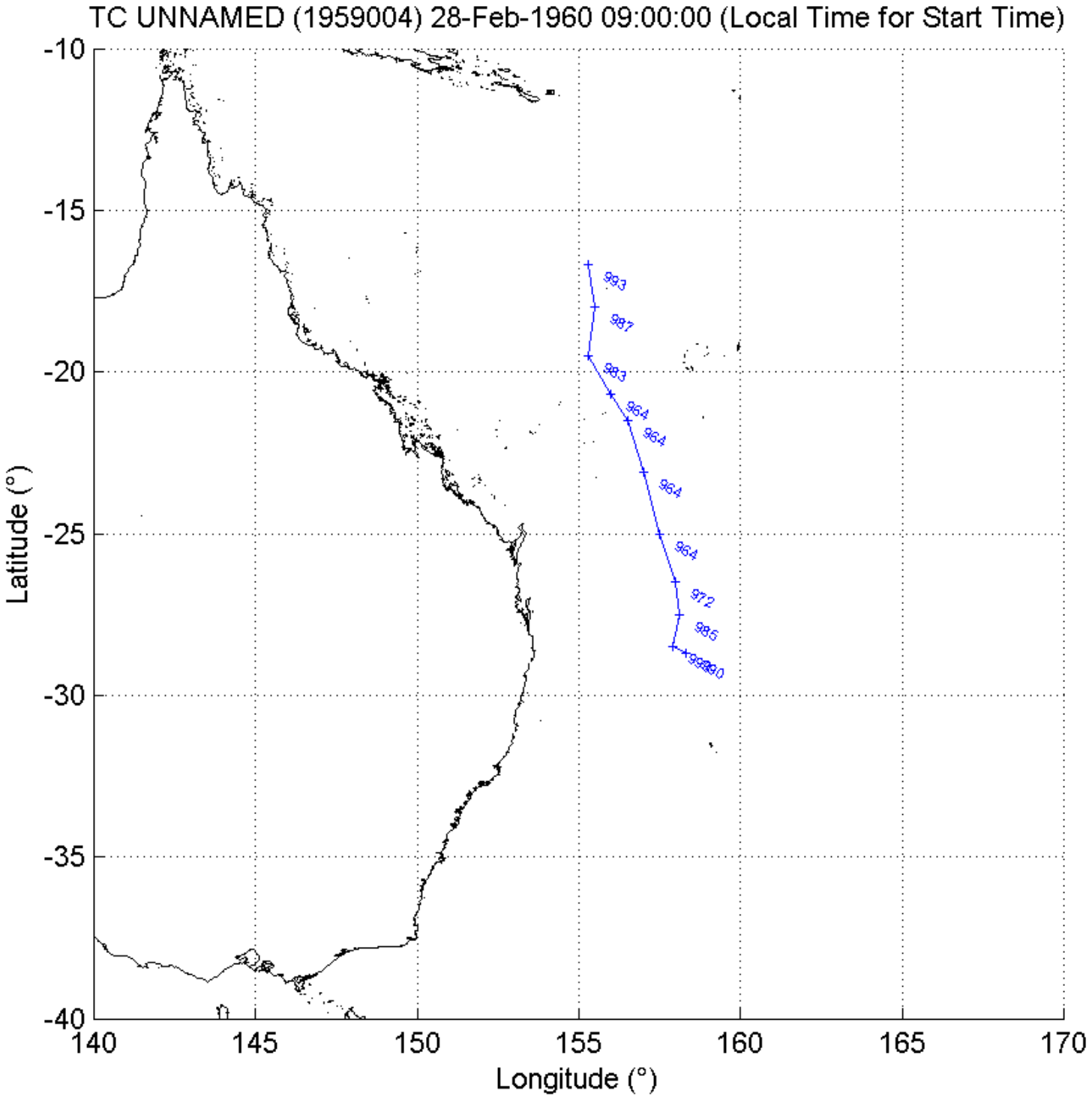
				Water Level mAHD 1000yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.02	1.94	0.08	0.57	1.7	267	0	2.10	2.32	2.26	2.71	2.29	2.77	1.41
514141	7006547	Caboolture-086	MBC-058	2.00	1.92	0.08	0.53	1.5	166	0	2.06	2.25	2.21	2.59	2.24	2.65	1.32
514958	7005756	Caboolture-088	MBC-059	1.95	1.88	0.07	0.46	1.5	172	0	2.00	2.18	2.13	2.49	2.15	2.54	1.37
515374	7005260	Caboolture-089	MBC-060	1.95	1.88	0.07	0.44	1.6	311	0	2.00	2.19	2.12	2.50	2.14	2.56	1.48
514730	7005140	Caboolture-090	MBC-061	1.96	1.89	0.07	0.44	1.6	337	0	2.01	2.19	2.13	2.51	2.15	2.56	1.46
514328	7005394	Caboolture-091	MBC-062	1.98	1.91	0.07	0.46	1.7	339	0	2.04	2.23	2.17	2.56	2.19	2.63	1.52
513269	7006199	Caboolture-093	MBC-063	2.02	1.94	0.08	0.53	1.7	199	0	2.09	2.31	2.24	2.69	2.26	2.75	1.48
511621	7007284	Caboolture-096	MBC-064	2.11	2.03	0.08	0.55	1.8	115	0	2.18	2.42	2.34	2.82	2.37	2.89	1.50
511339	7008048	Caboolture-097	MBC-065	2.12	2.04	0.08	0.55	1.7	120	0	2.19	2.42	2.35	2.81	2.37	2.88	1.47
511648	7008558	Caboolture-098	MBC-066	2.12	2.03	0.09	0.61	1.8	140	0	2.20	2.44	2.37	2.87	2.40	2.94	1.44
511835	7009040	Caboolture-099	MBC-067	2.09	2.00	0.09	0.62	1.8	147	0	2.17	2.42	2.35	2.85	2.38	2.92	1.43
511446	7009456	Caboolture-100	MBC-068	2.10	2.01	0.09	0.59	1.8	143	0	2.17	2.41	2.34	2.83	2.37	2.89	1.44
511058	7009456	Caboolture-101	MBC-069	2.11	2.03	0.08	0.58	1.8	135	0	2.19	2.42	2.36	2.83	2.38	2.90	1.44
510321	7009818	Caboolture-102	MBC-070	2.13	2.05	0.08	0.56	1.8	122	0	2.20	2.44	2.37	2.85	2.39	2.92	1.49
509784	7010233	Caboolture-103	MBC-071	2.19	2.11	0.08	0.53	1.8	109	0	2.26	2.48	2.41	2.86	2.44	2.94	1.52
509369	7010796	Caboolture-104	MBC-072	2.21	2.13	0.08	0.55	1.8	108	0	2.28	2.51	2.44	2.91	2.47	2.99	1.52
509034	7011198	Caboolture-105	MBC-073	2.25	2.17	0.08	0.56	1.8	114	0	2.32	2.56	2.49	2.97	2.51	3.04	1.49
508833	7011587	Caboolture-106	MBC-074	2.25	2.17	0.08	0.57	1.9	119	0	2.33	2.57	2.49	2.99	2.53	3.07	1.56
508752	7011869	Caboolture-107	MBC-075	2.28	2.19	0.09	0.60	1.9	125	0	2.36	2.61	2.53	3.04	2.57	3.13	1.52
508471	7012110	Caboolture-108	MBC-076	2.28	2.20	0.08	0.51	1.8	119	0	2.34	2.55	2.49	2.93	2.52	3.00	1.53
508926	7012177	Caboolture-109	MBC-077	2.25	2.16	0.09	0.64	1.9	137	0	2.34	2.60	2.52	3.07	2.55	3.14	1.48
509020	7012767	Caboolture-110	MBC-078	2.24	2.15	0.09	0.63	1.8	149	0	2.32	2.58	2.51	3.02	2.54	3.09	1.44
508565	7013276	Caboolture-111	MBC-079	2.26	2.18	0.08	0.54	1.7	143	0	2.33	2.54	2.48	2.92	2.51	2.98	1.43
508069	7013611	Caboolture-112	MBC-080	2.30	2.22	0.08	0.53	1.7	141	0	2.37	2.57	2.52	2.94	2.54	3.00	1.42
507667	7013960	Caboolture-113	MBC-081	2.35	2.27	0.08	0.55	1.7	135	0	2.42	2.64	2.58	3.02	2.60	3.08	1.42
507157	7014067	Caboolture-114	MBC-082	2.37	2.29	0.08	0.51	1.6	120	0	2.43	2.63	2.57	2.99	2.60	3.05	1.43
507171	7014777	Caboolture-115	MBC-083	2.40	2.31	0.09	0.59	1.8	129	0	2.47	2.72	2.64	3.14	2.67	3.21	1.47
507063	7015595	Caboolture-116	MBC-084	2.37	2.29	0.08	0.57	1.8	132	0	2.45	2.68	2.61	3.09	2.64	3.15	1.46
509121	6984944	Redcliffe-005	MBC-085	2.20	2.06	0.14	0.99	2.9	149	0	2.34	2.79	2.64	3.58	2.71	3.74	1.80
509533	6984891	Redcliffe-006	MBC-086	2.19	2.04	0.15	1.10	2.8	159	0	2.35	2.83	2.69	3.68	2.76	3.85	1.69
509892	6984691	Redcliffe-007	MBC-087	2.18	2.03	0.15	1.08	2.9	159	0	2.34	2.81	2.67	3.65	2.74	3.82	1.72
510464	6984279	Redcliffe-009	MBC-088	2.20	2.01	0.19	1.21	3.5	122	0	2.33	2.93	2.69	3.96	2.77	4.19	2.01
510783	6984638	Redcliffe-010	MBC-089	2.20	2.00	0.20	1.45	3.5	122	0	2.39	3.06	2.81	4.22	2.90	4.46	1.79
510969	6985516	Redcliffe-012	MBC-090	2.18	1.98	0.20	1.41	3.5	115	0	2.36	3.02	2.77	4.15	2.86	4.39	1.81
511076	6985889	Redcliffe-013	MBC-091	2.18	1.98	0.20	1.39	3.5	118	0	2.35	3.01	2.76	4.14	2.85	4.38	1.86
511488	6987365	Redcliffe-016	MBC-092	2.15	1.96	0.19	1.37	3.4	121	0	2.33	2.97	2.74	4.08	2.82	4.31	1.84
511768	6988017	Redcliffe-018	MBC-093	2.15	1.96	0.19	1.32	3.5	119	0	2.31	2.95	2.70	4.04	2.78	4.28	1.91
511648	6988496	Redcliffe-019	MBC-094	2.15	1.96	0.19	1.28	3.6	113	0	2.30	2.93	2.67	4.01	2.75	4.24	1.98
511741	6989254	Redcliffe-021	MBC-095	2.17	1.96	0.21	1.45	3.6	120	0	2.34	3.03	2.77	4.22	2.85	4.47	1.86
511874	6990079	Redcliffe-023	MBC-096	2.18	1.96	0.22	1.61	3.6	125	0	2.39	3.13	2.85	4.41	2.95	4.67	1.77
511648	6990451	Redcliffe-024	MBC-097	2.15	1.96	0.19	1.27	3.6	111	0	2.29	2.92	2.67	4.00	2.75	4.24	2.00
511661	6991063	Redcliffe-025	MBC-098	2.18	1.97	0.21	1.50	3.5	123	0	2.37	3.07	2.81	4.27	2.90	4.52	1.80
511568	6992087	Redcliffe-027	MBC-099	2.17	1.97	0.20	1.38	3.6	115	0	2.33	3.00	2.74	4.14	2.82	4.39	1.91
511475	6992513	Redcliffe-028	MBC-100	2.17	1.98	0.19	1.26	3.5	120	0	2.31	2.93	2.69	3.99	2.77	4.22	1.96
510916	6992713	Redcliffe-029	MBC-101	2.13	1.97	0.16	1.10	3.1	65	0	2.28	2.78	2.61	3.68	2.68	3.87	1.85
510531	6992472	Redcliffe-030	MBC-102	2.13	1.99	0.14	1.06	2.7	13	0	2.29	2.74	2.62	3.55	2.68	3.71	1.65
510161	6992164	Redcliffe-031	MBC-103	2.12	2.00	0.12	0.92	2.5	319	0	2.27	2.65	2.55	3.35	2.61	3.50	1.65
509833	6991712	Redcliffe-032	MBC-104	2.15	2.03	0.12	0.89	2.4	329	0	2.29	2.66	2.56	3.33	2.61	3.46	1.61
509525	6991322	Redcliffe-033	MBC-105	2.15	2.03	0.12	0.88	2.4	348	0	2.28	2.65	2.55	3.30	2.60	3.43	1.58
509155	6991199	Redcliffe-034	MBC-106	2.17	2.05	0.12	0.91	2.4	12	0	2.31	2.69	2.59	3.37	2.64	3.50	1.58
508478	6991343	Redcliffe-035	MBC-107	2.19	2.06	0.13	0.97	2.6	18	0	2.34	2.75	2.64	3.48	2.70	3.62	1.62
507965	6991487	Redcliffe-036	MBC-108	2.25	2.12	0.13	1.01	2.6	20	0	2.41	2.83	2.72	3.59	2.78	3.74	1.60
507205	6991589	Redcliffe-037	MBC-109	2.27	2.14	0.13	0.98	2.6	20	0	2.42	2.83	2.72	3.58	2.78	3.73	1.63
506548	6991836	Redcliffe-038	MBC-110	2.29	2.16	0.13	0.95	2.6	27	0	2.43	2.83	2.73	3.55	2.78	3.70	1.63
505830	6992082	Redcliffe-039	MBC-111	2.32	2.19	0.13	0.96	2.6	32	0	2.47	2.87	2.76	3.60	2.82	3.74	1.63
505358	6992267	Redcliffe-040	MBC-112	2.35	2.22	0.13	0.93	2.6	35	0	2.49	2.89	2.77	3.61	2.83	3.76	1.70

				Water Level mAHD 10000yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	1V:15H Slope	Revetment 1V:2H	1V:15H Slope	Revetment 1V:2H	1V:15H Slope	Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	2.05	2.05		0.68	2.2	24	0							
506913	6982622	PineRiver-001	MBC-001	2.53	2.38	0.15	1.06	2.9	114	0	2.68	3.15	3.01	3.98	3.07	4.15	1.74
507065	6983136	PineRiver-002	MBC-002	2.51	2.37	0.14	0.93	2.9	122	0	2.63	3.06	2.92	3.81	2.98	3.97	1.85
507237	6983516	PineRiver-003	MBC-003	2.52	2.36	0.16	1.08	3.0	118	0	2.66	3.15	3.00	4.02	3.07	4.20	1.81
507198	6984049	PineRiver-004	MBC-004	2.50	2.36	0.14	0.99	2.7	123	0	2.64	3.07	2.95	3.84	3.01	4.00	1.71
506913	6984334	PineRiver-005	MBC-005	2.54	2.42	0.12	0.85	2.5	124	0	2.66	3.03	2.93	3.69	2.98	3.82	1.69
507046	6984696	PineRiver-006	MBC-006	2.49	2.39	0.10	0.79	2.2	139	0	2.61	2.94	2.85	3.52	2.90	3.64	1.56
507522	6984334	PineRiver-007	MBC-007	2.48	2.35	0.13	0.95	2.7	131	0	2.62	3.03	2.91	3.77	2.97	3.92	1.70
507769	6984239	PineRiver-008	MBC-008	2.48	2.32	0.16	1.22	2.9	126	0	2.67	3.19	3.04	4.11	3.11	4.29	1.63
506179	6982661	PineRiver-009	MBC-009	2.54	2.42	0.12	0.85	2.5	124	0	2.66	3.03	2.93	3.69	2.98	3.82	1.69
504927	6992513	Caboolture-001	MBC-010	2.54	2.40	0.14	1.00	2.7	50	0	2.69	3.11	2.99	3.88	3.06	4.03	1.65
504270	6992575	Caboolture-002	MBC-011	2.62	2.50	0.12	0.89	2.5	59	0	2.76	3.13	3.03	3.80	3.09	3.94	1.63
503633	6992841	Caboolture-003	MBC-012	2.68	2.57	0.11	0.86	2.4	71	0	2.82	3.18	3.08	3.82	3.13	3.95	1.60
503346	6993519	Caboolture-004	MBC-013	2.68	2.57	0.11	0.83	2.4	92	0	2.81	3.16	3.06	3.80	3.11	3.93	1.67
503613	6994402	Caboolture-005	MBC-014	2.69	2.57	0.12	0.85	2.6	108	0	2.81	3.19	3.08	3.85	3.13	3.99	1.74
504658	6996186	Caboolture-009	MBC-015	2.59	2.44	0.15	1.07	2.8	115	0	2.74	3.21	3.07	4.04	3.14	4.21	1.70
504477	6996546	Caboolture-010	MBC-016	2.66	2.53	0.13	0.92	2.7	114	0	2.79	3.20	3.08	3.92	3.13	4.06	1.73
504774	6997055	Caboolture-012	MBC-017	2.58	2.43	0.15	1.05	2.8	120	0	2.73	3.19	3.05	4.00	3.12	4.17	1.71
505039	6997331	Caboolture-013	MBC-018	2.57	2.42	0.15	1.03	2.9	121	0	2.71	3.17	3.03	4.00	3.09	4.17	1.80
505442	6998582	Caboolture-016	MBC-019	2.59	2.42	0.17	1.23	3.1	122	0	2.76	3.31	3.14	4.28	3.21	4.48	1.74
505671	6999062	Caboolture-017	MBC-020	2.56	2.39	0.17	1.13	3.2	122	0	2.70	3.23	3.04	4.17	3.12	4.37	1.90
505909	6999567	Caboolture-018	MBC-021	2.56	2.38	0.18	1.20	3.3	124	0	2.71	3.27	3.07	4.25	3.14	4.46	1.87
506361	7000127	Caboolture-019	MBC-022	2.53	2.35	0.18	1.26	3.2	130	0	2.70	3.27	3.08	4.27	3.16	4.48	1.77
506813	7000580	Caboolture-020	MBC-023	2.49	2.32	0.17	1.15	3.2	128	0	2.64	3.17	2.98	4.11	3.06	4.31	1.86
507266	7001010	Caboolture-021	MBC-024	2.49	2.31	0.18	1.27	3.3	129	0	2.66	3.24	3.04	4.27	3.12	4.48	1.82
507718	7001452	Caboolture-022	MBC-025	2.48	2.29	0.19	1.33	3.4	134	0	2.65	3.27	3.04	4.34	3.13	4.56	1.82
508289	7001850	Caboolture-023	MBC-026	2.47	2.28	0.19	1.37	3.4	136	0	2.65	3.28	3.06	4.37	3.14	4.60	1.79
508903	7002206	Caboolture-024	MBC-027	2.39	2.20	0.19	1.39	3.4	139	0	2.58	3.22	2.99	4.33	3.07	4.57	1.81
509355	7002550	Caboolture-025	MBC-028	2.39	2.20	0.19	1.36	3.3	143	0	2.57	3.19	2.98	4.27	3.06	4.50	1.78
509894	7002744	Caboolture-026	MBC-029	2.36	2.18	0.18	1.28	3.3	149	0	2.53	3.12	2.91	4.16	2.99	4.38	1.84
510475	7002852	Caboolture-027	MBC-030	2.34	2.16	0.18	1.25	3.4	150	0	2.50	3.09	2.87	4.11	2.95	4.33	1.87
511067	7003003	Caboolture-028	MBC-031	2.34	2.15	0.19	1.32	3.4	152	0	2.51	3.13	2.90	4.21	2.98	4.44	1.87
511477	7003251	Caboolture-029	MBC-032	2.32	2.14	0.18	1.17	3.4	154	0	2.45	3.02	2.80	4.01	2.88	4.23	1.97
512112	7003326	Caboolture-030	MBC-033	2.30	2.11	0.19	1.31	3.4	156	0	2.46	3.08	2.85	4.15	2.93	4.37	1.86
512694	7003455	Caboolture-031	MBC-034	2.29	2.11	0.18	1.21	3.4	159	0	2.44	3.02	2.80	4.02	2.87	4.23	1.91
513275	7003412	Caboolture-032	MBC-035	2.27	2.09	0.18	1.22	3.3	156	0	2.42	3.00	2.79	4.00	2.87	4.21	1.88
513911	7003746	Caboolture-033	MBC-036	2.26	2.10	0.16	1.02	3.2	148	0	2.38	2.87	2.69	3.73	2.76	3.92	1.97
514481	7004446	Caboolture-034	MBC-037	2.21	2.08	0.13	0.96	2.6	152	0	2.36	2.77	2.65	3.51	2.71	3.66	1.68
516248	7002647	Caboolture-038	MBC-038	2.15	1.97	0.18	1.19	3.4	174	0	2.29	2.87	2.64	3.86	2.72	4.08	1.95
517280	7002397	Caboolture-040	MBC-039	2.16	1.95	0.21	1.55	3.6	156	0	2.36	3.08	2.81	4.32	2.90	4.57	1.79
519611	7002925	Caboolture-044	MBC-040	2.26	1.92	0.34	1.08	10.9	89	0	2.11	3.14	2.39	4.91	2.47	5.46	6.56
520367	7003619	Caboolture-046	MBC-041	2.33	1.92	0.41	1.40	11.3	62	0	2.17	3.46	2.52	5.64	2.63	6.30	5.94
520284	7006303	Caboolture-051	MBC-042	2.36	1.92	0.44	1.58	9.2	71	0	2.21	3.51	2.61	5.63	2.72	6.23	4.55
516778	7013518	Caboolture-060	MBC-043	2.42	1.90	0.52	2.44	10.7	73	0	2.35	4.30	2.95	7.48	3.12	8.36	4.29
516320	7014796	Caboolture-061	MBC-044	2.42	1.90	0.52	2.44	10.7	73	0	2.35	4.30	2.95	7.48	3.12	8.36	4.29
507667	7015461	Caboolture-067	MBC-045	2.58	2.49	0.09	0.68	1.8	163	0	2.68	2.93	2.87	3.38	2.91	3.45	1.36
508591	7014764	Caboolture-069	MBC-046	2.48	2.39	0.09	0.71	1.8	167	0	2.59	2.84	2.79	3.30	2.82	3.38	1.33
509101	7014442	Caboolture-070	MBC-047	2.44	2.35	0.09	0.68	1.9	175	0	2.54	2.81	2.74	3.28	2.77	3.36	1.42
509543	7013236	Caboolture-072	MBC-048	2.41	2.32	0.09	0.60	1.7	231	0	2.48	2.71	2.66	3.12	2.68	3.19	1.39
509623	7012592	Caboolture-073	MBC-049	2.39	2.31	0.08	0.56	1.7	254	0	2.46	2.69	2.62	3.08	2.65	3.14	1.43
510253	7011212	Caboolture-075	MBC-050	2.36	2.27	0.09	0.70	1.9	152	0	2.47	2.72	2.67	3.20	2.70	3.28	1.38
510669	7010917	Caboolture-076	MBC-051	2.29	2.20	0.09	0.72	1.9	152	0	2.40	2.67	2.61	3.15	2.64	3.23	1.38
511138	7010769	Caboolture-077	MBC-052	2.27	2.18	0.09	0.75	1.9	156	0	2.39	2.67	2.61	3.18	2.64	3.26	1.38
511701	7010475	Caboolture-078	MBC-053	2.25	2.15	0.10	0.75	1.9	166	0	2.36	2.64	2.58	3.15	2.61	3.23	1.38
512076	7010032	Caboolture-079	MBC-054	2.22	2.13	0.09	0.62	2.0	166	0	2.30	2.56	2.49	3.02	2.52	3.11	1.56
513283	7007901	Caboolture-083	MBC-055	2.17	2.08	0.09	0.61	1.7	174	0	2.25	2.46	2.42	2.85	2.45	2.92	1.32
513390	7007284	Caboolture-084	MBC-056	2.15	2.06	0.09	0.63	1.7	252	0	2.23	2.45	2.41	2.85	2.44	2.92	1.31
513444	7006735	Caboolture-085	MBC-057	2.16	2.07	0.09	0.62	1.7	267	0	2.24	2.46	2.42	2.87	2.45	2.94	1.35

				Water Level mAHD 10000yr ARI Sea-Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	1V:15H Slope	Revetment 1V:2H	1V:15H Slope	Revetment 1V:2H	1V:15H Slope	Revetment 1V:2H	ξ_m
514141	7006547	Caboolture-086	MBC-058	2.13	2.05	0.08	0.58	1.5	166	0	2.21	2.39	2.37	2.75	2.40	2.81	1.26
514958	7005756	Caboolture-088	MBC-059	2.07	1.99	0.08	0.52	1.5	172	0	2.13	2.31	2.28	2.63	2.30	2.69	1.29
515374	7005260	Caboolture-089	MBC-060	2.07	1.99	0.08	0.47	1.6	311	0	2.12	2.31	2.25	2.64	2.27	2.69	1.43
514730	7005140	Caboolture-090	MBC-061	2.08	2.00	0.08	0.47	1.6	337	0	2.13	2.31	2.26	2.64	2.28	2.69	1.41
514328	7005394	Caboolture-091	MBC-062	2.13	2.05	0.08	0.49	1.7	339	0	2.18	2.39	2.32	2.74	2.35	2.80	1.47
513269	7006199	Caboolture-093	MBC-063	2.15	2.07	0.08	0.57	1.7	199	0	2.23	2.45	2.39	2.85	2.42	2.91	1.42
511621	7007284	Caboolture-096	MBC-064	2.27	2.18	0.09	0.59	1.8	115	0	2.34	2.58	2.51	3.00	2.54	3.07	1.45
511339	7008048	Caboolture-097	MBC-065	2.29	2.20	0.09	0.59	1.7	120	0	2.36	2.59	2.53	3.00	2.56	3.07	1.41
511648	7008558	Caboolture-098	MBC-066	2.27	2.18	0.09	0.66	1.8	140	0	2.36	2.61	2.55	3.06	2.58	3.13	1.38
511835	7009040	Caboolture-099	MBC-067	2.23	2.14	0.09	0.68	1.8	147	0	2.33	2.58	2.52	3.03	2.56	3.10	1.36
511446	7009456	Caboolture-100	MBC-068	2.25	2.16	0.09	0.65	1.8	143	0	2.34	2.58	2.53	3.02	2.56	3.09	1.37
511058	7009456	Caboolture-101	MBC-069	2.27	2.18	0.09	0.62	1.8	135	0	2.35	2.59	2.53	3.01	2.56	3.08	1.40
510321	7009818	Caboolture-102	MBC-070	2.29	2.20	0.09	0.60	1.8	122	0	2.37	2.60	2.54	3.03	2.57	3.10	1.44
509784	7010233	Caboolture-103	MBC-071	2.37	2.29	0.08	0.57	1.8	109	0	2.45	2.68	2.61	3.09	2.64	3.16	1.46
509369	7010796	Caboolture-104	MBC-072	2.40	2.31	0.09	0.58	1.8	108	0	2.47	2.71	2.64	3.13	2.66	3.20	1.48
509034	7011198	Caboolture-105	MBC-073	2.44	2.35	0.09	0.60	1.8	114	0	2.52	2.75	2.69	3.18	2.72	3.25	1.44
508833	7011587	Caboolture-106	MBC-074	2.44	2.35	0.09	0.62	1.9	119	0	2.52	2.78	2.70	3.24	2.73	3.31	1.49
508752	7011869	Caboolture-107	MBC-075	2.47	2.38	0.09	0.65	1.9	125	0	2.56	2.83	2.75	3.29	2.78	3.37	1.46
508471	7012110	Caboolture-108	MBC-076	2.47	2.39	0.08	0.55	1.8	119	0	2.54	2.77	2.70	3.17	2.73	3.23	1.47
508926	7012177	Caboolture-109	MBC-077	2.43	2.34	0.09	0.69	1.9	137	0	2.53	2.80	2.73	3.28	2.77	3.36	1.42
509020	7012767	Caboolture-110	MBC-078	2.42	2.33	0.09	0.69	1.8	149	0	2.52	2.78	2.72	3.24	2.75	3.32	1.38
508565	7013276	Caboolture-111	MBC-079	2.45	2.37	0.08	0.58	1.7	143	0	2.53	2.75	2.69	3.14	2.72	3.20	1.38
508069	7013611	Caboolture-112	MBC-080	2.50	2.42	0.08	0.57	1.7	141	0	2.58	2.79	2.74	3.17	2.77	3.23	1.36
507667	7013960	Caboolture-113	MBC-081	2.58	2.49	0.09	0.59	1.7	135	0	2.65	2.87	2.82	3.27	2.85	3.33	1.37
507157	7014067	Caboolture-114	MBC-082	2.59	2.51	0.08	0.55	1.6	120	0	2.66	2.87	2.82	3.24	2.84	3.30	1.38
507171	7014777	Caboolture-115	MBC-083	2.62	2.53	0.09	0.64	1.8	129	0	2.71	2.96	2.89	3.40	2.92	3.47	1.41
507063	7015595	Caboolture-116	MBC-084	2.60	2.51	0.09	0.62	1.8	132	0	2.68	2.92	2.86	3.34	2.89	3.41	1.40
509121	6984944	Redcliffe-005	MBC-085	2.37	2.22	0.15	1.09	2.9	149	0	2.53	3.01	2.86	3.86	2.93	4.03	1.72
509533	6984891	Redcliffe-006	MBC-086	2.36	2.20	0.16	1.20	2.8	159	0	2.54	3.05	2.91	3.95	2.98	4.13	1.62
509892	6984691	Redcliffe-007	MBC-087	2.34	2.18	0.16	1.18	2.9	159	0	2.52	3.02	2.88	3.92	2.95	4.10	1.64
510464	6984279	Redcliffe-009	MBC-088	2.35	2.16	0.19	1.30	3.5	122	0	2.51	3.14	2.89	4.22	2.97	4.46	1.94
510783	6984638	Redcliffe-010	MBC-089	2.35	2.14	0.21	1.58	3.5	122	0	2.57	3.28	3.03	4.51	3.12	4.76	1.71
510969	6985516	Redcliffe-012	MBC-090	2.34	2.13	0.21	1.53	3.5	115	0	2.54	3.24	2.99	4.44	3.08	4.69	1.74
511076	6985889	Redcliffe-013	MBC-091	2.34	2.13	0.21	1.51	3.5	118	0	2.54	3.23	2.98	4.44	3.07	4.69	1.78
511488	6987365	Redcliffe-016	MBC-092	2.31	2.11	0.20	1.49	3.4	121	0	2.51	3.19	2.95	4.37	3.05	4.61	1.76
511768	6988017	Redcliffe-018	MBC-093	2.31	2.11	0.20	1.42	3.5	119	0	2.49	3.16	2.91	4.31	2.99	4.56	1.84
511648	6988496	Redcliffe-019	MBC-094	2.31	2.11	0.20	1.37	3.6	113	0	2.47	3.13	2.87	4.27	2.96	4.51	1.91
511741	6989254	Redcliffe-021	MBC-095	2.33	2.11	0.22	1.57	3.6	120	0	2.53	3.26	2.98	4.51	3.08	4.77	1.79
511874	6990079	Redcliffe-023	MBC-096	2.33	2.10	0.23	1.76	3.6	125	0	2.57	3.36	3.08	4.72	3.18	5.00	1.69
511648	6990451	Redcliffe-024	MBC-097	2.31	2.11	0.20	1.37	3.6	111	0	2.47	3.14	2.87	4.28	2.96	4.52	1.93
511661	6991063	Redcliffe-025	MBC-098	2.33	2.11	0.22	1.64	3.5	123	0	2.55	3.29	3.03	4.57	3.13	4.84	1.72
511568	6992087	Redcliffe-027	MBC-099	2.32	2.11	0.21	1.50	3.6	115	0	2.51	3.22	2.94	4.43	3.04	4.68	1.83
511475	6992513	Redcliffe-028	MBC-100	2.33	2.13	0.20	1.35	3.5	120	0	2.49	3.14	2.89	4.25	2.97	4.49	1.90
510916	6992713	Redcliffe-029	MBC-101	2.28	2.11	0.17	1.20	3.1	65	0	2.44	2.98	2.81	3.94	2.89	4.13	1.77
510531	6992472	Redcliffe-030	MBC-102	2.28	2.13	0.15	1.15	2.7	13	0	2.46	2.94	2.81	3.79	2.88	3.96	1.58
510161	6992164	Redcliffe-031	MBC-103	2.28	2.15	0.13	1.00	2.5	319	0	2.44	2.85	2.75	3.59	2.81	3.74	1.58
509833	6991712	Redcliffe-032	MBC-104	2.30	2.18	0.12	0.97	2.4	329	0	2.46	2.85	2.75	3.56	2.81	3.70	1.54
509525	6991322	Redcliffe-033	MBC-105	2.30	2.18	0.12	0.95	2.4	348	0	2.45	2.84	2.74	3.53	2.80	3.66	1.52
509155	6991199	Redcliffe-034	MBC-106	2.34	2.21	0.13	0.99	2.4	12	0	2.50	2.89	2.80	3.61	2.85	3.75	1.52
508478	6991343	Redcliffe-035	MBC-107	2.36	2.22	0.14	1.05	2.6	18	0	2.52	2.95	2.84	3.73	2.91	3.88	1.56
507965	6991487	Redcliffe-036	MBC-108	2.44	2.30	0.14	1.10	2.6	20	0	2.62	3.06	2.95	3.87	3.02	4.03	1.54
507205	6991589	Redcliffe-037	MBC-109	2.46	2.32	0.14	1.07	2.6	20	0	2.63	3.07	2.96	3.86	3.02	4.01	1.56
506548	6991836	Redcliffe-038	MBC-110	2.47	2.34	0.13	1.04	2.6	27	0	2.64	3.07	2.96	3.83	3.02	3.98	1.56
505830	6992082	Redcliffe-039	MBC-111	2.52	2.38	0.14	1.04	2.6	32	0	2.68	3.11	3.00	3.88	3.06	4.03	1.57
505358	6992267	Redcliffe-040	MBC-112	2.55	2.41	0.14	1.01	2.6	35	0	2.70	3.13	3.01	3.89	3.07	4.04	1.63

APPENDIX I

Cyclone Tracks – Monte Carlo Sample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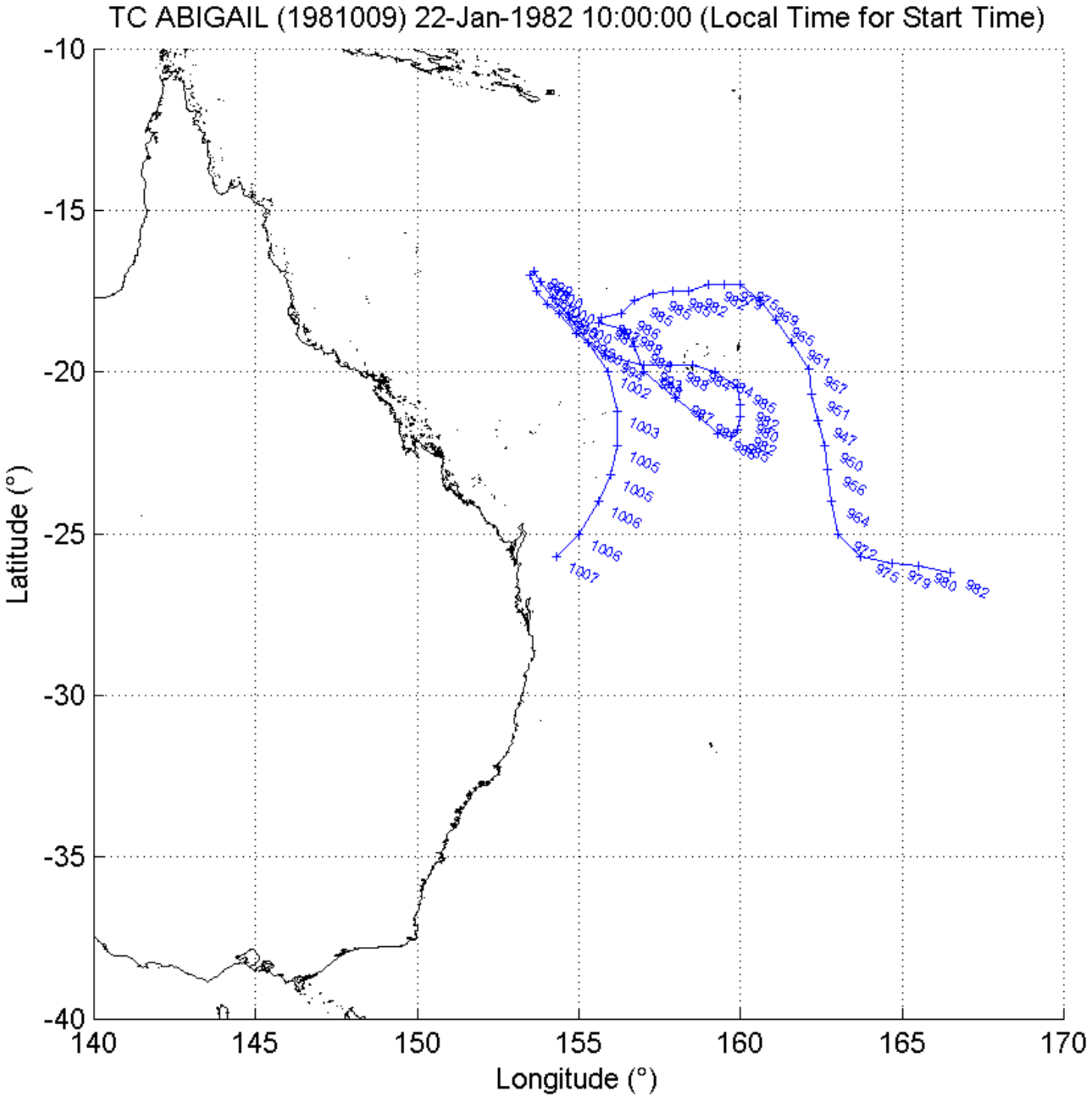
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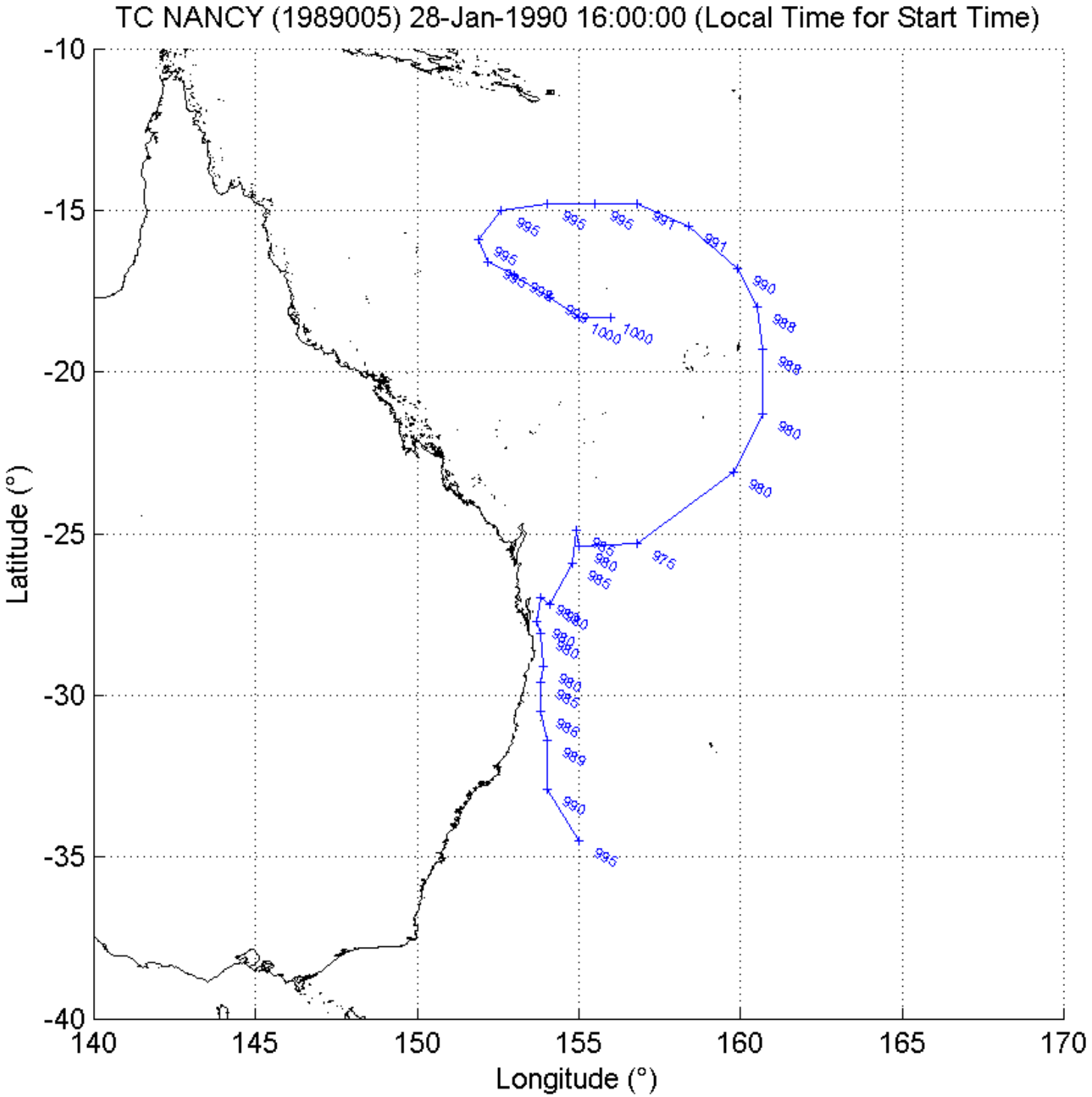
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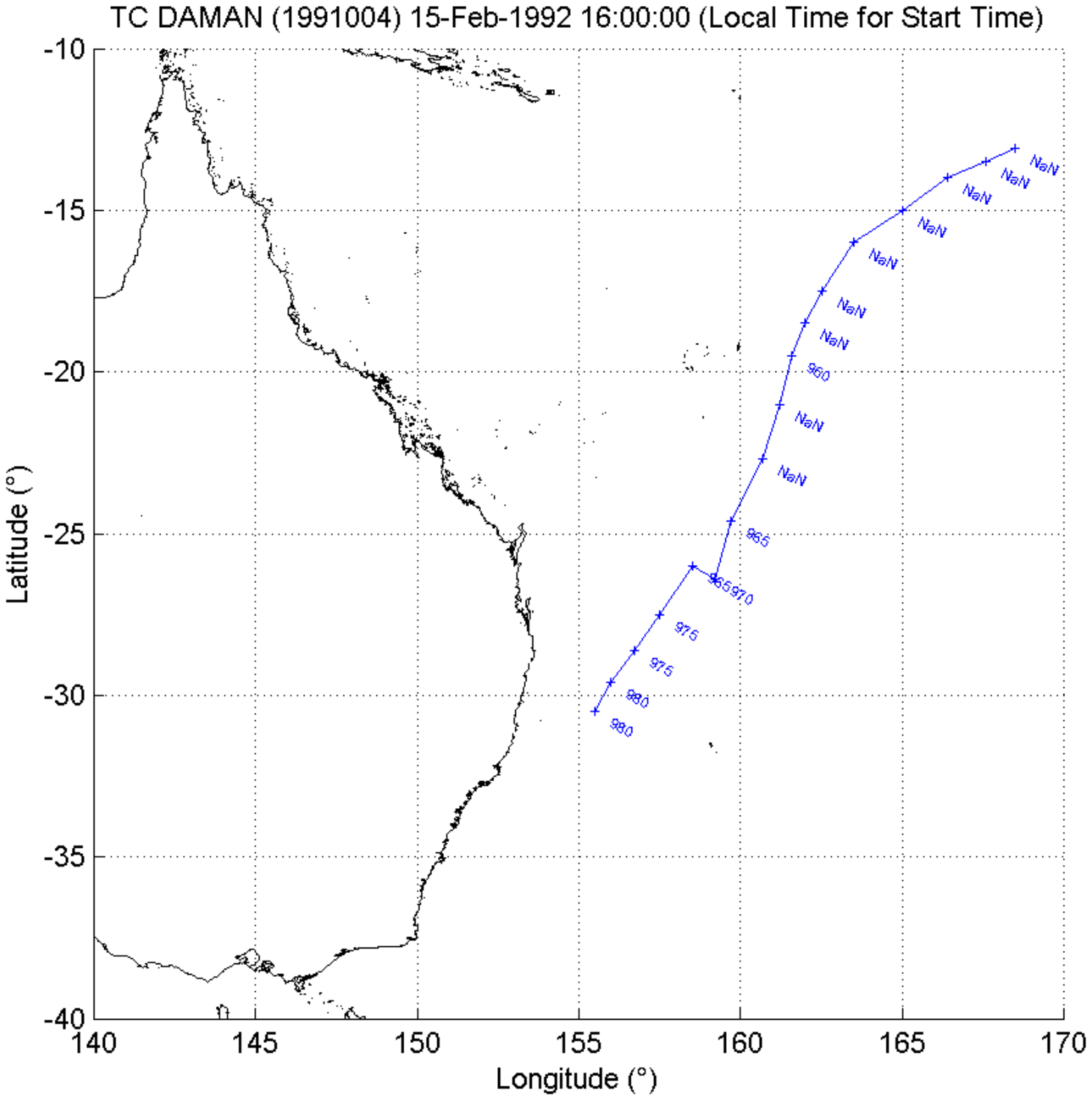
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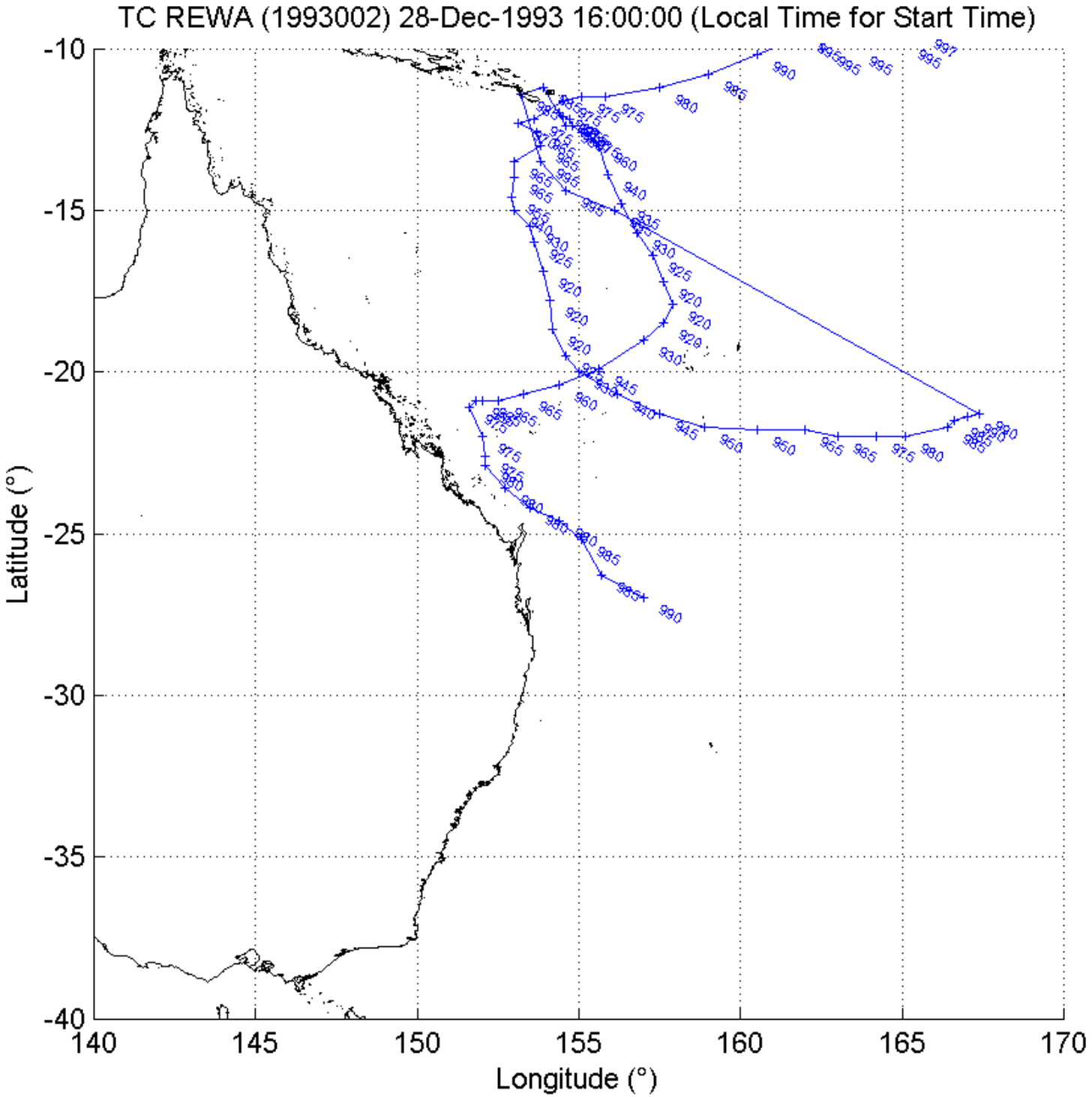
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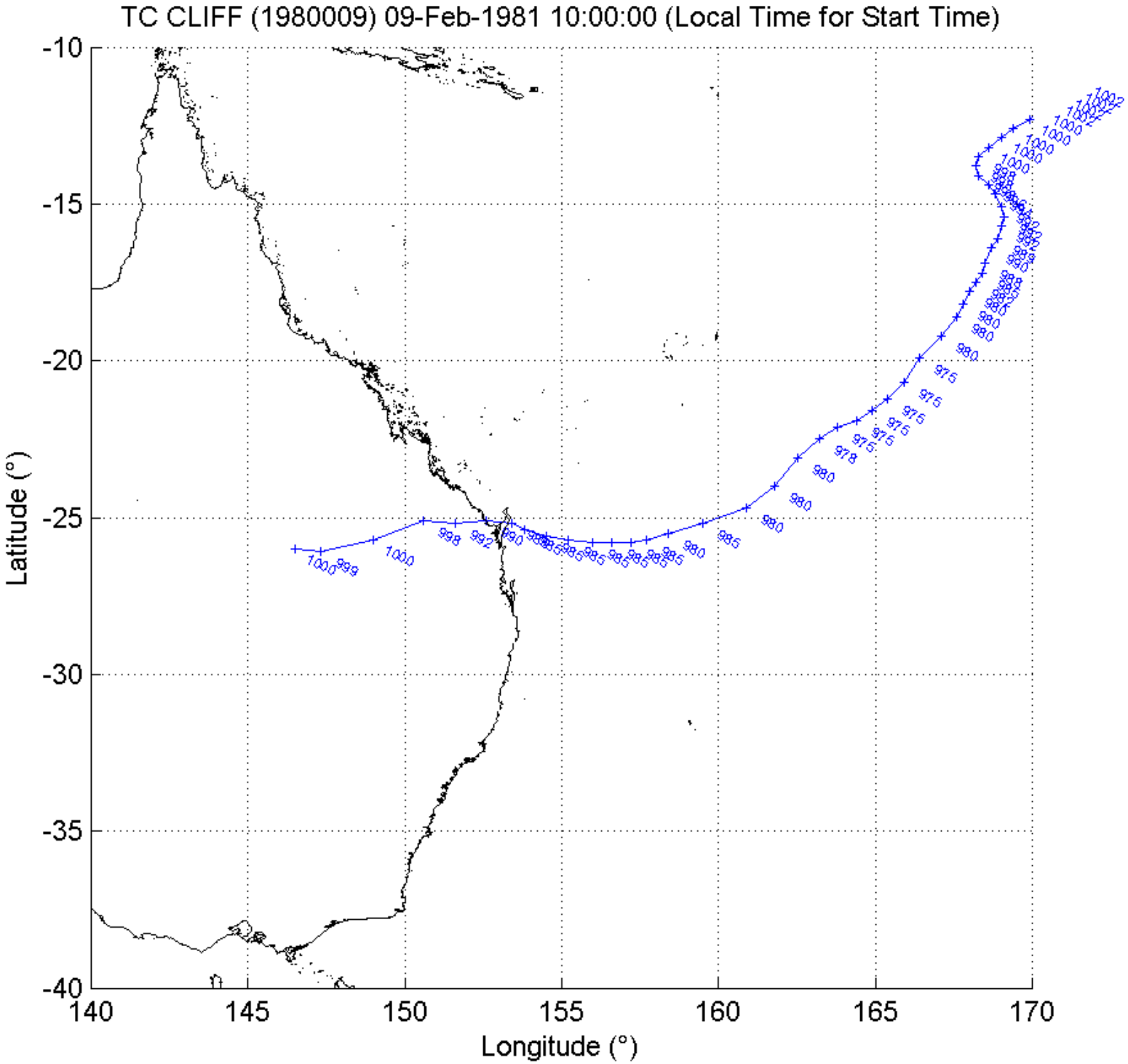
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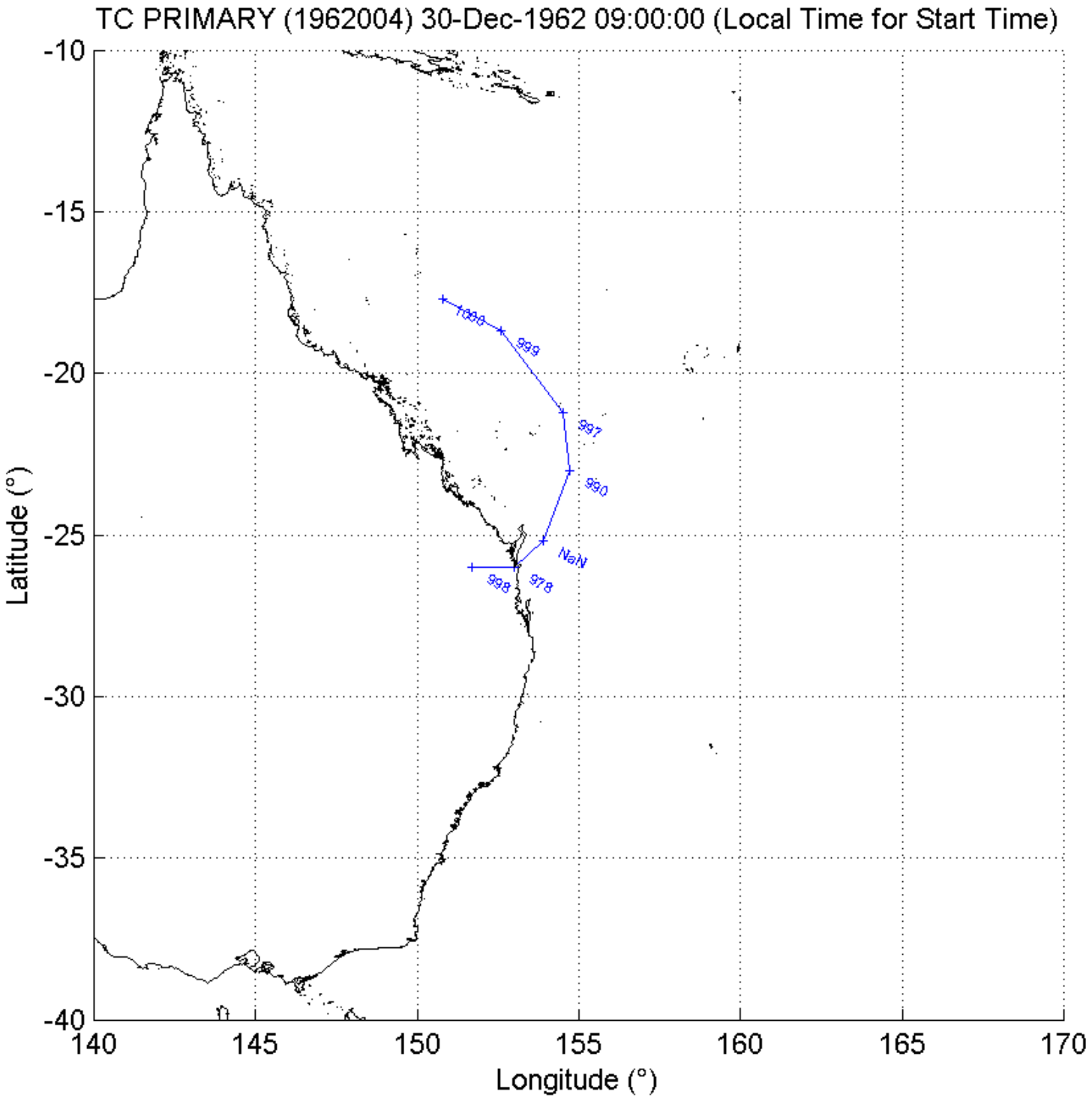
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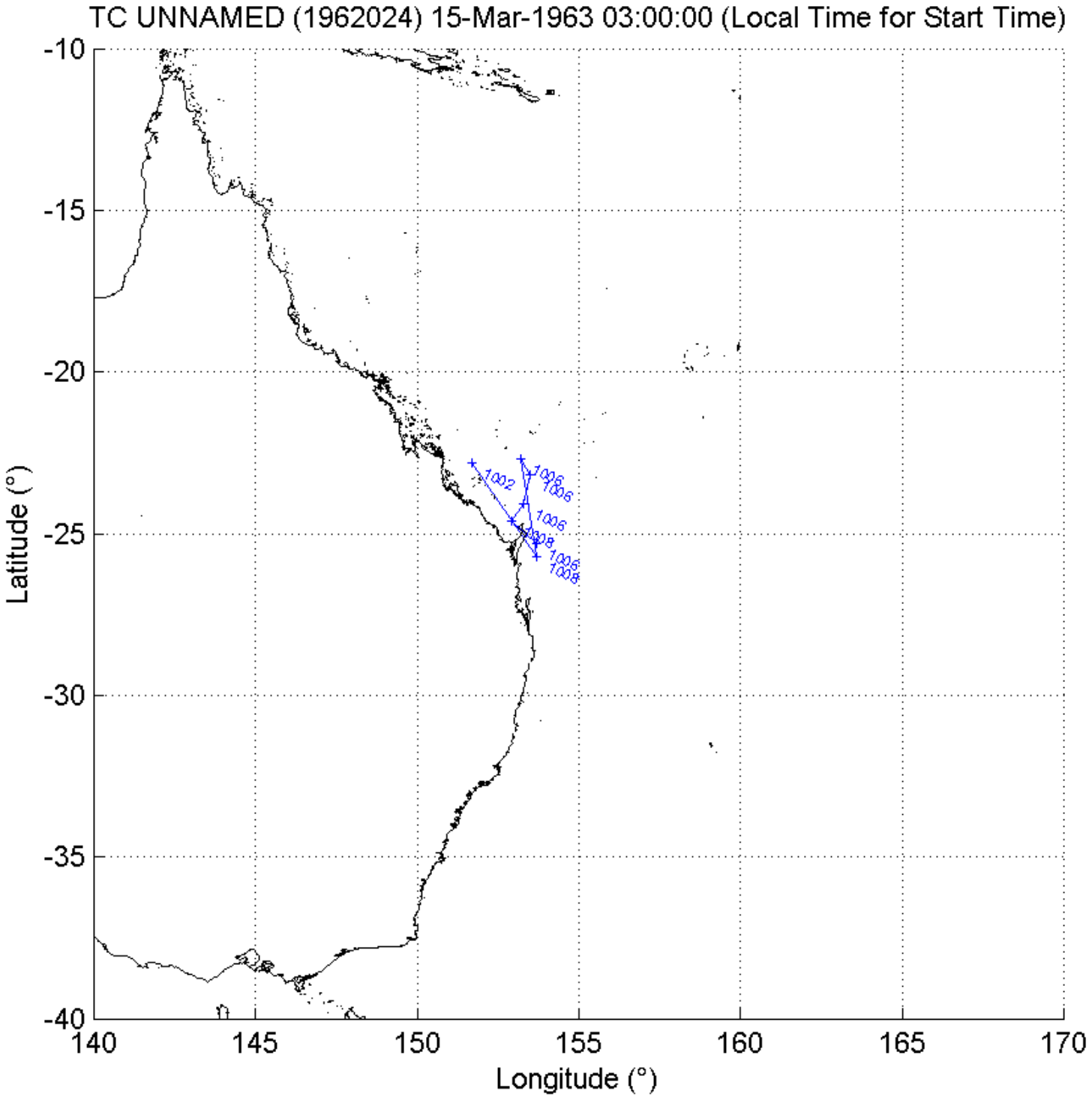
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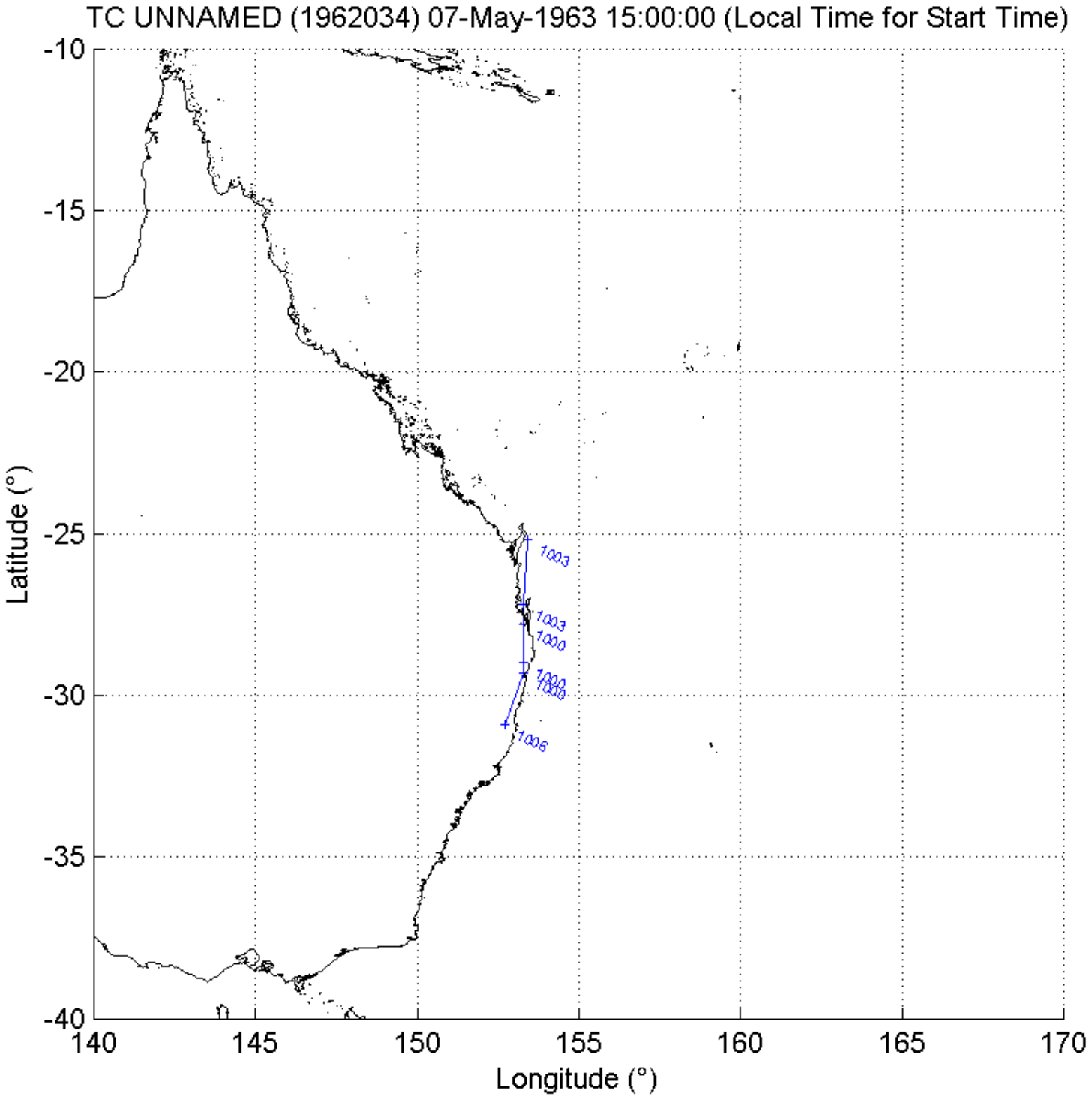
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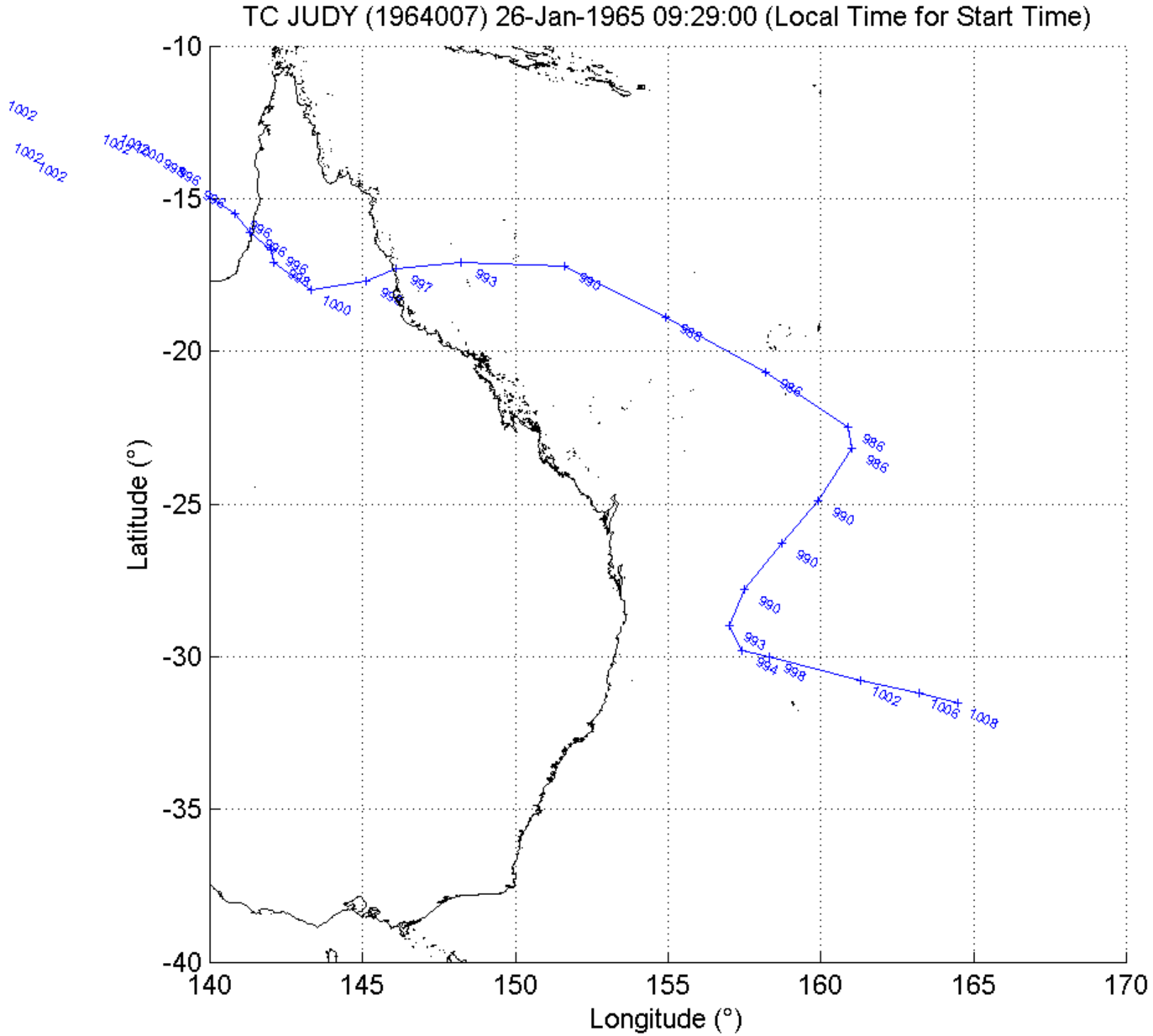
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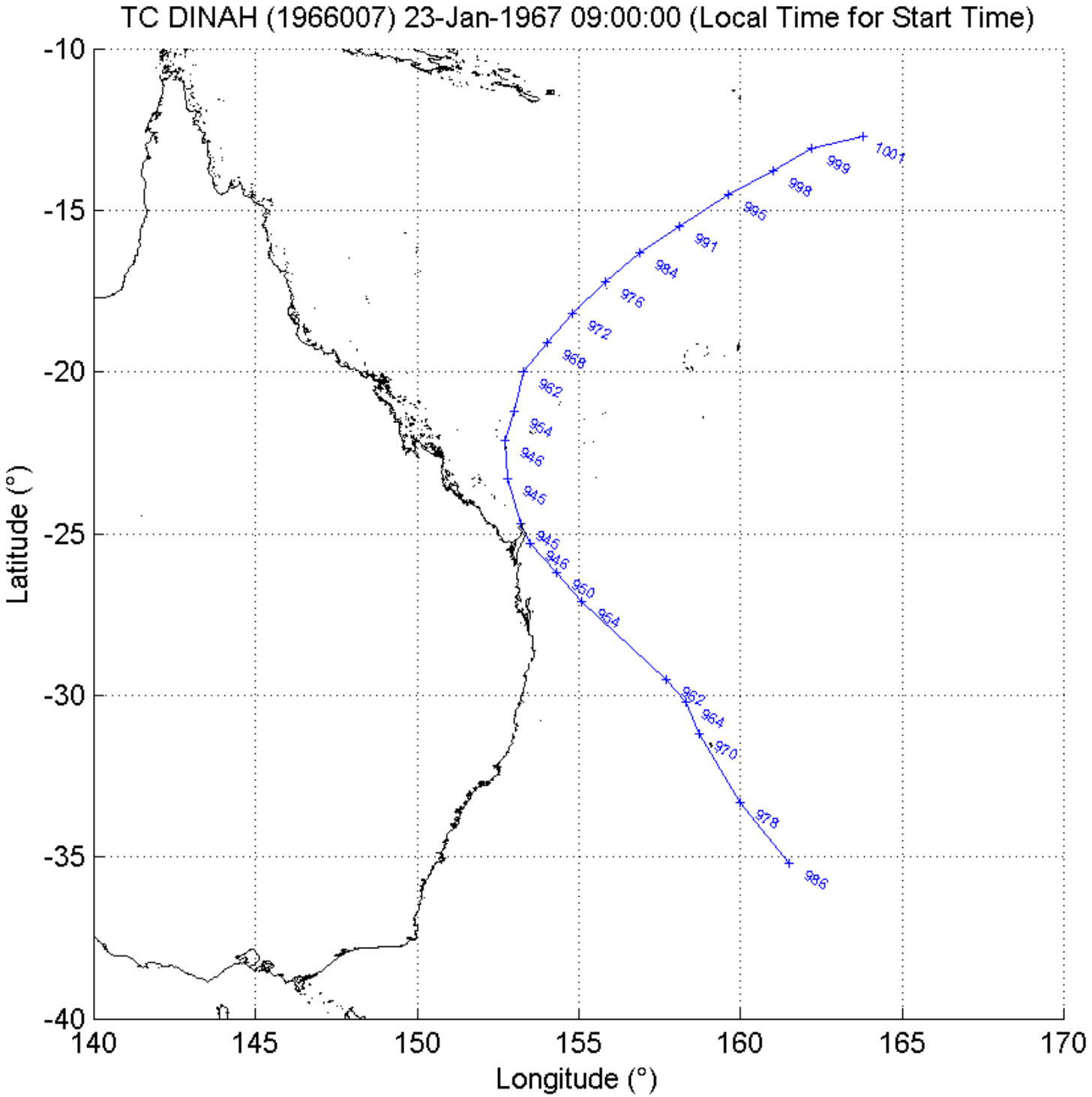
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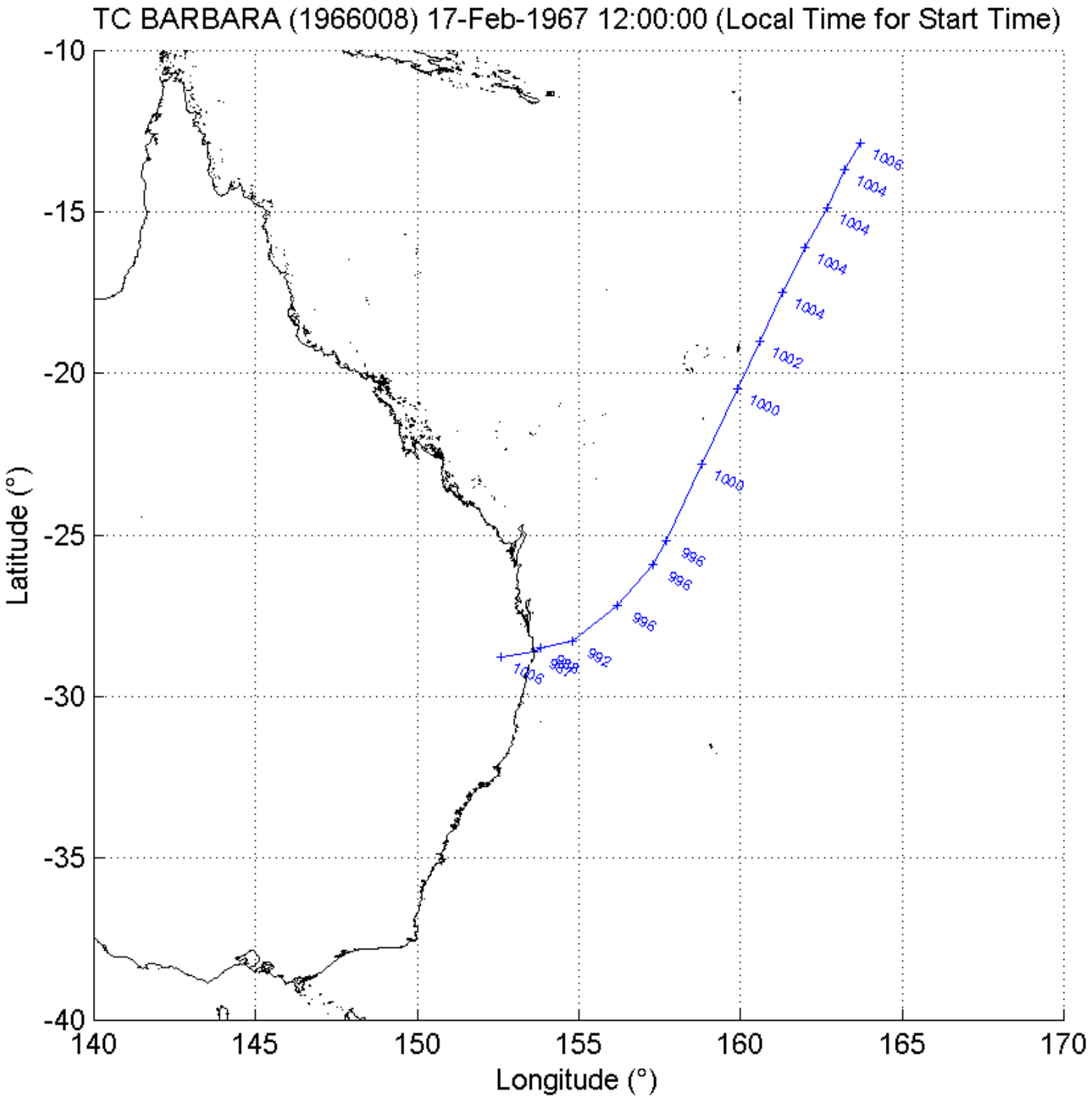
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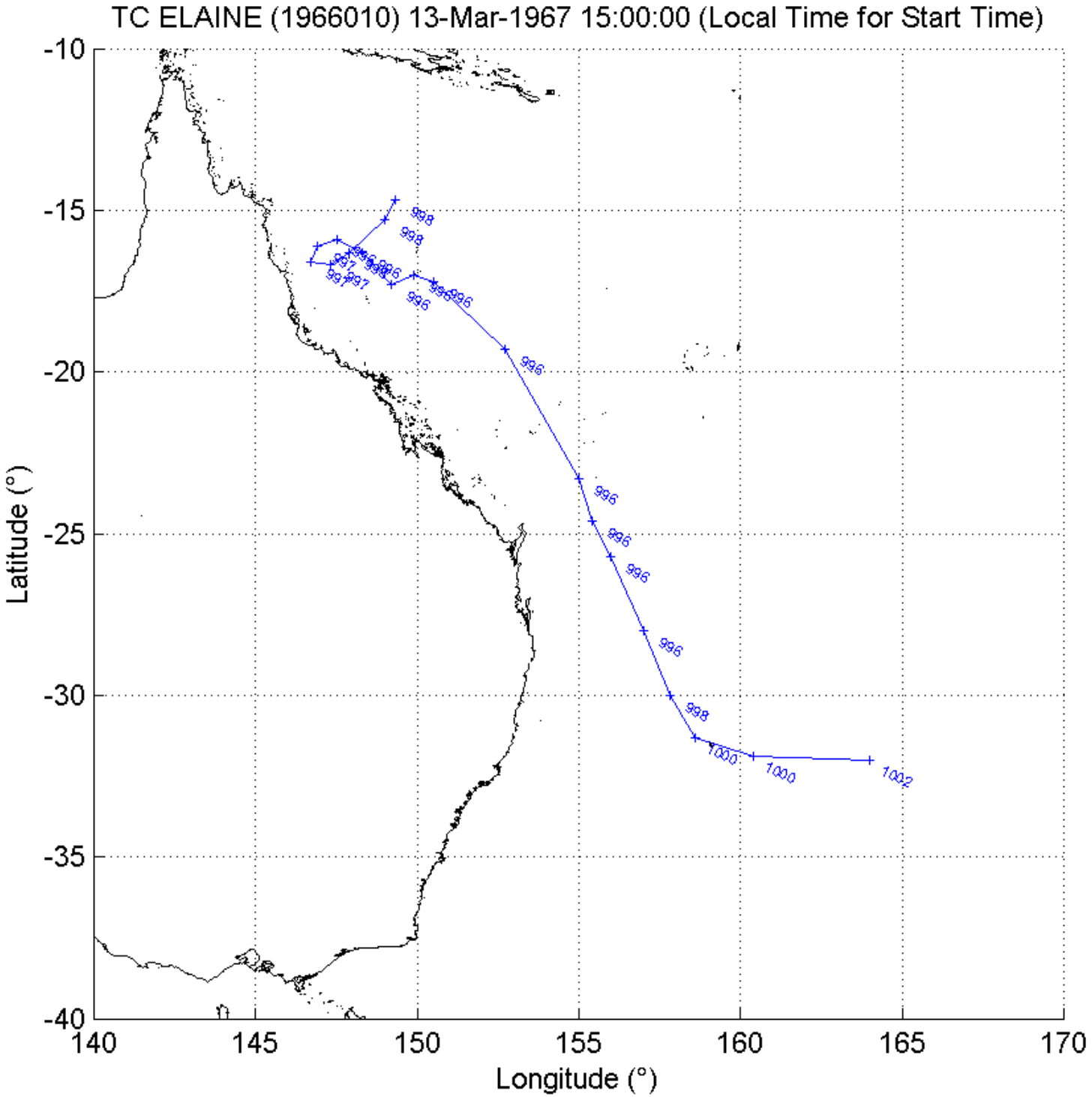
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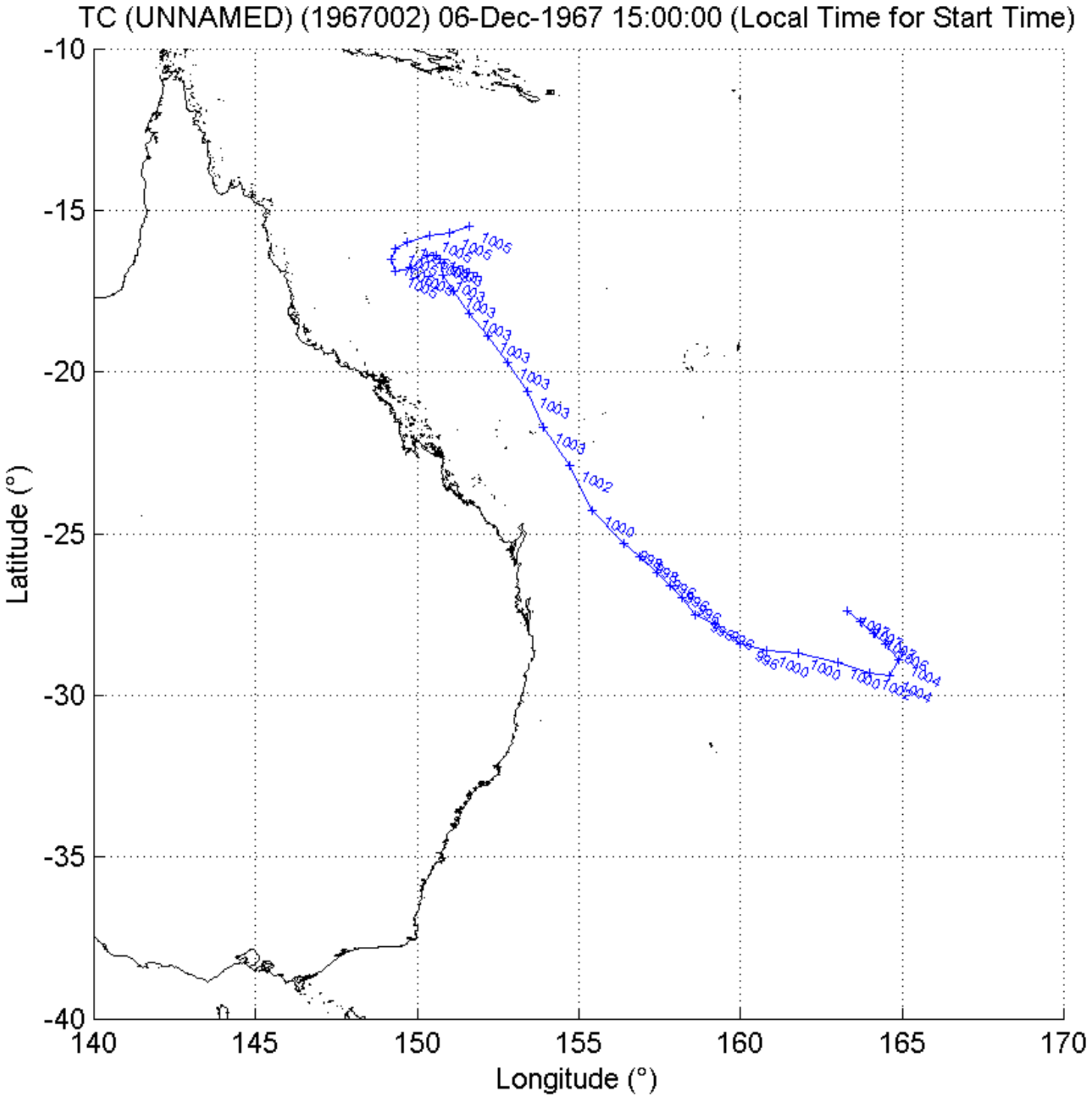
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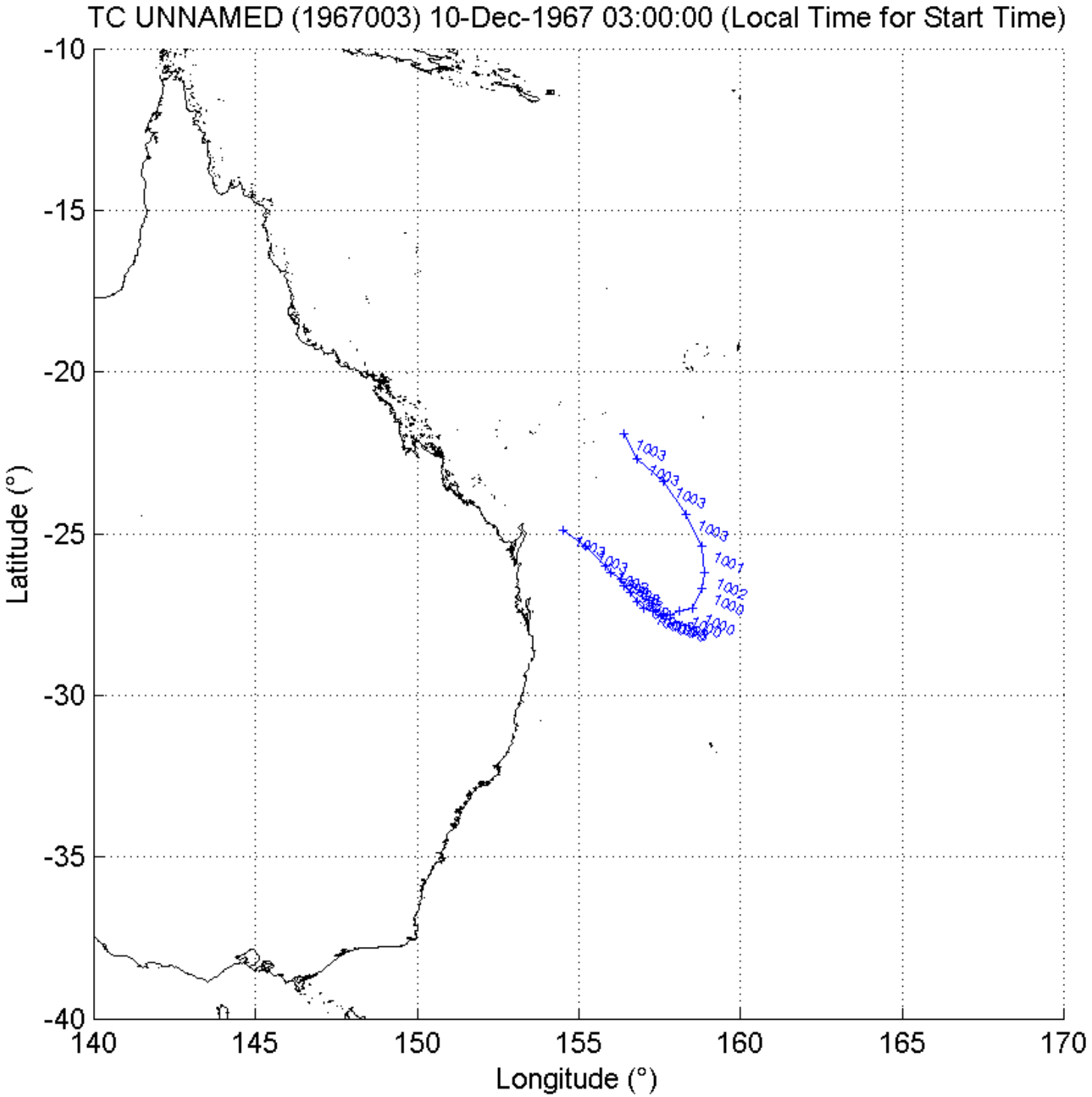
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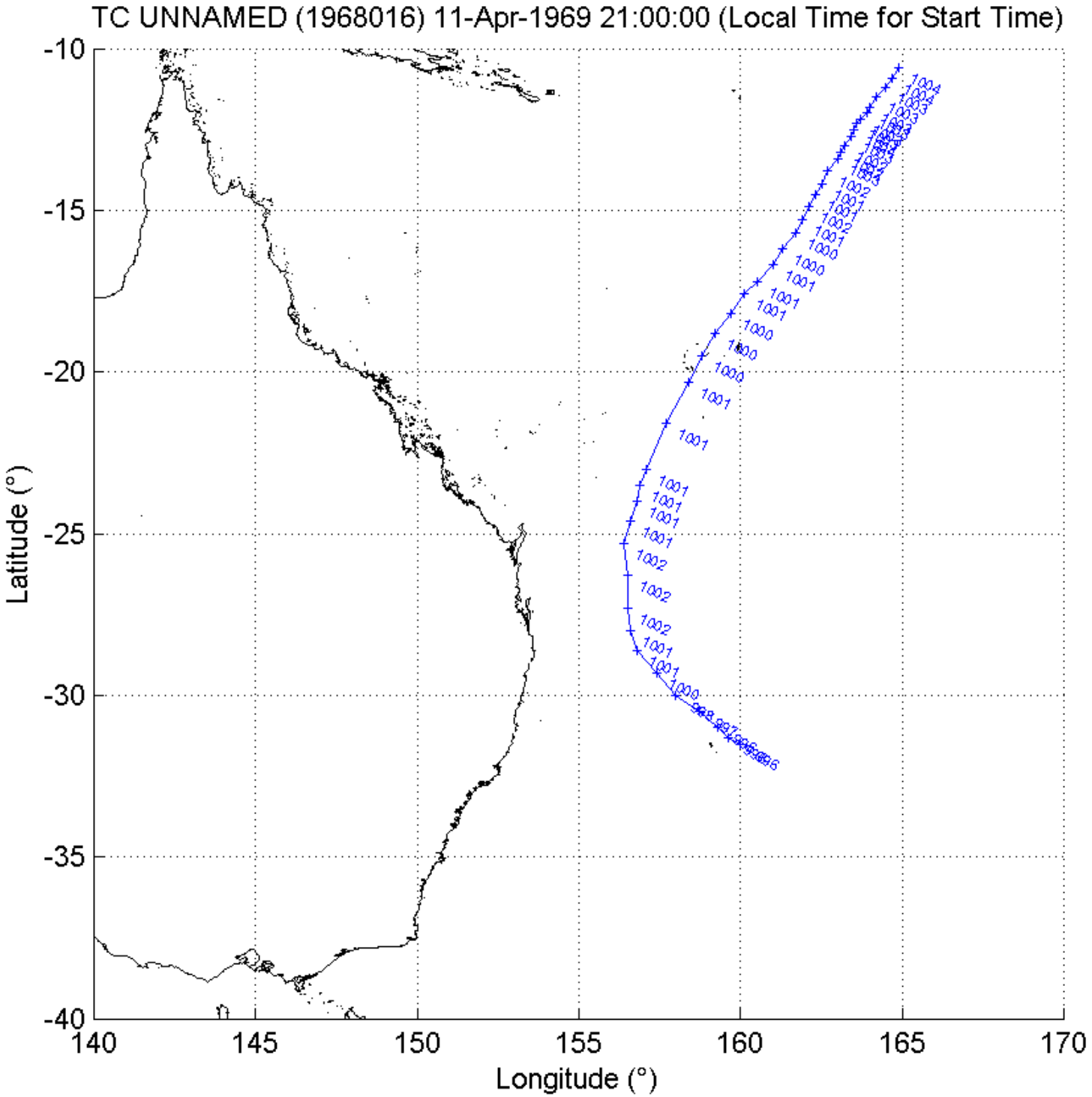
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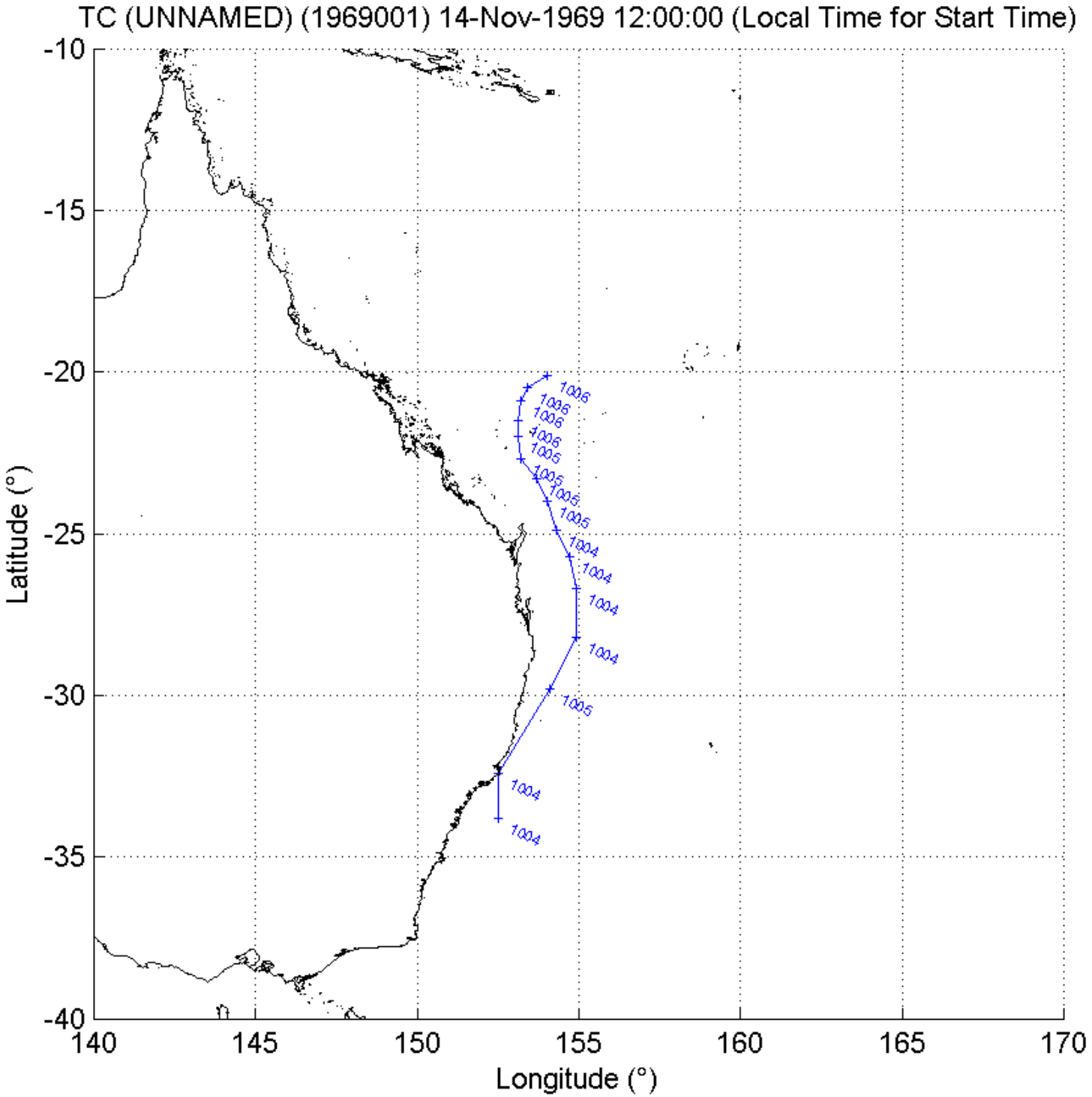
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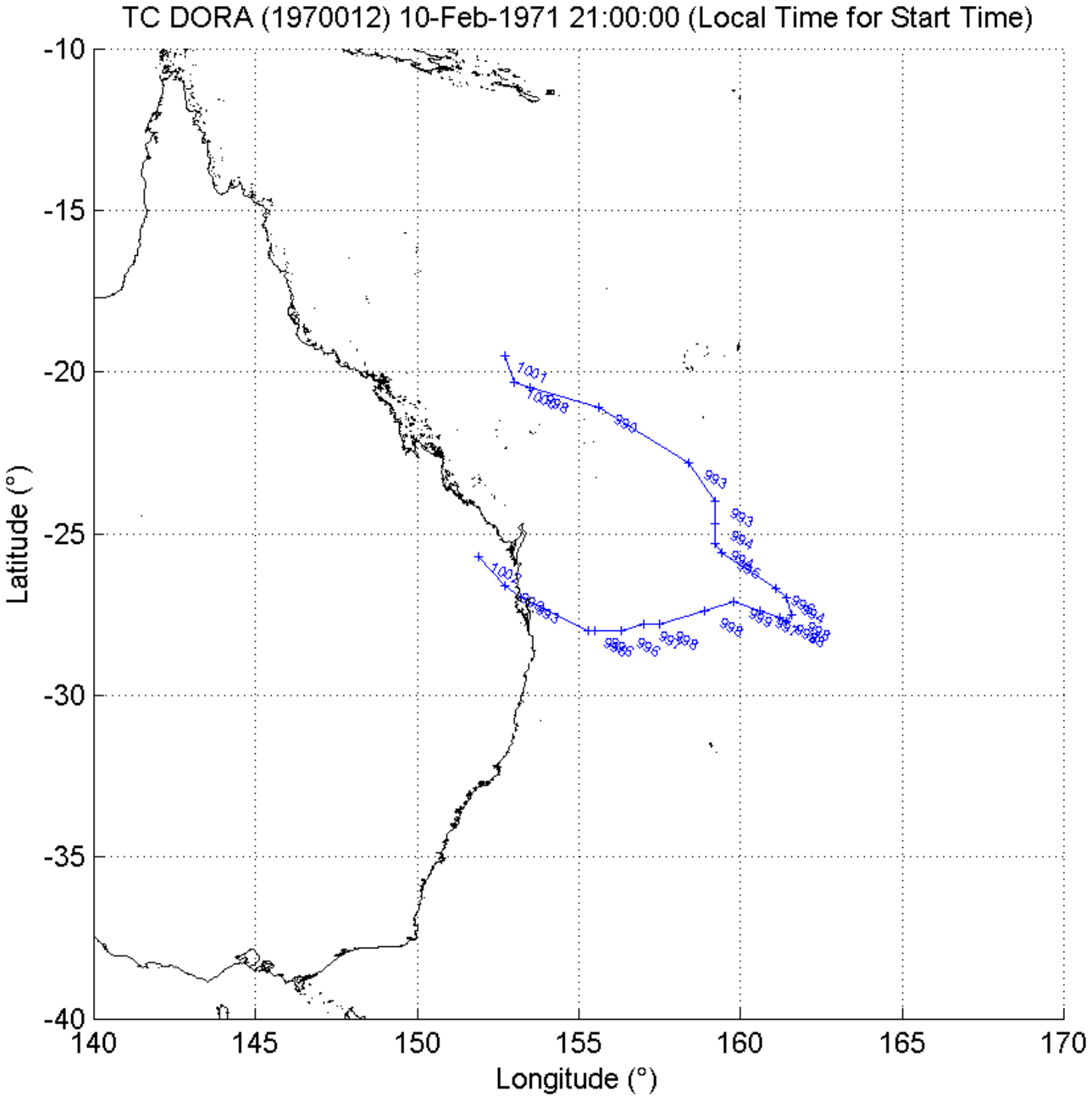
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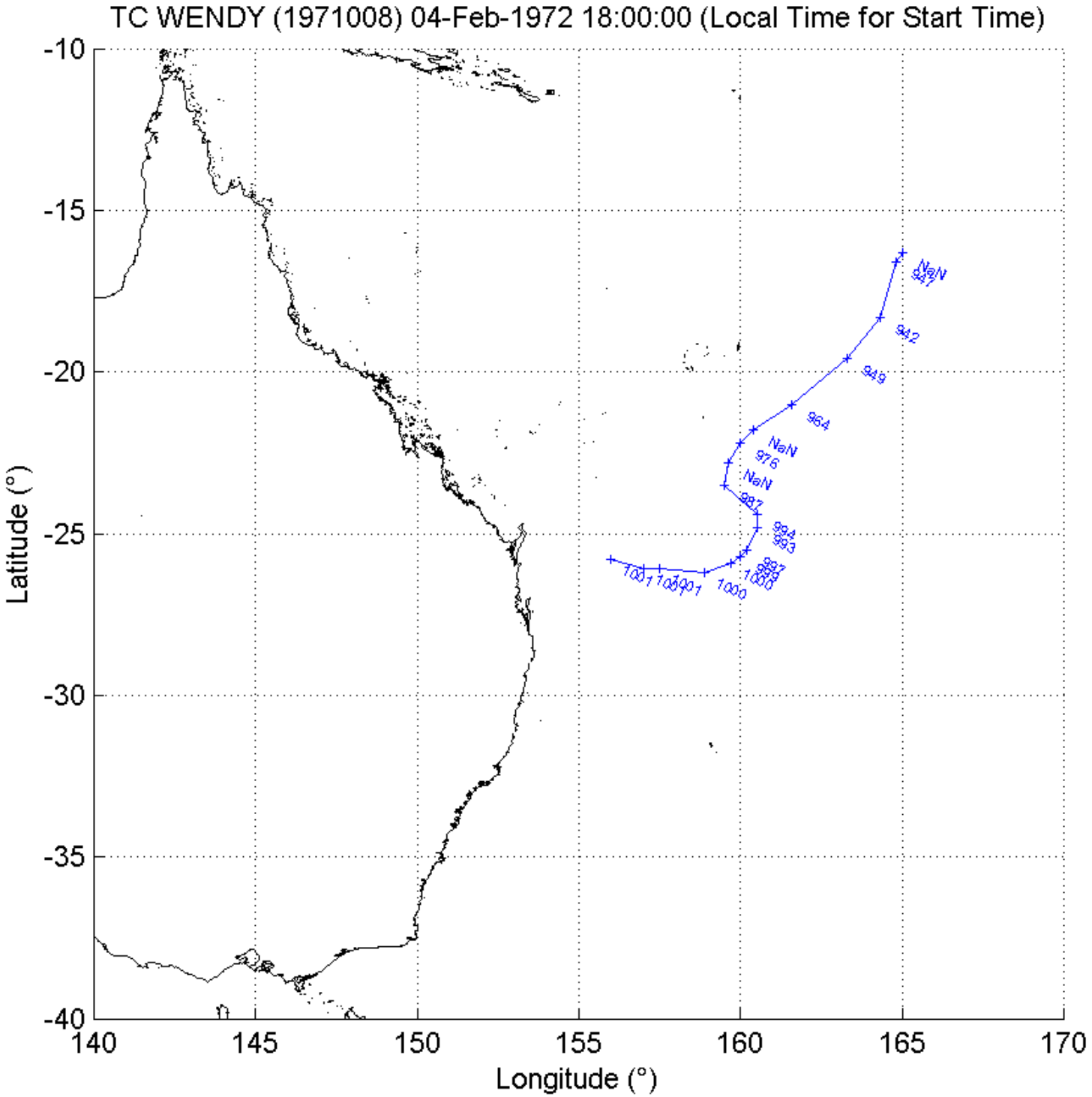
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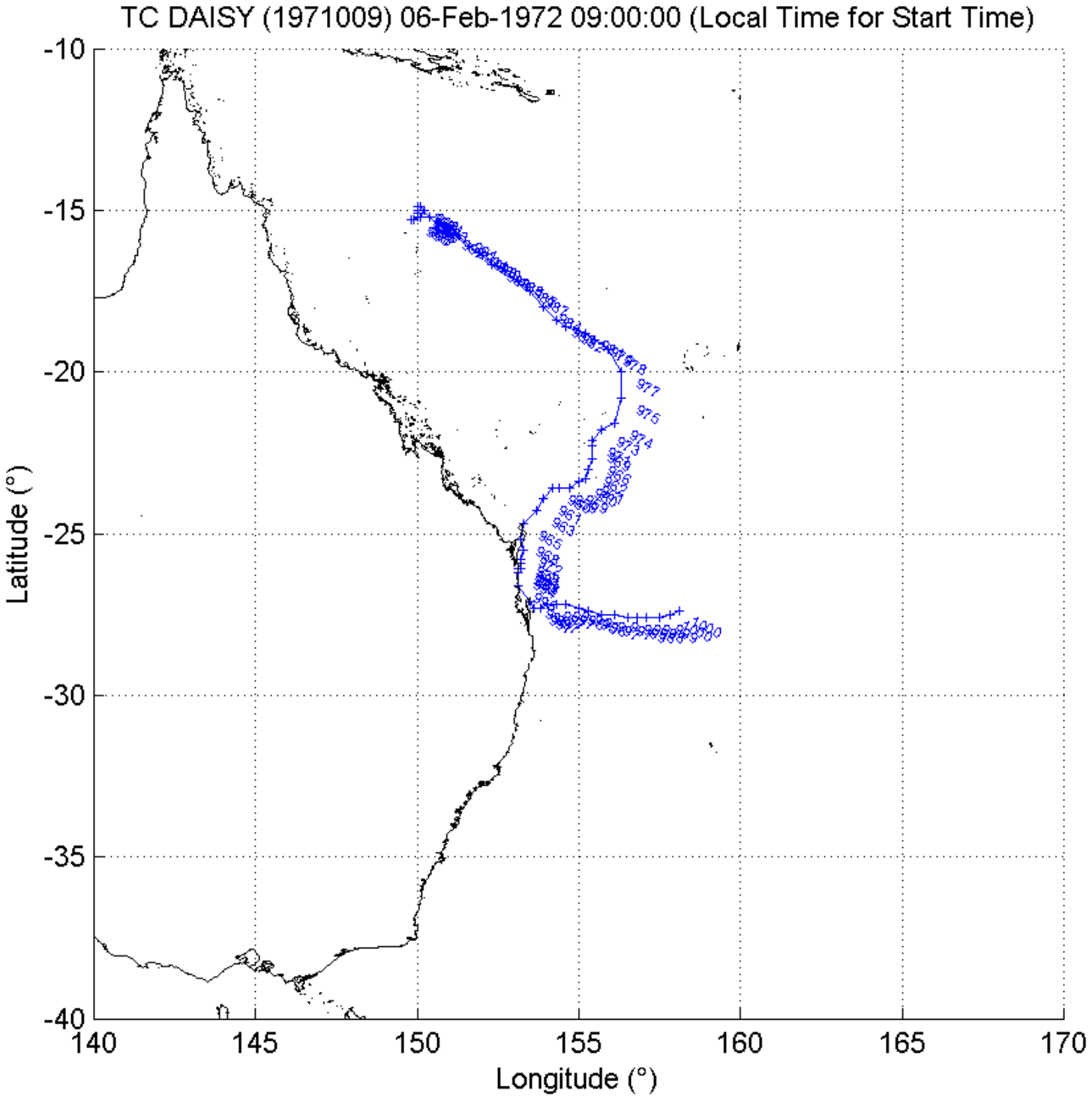
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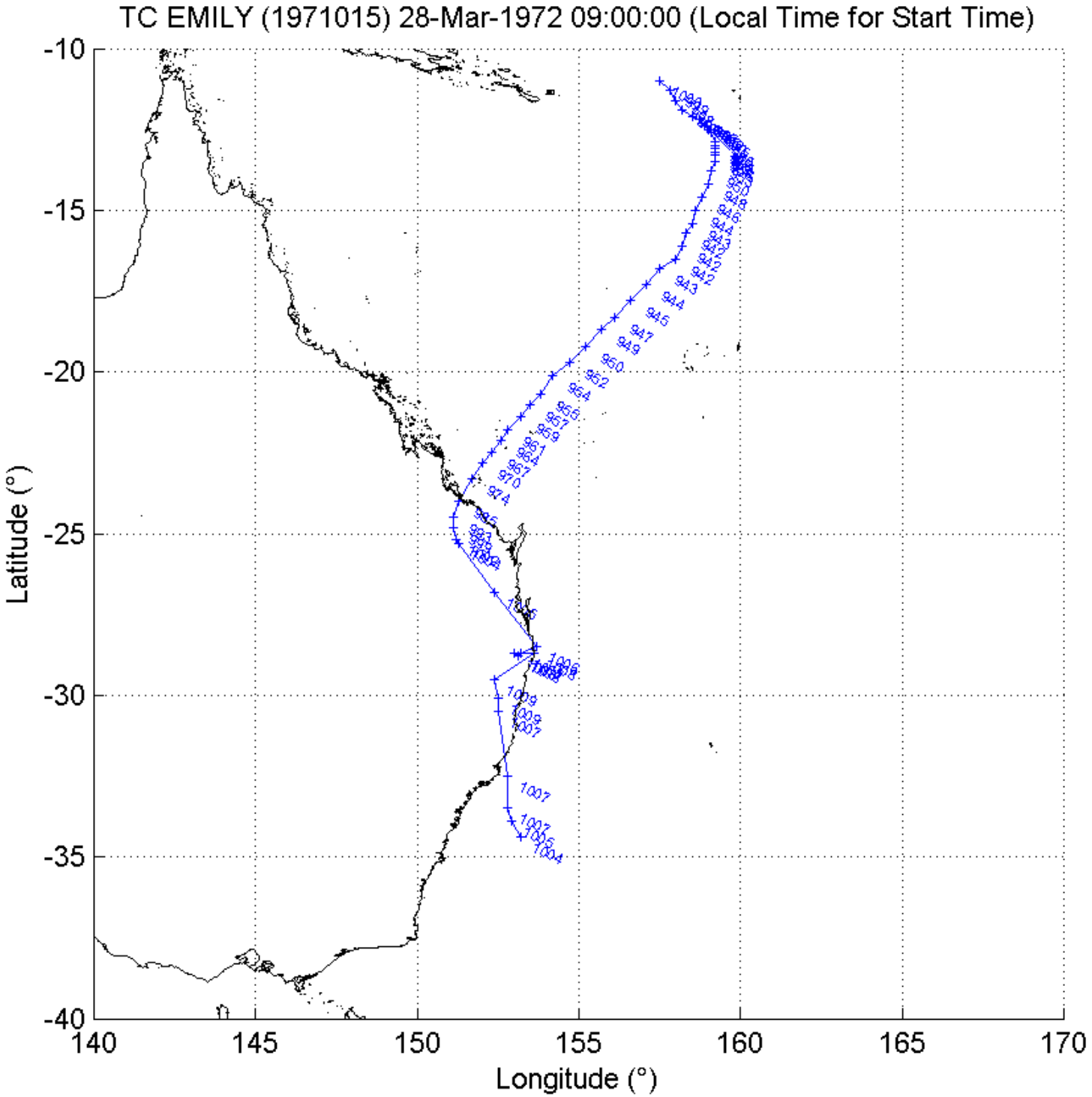
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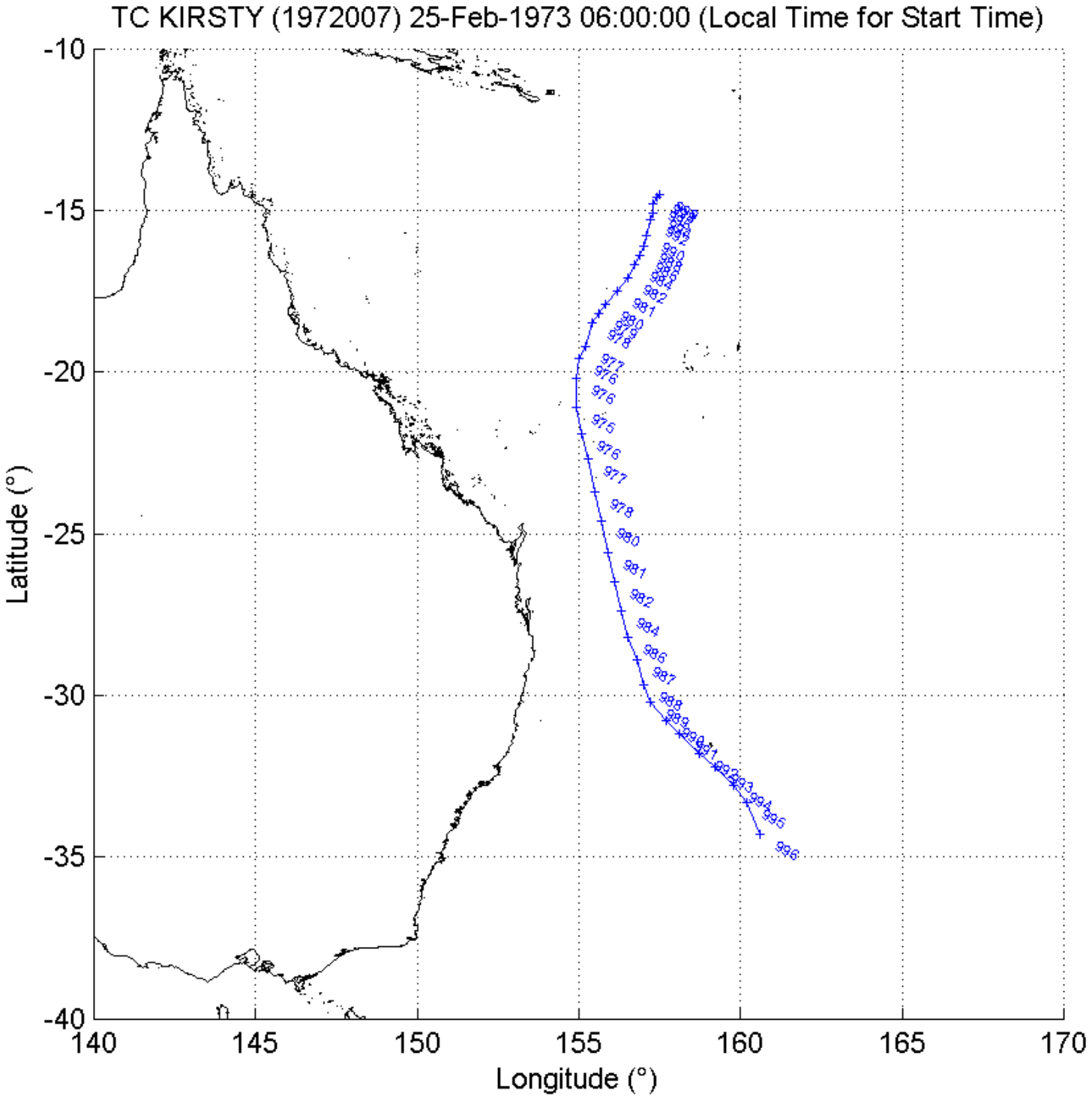
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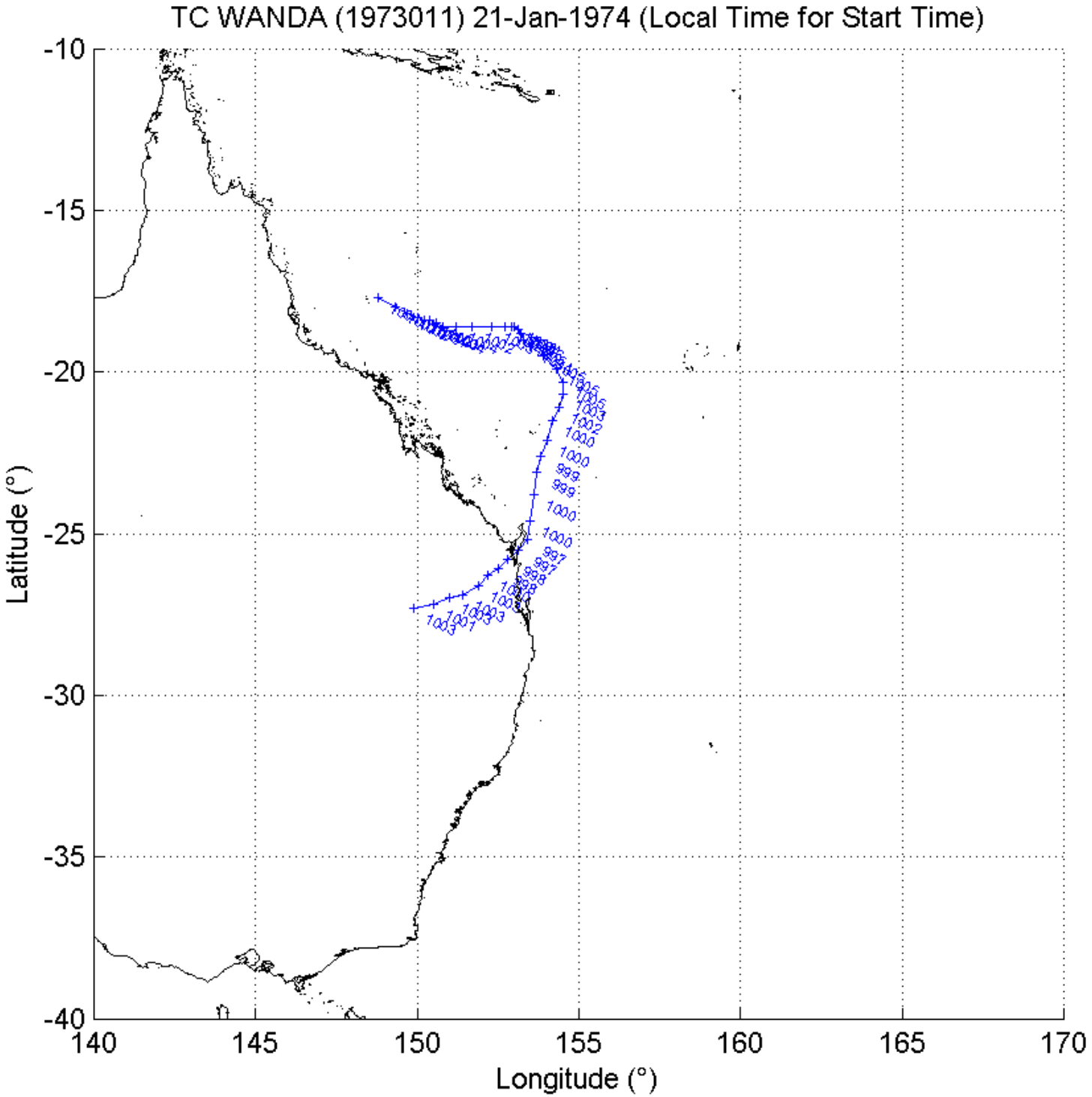
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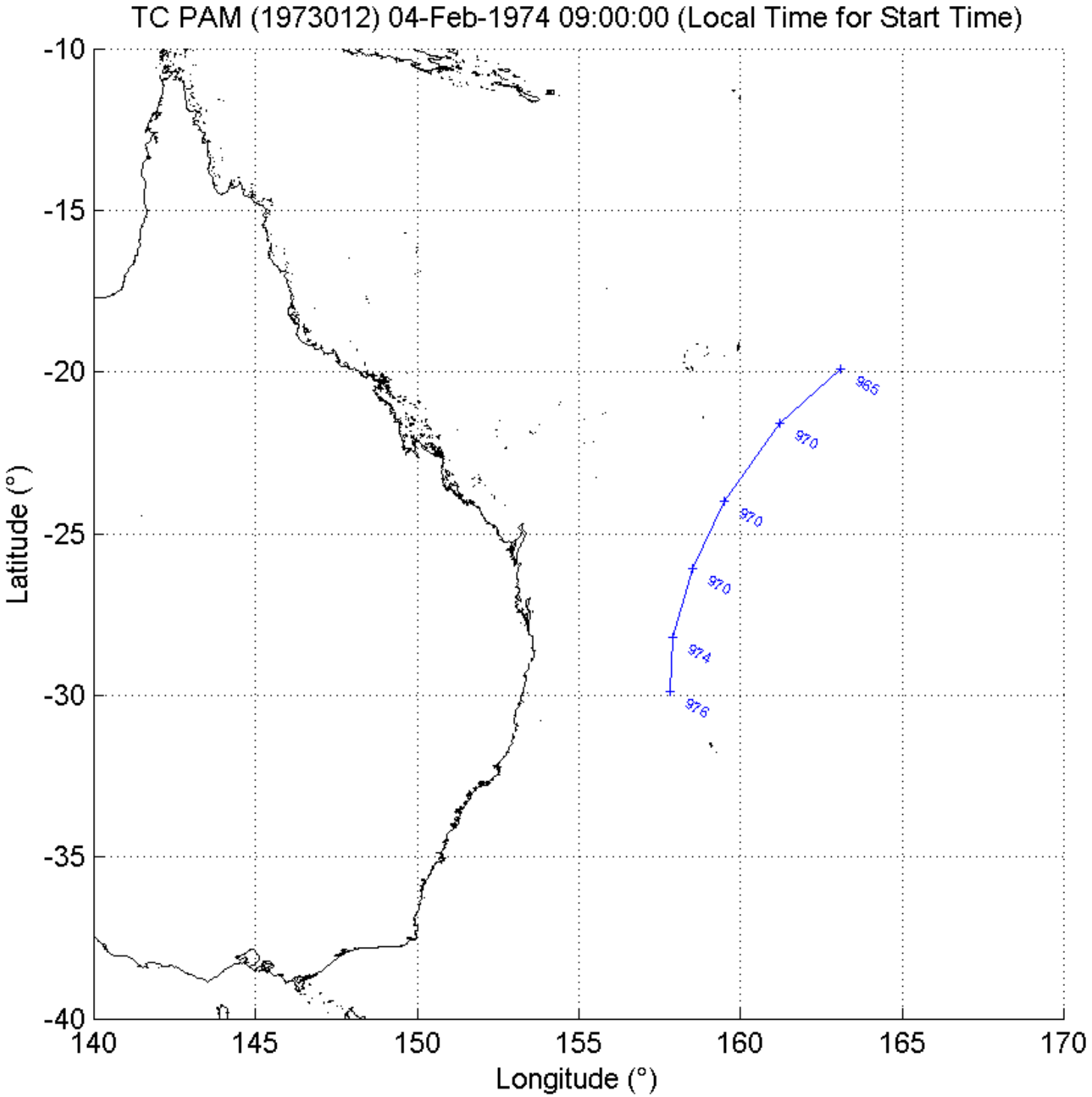
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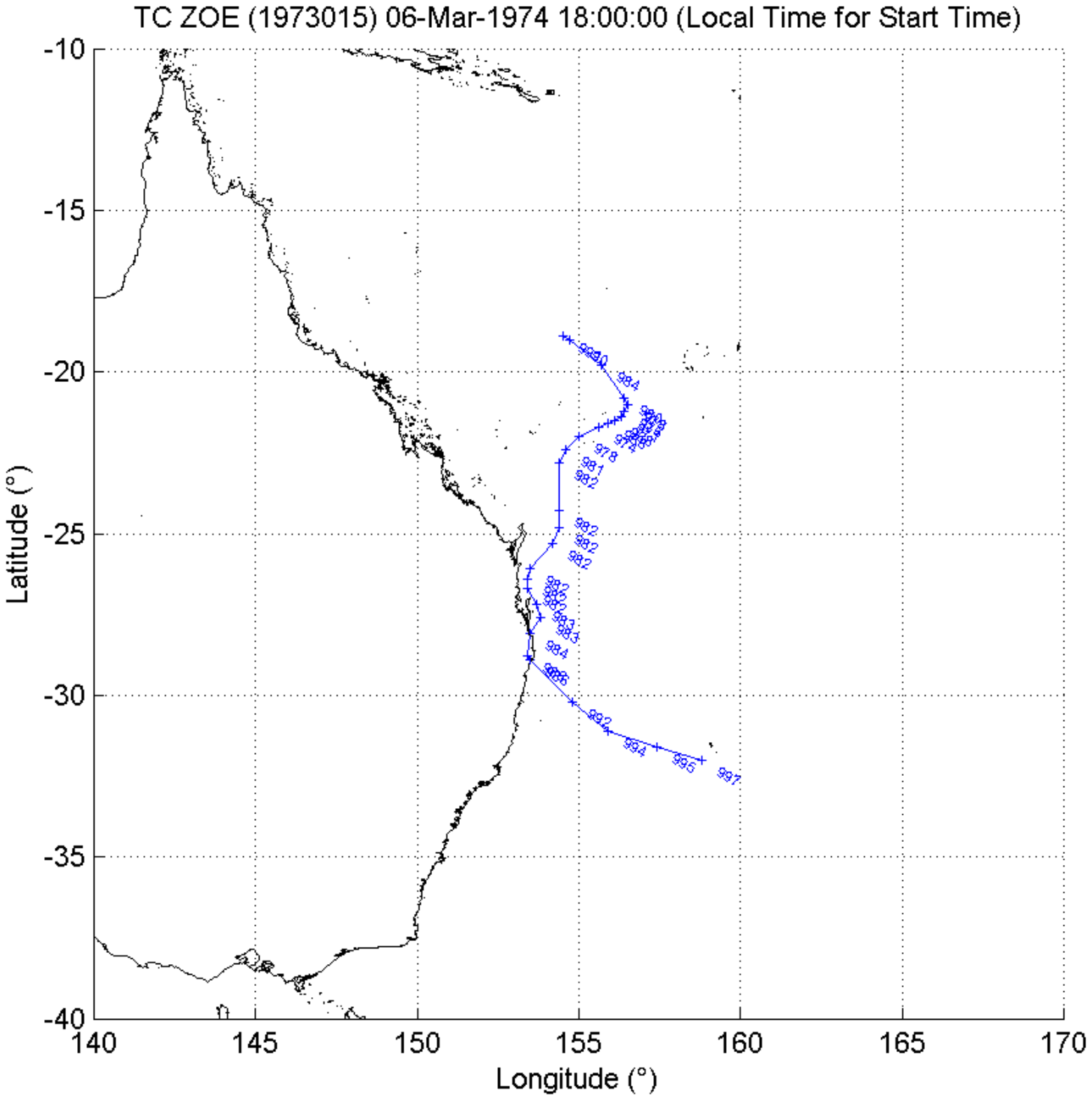
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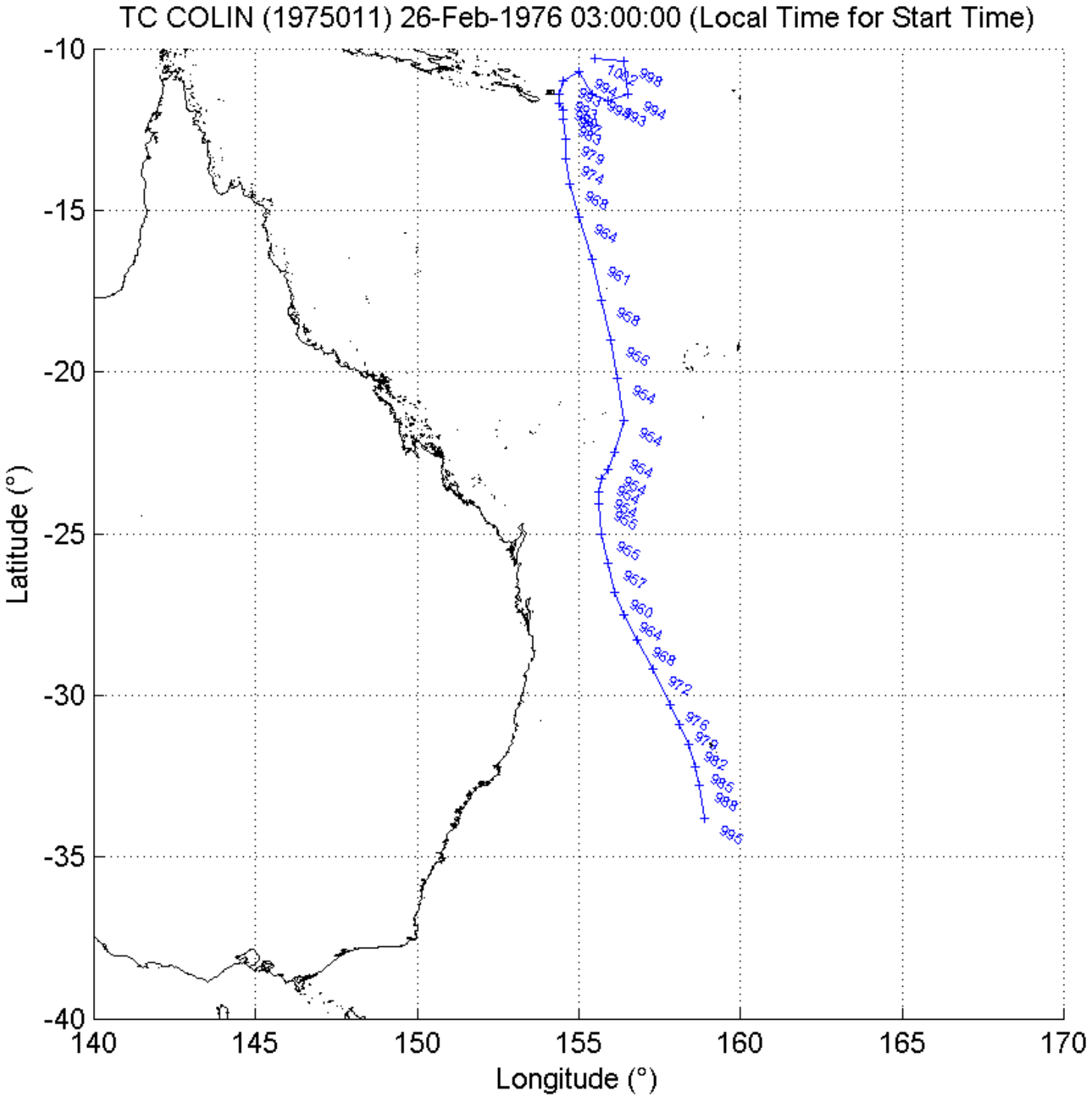
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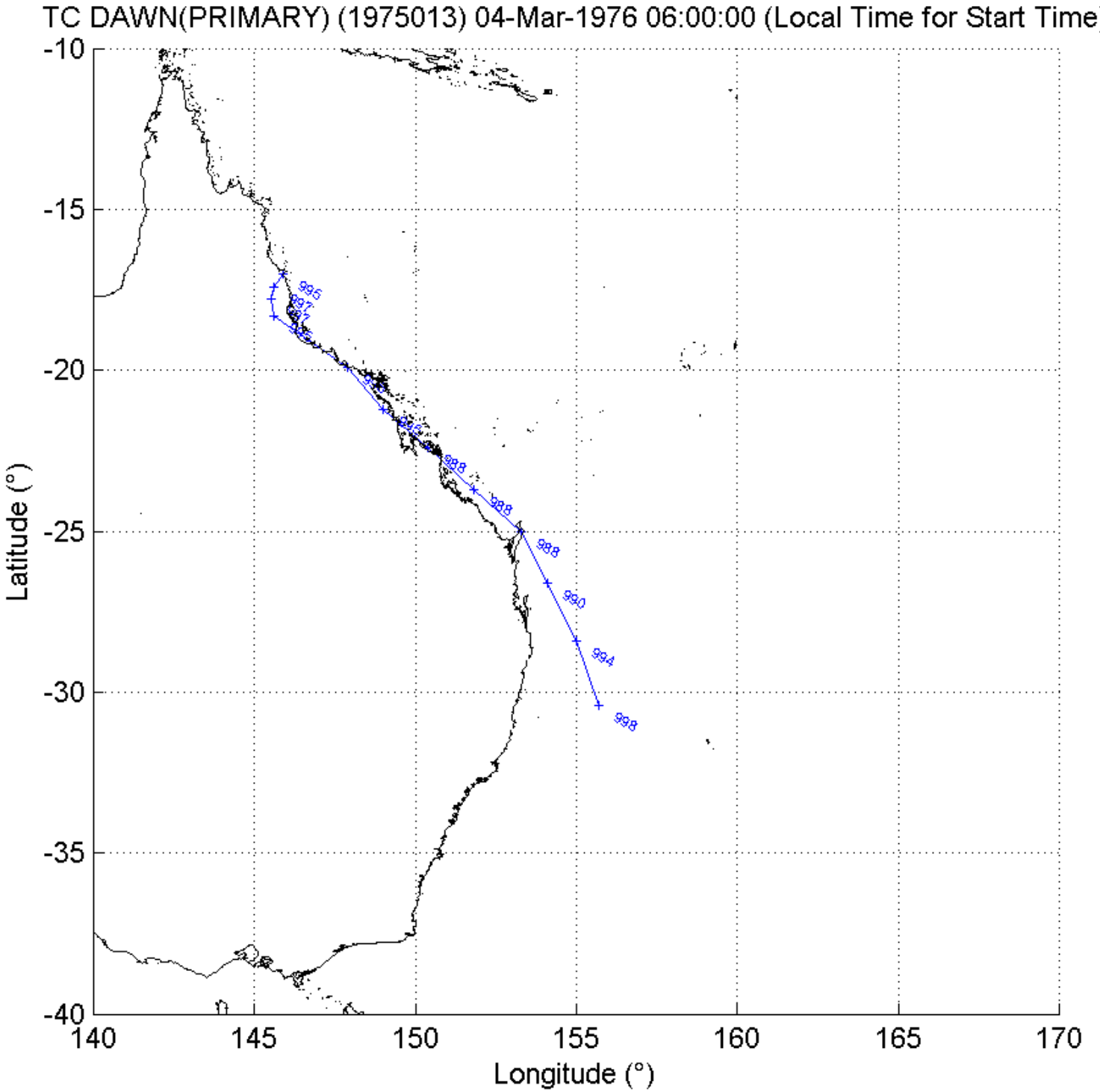
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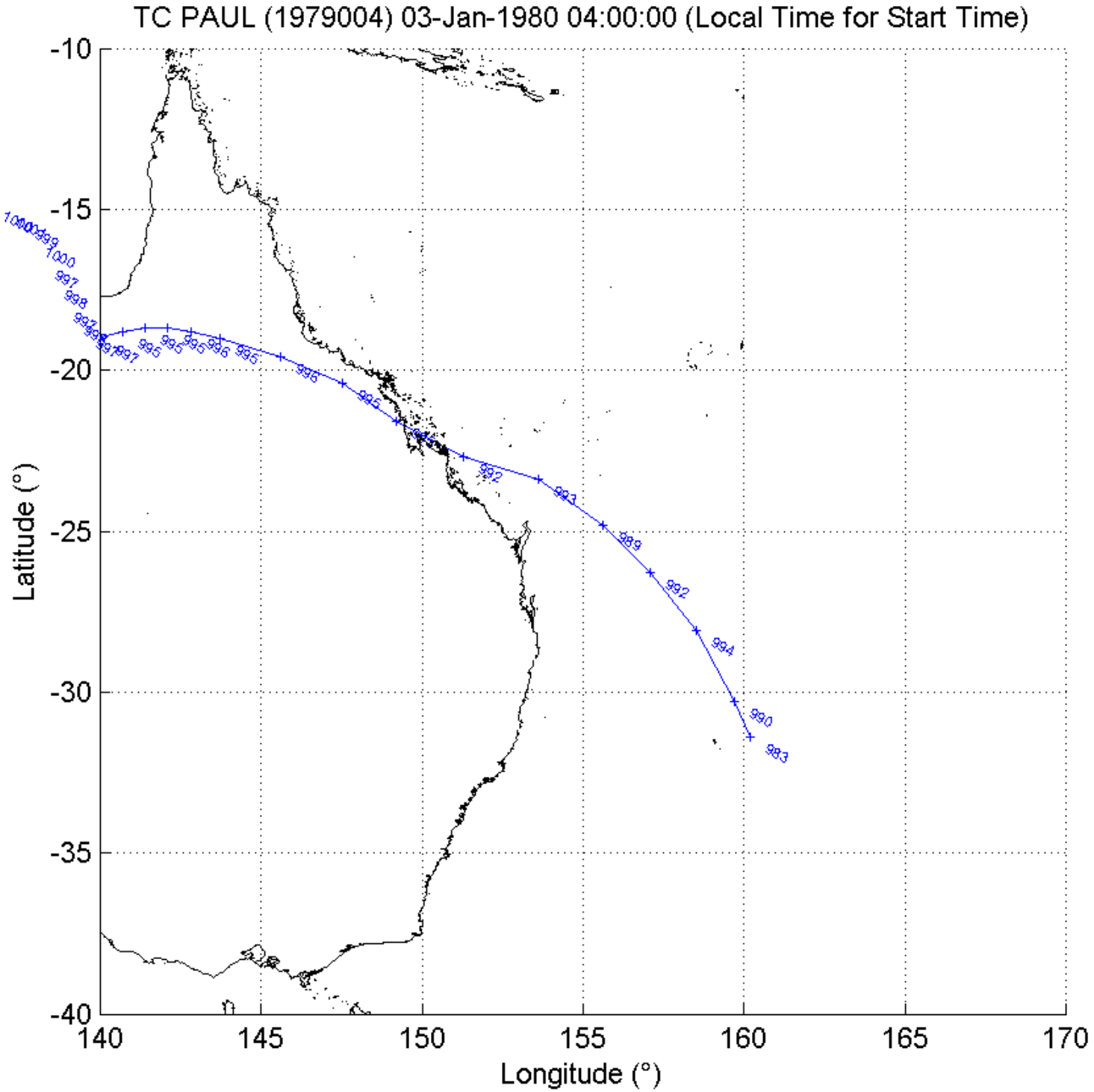
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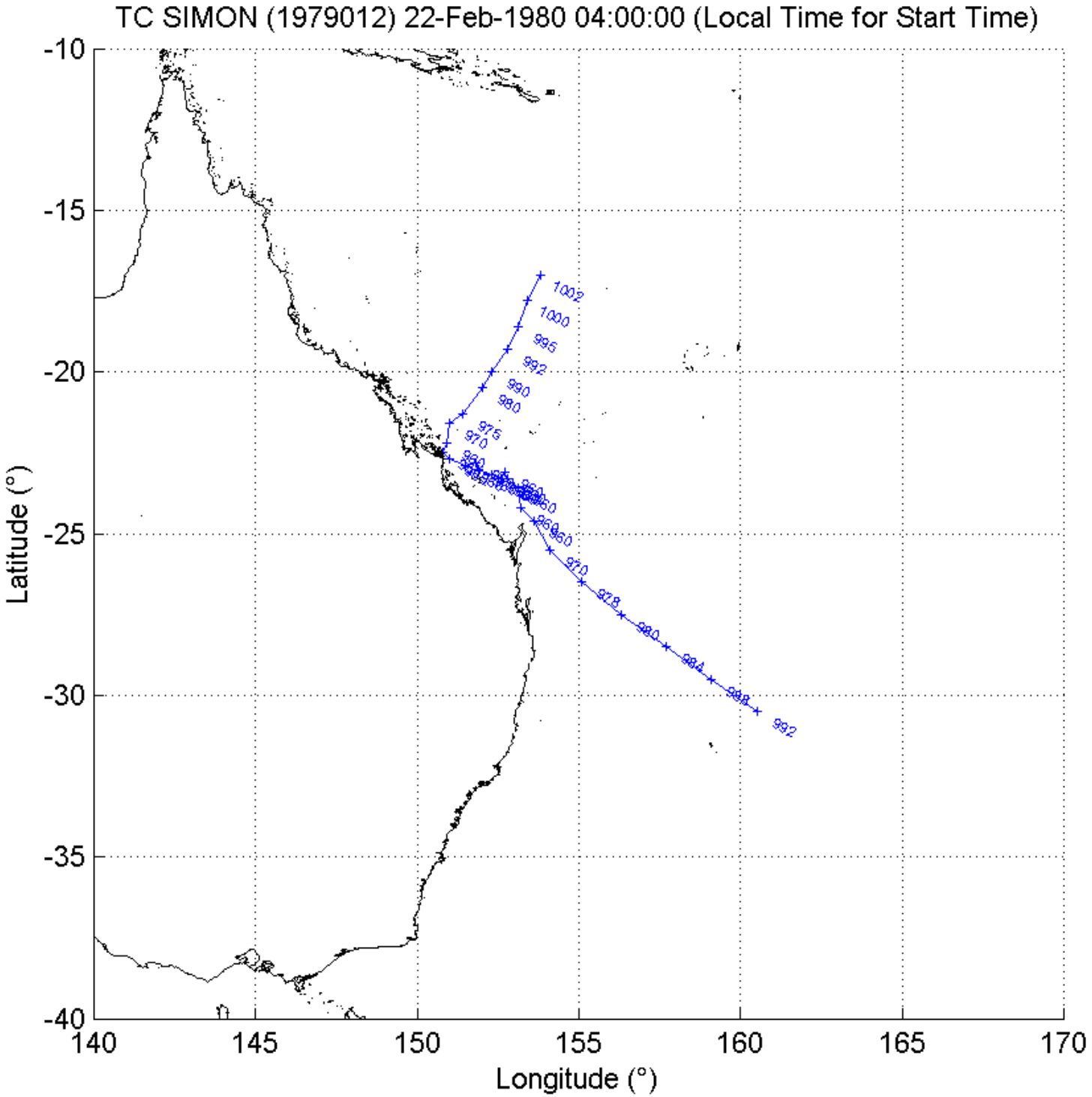
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APPENDIX J

Cyclonic Design Water Level and Concurrent Wave Parameters - Excluding Greenhouse Related Climate Change

				Water Level mAHD 20yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	1.62	1.62		0.96	2.5	153	0							
506913	6982622	PineRiver-001	MBC-001	1.92	1.78	0.14	1.07	2.6	128	0	2.09	2.52	2.42	3.31	2.48	3.46	1.55
507065	6983136	PineRiver-002	MBC-002	1.95	1.81	0.14	1.11	2.7	135	0	2.13	2.59	2.47	3.41	2.54	3.58	1.58
507237	6983516	PineRiver-003	MBC-003	1.94	1.81	0.13	1.03	2.6	126	0	2.11	2.53	2.42	3.30	2.49	3.45	1.58
507198	6984049	PineRiver-004	MBC-004	1.97	1.85	0.12	0.92	2.5	135	0	2.12	2.50	2.40	3.19	2.46	3.33	1.62
506913	6984334	PineRiver-005	MBC-005	2.03	1.92	0.11	0.83	2.2	132	0	2.16	2.50	2.40	3.10	2.45	3.22	1.53
507046	6984696	PineRiver-006	MBC-006	2.08	1.97	0.11	0.85	2.2	143	0	2.21	2.57	2.47	3.19	2.51	3.29	1.49
507522	6984334	PineRiver-007	MBC-007	1.98	1.85	0.13	0.95	2.5	146	0	2.12	2.52	2.42	3.24	2.48	3.38	1.63
507769	6984239	PineRiver-008	MBC-008	1.96	1.80	0.16	1.22	2.9	127	0	2.15	2.67	2.52	3.59	2.59	3.78	1.65
506179	6982661	PineRiver-009	MBC-009	2.03	1.92	0.11	0.83	2.2	132	0	2.16	2.50	2.40	3.10	2.45	3.22	1.53
504927	6992513	Caboolture-001	MBC-010	1.94	1.79	0.15	1.02	3.0	66	0	2.08	2.54	2.39	3.36	2.46	3.54	1.82
504270	6992575	Caboolture-002	MBC-011	1.93	1.80	0.13	0.93	2.7	70	0	2.06	2.47	2.35	3.20	2.41	3.35	1.73
503633	6992841	Caboolture-003	MBC-012	1.99	1.87	0.12	0.92	2.5	107	0	2.13	2.52	2.42	3.23	2.48	3.37	1.65
503346	6993519	Caboolture-004	MBC-013	2.04	1.91	0.13	1.00	2.5	131	0	2.20	2.60	2.51	3.33	2.57	3.48	1.53
503613	6994402	Caboolture-005	MBC-014	2.08	1.96	0.12	0.91	2.4	132	0	2.22	2.60	2.50	3.27	2.55	3.40	1.56
504658	6996186	Caboolture-009	MBC-015	2.08	1.94	0.14	1.07	2.8	132	0	2.25	2.70	2.57	3.52	2.64	3.69	1.66
504477	6996546	Caboolture-010	MBC-016	2.14	2.01	0.13	0.99	2.5	132	0	2.30	2.70	2.60	3.43	2.66	3.57	1.56
504774	6997055	Caboolture-012	MBC-017	2.11	1.98	0.13	0.96	2.7	116	0	2.25	2.67	2.55	3.42	2.61	3.58	1.73
505039	6997331	Caboolture-013	MBC-018	2.11	1.97	0.14	0.91	2.9	124	0	2.23	2.65	2.51	3.40	2.57	3.55	1.89
505442	6998582	Caboolture-016	MBC-019	2.16	2.01	0.15	1.07	2.9	124	0	2.31	2.79	2.64	3.64	2.71	3.82	1.77
505671	6999062	Caboolture-017	MBC-020	2.17	2.02	0.15	0.97	3.1	123	0	2.29	2.75	2.59	3.56	2.65	3.74	1.95
505909	6999567	Caboolture-018	MBC-021	2.19	2.03	0.16	1.04	3.2	124	0	2.31	2.81	2.63	3.68	2.70	3.86	1.94
506361	7000127	Caboolture-019	MBC-022	2.21	2.05	0.16	1.12	3.0	144	0	2.37	2.86	2.71	3.74	2.78	3.92	1.74
506813	7000580	Caboolture-020	MBC-023	2.15	2.00	0.15	1.04	2.9	142	0	2.29	2.76	2.61	3.58	2.68	3.75	1.76
507266	7001010	Caboolture-021	MBC-024	2.15	1.97	0.18	1.17	3.4	123	0	2.28	2.85	2.63	3.84	2.71	4.05	1.96
507718	7001452	Caboolture-022	MBC-025	2.16	1.98	0.18	1.23	3.4	143	0	2.31	2.90	2.68	3.91	2.75	4.13	1.90
508289	7001850	Caboolture-023	MBC-026	2.15	1.96	0.19	1.25	3.5	145	0	2.29	2.90	2.66	3.94	2.74	4.16	1.93
508903	7002206	Caboolture-024	MBC-027	2.14	1.94	0.20	1.29	3.6	146	0	2.28	2.92	2.66	4.01	2.74	4.25	1.99
509355	7002550	Caboolture-025	MBC-028	2.12	1.93	0.19	1.28	3.6	149	0	2.27	2.90	2.64	3.98	2.72	4.21	1.98
509894	7002744	Caboolture-026	MBC-029	2.10	1.90	0.20	1.34	3.7	155	0	2.25	2.91	2.64	4.05	2.72	4.29	1.98
510475	7002852	Caboolture-027	MBC-030	2.08	1.88	0.20	1.30	3.6	155	0	2.22	2.87	2.60	3.97	2.69	4.21	1.99
511067	7003003	Caboolture-028	MBC-031	2.05	1.87	0.18	1.20	3.4	164	0	2.19	2.77	2.55	3.77	2.63	3.98	1.93
511477	7003251	Caboolture-029	MBC-032	2.05	1.90	0.15	1.06	2.9	145	0	2.20	2.67	2.53	3.50	2.59	3.67	1.73
512112	7003326	Caboolture-030	MBC-033	2.03	1.87	0.16	1.17	3.0	142	0	2.20	2.72	2.56	3.64	2.63	3.83	1.74
512694	7003455	Caboolture-031	MBC-034	2.01	1.85	0.16	1.11	3.2	176	0	2.16	2.67	2.49	3.58	2.56	3.77	1.87
513275	7003412	Caboolture-032	MBC-035	2.00	1.84	0.16	1.12	3.0	170	0	2.16	2.65	2.50	3.54	2.57	3.72	1.75
513911	7003746	Caboolture-033	MBC-036	1.99	1.86	0.13	1.02	2.5	128	0	2.16	2.57	2.47	3.32	2.53	3.46	1.54
514481	7004446	Caboolture-034	MBC-037	1.89	1.76	0.13	0.98	2.5	124	0	2.04	2.45	2.34	3.18	2.40	3.32	1.58
516248	7002647	Caboolture-038	MBC-038	1.90	1.66	0.24	1.54	4.1	187	0	2.04	2.84	2.48	4.17	2.57	4.47	2.06
517280	7002397	Caboolture-040	MBC-039	1.84	1.63	0.21	1.43	3.6	168	0	2.01	2.70	2.42	3.88	2.51	4.13	1.90
519611	7002925	Caboolture-044	MBC-040	1.84	1.57	0.27	1.84	4.2	126	0	2.03	2.95	2.54	4.50	2.65	4.83	1.95
520367	7003619	Caboolture-046	MBC-041	1.87	1.55	0.32	2.22	4.7	108	0	2.08	3.22	2.67	5.09	2.80	5.49	1.96
520284	7006303	Caboolture-051	MBC-042	1.88	1.54	0.34	2.08	5.6	53	0	2.00	3.23	2.53	5.20	2.66	5.66	2.42
516778	7013518	Caboolture-060	MBC-043	1.95	1.56	0.39	2.40	6.0	59	0	2.08	3.50	2.69	5.77	2.83	6.30	2.41
516320	7014796	Caboolture-061	MBC-044	1.95	1.57	0.38	2.26	6.0	59	0	2.06	3.42	2.63	5.60	2.77	6.11	2.50
507667	7015461	Caboolture-067	MBC-045	2.17	2.04	0.13	1.02	2.5	196	0	2.34	2.75	2.65	3.49	2.71	3.64	1.53
508591	7014764	Caboolture-069	MBC-046	2.15	2.01	0.14	1.13	2.6	210	0	2.34	2.79	2.68	3.62	2.75	3.78	1.53
509101	7014442	Caboolture-070	MBC-047	2.12	1.97	0.15	1.18	2.7	192	0	2.31	2.80	2.67	3.67	2.74	3.84	1.58
509543	7013236	Caboolture-072	MBC-048	2.03	1.89	0.14	1.09	2.7	209	0	2.20	2.66	2.54	3.47	2.60	3.63	1.60
509623	7012592	Caboolture-073	MBC-049	2.00	1.85	0.15	1.13	2.8	209	0	2.17	2.65	2.52	3.50	2.59	3.67	1.62
510253	7011212	Caboolture-075	MBC-050	1.93	1.78	0.15	1.22	2.7	197	0	2.13	2.63	2.50	3.52	2.58	3.69	1.54
510669	7010917	Caboolture-076	MBC-051	1.88	1.75	0.13	0.98	2.4	204	0	2.03	2.43	2.33	3.14	2.39	3.28	1.53
511138	7010769	Caboolture-077	MBC-052	1.89	1.75	0.14	1.04	2.6	169	0	2.05	2.48	2.37	3.26	2.43	3.41	1.59
511701	7010475	Caboolture-078	MBC-053	1.88	1.74	0.14	1.10	2.7	187	0	2.06	2.51	2.39	3.34	2.46	3.50	1.60
512076	7010032	Caboolture-079	MBC-054	1.89	1.73	0.16	1.16	3.0	209	0	2.06	2.57	2.41	3.47	2.49	3.65	1.71
513283	7007901	Caboolture-083	MBC-055	1.81	1.64	0.17	1.29	2.9	223	0	2.01	2.55	2.40	3.51	2.48	3.71	1.60
513390	7007284	Caboolture-084	MBC-056	1.92	1.76	0.16	1.33	2.8	252	0	2.14	2.68	2.55	3.64	2.63	3.83	1.52

				Water Level mAHD 20yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
513444	7006735	Caboolture-085	MBC-057	1.90	1.73	0.17	1.41	2.9	144	0	2.14	2.70	2.56	3.72	2.64	3.92	1.50
514141	7006547	Caboolture-086	MBC-058	1.90	1.73	0.17	1.36	2.8	249	0	2.12	2.68	2.53	3.67	2.60	3.83	1.48
514958	7005756	Caboolture-088	MBC-059	1.86	1.70	0.16	1.28	2.9	255	0	2.07	2.60	2.46	3.54	2.53	3.73	1.57
515374	7005260	Caboolture-089	MBC-060	1.83	1.68	0.15	1.25	2.7	261	0	2.04	2.54	2.42	3.44	2.50	3.62	1.50
514730	7005140	Caboolture-090	MBC-061	1.80	1.68	0.12	1.01	2.3	112	0	1.97	2.37	2.27	3.09	2.32	3.21	1.45
514328	7005394	Caboolture-091	MBC-062	1.82	1.69	0.13	0.94	2.5	108	0	1.96	2.35	2.25	3.06	2.31	3.21	1.62
513269	7006199	Caboolture-093	MBC-063	1.87	1.72	0.15	1.13	2.7	106	0	2.05	2.51	2.39	3.35	2.46	3.51	1.57
511621	7007284	Caboolture-096	MBC-064	1.88	1.74	0.14	1.09	2.5	124	0	2.06	2.50	2.39	3.30	2.44	3.43	1.49
511339	7008048	Caboolture-097	MBC-065	1.89	1.76	0.13	1.03	2.4	47	0	2.06	2.46	2.37	3.19	2.42	3.31	1.45
511648	7008558	Caboolture-098	MBC-066	1.78	1.65	0.13	1.00	2.5	145	0	1.94	2.35	2.25	3.08	2.31	3.22	1.54
511835	7009040	Caboolture-099	MBC-067	1.81	1.68	0.13	1.00	2.5	143	0	1.97	2.38	2.28	3.12	2.34	3.27	1.58
511446	7009456	Caboolture-100	MBC-068	1.84	1.71	0.13	1.01	2.5	138	0	2.00	2.41	2.31	3.15	2.37	3.30	1.54
511058	7009456	Caboolture-101	MBC-069	1.86	1.73	0.13	1.06	2.5	116	0	2.04	2.46	2.36	3.23	2.43	3.38	1.51
510321	7009818	Caboolture-102	MBC-070	1.86	1.73	0.13	0.99	2.5	117	0	2.02	2.42	2.32	3.14	2.38	3.29	1.54
509784	7010233	Caboolture-103	MBC-071	1.86	1.73	0.13	1.04	2.5	141	0	2.03	2.45	2.35	3.20	2.41	3.34	1.50
509369	7010796	Caboolture-104	MBC-072	1.89	1.76	0.13	0.99	2.4	139	0	2.05	2.45	2.35	3.17	2.40	3.31	1.53
509034	7011198	Caboolture-105	MBC-073	1.99	1.85	0.14	1.11	2.6	43	0	2.17	2.62	2.51	3.42	2.58	3.58	1.51
508833	7011587	Caboolture-106	MBC-074	1.94	1.81	0.13	1.00	2.5	44	0	2.10	2.51	2.41	3.24	2.47	3.38	1.54
508752	7011869	Caboolture-107	MBC-075	1.91	1.77	0.14	1.17	2.5	20	0	2.11	2.57	2.47	3.40	2.53	3.53	1.45
508471	7012110	Caboolture-108	MBC-076	1.92	1.79	0.13	1.11	2.4	39	0	2.11	2.54	2.45	3.33	2.50	3.46	1.45
508926	7012177	Caboolture-109	MBC-077	1.94	1.81	0.13	1.02	2.5	152	0	2.11	2.52	2.42	3.28	2.48	3.43	1.57
509020	7012767	Caboolture-110	MBC-078	1.99	1.85	0.14	1.09	2.6	147	0	2.16	2.61	2.50	3.42	2.56	3.58	1.58
508565	7013276	Caboolture-111	MBC-079	2.03	1.91	0.12	0.97	2.3	138	0	2.19	2.58	2.48	3.29	2.53	3.40	1.48
508069	7013611	Caboolture-112	MBC-080	2.17	2.02	0.15	1.19	2.6	14	0	2.37	2.85	2.73	3.71	2.79	3.86	1.48
507667	7013960	Caboolture-113	MBC-081	2.20	2.07	0.13	1.10	2.4	35	0	2.39	2.82	2.72	3.60	2.78	3.73	1.45
507157	7014067	Caboolture-114	MBC-082	2.24	2.11	0.13	1.07	2.5	39	0	2.42	2.85	2.75	3.63	2.80	3.76	1.48
507171	7014777	Caboolture-115	MBC-083	2.18	2.04	0.14	1.09	2.5	39	0	2.36	2.80	2.69	3.60	2.74	3.73	1.49
507063	7015595	Caboolture-116	MBC-084	2.18	2.05	0.13	0.99	2.4	148	0	2.34	2.74	2.64	3.46	2.69	3.60	1.53
509121	6984944	Redcliffe-005	MBC-085	1.94	1.77	0.17	1.19	3.1	151	0	2.10	2.64	2.46	3.58	2.54	3.78	1.77
509533	6984891	Redcliffe-006	MBC-086	1.90	1.74	0.16	1.15	2.9	192	0	2.07	2.56	2.42	3.45	2.49	3.63	1.68
509892	6984691	Redcliffe-007	MBC-087	1.87	1.71	0.16	1.13	2.9	193	0	2.03	2.52	2.38	3.40	2.45	3.58	1.71
510464	6984279	Redcliffe-009	MBC-088	1.86	1.66	0.20	1.30	3.6	129	0	2.00	2.65	2.38	3.75	2.46	3.99	1.99
510783	6984638	Redcliffe-010	MBC-089	1.85	1.63	0.22	1.57	3.7	126	0	2.04	2.79	2.49	4.06	2.59	4.33	1.84
510969	6985516	Redcliffe-012	MBC-090	1.88	1.64	0.24	1.64	3.9	115	0	2.06	2.86	2.52	4.21	2.62	4.49	1.88
511076	6985889	Redcliffe-013	MBC-091	1.88	1.64	0.24	1.57	4.0	118	0	2.04	2.83	2.48	4.15	2.57	4.44	1.97
511488	6987365	Redcliffe-016	MBC-092	1.92	1.64	0.28	1.84	4.5	114	0	2.08	3.05	2.58	4.64	2.69	4.99	2.05
511768	6988017	Redcliffe-018	MBC-093	1.91	1.62	0.29	1.88	4.6	114	0	2.07	3.07	2.58	4.71	2.69	5.07	2.10
511648	6988496	Redcliffe-019	MBC-094	1.89	1.63	0.26	1.57	4.6	111	0	2.00	2.88	2.43	4.31	2.53	4.64	2.27
511741	6989254	Redcliffe-021	MBC-095	1.93	1.63	0.30	1.95	4.6	117	0	2.10	3.13	2.62	4.81	2.74	5.18	2.06
511874	6990079	Redcliffe-023	MBC-096	1.91	1.62	0.29	1.89	4.7	120	0	2.07	3.09	2.57	4.75	2.69	5.12	2.13
511648	6990451	Redcliffe-024	MBC-097	1.89	1.63	0.26	1.63	4.4	109	0	2.02	2.90	2.47	4.35	2.57	4.68	2.17
511661	6991063	Redcliffe-025	MBC-098	1.91	1.64	0.27	1.74	4.3	118	0	2.07	2.97	2.55	4.48	2.65	4.81	2.05
511568	6992087	Redcliffe-027	MBC-099	1.91	1.64	0.27	1.82	4.3	114	0	2.09	3.02	2.59	4.57	2.70	4.90	2.00
511475	6992513	Redcliffe-028	MBC-100	1.86	1.64	0.22	1.51	3.7	124	0	2.03	2.77	2.47	4.01	2.56	4.28	1.90
510916	6992713	Redcliffe-029	MBC-101	1.80	1.63	0.17	1.27	3.0	258	0	1.99	2.54	2.38	3.51	2.46	3.71	1.67
510531	6992472	Redcliffe-030	MBC-102	1.80	1.63	0.17	1.27	2.9	261	0	1.99	2.53	2.38	3.49	2.46	3.68	1.62
510161	6992164	Redcliffe-031	MBC-103	1.82	1.64	0.18	1.44	3.0	258	0	2.05	2.65	2.49	3.71	2.57	3.92	1.56
509833	6991712	Redcliffe-032	MBC-104	1.77	1.64	0.13	1.08	2.4	231	0	1.95	2.38	2.28	3.16	2.33	3.29	1.47
509525	6991322	Redcliffe-033	MBC-105	1.77	1.64	0.13	1.11	2.4	232	0	1.96	2.39	2.30	3.17	2.35	3.30	1.44
509155	6991199	Redcliffe-034	MBC-106	1.80	1.65	0.15	1.10	2.9	42	0	1.96	2.44	2.30	3.29	2.37	3.47	1.70
508478	6991343	Redcliffe-035	MBC-107	1.80	1.66	0.14	0.99	2.8	57	0	1.94	2.38	2.25	3.16	2.31	3.32	1.74
507965	6991487	Redcliffe-036	MBC-108	1.83	1.68	0.15	1.02	2.9	47	0	1.97	2.43	2.28	3.25	2.35	3.42	1.81
507205	6991589	Redcliffe-037	MBC-109	1.85	1.70	0.15	1.03	2.9	50	0	1.99	2.45	2.31	3.28	2.37	3.45	1.79
506548	6991836	Redcliffe-038	MBC-110	1.87	1.72	0.15	1.06	3.0	51	0	2.02	2.50	2.34	3.36	2.41	3.54	1.83
505830	6992082	Redcliffe-039	MBC-111	1.90	1.74	0.16	1.10	3.1	53	0	2.05	2.55	2.38	3.45	2.45	3.63	1.85
505358	6992267	Redcliffe-040	MBC-112	1.91	1.76	0.15	1.01	3.0	59	0	2.04	2.51	2.35	3.33	2.42	3.51	1.86

				Water Level mAHD 50yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	1.70	1.70		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.05	1.91	0.14	1.07	2.6	128	0	2.22	2.65	2.55	3.44	2.61	3.59	1.55
507065	6983136	PineRiver-002	MBC-002	2.08	1.94	0.14	1.11	2.7	135	0	2.26	2.72	2.60	3.54	2.67	3.71	1.58
507237	6983516	PineRiver-003	MBC-003	2.07	1.94	0.13	1.03	2.6	126	0	2.24	2.66	2.55	3.43	2.62	3.58	1.58
507198	6984049	PineRiver-004	MBC-004	2.10	1.98	0.12	0.96	2.4	129	0	2.26	2.65	2.55	3.35	2.61	3.49	1.54
506913	6984334	PineRiver-005	MBC-005	2.19	2.08	0.11	0.84	2.2	130	0	2.32	2.67	2.57	3.29	2.61	3.39	1.50
507046	6984696	PineRiver-006	MBC-006	2.25	2.14	0.11	0.86	2.2	139	0	2.39	2.74	2.64	3.36	2.68	3.46	1.47
507522	6984334	PineRiver-007	MBC-007	2.12	1.99	0.13	0.98	2.5	134	0	2.27	2.68	2.57	3.40	2.63	3.55	1.58
507769	6984239	PineRiver-008	MBC-008	2.08	1.92	0.16	1.22	2.9	127	0	2.27	2.79	2.64	3.71	2.71	3.90	1.65
506179	6982661	PineRiver-009	MBC-009	2.19	2.08	0.11	0.84	2.2	130	0	2.32	2.67	2.57	3.29	2.61	3.39	1.50
504927	6992513	Caboolture-001	MBC-010	2.06	1.91	0.15	1.02	2.9	75	0	2.20	2.65	2.51	3.47	2.58	3.64	1.78
504270	6992575	Caboolture-002	MBC-011	2.05	1.93	0.12	0.95	2.3	126	0	2.20	2.60	2.49	3.30	2.53	3.41	1.50
503633	6992841	Caboolture-003	MBC-012	2.14	2.02	0.12	0.99	2.4	127	0	2.31	2.72	2.61	3.44	2.65	3.56	1.49
503346	6993519	Caboolture-004	MBC-013	2.20	2.07	0.13	1.00	2.5	131	0	2.36	2.76	2.67	3.49	2.73	3.64	1.53
503613	6994402	Caboolture-005	MBC-014	2.25	2.13	0.12	0.91	2.4	132	0	2.39	2.77	2.67	3.44	2.72	3.57	1.56
504658	6996186	Caboolture-009	MBC-015	2.24	2.10	0.14	1.07	2.8	132	0	2.41	2.86	2.73	3.68	2.80	3.85	1.66
504477	6996546	Caboolture-010	MBC-016	2.32	2.19	0.13	0.99	2.5	132	0	2.48	2.88	2.78	3.61	2.84	3.75	1.56
504774	6997055	Caboolture-012	MBC-017	2.28	2.15	0.13	1.00	2.5	132	0	2.44	2.85	2.75	3.59	2.81	3.74	1.57
505039	6997331	Caboolture-013	MBC-018	2.27	2.14	0.13	0.95	2.7	132	0	2.41	2.82	2.70	3.56	2.76	3.71	1.71
505442	6998582	Caboolture-016	MBC-019	2.33	2.18	0.15	1.10	2.8	130	0	2.49	2.96	2.83	3.80	2.90	3.97	1.64
505671	6999062	Caboolture-017	MBC-020	2.34	2.20	0.14	1.01	2.8	74	0	2.49	2.93	2.80	3.72	2.86	3.88	1.73
505909	6999567	Caboolture-018	MBC-021	2.37	2.22	0.15	1.08	3.0	130	0	2.52	3.01	2.86	3.86	2.92	4.04	1.77
506361	7000127	Caboolture-019	MBC-022	2.39	2.24	0.15	1.14	2.9	135	0	2.56	3.05	2.91	3.93	2.98	4.11	1.67
506813	7000580	Caboolture-020	MBC-023	2.32	2.17	0.15	1.06	2.8	132	0	2.47	2.93	2.80	3.76	2.86	3.93	1.71
507266	7001010	Caboolture-021	MBC-024	2.31	2.14	0.17	1.21	3.2	128	0	2.47	3.03	2.84	4.01	2.92	4.21	1.83
507718	7001452	Caboolture-022	MBC-025	2.33	2.15	0.18	1.26	3.3	134	0	2.49	3.08	2.87	4.11	2.95	4.32	1.85
508289	7001850	Caboolture-023	MBC-026	2.32	2.13	0.19	1.27	3.4	135	0	2.47	3.07	2.85	4.11	2.93	4.33	1.87
508903	7002206	Caboolture-024	MBC-027	2.29	2.09	0.20	1.31	3.5	137	0	2.44	3.07	2.82	4.16	2.91	4.40	1.93
509355	7002550	Caboolture-025	MBC-028	2.27	2.08	0.19	1.29	3.5	139	0	2.42	3.05	2.80	4.12	2.89	4.35	1.92
509894	7002744	Caboolture-026	MBC-029	2.24	2.04	0.20	1.35	3.6	144	0	2.40	3.05	2.79	4.17	2.87	4.41	1.92
510475	7002852	Caboolture-027	MBC-030	2.21	2.02	0.19	1.31	3.5	144	0	2.37	3.00	2.75	4.09	2.84	4.33	1.93
511067	7003003	Caboolture-028	MBC-031	2.18	2.00	0.18	1.20	3.4	163	0	2.32	2.90	2.68	3.89	2.76	4.11	1.92
511477	7003251	Caboolture-029	MBC-032	2.19	2.04	0.15	1.06	2.9	148	0	2.34	2.81	2.67	3.65	2.73	3.82	1.75
512112	7003326	Caboolture-030	MBC-033	2.17	2.01	0.16	1.18	3.0	144	0	2.34	2.87	2.70	3.79	2.78	3.99	1.75
512694	7003455	Caboolture-031	MBC-034	2.14	1.98	0.16	1.12	3.1	165	0	2.29	2.80	2.63	3.70	2.70	3.89	1.81
513275	7003412	Caboolture-032	MBC-035	2.13	1.97	0.16	1.12	3.0	177	0	2.29	2.79	2.63	3.68	2.70	3.86	1.78
513911	7003746	Caboolture-033	MBC-036	2.12	1.99	0.13	1.02	2.5	128	0	2.29	2.70	2.60	3.45	2.66	3.59	1.54
514481	7004446	Caboolture-034	MBC-037	2.00	1.87	0.13	0.98	2.5	124	0	2.15	2.56	2.45	3.29	2.51	3.43	1.58
516248	7002647	Caboolture-038	MBC-038	1.99	1.75	0.24	1.54	4.1	187	0	2.13	2.93	2.57	4.26	2.66	4.56	2.06
517280	7002397	Caboolture-040	MBC-039	1.91	1.70	0.21	1.43	3.7	176	0	2.07	2.77	2.49	3.96	2.58	4.21	1.92
519611	7002925	Caboolture-044	MBC-040	1.90	1.62	0.28	1.93	4.3	120	0	2.10	3.06	2.63	4.66	2.74	5.01	1.91
520367	7003619	Caboolture-046	MBC-041	1.92	1.60	0.32	2.22	4.7	108	0	2.13	3.27	2.72	5.14	2.85	5.54	1.96
520284	7006303	Caboolture-051	MBC-042	1.93	1.59	0.34	2.08	5.6	53	0	2.05	3.28	2.58	5.25	2.71	5.71	2.42
516778	7013518	Caboolture-060	MBC-043	2.01	1.62	0.39	2.40	6.0	59	0	2.14	3.56	2.75	5.83	2.89	6.36	2.41
516320	7014796	Caboolture-061	MBC-044	2.00	1.62	0.38	2.26	6.0	59	0	2.11	3.47	2.68	5.65	2.82	6.16	2.50
507667	7015461	Caboolture-067	MBC-045	2.34	2.21	0.13	1.02	2.4	210	0	2.50	2.91	2.81	3.65	2.87	3.80	1.51
508591	7014764	Caboolture-069	MBC-046	2.32	2.17	0.15	1.19	2.6	223	0	2.52	2.99	2.88	3.85	2.95	4.02	1.51
509101	7014442	Caboolture-070	MBC-047	2.28	2.12	0.16	1.23	2.8	200	0	2.47	2.98	2.85	3.88	2.92	4.06	1.55
509543	7013236	Caboolture-072	MBC-048	2.18	2.03	0.15	1.14	2.7	214	0	2.36	2.83	2.71	3.68	2.78	3.84	1.58
509623	7012592	Caboolture-073	MBC-049	2.13	1.98	0.15	1.18	2.8	221	0	2.32	2.81	2.68	3.68	2.75	3.86	1.58
510253	7011212	Caboolture-075	MBC-050	2.04	1.89	0.15	1.22	2.7	197	0	2.24	2.74	2.61	3.63	2.69	3.80	1.54
510669	7010917	Caboolture-076	MBC-051	1.99	1.86	0.13	0.98	2.4	204	0	2.14	2.54	2.44	3.25	2.50	3.39	1.53
511138	7010769	Caboolture-077	MBC-052	2.00	1.86	0.14	1.05	2.6	156	0	2.16	2.60	2.48	3.38	2.55	3.53	1.58
511701	7010475	Caboolture-078	MBC-053	1.99	1.85	0.14	1.11	2.7	193	0	2.17	2.63	2.51	3.46	2.58	3.62	1.59
512076	7010032	Caboolture-079	MBC-054	1.99	1.83	0.16	1.20	3.0	214	0	2.17	2.69	2.54	3.62	2.61	3.81	1.69
513283	7007901	Caboolture-083	MBC-055	1.89	1.72	0.17	1.29	2.9	223	0	2.09	2.63	2.48	3.59	2.56	3.79	1.60
513390	7007284	Caboolture-084	MBC-056	2.03	1.87	0.16	1.33	2.8	252	0	2.25	2.79	2.66	3.75	2.74	3.94	1.52

				Water Level mAHD 50yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
513444	7006735	Caboolture-085	MBC-057	2.00	1.83	0.17	1.41	2.9	144	0	2.24	2.80	2.66	3.82	2.74	4.02	1.50
514141	7006547	Caboolture-086	MBC-058	2.00	1.83	0.17	1.36	2.8	249	0	2.22	2.78	2.63	3.77	2.70	3.93	1.48
514958	7005756	Caboolture-088	MBC-059	1.94	1.78	0.16	1.28	2.9	255	0	2.15	2.68	2.54	3.62	2.61	3.81	1.57
515374	7005260	Caboolture-089	MBC-060	1.91	1.76	0.15	1.25	2.7	261	0	2.12	2.62	2.50	3.52	2.58	3.70	1.50
514730	7005140	Caboolture-090	MBC-061	1.88	1.76	0.12	1.01	2.3	112	0	2.05	2.45	2.35	3.17	2.40	3.29	1.45
514328	7005394	Caboolture-091	MBC-062	1.90	1.77	0.13	0.94	2.5	108	0	2.04	2.43	2.33	3.14	2.39	3.29	1.62
513269	7006199	Caboolture-093	MBC-063	1.97	1.82	0.15	1.13	2.7	106	0	2.15	2.61	2.49	3.45	2.56	3.61	1.57
511621	7007284	Caboolture-096	MBC-064	1.98	1.84	0.14	1.09	2.5	124	0	2.16	2.60	2.49	3.40	2.54	3.53	1.49
511339	7008048	Caboolture-097	MBC-065	2.00	1.87	0.13	1.03	2.4	47	0	2.17	2.57	2.48	3.30	2.53	3.42	1.45
511648	7008558	Caboolture-098	MBC-066	1.85	1.72	0.13	1.00	2.5	145	0	2.01	2.42	2.32	3.15	2.38	3.29	1.54
511835	7009040	Caboolture-099	MBC-067	1.89	1.76	0.13	1.00	2.5	143	0	2.05	2.46	2.36	3.20	2.42	3.35	1.58
511446	7009456	Caboolture-100	MBC-068	1.95	1.81	0.14	1.04	2.6	120	0	2.11	2.54	2.43	3.31	2.49	3.46	1.57
511058	7009456	Caboolture-101	MBC-069	1.96	1.83	0.13	1.06	2.5	116	0	2.14	2.56	2.46	3.33	2.53	3.48	1.51
510321	7009818	Caboolture-102	MBC-070	1.96	1.83	0.13	0.99	2.5	117	0	2.12	2.52	2.42	3.24	2.48	3.39	1.54
509784	7010233	Caboolture-103	MBC-071	1.95	1.82	0.13	1.04	2.5	141	0	2.12	2.54	2.44	3.29	2.50	3.43	1.50
509369	7010796	Caboolture-104	MBC-072	2.01	1.87	0.14	1.05	2.6	124	0	2.17	2.60	2.49	3.38	2.56	3.53	1.56
509034	7011198	Caboolture-105	MBC-073	2.12	1.98	0.14	1.11	2.6	43	0	2.30	2.75	2.64	3.55	2.71	3.71	1.51
508833	7011587	Caboolture-106	MBC-074	2.06	1.93	0.13	1.00	2.5	44	0	2.22	2.63	2.53	3.36	2.59	3.50	1.54
508752	7011869	Caboolture-107	MBC-075	2.01	1.87	0.14	1.17	2.5	20	0	2.21	2.67	2.57	3.50	2.63	3.63	1.45
508471	7012110	Caboolture-108	MBC-076	2.03	1.90	0.13	1.11	2.4	39	0	2.22	2.65	2.56	3.44	2.61	3.57	1.45
508926	7012177	Caboolture-109	MBC-077	2.06	1.93	0.13	1.02	2.5	152	0	2.23	2.64	2.54	3.40	2.60	3.55	1.57
509020	7012767	Caboolture-110	MBC-078	2.12	1.98	0.14	1.11	2.7	136	0	2.30	2.76	2.64	3.58	2.71	3.74	1.58
508565	7013276	Caboolture-111	MBC-079	2.17	2.05	0.12	0.98	2.4	132	0	2.33	2.73	2.63	3.44	2.68	3.56	1.48
508069	7013611	Caboolture-112	MBC-080	2.34	2.19	0.15	1.19	2.6	14	0	2.54	3.02	2.90	3.88	2.96	4.03	1.48
507667	7013960	Caboolture-113	MBC-081	2.38	2.25	0.13	1.10	2.4	35	0	2.57	3.00	2.90	3.78	2.96	3.91	1.45
507157	7014067	Caboolture-114	MBC-082	2.42	2.29	0.13	1.07	2.5	39	0	2.60	3.03	2.93	3.81	2.98	3.94	1.48
507171	7014777	Caboolture-116	MBC-083	2.35	2.21	0.14	1.09	2.5	39	0	2.53	2.97	2.86	3.77	2.91	3.90	1.49
507063	7015595	Caboolture-116	MBC-084	2.36	2.23	0.13	1.03	2.5	129	0	2.53	2.95	2.84	3.70	2.91	3.85	1.54
509121	6984944	Redcliffe-005	MBC-085	2.05	1.88	0.17	1.19	3.1	151	0	2.21	2.75	2.57	3.69	2.65	3.89	1.77
509533	6984891	Redcliffe-006	MBC-086	2.01	1.85	0.16	1.15	2.9	192	0	2.18	2.67	2.53	3.56	2.60	3.74	1.68
509892	6984691	Redcliffe-007	MBC-087	1.97	1.81	0.16	1.13	2.9	193	0	2.13	2.62	2.48	3.50	2.55	3.68	1.71
510464	6984279	Redcliffe-009	MBC-088	1.95	1.75	0.20	1.30	3.6	129	0	2.09	2.74	2.47	3.84	2.55	4.08	1.99
510783	6984638	Redcliffe-010	MBC-089	1.94	1.72	0.22	1.57	3.7	126	0	2.13	2.88	2.58	4.15	2.68	4.42	1.84
510969	6985516	Redcliffe-012	MBC-090	1.96	1.72	0.24	1.64	3.9	115	0	2.14	2.94	2.60	4.29	2.70	4.57	1.88
511076	6985889	Redcliffe-013	MBC-091	1.96	1.72	0.24	1.57	4.0	118	0	2.12	2.91	2.56	4.23	2.65	4.52	1.97
511488	6987365	Redcliffe-016	MBC-092	2.00	1.72	0.28	1.84	4.5	114	0	2.16	3.13	2.66	4.72	2.77	5.07	2.05
511768	6988017	Redcliffe-018	MBC-093	1.98	1.69	0.29	1.88	4.6	114	0	2.14	3.14	2.65	4.78	2.76	5.14	2.10
511648	6988496	Redcliffe-019	MBC-094	1.97	1.71	0.26	1.57	4.6	111	0	2.08	2.96	2.51	4.39	2.61	4.72	2.27
511741	6989254	Redcliffe-021	MBC-095	2.01	1.71	0.30	1.95	4.6	117	0	2.18	3.21	2.70	4.89	2.82	5.26	2.06
511874	6990079	Redcliffe-023	MBC-096	1.99	1.70	0.29	1.89	4.7	120	0	2.15	3.17	2.65	4.83	2.77	5.20	2.13
511648	6990451	Redcliffe-024	MBC-097	1.97	1.71	0.26	1.64	4.3	110	0	2.11	2.98	2.56	4.42	2.67	4.74	2.12
511661	6991063	Redcliffe-025	MBC-098	1.98	1.72	0.26	1.75	4.3	119	0	2.15	3.05	2.63	4.54	2.74	4.87	2.01
511568	6992087	Redcliffe-027	MBC-099	1.99	1.72	0.27	1.82	4.3	114	0	2.17	3.10	2.67	4.65	2.78	4.98	2.00
511475	6992513	Redcliffe-028	MBC-100	1.94	1.72	0.22	1.51	3.7	124	0	2.11	2.85	2.55	4.09	2.64	4.36	1.90
510916	6992713	Redcliffe-029	MBC-101	1.88	1.71	0.17	1.27	3.0	258	0	2.07	2.62	2.46	3.59	2.54	3.79	1.67
510531	6992472	Redcliffe-030	MBC-102	1.88	1.71	0.17	1.27	2.9	261	0	2.07	2.61	2.46	3.57	2.54	3.76	1.62
510161	6992164	Redcliffe-031	MBC-103	1.90	1.72	0.18	1.44	3.0	258	0	2.13	2.73	2.57	3.79	2.65	4.00	1.56
509833	6991712	Redcliffe-032	MBC-104	1.86	1.73	0.13	1.09	2.4	227	0	2.05	2.47	2.38	3.24	2.43	3.37	1.45
509525	6991322	Redcliffe-033	MBC-105	1.86	1.72	0.14	1.14	2.4	228	0	2.05	2.48	2.39	3.27	2.45	3.40	1.42
509155	6991199	Redcliffe-034	MBC-106	1.87	1.73	0.14	1.15	2.4	223	0	2.06	2.48	2.41	3.27	2.47	3.39	1.39
508478	6991343	Redcliffe-035	MBC-107	1.89	1.75	0.14	1.00	2.8	58	0	2.03	2.47	2.34	3.26	2.40	3.42	1.73
507965	6991487	Redcliffe-036	MBC-108	1.92	1.77	0.15	1.03	2.8	60	0	2.06	2.52	2.38	3.33	2.44	3.50	1.75
507205	6991589	Redcliffe-037	MBC-109	1.94	1.79	0.15	1.04	2.9	49	0	2.08	2.55	2.40	3.38	2.47	3.56	1.79
506548	6991836	Redcliffe-038	MBC-110	1.98	1.82	0.16	1.07	3.0	49	0	2.12	2.61	2.45	3.47	2.52	3.65	1.82
505830	6992082	Redcliffe-039	MBC-111	2.01	1.85	0.16	1.11	3.1	51	0	2.16	2.67	2.50	3.57	2.57	3.76	1.84
505357.8	6992266.6	Redcliffe-040	MBC-112	2.02	1.87	0.15	1.01	3.0	55	0	2.15	2.62	2.46	3.45	2.53	3.62	1.88

				Water Level mAHD 100yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	1.76	1.76		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.14	2.00	0.14	1.08	2.5	130	0	2.31	2.75	2.64	3.53	2.71	3.68	1.52
507065	6983136	PineRiver-002	MBC-002	2.17	2.03	0.14	1.11	2.7	135	0	2.35	2.81	2.69	3.63	2.76	3.80	1.58
507237	6983516	PineRiver-003	MBC-003	2.16	2.03	0.13	1.03	2.6	126	0	2.33	2.75	2.64	3.52	2.71	3.67	1.58
507198	6984049	PineRiver-004	MBC-004	2.21	2.09	0.12	0.96	2.4	129	0	2.37	2.76	2.66	3.46	2.72	3.60	1.54
506913	6984334	PineRiver-005	MBC-005	2.31	2.20	0.11	0.84	2.2	130	0	2.44	2.79	2.69	3.41	2.73	3.51	1.50
507046	6984696	PineRiver-006	MBC-006	2.37	2.27	0.10	0.87	2.1	47	0	2.52	2.84	2.77	3.43	2.82	3.53	1.39
507522	6984334	PineRiver-007	MBC-007	2.22	2.09	0.13	0.98	2.5	134	0	2.37	2.78	2.67	3.50	2.73	3.65	1.58
507769	6984239	PineRiver-008	MBC-008	2.18	2.02	0.16	1.22	2.9	127	0	2.37	2.89	2.74	3.81	2.81	4.00	1.65
506179	6982661	PineRiver-009	MBC-009	2.31	2.20	0.11	0.84	2.2	130	0	2.44	2.79	2.69	3.41	2.73	3.51	1.50
504927	6992513	Caboolture-001	MBC-010	2.15	2.00	0.15	1.02	2.9	75	0	2.29	2.74	2.60	3.56	2.67	3.73	1.78
504270	6992575	Caboolture-002	MBC-011	2.14	2.02	0.12	0.95	2.3	126	0	2.29	2.69	2.58	3.39	2.62	3.50	1.50
503633	6992841	Caboolture-003	MBC-012	2.25	2.13	0.12	0.99	2.4	127	0	2.42	2.83	2.72	3.55	2.76	3.67	1.49
503346	6993519	Caboolture-004	MBC-013	2.32	2.19	0.13	1.02	2.5	128	0	2.49	2.89	2.80	3.63	2.86	3.78	1.51
503613	6994402	Caboolture-005	MBC-014	2.37	2.25	0.12	0.92	2.4	129	0	2.52	2.89	2.79	3.56	2.85	3.70	1.54
504658	6996186	Caboolture-009	MBC-015	2.36	2.22	0.14	1.08	2.7	129	0	2.53	2.99	2.86	3.81	2.93	3.97	1.64
504477	6996546	Caboolture-010	MBC-016	2.46	2.33	0.13	1.01	2.5	129	0	2.62	3.03	2.93	3.77	2.99	3.91	1.53
504774	6997055	Caboolture-012	MBC-017	2.41	2.28	0.13	1.00	2.5	132	0	2.57	2.98	2.88	3.72	2.94	3.87	1.57
505039	6997331	Caboolture-013	MBC-018	2.40	2.27	0.13	0.95	2.6	70	0	2.54	2.95	2.84	3.67	2.89	3.82	1.65
505442	6998582	Caboolture-016	MBC-019	2.47	2.32	0.15	1.10	2.7	74	0	2.64	3.10	2.97	3.92	3.04	4.09	1.61
505671	6999062	Caboolture-017	MBC-020	2.47	2.33	0.14	1.01	2.8	126	0	2.62	3.06	2.93	3.86	2.99	4.02	1.75
505909	6999567	Caboolture-018	MBC-021	2.50	2.35	0.15	1.09	2.9	127	0	2.66	3.14	2.99	4.00	3.06	4.18	1.75
506361	7000127	Caboolture-019	MBC-022	2.53	2.38	0.15	1.14	2.8	132	0	2.71	3.19	3.05	4.06	3.12	4.24	1.66
506813	7000580	Caboolture-020	MBC-023	2.45	2.30	0.15	1.06	2.8	129	0	2.60	3.06	2.93	3.88	2.99	4.05	1.69
507266	7001010	Caboolture-021	MBC-024	2.43	2.26	0.17	1.21	3.2	128	0	2.59	3.15	2.96	4.13	3.04	4.33	1.83
507718	7001452	Caboolture-022	MBC-025	2.46	2.28	0.18	1.26	3.3	134	0	2.62	3.21	3.00	4.24	3.08	4.45	1.85
508289	7001850	Caboolture-023	MBC-026	2.44	2.25	0.19	1.27	3.4	135	0	2.59	3.19	2.97	4.23	3.05	4.45	1.87
508903	7002206	Caboolture-024	MBC-027	2.41	2.21	0.20	1.31	3.5	137	0	2.56	3.19	2.94	4.28	3.03	4.52	1.93
509355	7002550	Caboolture-025	MBC-028	2.39	2.20	0.19	1.29	3.5	141	0	2.54	3.17	2.92	4.24	3.01	4.47	1.92
509894	7002744	Caboolture-026	MBC-029	2.35	2.15	0.20	1.35	3.6	144	0	2.51	3.16	2.90	4.28	2.98	4.52	1.92
510475	7002852	Caboolture-027	MBC-030	2.32	2.13	0.19	1.31	3.5	144	0	2.48	3.11	2.86	4.20	2.95	4.44	1.93
511067	7003003	Caboolture-028	MBC-031	2.29	2.11	0.18	1.20	3.5	174	0	2.43	3.02	2.78	4.03	2.86	4.25	1.97
511477	7003251	Caboolture-029	MBC-032	2.30	2.15	0.15	1.06	2.8	139	0	2.45	2.91	2.78	3.73	2.84	3.90	1.70
512112	7003326	Caboolture-030	MBC-033	2.27	2.11	0.16	1.18	3.0	144	0	2.44	2.97	2.80	3.89	2.88	4.09	1.75
512694	7003455	Caboolture-031	MBC-034	2.24	2.08	0.16	1.12	3.1	165	0	2.39	2.90	2.73	3.80	2.80	3.99	1.81
513275	7003412	Caboolture-032	MBC-035	2.23	2.07	0.16	1.12	3.0	177	0	2.39	2.89	2.73	3.78	2.80	3.96	1.78
513911	7003746	Caboolture-033	MBC-036	2.22	2.09	0.13	1.02	2.5	128	0	2.39	2.80	2.70	3.55	2.76	3.69	1.54
514481	7004446	Caboolture-034	MBC-037	2.08	1.95	0.13	1.00	2.5	126	0	2.24	2.65	2.55	3.38	2.61	3.52	1.55
516248	7002647	Caboolture-038	MBC-038	2.05	1.81	0.24	1.54	4.1	187	0	2.19	2.99	2.63	4.32	2.72	4.62	2.06
517280	7002397	Caboolture-040	MBC-039	1.97	1.76	0.21	1.43	3.7	176	0	2.13	2.83	2.55	4.02	2.64	4.27	1.92
519611	7002925	Caboolture-044	MBC-040	1.94	1.66	0.28	1.93	4.3	120	0	2.14	3.10	2.67	4.70	2.78	5.05	1.91
520367	7003619	Caboolture-046	MBC-041	1.96	1.64	0.32	2.22	4.7	108	0	2.17	3.31	2.76	5.18	2.89	5.58	1.96
520284	7006303	Caboolture-051	MBC-042	1.97	1.63	0.34	2.08	5.6	53	0	2.09	3.32	2.62	5.29	2.75	5.75	2.42
516778	7013518	Caboolture-060	MBC-043	2.06	1.66	0.40	2.52	5.9	58	0	2.21	3.67	2.85	6.00	2.99	6.53	2.31
516320	7014796	Caboolture-061	MBC-044	2.04	1.66	0.38	2.35	5.8	58	0	2.17	3.55	2.77	5.75	2.91	6.26	2.38
507667	7015461	Caboolture-067	MBC-045	2.46	2.33	0.13	1.02	2.4	216	0	2.62	3.03	2.93	3.77	2.99	3.91	1.50
508591	7014764	Caboolture-069	MBC-046	2.45	2.30	0.15	1.21	2.6	227	0	2.65	3.15	3.02	4.03	3.08	4.18	1.49
509101	7014442	Caboolture-070	MBC-047	2.39	2.24	0.15	1.24	2.7	223	0	2.60	3.10	2.98	4.00	3.05	4.18	1.53
509543	7013236	Caboolture-072	MBC-048	2.28	2.13	0.15	1.14	2.7	222	0	2.46	2.93	2.81	3.77	2.87	3.93	1.56
509623	7012592	Caboolture-073	MBC-049	2.22	2.07	0.15	1.18	2.8	221	0	2.41	2.90	2.77	3.77	2.84	3.95	1.58
510253	7011212	Caboolture-075	MBC-050	2.13	1.98	0.15	1.22	2.7	213	0	2.33	2.82	2.70	3.71	2.78	3.88	1.52
510669	7010917	Caboolture-076	MBC-051	2.05	1.93	0.12	0.98	2.4	213	0	2.21	2.61	2.51	3.32	2.57	3.46	1.51
511138	7010769	Caboolture-077	MBC-052	2.08	1.94	0.14	1.05	2.6	145	0	2.24	2.68	2.56	3.46	2.63	3.61	1.58
511701	7010475	Caboolture-078	MBC-053	2.06	1.92	0.14	1.11	2.7	193	0	2.24	2.70	2.58	3.53	2.65	3.69	1.59
512076	7010032	Caboolture-079	MBC-054	2.07	1.91	0.16	1.20	3.0	214	0	2.25	2.77	2.62	3.70	2.69	3.89	1.69
513283	7007901	Caboolture-083	MBC-055	1.94	1.77	0.17	1.29	2.9	223	0	2.14	2.68	2.53	3.64	2.61	3.84	1.60
513390	7007284	Caboolture-084	MBC-056	2.11	1.95	0.16	1.33	2.8	252	0	2.33	2.87	2.74	3.83	2.82	4.02	1.52

				Water Level mAHD 100yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
513444	7006735	Caboolture-085	MBC-057	2.08	1.91	0.17	1.41	2.9	144	0	2.32	2.88	2.74	3.90	2.82	4.10	1.50
514141	7006547	Caboolture-086	MBC-058	2.08	1.91	0.17	1.36	2.8	249	0	2.30	2.86	2.71	3.85	2.78	4.01	1.48
514958	7005756	Caboolture-088	MBC-059	2.01	1.85	0.16	1.28	2.9	255	0	2.22	2.75	2.61	3.69	2.68	3.88	1.57
515374	7005260	Caboolture-089	MBC-060	1.97	1.82	0.15	1.25	2.7	261	0	2.18	2.68	2.56	3.58	2.64	3.76	1.50
514730	7005140	Caboolture-090	MBC-061	1.95	1.83	0.12	1.01	2.3	112	0	2.12	2.52	2.42	3.24	2.47	3.36	1.45
514328	7005394	Caboolture-091	MBC-062	1.97	1.84	0.13	0.94	2.5	108	0	2.11	2.50	2.40	3.21	2.46	3.36	1.62
513269	7006199	Caboolture-093	MBC-063	2.04	1.89	0.15	1.13	2.7	106	0	2.22	2.68	2.56	3.52	2.63	3.68	1.57
511621	7007284	Caboolture-096	MBC-064	2.06	1.92	0.14	1.09	2.5	124	0	2.24	2.68	2.57	3.48	2.62	3.61	1.49
511339	7008048	Caboolture-097	MBC-065	2.07	1.94	0.13	1.03	2.4	47	0	2.24	2.64	2.55	3.37	2.60	3.49	1.45
511648	7008558	Caboolture-098	MBC-066	1.91	1.78	0.13	1.00	2.5	145	0	2.07	2.48	2.38	3.21	2.44	3.35	1.54
511835	7009040	Caboolture-099	MBC-067	1.96	1.83	0.13	1.02	2.6	129	0	2.12	2.55	2.44	3.31	2.50	3.46	1.60
511446	7009456	Caboolture-100	MBC-068	2.02	1.88	0.14	1.11	2.6	16	0	2.20	2.66	2.54	3.48	2.61	3.64	1.56
511058	7009456	Caboolture-101	MBC-069	2.03	1.90	0.13	1.06	2.5	116	0	2.21	2.63	2.53	3.40	2.60	3.55	1.51
510321	7009818	Caboolture-102	MBC-070	2.03	1.90	0.13	1.02	2.5	110	0	2.20	2.61	2.51	3.36	2.57	3.51	1.55
509784	7010233	Caboolture-103	MBC-071	2.02	1.89	0.13	1.04	2.5	141	0	2.19	2.61	2.51	3.36	2.57	3.50	1.50
509369	7010796	Caboolture-104	MBC-072	2.09	1.95	0.14	1.05	2.6	124	0	2.25	2.68	2.57	3.46	2.64	3.61	1.56
509034	7011198	Caboolture-105	MBC-073	2.22	2.08	0.14	1.11	2.6	43	0	2.40	2.85	2.74	3.65	2.81	3.81	1.51
508833	7011587	Caboolture-106	MBC-074	2.15	2.02	0.13	1.00	2.5	44	0	2.31	2.72	2.62	3.45	2.68	3.59	1.54
508752	7011869	Caboolture-107	MBC-075	2.10	1.96	0.14	1.17	2.5	20	0	2.30	2.76	2.66	3.59	2.72	3.72	1.45
508471	7012110	Caboolture-108	MBC-076	2.12	1.99	0.13	1.11	2.4	39	0	2.31	2.74	2.65	3.53	2.70	3.66	1.45
508926	7012177	Caboolture-109	MBC-077	2.16	2.02	0.14	1.03	2.6	139	0	2.32	2.74	2.63	3.51	2.70	3.66	1.59
509020	7012767	Caboolture-110	MBC-078	2.21	2.07	0.14	1.11	2.6	143	0	2.39	2.84	2.73	3.66	2.80	3.82	1.56
508565	7013276	Caboolture-111	MBC-079	2.28	2.16	0.12	0.98	2.4	132	0	2.44	2.84	2.74	3.55	2.79	3.67	1.48
508069	7013611	Caboolture-112	MBC-080	2.47	2.32	0.15	1.19	2.6	14	0	2.67	3.15	3.03	4.01	3.09	4.16	1.48
507667	7013960	Caboolture-113	MBC-081	2.52	2.39	0.13	1.10	2.4	35	0	2.71	3.14	3.04	3.92	3.10	4.05	1.45
507157	7014067	Caboolture-114	MBC-082	2.56	2.43	0.13	1.07	2.5	39	0	2.74	3.17	3.07	3.95	3.12	4.08	1.48
507171	7014777	Caboolture-116	MBC-083	2.48	2.34	0.14	1.09	2.5	39	0	2.66	3.10	2.99	3.90	3.04	4.03	1.49
507063	7015595	Caboolture-116	MBC-084	2.49	2.36	0.13	1.03	2.5	129	0	2.66	3.08	2.97	3.83	3.04	3.98	1.54
509121	6984944	Redcliffe-005	MBC-085	2.14	1.97	0.17	1.19	3.1	151	0	2.30	2.84	2.66	3.78	2.74	3.98	1.77
509533	6984891	Redcliffe-006	MBC-086	2.09	1.93	0.16	1.15	2.9	192	0	2.26	2.75	2.61	3.64	2.68	3.82	1.68
509892	6984691	Redcliffe-007	MBC-087	2.04	1.89	0.15	1.14	2.9	193	0	2.21	2.70	2.56	3.58	2.63	3.75	1.67
510464	6984279	Redcliffe-009	MBC-088	2.01	1.81	0.20	1.30	3.6	129	0	2.15	2.80	2.53	3.90	2.61	4.14	1.99
510783	6984638	Redcliffe-010	MBC-089	2.00	1.78	0.22	1.57	3.7	129	0	2.19	2.94	2.64	4.21	2.74	4.48	1.84
510969	6985516	Redcliffe-012	MBC-090	2.02	1.78	0.24	1.64	3.9	115	0	2.20	3.00	2.66	4.35	2.76	4.63	1.88
511076	6985889	Redcliffe-013	MBC-091	2.02	1.78	0.24	1.57	4.0	118	0	2.18	2.97	2.62	4.29	2.71	4.58	1.97
511488	6987365	Redcliffe-016	MBC-092	2.06	1.78	0.28	1.84	4.5	114	0	2.22	3.19	2.72	4.78	2.83	5.13	2.05
511768	6988017	Redcliffe-018	MBC-093	2.04	1.75	0.29	1.88	4.6	114	0	2.20	3.20	2.71	4.84	2.82	5.20	2.10
511648	6988496	Redcliffe-019	MBC-094	2.02	1.76	0.26	1.57	4.6	111	0	2.13	3.01	2.56	4.44	2.66	4.77	2.27
511741	6989254	Redcliffe-021	MBC-095	2.07	1.77	0.30	1.95	4.6	117	0	2.24	3.27	2.76	4.95	2.88	5.32	2.06
511874	6990079	Redcliffe-023	MBC-096	2.04	1.75	0.29	1.89	4.7	120	0	2.20	3.22	2.70	4.88	2.82	5.25	2.13
511648	6990451	Redcliffe-024	MBC-097	2.03	1.77	0.26	1.64	4.3	110	0	2.17	3.04	2.62	4.48	2.73	4.80	2.12
511661	6991063	Redcliffe-025	MBC-098	2.04	1.78	0.26	1.75	4.3	119	0	2.21	3.11	2.69	4.60	2.80	4.93	2.01
511568	6992087	Redcliffe-027	MBC-099	2.04	1.77	0.27	1.82	4.3	114	0	2.22	3.15	2.72	4.70	2.83	5.03	2.00
511475	6992513	Redcliffe-028	MBC-100	2.00	1.78	0.22	1.52	3.7	125	0	2.18	2.90	2.62	4.14	2.71	4.40	1.85
510916	6992713	Redcliffe-029	MBC-101	1.93	1.77	0.16	1.28	2.9	242	0	2.14	2.67	2.53	3.62	2.60	3.81	1.59
510531	6992472	Redcliffe-030	MBC-102	1.93	1.77	0.16	1.29	2.8	249	0	2.14	2.67	2.53	3.61	2.61	3.80	1.55
510161	6992164	Redcliffe-031	MBC-103	1.96	1.78	0.18	1.44	3.0	258	0	2.19	2.79	2.63	3.85	2.71	4.06	1.56
509833	6991712	Redcliffe-032	MBC-104	1.92	1.79	0.13	1.09	2.4	227	0	2.11	2.53	2.44	3.30	2.49	3.43	1.45
509525	6991322	Redcliffe-033	MBC-105	1.92	1.78	0.14	1.14	2.4	228	0	2.11	2.54	2.45	3.33	2.51	3.46	1.42
509155	6991199	Redcliffe-034	MBC-106	1.93	1.79	0.14	1.15	2.4	223	0	2.12	2.54	2.47	3.33	2.53	3.45	1.39
508478	6991343	Redcliffe-035	MBC-107	1.94	1.82	0.12	1.02	2.3	130	0	2.11	2.51	2.42	3.23	2.47	3.35	1.44
507965	6991487	Redcliffe-036	MBC-108	1.97	1.84	0.13	1.04	2.4	129	0	2.14	2.55	2.46	3.30	2.51	3.42	1.46
507205	6991589	Redcliffe-037	MBC-109	2.02	1.87	0.15	1.04	2.9	49	0	2.16	2.63	2.48	3.46	2.55	3.64	1.79
506548	6991836	Redcliffe-038	MBC-110	2.06	1.90	0.16	1.07	3.0	49	0	2.20	2.69	2.53	3.55	2.60	3.73	1.82
505830	6992082	Redcliffe-039	MBC-111	2.09	1.93	0.16	1.11	3.1	51	0	2.24	2.75	2.58	3.65	2.65	3.84	1.84
505357.8	6992266.6	Redcliffe-040	MBC-112	2.11	1.96	0.15	1.01	3.0	55	0	2.24	2.71	2.55	3.54	2.62	3.71	1.88

				Water Level mAHD 200yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	1.82	1.82		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.23	2.09	0.14	1.08	2.5	130	0	2.40	2.84	2.73	3.62	2.80	3.77	1.52
507065	6983136	PineRiver-002	MBC-002	2.28	2.13	0.15	1.16	2.7	138	0	2.46	2.94	2.82	3.79	2.89	3.96	1.55
507237	6983516	PineRiver-003	MBC-003	2.26	2.13	0.13	1.04	2.5	129	0	2.43	2.85	2.75	3.62	2.81	3.76	1.54
507198	6984049	PineRiver-004	MBC-004	2.31	2.19	0.12	0.96	2.4	129	0	2.47	2.86	2.76	3.56	2.82	3.70	1.54
506913	6984334	PineRiver-005	MBC-005	2.43	2.32	0.11	0.84	2.2	130	0	2.56	2.91	2.81	3.53	2.85	3.63	1.50
507046	6984696	PineRiver-006	MBC-006	2.50	2.40	0.10	0.87	2.1	47	0	2.65	2.97	2.90	3.56	2.95	3.66	1.39
507522	6984334	PineRiver-007	MBC-007	2.33	2.20	0.13	0.98	2.5	134	0	2.48	2.89	2.78	3.61	2.84	3.76	1.58
507769	6984239	PineRiver-008	MBC-008	2.27	2.11	0.16	1.23	2.9	129	0	2.46	2.98	2.84	3.90	2.91	4.08	1.60
506179	6982661	PineRiver-009	MBC-009	2.43	2.32	0.11	0.84	2.2	130	0	2.56	2.91	2.81	3.53	2.85	3.63	1.50
504927	6992513	Caboolture-001	MBC-010	2.24	2.09	0.15	1.02	2.9	75	0	2.38	2.83	2.69	3.65	2.76	3.82	1.78
504270	6992575	Caboolture-002	MBC-011	2.24	2.12	0.12	0.95	2.3	126	0	2.39	2.79	2.68	3.49	2.72	3.60	1.50
503633	6992841	Caboolture-003	MBC-012	2.36	2.24	0.12	0.99	2.4	127	0	2.53	2.94	2.83	3.66	2.87	3.78	1.49
503346	6993519	Caboolture-004	MBC-013	2.43	2.30	0.13	1.02	2.5	128	0	2.60	3.00	2.91	3.74	2.97	3.89	1.51
503613	6994402	Caboolture-005	MBC-014	2.49	2.37	0.12	0.92	2.4	129	0	2.64	3.01	2.91	3.68	2.97	3.82	1.54
504658	6996186	Caboolture-009	MBC-015	2.48	2.34	0.14	1.08	2.7	129	0	2.65	3.11	2.98	3.93	3.05	4.09	1.64
504477	6996546	Caboolture-010	MBC-016	2.59	2.46	0.13	1.06	2.4	43	0	2.77	3.19	3.09	3.94	3.14	4.06	1.46
504774	6997055	Caboolture-012	MBC-017	2.53	2.40	0.13	1.02	2.5	69	0	2.70	3.11	3.01	3.85	3.07	4.00	1.53
505039	6997331	Caboolture-013	MBC-018	2.52	2.39	0.13	0.95	2.6	129	0	2.66	3.07	2.96	3.81	3.01	3.95	1.69
505442	6998582	Caboolture-016	MBC-019	2.60	2.45	0.15	1.11	2.7	127	0	2.77	3.23	3.11	4.07	3.18	4.24	1.62
505671	6999062	Caboolture-017	MBC-020	2.61	2.47	0.14	1.01	2.8	126	0	2.76	3.20	3.07	4.00	3.13	4.16	1.75
505909	6999567	Caboolture-018	MBC-021	2.64	2.49	0.15	1.09	2.9	127	0	2.80	3.28	3.13	4.14	3.20	4.32	1.75
506361	7000127	Caboolture-019	MBC-022	2.66	2.51	0.15	1.14	2.8	132	0	2.84	3.32	3.18	4.19	3.25	4.37	1.66
506813	7000580	Caboolture-020	MBC-023	2.58	2.43	0.15	1.06	2.8	129	0	2.73	3.19	3.06	4.01	3.12	4.18	1.69
507266	7001010	Caboolture-021	MBC-024	2.56	2.39	0.17	1.22	3.2	125	0	2.73	3.29	3.09	4.26	3.17	4.47	1.81
507718	7001452	Caboolture-022	MBC-025	2.58	2.40	0.18	1.27	3.3	131	0	2.75	3.34	3.13	4.36	3.21	4.58	1.83
508289	7001850	Caboolture-023	MBC-026	2.55	2.37	0.18	1.28	3.4	132	0	2.72	3.32	3.10	4.36	3.18	4.58	1.85
508903	7002206	Caboolture-024	MBC-027	2.52	2.33	0.19	1.32	3.5	134	0	2.68	3.32	3.07	4.41	3.15	4.65	1.91
509355	7002550	Caboolture-025	MBC-028	2.50	2.31	0.19	1.30	3.5	136	0	2.66	3.28	3.04	4.35	3.12	4.58	1.90
509894	7002744	Caboolture-026	MBC-029	2.46	2.26	0.20	1.35	3.5	141	0	2.62	3.27	3.02	4.38	3.10	4.62	1.90
510475	7002852	Caboolture-027	MBC-030	2.42	2.23	0.19	1.31	3.5	141	0	2.58	3.21	2.96	4.29	3.05	4.52	1.90
511067	7003003	Caboolture-028	MBC-031	2.39	2.21	0.18	1.20	3.5	174	0	2.53	3.12	2.88	4.13	2.96	4.35	1.97
511477	7003251	Caboolture-029	MBC-032	2.41	2.26	0.15	1.06	2.8	139	0	2.56	3.02	2.89	3.84	2.95	4.01	1.70
512112	7003326	Caboolture-030	MBC-033	2.37	2.21	0.16	1.18	3.0	144	0	2.54	3.07	2.90	3.99	2.98	4.19	1.75
512694	7003455	Caboolture-031	MBC-034	2.34	2.18	0.16	1.12	3.1	165	0	2.49	3.00	2.83	3.90	2.90	4.09	1.81
513275	7003412	Caboolture-032	MBC-035	2.32	2.16	0.16	1.12	3.0	177	0	2.48	2.98	2.82	3.87	2.89	4.05	1.78
513911	7003746	Caboolture-033	MBC-036	2.32	2.19	0.13	1.02	2.5	128	0	2.49	2.90	2.80	3.65	2.86	3.79	1.54
514481	7004446	Caboolture-034	MBC-037	2.16	2.03	0.13	1.00	2.5	126	0	2.32	2.73	2.63	3.46	2.69	3.60	1.55
516248	7002647	Caboolture-038	MBC-038	2.11	1.87	0.24	1.54	4.1	187	0	2.25	3.05	2.69	4.38	2.78	4.68	2.06
517280	7002397	Caboolture-040	MBC-039	2.02	1.81	0.21	1.43	3.7	176	0	2.18	2.88	2.60	4.07	2.69	4.32	1.92
519611	7002925	Caboolture-044	MBC-040	1.98	1.70	0.28	1.93	4.3	120	0	2.18	3.14	2.71	4.74	2.82	5.09	1.91
520367	7003619	Caboolture-046	MBC-041	2.00	1.67	0.33	2.27	4.8	102	0	2.21	3.39	2.80	5.30	2.93	5.71	1.97
520284	7006303	Caboolture-051	MBC-042	2.00	1.66	0.34	2.08	5.6	53	0	2.12	3.35	2.65	5.32	2.78	5.78	2.42
516778	7013518	Caboolture-060	MBC-043	2.09	1.69	0.40	2.52	5.9	58	0	2.24	3.70	2.88	6.03	3.02	6.56	2.31
516320	7014796	Caboolture-061	MBC-044	2.08	1.70	0.38	2.35	5.8	58	0	2.21	3.59	2.81	5.79	2.95	6.30	2.38
507667	7015461	Caboolture-067	MBC-045	2.59	2.46	0.13	1.02	2.4	216	0	2.75	3.16	3.06	3.90	3.12	4.04	1.50
508591	7014764	Caboolture-069	MBC-046	2.57	2.42	0.15	1.21	2.6	227	0	2.77	3.27	3.14	4.15	3.20	4.30	1.49
509101	7014442	Caboolture-070	MBC-047	2.51	2.36	0.15	1.24	2.7	223	0	2.72	3.22	3.10	4.12	3.17	4.30	1.53
509543	7013236	Caboolture-072	MBC-048	2.38	2.23	0.15	1.16	2.7	226	0	2.56	3.04	2.92	3.89	2.99	4.06	1.55
509623	7012592	Caboolture-073	MBC-049	2.32	2.17	0.15	1.20	2.8	224	0	2.51	3.01	2.88	3.90	2.95	4.08	1.57
510253	7011212	Caboolture-075	MBC-050	2.21	2.06	0.15	1.23	2.7	220	0	2.42	2.91	2.79	3.80	2.86	3.98	1.51
510669	7010917	Caboolture-076	MBC-051	2.13	2.01	0.12	0.98	2.4	213	0	2.29	2.69	2.59	3.40	2.65	3.54	1.51
511138	7010769	Caboolture-077	MBC-052	2.15	2.01	0.14	1.05	2.6	145	0	2.31	2.75	2.63	3.53	2.70	3.68	1.58
511701	7010475	Caboolture-078	MBC-053	2.14	2.00	0.14	1.11	2.7	193	0	2.32	2.78	2.66	3.61	2.73	3.77	1.59
512076	7010032	Caboolture-079	MBC-054	2.14	1.98	0.16	1.20	3.0	214	0	2.32	2.84	2.69	3.77	2.76	3.96	1.69
513283	7007901	Caboolture-083	MBC-055	2.00	1.83	0.17	1.29	2.9	241	0	2.20	2.74	2.59	3.71	2.67	3.90	1.61
513390	7007284	Caboolture-084	MBC-056	2.20	2.03	0.17	1.38	2.8	246	0	2.43	3.00	2.85	4.02	2.91	4.18	1.50

				Water Level mAHD 200yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
513444	7006735	Caboolture-085	MBC-057	2.15	1.98	0.17	1.41	2.9	144	0	2.39	2.95	2.81	3.97	2.89	4.17	1.50
514141	7006547	Caboolture-086	MBC-058	2.15	1.98	0.17	1.36	2.8	249	0	2.37	2.93	2.78	3.92	2.85	4.08	1.48
514958	7005756	Caboolture-088	MBC-059	2.08	1.92	0.16	1.28	2.9	255	0	2.29	2.82	2.68	3.76	2.75	3.95	1.57
515374	7005260	Caboolture-089	MBC-060	2.04	1.89	0.15	1.25	2.7	261	0	2.25	2.75	2.63	3.65	2.71	3.83	1.50
514730	7005140	Caboolture-090	MBC-061	2.01	1.89	0.12	1.01	2.3	112	0	2.18	2.58	2.48	3.30	2.53	3.42	1.45
514328	7005394	Caboolture-091	MBC-062	2.03	1.90	0.13	0.94	2.5	108	0	2.17	2.56	2.46	3.27	2.52	3.42	1.62
513269	7006199	Caboolture-093	MBC-063	2.11	1.96	0.15	1.13	2.7	106	0	2.29	2.75	2.63	3.59	2.70	3.75	1.57
511621	7007284	Caboolture-096	MBC-064	2.14	2.00	0.14	1.09	2.5	124	0	2.32	2.76	2.65	3.56	2.70	3.69	1.49
511339	7008048	Caboolture-097	MBC-065	2.15	2.02	0.13	1.03	2.4	47	0	2.32	2.72	2.63	3.45	2.68	3.57	1.45
511648	7008558	Caboolture-098	MBC-066	1.97	1.84	0.13	1.00	2.5	145	0	2.13	2.54	2.44	3.27	2.50	3.41	1.54
511835	7009040	Caboolture-099	MBC-067	2.02	1.89	0.13	1.02	2.6	129	0	2.18	2.61	2.50	3.37	2.56	3.52	1.60
511446	7009456	Caboolture-100	MBC-068	2.09	1.95	0.14	1.11	2.6	16	0	2.27	2.73	2.61	3.55	2.68	3.71	1.56
511058	7009456	Caboolture-101	MBC-069	2.11	1.98	0.13	1.06	2.5	116	0	2.29	2.71	2.61	3.48	2.68	3.63	1.51
510321	7009818	Caboolture-102	MBC-070	2.13	1.98	0.15	1.12	2.7	14	0	2.30	2.77	2.64	3.60	2.71	3.77	1.59
509784	7010233	Caboolture-103	MBC-071	2.11	1.97	0.14	1.12	2.6	125	0	2.29	2.75	2.64	3.56	2.70	3.72	1.53
509369	7010796	Caboolture-104	MBC-072	2.17	2.03	0.14	1.08	2.6	118	0	2.34	2.79	2.67	3.59	2.74	3.75	1.57
509034	7011198	Caboolture-105	MBC-073	2.31	2.17	0.14	1.11	2.6	43	0	2.49	2.94	2.83	3.74	2.90	3.90	1.51
508833	7011587	Caboolture-106	MBC-074	2.24	2.11	0.13	1.00	2.5	44	0	2.40	2.81	2.71	3.54	2.77	3.68	1.54
508752	7011869	Caboolture-107	MBC-075	2.18	2.04	0.14	1.17	2.5	20	0	2.38	2.84	2.74	3.67	2.80	3.80	1.45
508471	7012110	Caboolture-108	MBC-076	2.20	2.07	0.13	1.11	2.4	39	0	2.39	2.82	2.73	3.61	2.78	3.74	1.45
508926	7012177	Caboolture-109	MBC-077	2.23	2.10	0.13	1.03	2.6	148	0	2.40	2.82	2.71	3.58	2.77	3.73	1.57
509020	7012767	Caboolture-110	MBC-078	2.32	2.17	0.15	1.12	2.7	131	0	2.49	2.95	2.83	3.79	2.90	3.95	1.58
508565	7013276	Caboolture-111	MBC-079	2.39	2.27	0.12	0.98	2.4	132	0	2.55	2.95	2.85	3.66	2.90	3.78	1.48
508069	7013611	Caboolture-112	MBC-080	2.59	2.44	0.15	1.19	2.6	14	0	2.79	3.27	3.15	4.13	3.21	4.28	1.48
507667	7013960	Caboolture-113	MBC-081	2.65	2.52	0.13	1.10	2.4	35	0	2.84	3.27	3.17	4.05	3.23	4.18	1.45
507157	7014067	Caboolture-114	MBC-082	2.70	2.57	0.13	1.07	2.5	39	0	2.88	3.31	3.21	4.09	3.26	4.22	1.48
507171	7014777	Caboolture-115	MBC-083	2.60	2.46	0.14	1.09	2.5	39	0	2.78	3.22	3.11	4.02	3.16	4.15	1.49
507063	7015595	Caboolture-116	MBC-084	2.62	2.49	0.13	1.03	2.5	129	0	2.79	3.21	3.10	3.96	3.17	4.11	1.54
509121	6984944	Redcliffe-005	MBC-085	2.23	2.06	0.17	1.19	3.1	151	0	2.39	2.93	2.75	3.87	2.83	4.07	1.77
509533	6984891	Redcliffe-006	MBC-086	2.16	2.01	0.15	1.17	2.8	191	0	2.34	2.84	2.70	3.73	2.77	3.90	1.63
509892	6984691	Redcliffe-007	MBC-087	2.11	1.96	0.15	1.14	2.9	193	0	2.28	2.77	2.63	3.65	2.70	3.82	1.67
510464	6984279	Redcliffe-009	MBC-088	2.08	1.88	0.20	1.30	3.6	129	0	2.22	2.87	2.60	3.97	2.68	4.21	1.99
510783	6984638	Redcliffe-010	MBC-089	2.05	1.83	0.22	1.57	3.7	129	0	2.24	2.99	2.69	4.26	2.79	4.53	1.84
510969	6985516	Redcliffe-012	MBC-090	2.08	1.84	0.24	1.64	3.9	115	0	2.26	3.06	2.72	4.41	2.82	4.69	1.88
511076	6985889	Redcliffe-013	MBC-091	2.08	1.84	0.24	1.57	4.0	118	0	2.24	3.03	2.68	4.35	2.77	4.64	1.97
511488	6987365	Redcliffe-016	MBC-092	2.12	1.84	0.28	1.84	4.5	114	0	2.28	3.25	2.78	4.84	2.89	5.19	2.05
511768	6988017	Redcliffe-018	MBC-093	2.09	1.80	0.29	1.88	4.6	114	0	2.25	3.25	2.76	4.89	2.87	5.25	2.10
511648	6988496	Redcliffe-019	MBC-094	2.08	1.82	0.26	1.57	4.6	111	0	2.19	3.07	2.62	4.50	2.72	4.83	2.27
511741	6989254	Redcliffe-021	MBC-095	2.12	1.82	0.30	1.95	4.6	117	0	2.29	3.32	2.81	5.00	2.93	5.37	2.06
511874	6990079	Redcliffe-023	MBC-096	2.10	1.81	0.29	1.89	4.7	120	0	2.26	3.28	2.76	4.94	2.88	5.31	2.13
511648	6990451	Redcliffe-024	MBC-097	2.08	1.82	0.26	1.64	4.3	110	0	2.22	3.09	2.67	4.53	2.78	4.85	2.12
511661	6991063	Redcliffe-025	MBC-098	2.10	1.84	0.26	1.75	4.3	119	0	2.27	3.17	2.75	4.66	2.86	4.99	2.01
511568	6992087	Redcliffe-027	MBC-099	2.10	1.83	0.27	1.83	4.3	115	0	2.28	3.21	2.78	4.75	2.89	5.08	1.96
511475	6992513	Redcliffe-028	MBC-100	2.06	1.84	0.22	1.52	3.7	125	0	2.24	2.96	2.68	4.20	2.77	4.46	1.85
510916	6992713	Redcliffe-029	MBC-101	1.98	1.82	0.16	1.28	2.9	242	0	2.19	2.72	2.58	3.67	2.65	3.86	1.59
510531	6992472	Redcliffe-030	MBC-102	1.99	1.83	0.16	1.29	2.8	249	0	2.20	2.73	2.59	3.67	2.67	3.86	1.55
510161	6992164	Redcliffe-031	MBC-103	2.02	1.84	0.18	1.49	2.9	244	0	2.27	2.89	2.72	3.98	2.79	4.15	1.49
509833	6991712	Redcliffe-032	MBC-104	1.98	1.85	0.13	1.09	2.4	227	0	2.17	2.59	2.50	3.36	2.55	3.49	1.45
509525	6991322	Redcliffe-033	MBC-105	1.98	1.84	0.14	1.14	2.4	228	0	2.17	2.60	2.51	3.39	2.57	3.52	1.42
509155	6991199	Redcliffe-034	MBC-106	2.00	1.86	0.14	1.15	2.4	223	0	2.19	2.61	2.54	3.40	2.60	3.52	1.39
508478	6991343	Redcliffe-035	MBC-107	2.00	1.88	0.12	1.02	2.3	130	0	2.17	2.57	2.48	3.29	2.53	3.41	1.44
507965	6991487	Redcliffe-036	MBC-108	2.04	1.91	0.13	1.04	2.4	129	0	2.21	2.62	2.53	3.37	2.58	3.49	1.46
507205	6991589	Redcliffe-037	MBC-109	2.09	1.94	0.15	1.04	2.9	49	0	2.23	2.70	2.55	3.53	2.62	3.71	1.79
506548	6991836	Redcliffe-038	MBC-110	2.14	1.98	0.16	1.07	3.0	49	0	2.28	2.77	2.61	3.63	2.68	3.81	1.82
505830	6992082	Redcliffe-039	MBC-111	2.18	2.02	0.16	1.11	3.1	51	0	2.33	2.84	2.67	3.74	2.74	3.93	1.84
505358	6992267	Redcliffe-040	MBC-112	2.19	2.04	0.15	1.01	3.0	55	0	2.32	2.79	2.63	3.62	2.70	3.79	1.88

				Water Level mAHD 500yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.90	1.90		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.35	2.21	0.14	1.08	2.5	130	0	2.52	2.96	2.85	3.74	2.92	3.89	1.52
507065	6983136	PineRiver-002	MBC-002	2.40	2.25	0.15	1.16	2.7	138	0	2.58	3.06	2.94	3.91	3.01	4.08	1.55
507237	6983516	PineRiver-003	MBC-003	2.39	2.26	0.13	1.04	2.5	129	0	2.56	2.98	2.88	3.75	2.94	3.89	1.54
507198	6984049	PineRiver-004	MBC-004	2.45	2.33	0.12	0.98	2.4	131	0	2.61	3.01	2.91	3.71	2.97	3.85	1.51
506913	6984334	PineRiver-005	MBC-005	2.59	2.48	0.11	0.86	2.2	59	0	2.73	3.07	2.98	3.68	3.02	3.78	1.45
507046	6984696	PineRiver-006	MBC-006	2.67	2.57	0.10	0.87	2.1	47	0	2.82	3.14	3.07	3.73	3.12	3.83	1.39
507522	6984334	PineRiver-007	MBC-007	2.46	2.33	0.13	1.00	2.5	137	0	2.62	3.03	2.93	3.76	2.99	3.90	1.54
507769	6984239	PineRiver-008	MBC-008	2.39	2.23	0.16	1.23	2.9	129	0	2.58	3.10	2.96	4.02	3.03	4.20	1.60
506179	6982661	PineRiver-009	MBC-009	2.59	2.48	0.11	0.86	2.2	59	0	2.73	3.07	2.98	3.68	3.02	3.78	1.45
504927	6992513	Caboolture-001	MBC-010	2.36	2.21	0.15	1.02	2.9	75	0	2.50	2.95	2.81	3.77	2.88	3.94	1.78
504270	6992575	Caboolture-002	MBC-011	2.36	2.24	0.12	0.95	2.3	126	0	2.51	2.91	2.80	3.61	2.84	3.72	1.50
503633	6992841	Caboolture-003	MBC-012	2.50	2.38	0.12	0.99	2.4	127	0	2.67	3.08	2.97	3.80	3.01	3.92	1.49
503346	6993519	Caboolture-004	MBC-013	2.59	2.46	0.13	1.02	2.5	128	0	2.76	3.16	3.07	3.90	3.13	4.05	1.51
503613	6994402	Caboolture-005	MBC-014	2.66	2.54	0.12	0.92	2.4	129	0	2.81	3.18	3.08	3.85	3.14	3.99	1.54
504658	6996186	Caboolture-009	MBC-015	2.64	2.50	0.14	1.08	2.7	71	0	2.81	3.26	3.14	4.07	3.21	4.23	1.59
504477	6996546	Caboolture-010	MBC-016	2.77	2.64	0.13	1.06	2.4	43	0	2.95	3.37	3.27	4.12	3.32	4.24	1.46
504774	6997055	Caboolture-012	MBC-017	2.70	2.57	0.13	1.02	2.5	69	0	2.87	3.28	3.18	4.02	3.24	4.17	1.53
505039	6997331	Caboolture-013	MBC-018	2.69	2.56	0.13	0.95	2.6	129	0	2.83	3.24	3.13	3.98	3.18	4.12	1.69
505442	6998582	Caboolture-016	MBC-019	2.77	2.62	0.15	1.11	2.7	127	0	2.94	3.40	3.28	4.24	3.35	4.41	1.62
505671	6999062	Caboolture-017	MBC-020	2.78	2.64	0.14	1.01	2.8	126	0	2.93	3.37	3.24	4.17	3.30	4.33	1.75
505909	6999567	Caboolture-018	MBC-021	2.82	2.67	0.15	1.09	2.9	127	0	2.98	3.46	3.31	4.32	3.38	4.50	1.75
506361	7000127	Caboolture-019	MBC-022	2.85	2.70	0.15	1.14	2.8	132	0	3.03	3.51	3.37	4.38	3.44	4.56	1.66
506813	7000580	Caboolture-020	MBC-023	2.75	2.60	0.15	1.06	2.8	129	0	2.90	3.36	3.23	4.18	3.29	4.35	1.69
507266	7001010	Caboolture-021	MBC-024	2.72	2.55	0.17	1.22	3.2	125	0	2.89	3.45	3.25	4.42	3.33	4.63	1.81
507718	7001452	Caboolture-022	MBC-025	2.75	2.57	0.18	1.27	3.3	131	0	2.92	3.51	3.30	4.53	3.38	4.75	1.83
508289	7001850	Caboolture-023	MBC-026	2.72	2.54	0.18	1.28	3.4	132	0	2.89	3.49	3.27	4.53	3.35	4.75	1.85
508903	7002206	Caboolture-024	MBC-027	2.67	2.48	0.19	1.32	3.5	134	0	2.83	3.47	3.22	4.56	3.30	4.80	1.91
509355	7002550	Caboolture-025	MBC-028	2.65	2.46	0.19	1.30	3.5	136	0	2.81	3.43	3.19	4.50	3.27	4.73	1.90
509894	7002744	Caboolture-026	MBC-029	2.60	2.40	0.20	1.35	3.5	141	0	2.76	3.41	3.16	4.52	3.24	4.76	1.90
510475	7002852	Caboolture-027	MBC-030	2.56	2.37	0.19	1.31	3.5	141	0	2.72	3.35	3.10	4.43	3.19	4.66	1.90
511067	7003003	Caboolture-028	MBC-031	2.52	2.34	0.18	1.20	3.5	174	0	2.66	3.25	3.01	4.26	3.09	4.48	1.97
511477	7003251	Caboolture-029	MBC-032	2.55	2.40	0.15	1.06	2.8	139	0	2.70	3.16	3.03	3.98	3.09	4.15	1.70
512112	7003326	Caboolture-030	MBC-033	2.51	2.35	0.16	1.18	3.0	144	0	2.68	3.21	3.04	4.13	3.12	4.33	1.75
512694	7003455	Caboolture-031	MBC-034	2.46	2.30	0.16	1.12	3.1	165	0	2.61	3.12	2.95	4.02	3.02	4.21	1.81
513275	7003412	Caboolture-032	MBC-035	2.45	2.29	0.16	1.12	3.0	177	0	2.61	3.11	2.95	4.00	3.02	4.18	1.78
513911	7003746	Caboolture-033	MBC-036	2.44	2.31	0.13	1.04	2.5	130	0	2.61	3.03	2.93	3.78	2.99	3.92	1.51
514481	7004446	Caboolture-034	MBC-037	2.27	2.14	0.13	1.00	2.5	126	0	2.43	2.84	2.74	3.57	2.80	3.71	1.55
516248	7002647	Caboolture-038	MBC-038	2.18	1.95	0.23	1.55	4.0	211	0	2.34	3.12	2.78	4.43	2.87	4.72	1.98
517280	7002397	Caboolture-040	MBC-039	2.09	1.88	0.21	1.43	3.7	176	0	2.25	2.95	2.67	4.14	2.76	4.39	1.92
519611	7002925	Caboolture-044	MBC-040	2.04	1.76	0.28	1.93	4.3	120	0	2.24	3.20	2.77	4.80	2.88	5.15	1.91
520367	7003619	Caboolture-046	MBC-041	2.05	1.72	0.33	2.27	4.8	102	0	2.26	3.44	2.85	5.35	2.98	5.76	1.97
520284	7006303	Caboolture-051	MBC-042	2.05	1.71	0.34	2.08	5.6	53	0	2.17	3.40	2.70	5.37	2.83	5.83	2.42
516778	7013518	Caboolture-060	MBC-043	2.15	1.75	0.40	2.52	5.9	58	0	2.30	3.76	2.94	6.09	3.08	6.62	2.31
516320	7014796	Caboolture-061	MBC-044	2.13	1.75	0.38	2.35	5.8	58	0	2.26	3.64	2.86	5.84	3.00	6.35	2.38
507667	7015461	Caboolture-067	MBC-045	2.76	2.63	0.13	1.02	2.4	216	0	2.92	3.33	3.23	4.07	3.29	4.21	1.50
508591	7014764	Caboolture-069	MBC-046	2.73	2.58	0.15	1.21	2.6	227	0	2.93	3.43	3.30	4.31	3.36	4.46	1.49
509101	7014442	Caboolture-070	MBC-047	2.66	2.51	0.15	1.24	2.7	223	0	2.87	3.37	3.25	4.27	3.32	4.45	1.53
509543	7013236	Caboolture-072	MBC-048	2.52	2.37	0.15	1.16	2.7	226	0	2.70	3.18	3.06	4.03	3.13	4.20	1.55
509623	7012592	Caboolture-073	MBC-049	2.44	2.29	0.15	1.20	2.8	224	0	2.63	3.13	3.00	4.02	3.07	4.20	1.57
510253	7011212	Caboolture-075	MBC-050	2.32	2.17	0.15	1.23	2.7	220	0	2.53	3.02	2.90	3.91	2.97	4.09	1.51
510669	7010917	Caboolture-076	MBC-051	2.23	2.11	0.12	0.99	2.4	217	0	2.40	2.79	2.70	3.51	2.75	3.64	1.50
511138	7010769	Caboolture-077	MBC-052	2.26	2.12	0.14	1.05	2.6	140	0	2.42	2.85	2.74	3.63	2.81	3.79	1.57
511701	7010475	Caboolture-078	MBC-053	2.24	2.10	0.14	1.11	2.7	193	0	2.42	2.88	2.76	3.71	2.83	3.87	1.59
512076	7010032	Caboolture-079	MBC-054	2.24	2.08	0.16	1.20	3.0	214	0	2.42	2.94	2.79	3.87	2.86	4.06	1.69
513283	7007901	Caboolture-083	MBC-055	2.07	1.90	0.17	1.29	2.9	241	0	2.27	2.81	2.66	3.78	2.74	3.97	1.61
513390	7007284	Caboolture-084	MBC-056	2.31	2.14	0.17	1.38	2.8	246	0	2.54	3.11	2.96	4.13	3.02	4.29	1.50

				Water Level mAHD 500yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.26	2.08	0.18	1.51	2.9	149	0	2.52	3.14	2.97	4.24	3.05	4.42	1.49
514141	7006547	Caboolture-086	MBC-058	2.25	2.08	0.17	1.44	2.8	242	0	2.50	3.07	2.93	4.11	3.00	4.28	1.47
514958	7005756	Caboolture-088	MBC-059	2.19	2.01	0.18	1.41	3.0	250	0	2.41	2.99	2.84	4.03	2.92	4.24	1.56
515374	7005260	Caboolture-089	MBC-060	2.12	1.97	0.15	1.25	2.7	261	0	2.33	2.83	2.71	3.73	2.79	3.91	1.50
514730	7005140	Caboolture-090	MBC-061	2.10	1.97	0.13	1.07	2.4	118	0	2.28	2.70	2.60	3.46	2.66	3.58	1.45
514328	7005394	Caboolture-091	MBC-062	2.12	1.99	0.13	1.01	2.6	111	0	2.28	2.70	2.59	3.46	2.65	3.61	1.61
513269	7006199	Caboolture-093	MBC-063	2.21	2.06	0.15	1.19	2.7	110	0	2.40	2.89	2.77	3.77	2.84	3.94	1.56
511621	7007284	Caboolture-096	MBC-064	2.24	2.10	0.14	1.09	2.5	124	0	2.42	2.86	2.75	3.66	2.80	3.79	1.49
511339	7008048	Caboolture-097	MBC-065	2.26	2.13	0.13	1.03	2.4	47	0	2.43	2.83	2.74	3.56	2.79	3.68	1.45
511648	7008558	Caboolture-098	MBC-066	2.04	1.91	0.13	1.00	2.5	145	0	2.20	2.61	2.51	3.34	2.57	3.48	1.54
511835	7009040	Caboolture-099	MBC-067	2.11	1.97	0.14	1.03	2.6	123	0	2.27	2.70	2.58	3.47	2.65	3.62	1.60
511446	7009456	Caboolture-100	MBC-068	2.18	2.04	0.14	1.11	2.6	16	0	2.36	2.82	2.70	3.64	2.77	3.80	1.56
511058	7009456	Caboolture-101	MBC-069	2.22	2.07	0.15	1.14	2.6	12	0	2.40	2.86	2.75	3.70	2.82	3.86	1.54
510321	7009818	Caboolture-102	MBC-070	2.22	2.07	0.15	1.12	2.7	14	0	2.39	2.86	2.73	3.69	2.80	3.86	1.59
509784	7010233	Caboolture-103	MBC-071	2.20	2.06	0.14	1.12	2.6	125	0	2.38	2.84	2.73	3.65	2.79	3.81	1.53
509369	7010796	Caboolture-104	MBC-072	2.27	2.13	0.14	1.08	2.6	118	0	2.44	2.89	2.77	3.69	2.84	3.85	1.57
509034	7011198	Caboolture-105	MBC-073	2.44	2.30	0.14	1.11	2.6	43	0	2.62	3.07	2.96	3.87	3.03	4.03	1.51
508833	7011587	Caboolture-106	MBC-074	2.35	2.22	0.13	1.00	2.5	44	0	2.51	2.92	2.82	3.65	2.88	3.79	1.54
508752	7011869	Caboolture-107	MBC-075	2.28	2.14	0.14	1.17	2.5	20	0	2.48	2.94	2.84	3.77	2.90	3.90	1.45
508471	7012110	Caboolture-108	MBC-076	2.31	2.18	0.13	1.11	2.4	39	0	2.50	2.93	2.84	3.72	2.89	3.85	1.45
508926	7012177	Caboolture-109	MBC-077	2.36	2.22	0.14	1.04	2.6	134	0	2.52	2.95	2.84	3.72	2.90	3.88	1.59
509020	7012767	Caboolture-110	MBC-078	2.43	2.29	0.14	1.12	2.6	120	0	2.61	3.07	2.96	3.89	3.02	4.05	1.55
508565	7013276	Caboolture-111	MBC-079	2.53	2.41	0.12	0.99	2.4	107	0	2.70	3.10	3.00	3.82	3.04	3.94	1.49
508069	7013611	Caboolture-112	MBC-080	2.76	2.61	0.15	1.19	2.6	14	0	2.96	3.44	3.32	4.30	3.38	4.45	1.48
507667	7013960	Caboolture-113	MBC-081	2.82	2.69	0.13	1.10	2.4	35	0	3.01	3.44	3.34	4.22	3.40	4.35	1.45
507157	7014067	Caboolture-114	MBC-082	2.88	2.75	0.13	1.07	2.5	39	0	3.06	3.49	3.39	4.27	3.44	4.40	1.48
507171	7014777	Caboolture-115	MBC-083	2.77	2.63	0.14	1.09	2.5	39	0	2.95	3.39	3.28	4.19	3.33	4.32	1.49
507063	7015595	Caboolture-116	MBC-084	2.80	2.66	0.14	1.08	2.6	95	0	2.97	3.41	3.30	4.20	3.37	4.36	1.54
509121	6984944	Redcliffe-005	MBC-085	2.34	2.17	0.17	1.21	3.0	171	0	2.51	3.04	2.88	3.99	2.96	4.18	1.73
509533	6984891	Redcliffe-006	MBC-086	2.27	2.12	0.15	1.17	2.8	191	0	2.45	2.95	2.81	3.84	2.88	4.01	1.63
509892	6984691	Redcliffe-007	MBC-087	2.21	2.06	0.15	1.14	2.9	193	0	2.38	2.87	2.73	3.75	2.80	3.92	1.67
510464	6984279	Redcliffe-009	MBC-088	2.16	1.96	0.20	1.30	3.6	129	0	2.30	2.95	2.68	4.05	2.76	4.29	1.99
510783	6984638	Redcliffe-010	MBC-089	2.13	1.91	0.22	1.57	3.7	129	0	2.32	3.07	2.77	4.34	2.87	4.61	1.84
510969	6985516	Redcliffe-012	MBC-090	2.16	1.92	0.24	1.64	3.9	115	0	2.34	3.14	2.80	4.49	2.90	4.77	1.88
511076	6985889	Redcliffe-013	MBC-091	2.16	1.92	0.24	1.57	4.0	118	0	2.32	3.11	2.76	4.43	2.85	4.72	1.97
511488	6987365	Redcliffe-016	MBC-092	2.19	1.91	0.28	1.84	4.5	114	0	2.35	3.32	2.85	4.91	2.96	5.26	2.05
511768	6988017	Redcliffe-018	MBC-093	2.16	1.87	0.29	1.88	4.6	114	0	2.32	3.32	2.83	4.96	2.94	5.32	2.10
511648	6988496	Redcliffe-019	MBC-094	2.16	1.90	0.26	1.57	4.6	111	0	2.27	3.15	2.70	4.58	2.80	4.91	2.27
511741	6989254	Redcliffe-021	MBC-095	2.20	1.90	0.30	1.95	4.6	117	0	2.37	3.40	2.89	5.08	3.01	5.45	2.06
511874	6990079	Redcliffe-023	MBC-096	2.17	1.88	0.29	1.89	4.7	120	0	2.33	3.35	2.83	5.01	2.95	5.38	2.13
511648	6990451	Redcliffe-024	MBC-097	2.16	1.90	0.26	1.64	4.3	110	0	2.30	3.17	2.75	4.61	2.86	4.93	2.12
511661	6991063	Redcliffe-025	MBC-098	2.17	1.91	0.26	1.75	4.3	119	0	2.34	3.24	2.82	4.73	2.93	5.06	2.01
511568	6992087	Redcliffe-027	MBC-099	2.18	1.91	0.27	1.84	4.2	71	0	2.37	3.29	2.88	4.83	2.99	5.16	1.94
511475	6992513	Redcliffe-028	MBC-100	2.13	1.91	0.22	1.52	3.7	125	0	2.31	3.03	2.75	4.27	2.84	4.53	1.85
510916	6992713	Redcliffe-029	MBC-101	2.06	1.90	0.16	1.28	2.9	242	0	2.27	2.80	2.66	3.75	2.73	3.94	1.59
510531	6992472	Redcliffe-030	MBC-102	2.06	1.90	0.16	1.29	2.8	249	0	2.27	2.80	2.66	3.74	2.74	3.93	1.55
510161	6992164	Redcliffe-031	MBC-103	2.10	1.92	0.18	1.49	2.9	244	0	2.35	2.97	2.80	4.06	2.87	4.23	1.49
509833	6991712	Redcliffe-032	MBC-104	2.06	1.93	0.13	1.09	2.4	227	0	2.25	2.67	2.58	3.44	2.63	3.57	1.45
509525	6991322	Redcliffe-033	MBC-105	2.06	1.92	0.14	1.14	2.4	228	0	2.25	2.68	2.59	3.47	2.65	3.60	1.42
509155	6991199	Redcliffe-034	MBC-106	2.08	1.94	0.14	1.15	2.4	223	0	2.27	2.69	2.62	3.48	2.68	3.60	1.39
508478	6991343	Redcliffe-035	MBC-107	2.09	1.97	0.12	1.02	2.3	130	0	2.26	2.66	2.57	3.38	2.62	3.50	1.44
507965	6991487	Redcliffe-036	MBC-108	2.13	2.00	0.13	1.04	2.4	129	0	2.30	2.71	2.62	3.46	2.67	3.58	1.46
507205	6991589	Redcliffe-037	MBC-109	2.18	2.03	0.15	1.04	2.9	49	0	2.32	2.79	2.64	3.62	2.71	3.80	1.79
506548	6991836	Redcliffe-038	MBC-110	2.24	2.08	0.16	1.07	3.0	49	0	2.38	2.87	2.71	3.73	2.78	3.91	1.82
505830	6992082	Redcliffe-039	MBC-111	2.28	2.12	0.16	1.11	3.1	51	0	2.43	2.94	2.77	3.84	2.84	4.03	1.84
505358	6992267	Redcliffe-040	MBC-112	2.30	2.15	0.15	1.01	3.0	55	0	2.43	2.90	2.74	3.73	2.81	3.90	1.88

				Water Level mAHD 1000yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.96	1.96		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.44	2.30	0.14	1.08	2.5	130	0	2.61	3.05	2.94	3.83	3.01	3.98	1.52
507065	6983136	PineRiver-002	MBC-002	2.50	2.35	0.15	1.16	2.7	138	0	2.68	3.16	3.04	4.01	3.11	4.18	1.55
507237	6983516	PineRiver-003	MBC-003	2.48	2.35	0.13	1.04	2.5	129	0	2.65	3.07	2.97	3.84	3.03	3.98	1.54
507198	6984049	PineRiver-004	MBC-004	2.55	2.43	0.12	0.98	2.4	61	0	2.71	3.12	3.01	3.83	3.06	3.95	1.49
506913	6984334	PineRiver-005	MBC-005	2.70	2.59	0.11	0.86	2.2	132	0	2.84	3.18	3.09	3.80	3.13	3.90	1.47
507046	6984696	PineRiver-006	MBC-006	2.80	2.69	0.11	0.88	2.2	141	0	2.94	3.29	3.20	3.91	3.25	4.01	1.44
507522	6984334	PineRiver-007	MBC-007	2.57	2.44	0.13	1.00	2.5	137	0	2.73	3.14	3.04	3.87	3.10	4.01	1.54
507769	6984239	PineRiver-008	MBC-008	2.49	2.33	0.16	1.23	2.9	129	0	2.68	3.20	3.06	4.12	3.13	4.30	1.60
506179	6982661	PineRiver-009	MBC-009	2.70	2.59	0.11	0.86	2.2	132	0	2.84	3.18	3.09	3.80	3.13	3.90	1.47
504927	6992513	Caboolture-001	MBC-010	2.43	2.30	0.13	1.03	2.5	120	0	2.60	3.01	2.91	3.77	2.98	3.91	1.53
504270	6992575	Caboolture-002	MBC-011	2.46	2.34	0.12	0.97	2.3	132	0	2.62	3.01	2.91	3.70	2.96	3.82	1.46
503633	6992841	Caboolture-003	MBC-012	2.61	2.49	0.12	1.01	2.4	132	0	2.78	3.18	3.09	3.91	3.14	4.02	1.46
503346	6993519	Caboolture-004	MBC-013	2.70	2.57	0.13	1.04	2.4	131	0	2.87	3.29	3.19	4.05	3.24	4.17	1.48
503613	6994402	Caboolture-005	MBC-014	2.78	2.66	0.12	0.93	2.3	132	0	2.93	3.30	3.21	3.98	3.26	4.11	1.52
504658	6996186	Caboolture-009	MBC-015	2.76	2.62	0.14	1.08	2.7	71	0	2.93	3.38	3.26	4.19	3.33	4.35	1.59
504477	6996546	Caboolture-010	MBC-016	2.90	2.77	0.13	1.06	2.4	43	0	3.08	3.50	3.40	4.25	3.45	4.37	1.46
504774	6997055	Caboolture-012	MBC-017	2.83	2.70	0.13	1.02	2.5	69	0	3.00	3.41	3.31	4.15	3.37	4.30	1.53
505039	6997331	Caboolture-013	MBC-018	2.81	2.68	0.13	0.95	2.6	129	0	2.95	3.36	3.25	4.10	3.30	4.24	1.69
505442	6998582	Caboolture-016	MBC-019	2.90	2.75	0.15	1.11	2.7	127	0	3.07	3.53	3.41	4.37	3.48	4.54	1.62
505671	6999062	Caboolture-017	MBC-020	2.92	2.78	0.14	1.02	2.8	128	0	3.07	3.51	3.38	4.31	3.45	4.47	1.71
505909	6999567	Caboolture-018	MBC-021	2.95	2.80	0.15	1.10	2.9	129	0	3.11	3.59	3.45	4.44	3.52	4.62	1.70
506361	7000127	Caboolture-019	MBC-022	2.98	2.83	0.15	1.16	2.8	133	0	3.16	3.65	3.52	4.52	3.59	4.69	1.61
506813	7000580	Caboolture-020	MBC-023	2.88	2.73	0.15	1.06	2.8	129	0	3.03	3.49	3.36	4.31	3.42	4.48	1.69
507266	7001010	Caboolture-021	MBC-024	2.84	2.67	0.17	1.22	3.2	125	0	3.01	3.57	3.37	4.54	3.45	4.75	1.81
507718	7001452	Caboolture-022	MBC-025	2.87	2.69	0.18	1.27	3.3	131	0	3.04	3.63	3.42	4.65	3.50	4.87	1.83
508289	7001850	Caboolture-023	MBC-026	2.84	2.66	0.18	1.28	3.4	132	0	3.01	3.61	3.39	4.65	3.47	4.87	1.85
508903	7002206	Caboolture-024	MBC-027	2.78	2.59	0.19	1.32	3.5	134	0	2.94	3.58	3.33	4.67	3.41	4.91	1.91
509355	7002550	Caboolture-025	MBC-028	2.76	2.57	0.19	1.30	3.5	136	0	2.92	3.54	3.30	4.61	3.38	4.84	1.90
509894	7002744	Caboolture-026	MBC-029	2.71	2.51	0.20	1.35	3.5	141	0	2.87	3.52	3.27	4.63	3.35	4.87	1.90
510475	7002852	Caboolture-027	MBC-030	2.67	2.47	0.20	1.31	3.6	150	0	2.81	3.46	3.20	4.55	3.28	4.79	1.94
511067	7003003	Caboolture-028	MBC-031	2.62	2.44	0.18	1.20	3.3	157	0	2.77	3.33	3.13	4.32	3.20	4.52	1.88
511477	7003251	Caboolture-029	MBC-032	2.66	2.51	0.15	1.06	2.9	154	0	2.81	3.28	3.14	4.12	3.20	4.29	1.76
512112	7003326	Caboolture-030	MBC-033	2.61	2.45	0.16	1.18	3.1	148	0	2.78	3.31	3.14	4.24	3.21	4.43	1.76
512694	7003455	Caboolture-031	MBC-034	2.56	2.40	0.16	1.12	3.0	158	0	2.72	3.22	3.06	4.10	3.13	4.29	1.77
513275	7003412	Caboolture-032	MBC-035	2.54	2.39	0.15	1.12	2.7	142	0	2.71	3.18	3.05	4.02	3.12	4.19	1.61
513911	7003746	Caboolture-033	MBC-036	2.54	2.41	0.13	1.04	2.5	130	0	2.71	3.13	3.03	3.88	3.09	4.02	1.51
514481	7004446	Caboolture-034	MBC-037	2.34	2.21	0.13	1.00	2.5	126	0	2.50	2.91	2.81	3.64	2.87	3.78	1.55
516248	7002647	Caboolture-038	MBC-038	2.24	2.01	0.23	1.56	3.8	229	0	2.41	3.18	2.86	4.47	2.95	4.74	1.91
517280	7002397	Caboolture-040	MBC-039	2.14	1.93	0.21	1.43	3.7	176	0	2.30	3.00	2.72	4.19	2.81	4.44	1.92
519611	7002925	Caboolture-044	MBC-040	2.09	1.80	0.29	1.95	4.3	114	0	2.28	3.26	2.82	4.89	2.93	5.24	1.93
520367	7003619	Caboolture-046	MBC-041	2.09	1.76	0.33	2.27	4.8	102	0	2.30	3.48	2.89	5.39	3.02	5.80	1.97
520284	7006303	Caboolture-051	MBC-042	2.08	1.74	0.34	2.08	5.6	53	0	2.20	3.43	2.73	5.40	2.86	5.86	2.42
516778	7013518	Caboolture-060	MBC-043	2.18	1.78	0.40	2.52	5.9	58	0	2.33	3.79	2.97	6.12	3.11	6.65	2.31
516320	7014796	Caboolture-061	MBC-044	2.17	1.79	0.38	2.35	5.8	58	0	2.30	3.68	2.90	5.88	3.04	6.39	2.38
507667	7015461	Caboolture-067	MBC-045	2.89	2.76	0.13	1.02	2.4	211	0	3.05	3.46	3.36	4.20	3.42	4.35	1.51
508591	7014764	Caboolture-069	MBC-046	2.85	2.70	0.15	1.21	2.6	227	0	3.05	3.55	3.42	4.43	3.48	4.58	1.49
509101	7014442	Caboolture-070	MBC-047	2.77	2.62	0.15	1.24	2.7	223	0	2.98	3.48	3.36	4.38	3.43	4.56	1.53
509543	7013236	Caboolture-072	MBC-048	2.62	2.47	0.15	1.16	2.7	226	0	2.80	3.28	3.16	4.13	3.23	4.30	1.55
509623	7012592	Caboolture-073	MBC-049	2.54	2.39	0.15	1.20	2.8	224	0	2.73	3.23	3.10	4.12	3.17	4.30	1.57
510253	7011212	Caboolture-075	MBC-050	2.40	2.25	0.15	1.23	2.7	220	0	2.61	3.10	2.98	3.99	3.05	4.17	1.51
510669	7010917	Caboolture-076	MBC-051	2.31	2.19	0.12	0.99	2.4	217	0	2.48	2.87	2.78	3.59	2.83	3.72	1.50
511138	7010769	Caboolture-077	MBC-052	2.33	2.19	0.14	1.05	2.6	148	0	2.49	2.93	2.81	3.71	2.88	3.86	1.58
511701	7010475	Caboolture-078	MBC-053	2.31	2.17	0.14	1.11	2.7	196	0	2.49	2.95	2.83	3.78	2.90	3.94	1.59
512076	7010032	Caboolture-079	MBC-054	2.31	2.15	0.16	1.20	3.0	214	0	2.49	3.01	2.86	3.94	2.93	4.13	1.69
513283	7007901	Caboolture-083	MBC-055	2.12	1.95	0.17	1.31	2.9	249	0	2.32	2.87	2.72	3.85	2.80	4.05	1.60
513390	7007284	Caboolture-084	MBC-056	2.39	2.22	0.17	1.38	2.8	246	0	2.62	3.19	3.04	4.21	3.10	4.37	1.50

				Water Level mAHD 1000yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.33	2.15	0.18	1.51	2.9	149	0	2.59	3.21	3.04	4.31	3.12	4.49	1.49
514141	7006547	Caboolture-086	MBC-058	2.32	2.15	0.17	1.44	2.8	242	0	2.57	3.14	3.00	4.18	3.07	4.35	1.47
514958	7005756	Caboolture-088	MBC-059	2.25	2.07	0.18	1.41	3.0	250	0	2.47	3.05	2.90	4.09	2.98	4.30	1.56
515374	7005260	Caboolture-089	MBC-060	2.19	2.03	0.16	1.34	2.8	258	0	2.42	2.97	2.82	3.95	2.89	4.11	1.49
514730	7005140	Caboolture-090	MBC-061	2.16	2.03	0.13	1.07	2.4	118	0	2.34	2.76	2.66	3.52	2.72	3.64	1.45
514328	7005394	Caboolture-091	MBC-062	2.18	2.05	0.13	1.01	2.6	111	0	2.34	2.76	2.65	3.52	2.71	3.67	1.61
513269	7006199	Caboolture-093	MBC-063	2.28	2.13	0.15	1.19	2.7	110	0	2.47	2.96	2.84	3.84	2.91	4.01	1.56
511621	7007284	Caboolture-096	MBC-064	2.31	2.17	0.14	1.11	2.5	129	0	2.49	2.94	2.83	3.74	2.89	3.87	1.48
511339	7008048	Caboolture-097	MBC-065	2.33	2.20	0.13	1.03	2.3	129	0	2.50	2.89	2.81	3.62	2.86	3.74	1.43
511648	7008558	Caboolture-098	MBC-066	2.10	1.97	0.13	1.02	2.5	132	0	2.27	2.68	2.58	3.43	2.64	3.57	1.55
511835	7009040	Caboolture-099	MBC-067	2.17	2.03	0.14	1.03	2.6	123	0	2.33	2.76	2.64	3.53	2.71	3.68	1.60
511446	7009456	Caboolture-100	MBC-068	2.26	2.11	0.15	1.12	2.7	75	0	2.43	2.90	2.77	3.73	2.84	3.90	1.59
511058	7009456	Caboolture-101	MBC-069	2.30	2.15	0.15	1.14	2.6	12	0	2.48	2.94	2.83	3.78	2.90	3.94	1.54
510321	7009818	Caboolture-102	MBC-070	2.30	2.15	0.15	1.12	2.7	14	0	2.47	2.94	2.81	3.77	2.88	3.94	1.59
509784	7010233	Caboolture-103	MBC-071	2.29	2.13	0.16	1.25	2.8	79	0	2.49	3.00	2.87	3.92	2.94	4.10	1.56
509369	7010796	Caboolture-104	MBC-072	2.35	2.21	0.14	1.12	2.7	82	0	2.53	2.99	2.87	3.83	2.94	3.99	1.58
509034	7011198	Caboolture-105	MBC-073	2.53	2.39	0.14	1.11	2.6	43	0	2.71	3.16	3.05	3.96	3.12	4.12	1.51
508833	7011587	Caboolture-106	MBC-074	2.44	2.31	0.13	1.00	2.5	44	0	2.60	3.01	2.91	3.74	2.97	3.88	1.54
508752	7011869	Caboolture-107	MBC-075	2.36	2.22	0.14	1.17	2.5	20	0	2.56	3.02	2.92	3.85	2.98	3.98	1.45
508471	7012110	Caboolture-108	MBC-076	2.40	2.27	0.13	1.11	2.4	39	0	2.59	3.02	2.93	3.81	2.98	3.94	1.45
508926	7012177	Caboolture-109	MBC-077	2.45	2.31	0.14	1.04	2.6	122	0	2.61	3.04	2.93	3.82	2.99	3.97	1.60
509020	7012767	Caboolture-110	MBC-078	2.53	2.39	0.14	1.12	2.6	120	0	2.71	3.17	3.06	3.99	3.12	4.15	1.55
508565	7013276	Caboolture-111	MBC-079	2.63	2.51	0.12	0.99	2.4	107	0	2.80	3.20	3.10	3.92	3.14	4.04	1.49
508069	7013611	Caboolture-112	MBC-080	2.88	2.73	0.15	1.19	2.6	14	0	3.08	3.56	3.44	4.42	3.50	4.57	1.48
507667	7013960	Caboolture-113	MBC-081	2.95	2.82	0.13	1.10	2.4	35	0	3.14	3.57	3.47	4.35	3.53	4.48	1.45
507157	7014067	Caboolture-114	MBC-082	3.01	2.88	0.13	1.07	2.5	39	0	3.19	3.62	3.52	4.40	3.57	4.53	1.48
507171	7014777	Caboolture-115	MBC-083	2.89	2.75	0.14	1.09	2.5	39	0	3.07	3.51	3.40	4.31	3.45	4.44	1.49
507063	7015595	Caboolture-116	MBC-084	2.93	2.79	0.14	1.08	2.6	95	0	3.10	3.54	3.43	4.33	3.50	4.49	1.54
509121	6984944	Redcliffe-005	MBC-085	2.43	2.26	0.17	1.21	3.0	171	0	2.60	3.13	2.97	4.08	3.05	4.27	1.73
509533	6984891	Redcliffe-006	MBC-086	2.35	2.20	0.15	1.17	2.8	191	0	2.53	3.03	2.89	3.92	2.96	4.09	1.63
509892	6984691	Redcliffe-007	MBC-087	2.29	2.14	0.15	1.14	2.9	193	0	2.46	2.95	2.81	3.83	2.88	4.00	1.67
510464	6984279	Redcliffe-009	MBC-088	2.23	2.03	0.20	1.30	3.6	129	0	2.37	3.02	2.75	4.12	2.83	4.36	1.99
510783	6984638	Redcliffe-010	MBC-089	2.19	1.97	0.22	1.57	3.7	129	0	2.38	3.13	2.83	4.40	2.93	4.67	1.84
510969	6985516	Redcliffe-012	MBC-090	2.22	1.98	0.24	1.64	3.9	115	0	2.40	3.20	2.86	4.55	2.96	4.83	1.88
511076	6985889	Redcliffe-013	MBC-091	2.22	1.98	0.24	1.57	4.0	118	0	2.38	3.17	2.82	4.49	2.91	4.78	1.97
511488	6987365	Redcliffe-016	MBC-092	2.25	1.97	0.28	1.84	4.5	76	0	2.41	3.39	2.91	4.99	3.02	5.34	2.09
511768	6988017	Redcliffe-018	MBC-093	2.22	1.93	0.29	1.92	4.6	70	0	2.39	3.41	2.91	5.08	3.02	5.45	2.09
511648	6988496	Redcliffe-019	MBC-094	2.21	1.95	0.26	1.61	4.5	70	0	2.33	3.21	2.78	4.66	2.87	4.98	2.20
511741	6989254	Redcliffe-021	MBC-095	2.26	1.96	0.30	1.95	4.6	69	0	2.43	3.45	2.95	5.13	3.07	5.50	2.04
511874	6990079	Redcliffe-023	MBC-096	2.23	1.94	0.29	1.89	4.7	120	0	2.39	3.41	2.89	5.07	3.01	5.44	2.13
511648	6990451	Redcliffe-024	MBC-097	2.23	1.96	0.27	1.70	4.4	67	0	2.37	3.28	2.84	4.77	2.94	5.10	2.12
511661	6991063	Redcliffe-025	MBC-098	2.23	1.97	0.26	1.75	4.3	119	0	2.40	3.30	2.88	4.79	2.99	5.12	2.01
511568	6992087	Redcliffe-027	MBC-099	2.24	1.97	0.27	1.84	4.2	71	0	2.43	3.35	2.94	4.89	3.05	5.22	1.94
511475	6992513	Redcliffe-028	MBC-100	2.19	1.97	0.22	1.52	3.7	125	0	2.37	3.09	2.81	4.33	2.90	4.59	1.85
510916	6992713	Redcliffe-029	MBC-101	2.12	1.96	0.16	1.28	2.9	242	0	2.33	2.86	2.72	3.81	2.79	4.00	1.59
510531	6992472	Redcliffe-030	MBC-102	2.12	1.96	0.16	1.29	2.8	249	0	2.33	2.86	2.72	3.80	2.80	3.99	1.55
510161	6992164	Redcliffe-031	MBC-103	2.16	1.98	0.18	1.49	2.9	244	0	2.41	3.03	2.86	4.12	2.93	4.29	1.49
509833	6991712	Redcliffe-032	MBC-104	2.12	1.99	0.13	1.09	2.4	227	0	2.31	2.73	2.64	3.50	2.69	3.63	1.45
509525	6991322	Redcliffe-033	MBC-105	2.12	1.98	0.14	1.14	2.4	228	0	2.31	2.74	2.65	3.53	2.71	3.66	1.42
509155	6991199	Redcliffe-034	MBC-106	2.14	2.00	0.14	1.15	2.4	223	0	2.33	2.75	2.68	3.54	2.74	3.66	1.39
508478	6991343	Redcliffe-035	MBC-107	2.15	2.03	0.12	1.02	2.3	130	0	2.32	2.72	2.63	3.44	2.68	3.56	1.44
507965	6991487	Redcliffe-036	MBC-108	2.20	2.07	0.13	1.04	2.4	129	0	2.37	2.78	2.69	3.53	2.74	3.65	1.46
507205	6991589	Redcliffe-037	MBC-109	2.26	2.11	0.15	1.04	2.9	49	0	2.40	2.87	2.72	3.70	2.79	3.88	1.79
506548	6991836	Redcliffe-038	MBC-110	2.31	2.15	0.16	1.07	3.0	49	0	2.45	2.94	2.78	3.80	2.85	3.98	1.82
505830	6992082	Redcliffe-039	MBC-111	2.36	2.20	0.16	1.11	3.1	51	0	2.51	3.02	2.85	3.92	2.92	4.11	1.84
505358	6992267	Redcliffe-040	MBC-112	2.39	2.24	0.15	1.01	2.9	66	0	2.52	2.98	2.84	3.79	2.90	3.96	1.80

				Water Level mAHD 10000yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	2.15	2.15		1.12	2.5	147	0							
506913	6982622	PineRiver-001	MBC-001	2.74	2.60	0.14	1.08	2.5	130	0	2.91	3.35	3.24	4.13	3.31	4.28	1.52
507065	6983136	PineRiver-002	MBC-002	2.81	2.66	0.15	1.16	2.7	138	0	2.99	3.47	3.35	4.32	3.42	4.49	1.55
507237	6983516	PineRiver-003	MBC-003	2.80	2.67	0.13	1.04	2.5	65	0	2.97	3.39	3.29	4.16	3.35	4.31	1.55
507198	6984049	PineRiver-004	MBC-004	2.89	2.77	0.12	0.98	2.4	61	0	3.05	3.46	3.35	4.17	3.40	4.29	1.49
506913	6984334	PineRiver-005	MBC-005	3.09	2.98	0.11	0.86	2.2	132	0	3.23	3.57	3.48	4.19	3.52	4.29	1.47
507046	6984696	PineRiver-006	MBC-006	3.22	3.11	0.11	0.88	2.2	141	0	3.36	3.71	3.62	4.33	3.67	4.43	1.44
507522	6984334	PineRiver-007	MBC-007	2.91	2.78	0.13	1.00	2.5	137	0	3.07	3.48	3.38	4.21	3.44	4.35	1.54
507769	6984239	PineRiver-008	MBC-008	2.79	2.63	0.16	1.23	2.9	129	0	2.98	3.50	3.36	4.42	3.43	4.60	1.60
506179	6982661	PineRiver-009	MBC-009	3.09	2.98	0.11	0.86	2.2	132	0	3.23	3.57	3.48	4.19	3.52	4.29	1.47
504927	6992513	Caboolture-001	MBC-010	2.75	2.60	0.15	1.03	2.9	65	0	2.89	3.35	3.21	4.17	3.27	4.34	1.78
504270	6992575	Caboolture-002	MBC-011	2.77	2.65	0.12	0.97	2.3	132	0	2.93	3.32	3.22	4.01	3.27	4.13	1.46
503633	6992841	Caboolture-003	MBC-012	2.96	2.84	0.12	1.01	2.4	132	0	3.13	3.53	3.44	4.26	3.49	4.37	1.46
503346	6993519	Caboolture-004	MBC-013	3.09	2.96	0.13	1.07	2.5	66	0	3.27	3.70	3.60	4.48	3.65	4.61	1.48
503613	6994402	Caboolture-005	MBC-014	3.19	3.07	0.12	0.93	2.3	132	0	3.34	3.71	3.62	4.39	3.67	4.52	1.52
504658	6996186	Caboolture-009	MBC-015	3.15	3.01	0.14	1.09	2.7	131	0	3.32	3.78	3.66	4.59	3.72	4.76	1.60
504477	6996546	Caboolture-010	MBC-016	3.34	3.21	0.13	1.06	2.4	43	0	3.52	3.94	3.84	4.69	3.89	4.81	1.46
504774	6997055	Caboolture-012	MBC-017	3.24	3.11	0.13	1.02	2.5	131	0	3.41	3.82	3.72	4.56	3.78	4.71	1.53
505039	6997331	Caboolture-013	MBC-018	3.23	3.10	0.13	0.96	2.6	131	0	3.38	3.78	3.67	4.51	3.73	4.66	1.65
505442	6998582	Caboolture-016	MBC-019	3.34	3.19	0.15	1.11	2.7	127	0	3.51	3.97	3.85	4.81	3.92	4.98	1.62
505671	6999062	Caboolture-017	MBC-020	3.36	3.22	0.14	1.02	2.8	128	0	3.51	3.95	3.82	4.75	3.89	4.91	1.71
505909	6999567	Caboolture-018	MBC-021	3.40	3.25	0.15	1.10	2.9	129	0	3.56	4.04	3.90	4.89	3.97	5.07	1.70
506361	7000127	Caboolture-019	MBC-022	3.44	3.29	0.15	1.16	2.8	133	0	3.62	4.11	3.98	4.98	4.05	5.15	1.61
506813	7000580	Caboolture-020	MBC-023	3.29	3.15	0.14	1.08	2.7	131	0	3.46	3.92	3.79	4.74	3.86	4.90	1.64
507266	7001010	Caboolture-021	MBC-024	3.25	3.08	0.17	1.23	3.1	127	0	3.42	3.97	3.80	4.94	3.87	5.15	1.76
507718	7001452	Caboolture-022	MBC-025	3.28	3.10	0.18	1.28	3.2	132	0	3.45	4.03	3.84	5.05	3.92	5.27	1.78
508289	7001850	Caboolture-023	MBC-026	3.24	3.06	0.18	1.29	3.3	133	0	3.41	4.01	3.80	5.04	3.88	5.26	1.80
508903	7002206	Caboolture-024	MBC-027	3.17	2.98	0.19	1.33	3.4	135	0	3.34	3.97	3.73	5.05	3.82	5.28	1.86
509355	7002550	Caboolture-025	MBC-028	3.14	2.95	0.19	1.31	3.4	138	0	3.30	3.92	3.69	4.99	3.77	5.21	1.86
509894	7002744	Caboolture-026	MBC-029	3.07	2.87	0.20	1.37	3.5	142	0	3.24	3.88	3.64	5.00	3.72	5.23	1.85
510475	7002852	Caboolture-027	MBC-030	3.01	2.82	0.19	1.33	3.4	142	0	3.18	3.80	3.57	4.89	3.66	5.12	1.86
511067	7003003	Caboolture-028	MBC-031	2.95	2.78	0.17	1.21	3.1	145	0	3.12	3.66	3.49	4.62	3.56	4.82	1.78
511477	7003251	Caboolture-029	MBC-032	3.01	2.86	0.15	1.07	2.8	141	0	3.17	3.62	3.49	4.44	3.56	4.61	1.67
512112	7003326	Caboolture-030	MBC-033	2.95	2.79	0.16	1.19	2.9	139	0	3.13	3.64	3.49	4.55	3.57	4.74	1.67
512694	7003455	Caboolture-031	MBC-034	2.87	2.72	0.15	1.12	2.8	144	0	3.04	3.52	3.38	4.38	3.45	4.56	1.68
513275	7003412	Caboolture-032	MBC-035	2.86	2.70	0.16	1.12	3.0	177	0	3.02	3.52	3.36	4.41	3.43	4.59	1.78
513911	7003746	Caboolture-033	MBC-036	2.87	2.74	0.13	1.04	2.5	130	0	3.04	3.46	3.36	4.21	3.42	4.35	1.51
514481	7004446	Caboolture-034	MBC-037	2.61	2.48	0.13	1.00	2.5	126	0	2.77	3.18	3.08	3.91	3.14	4.05	1.55
516248	7002647	Caboolture-038	MBC-038	2.44	2.21	0.23	1.56	3.8	229	0	2.61	3.38	3.06	4.67	3.15	4.94	1.91
517280	7002397	Caboolture-040	MBC-039	2.32	2.11	0.21	1.43	3.7	176	0	2.48	3.18	2.90	4.37	2.99	4.62	1.92
519611	7002925	Caboolture-044	MBC-040	2.22	1.93	0.29	1.95	4.3	114	0	2.41	3.39	2.95	5.02	3.06	5.37	1.93
520367	7003619	Caboolture-046	MBC-041	2.22	1.89	0.33	2.27	4.8	102	0	2.43	3.61	3.02	5.52	3.15	5.93	1.97
520284	7006303	Caboolture-051	MBC-042	2.20	1.86	0.34	2.08	5.6	53	0	2.32	3.55	2.85	5.52	2.98	5.98	2.42
516778	7013518	Caboolture-060	MBC-043	2.31	1.91	0.40	2.52	5.9	58	0	2.46	3.92	3.10	6.25	3.24	6.78	2.31
516320	7014796	Caboolture-061	MBC-044	2.30	1.92	0.38	2.35	5.8	58	0	2.43	3.81	3.03	6.01	3.17	6.52	2.38
507667	7015461	Caboolture-067	MBC-045	3.31	3.18	0.13	1.04	2.4	213	0	3.48	3.91	3.80	4.67	3.85	4.80	1.49
508591	7014764	Caboolture-069	MBC-046	3.26	3.11	0.15	1.26	2.7	228	0	3.48	3.99	3.86	4.91	3.92	5.06	1.49
509101	7014442	Caboolture-070	MBC-047	3.18	3.01	0.17	1.34	2.8	220	0	3.40	3.94	3.80	4.91	3.88	5.10	1.52
509543	7013236	Caboolture-072	MBC-048	2.96	2.80	0.16	1.24	2.8	228	0	3.16	3.66	3.53	4.57	3.61	4.75	1.54
509623	7012592	Caboolture-073	MBC-049	2.85	2.70	0.15	1.20	2.8	224	0	3.04	3.54	3.41	4.43	3.48	4.61	1.57
510253	7011212	Caboolture-075	MBC-050	2.68	2.53	0.15	1.23	2.7	220	0	2.89	3.38	3.26	4.27	3.33	4.45	1.51
510669	7010917	Caboolture-076	MBC-051	2.56	2.44	0.12	0.99	2.4	217	0	2.73	3.12	3.03	3.84	3.08	3.97	1.50
511138	7010769	Caboolture-077	MBC-052	2.59	2.45	0.14	1.05	2.6	141	0	2.75	3.18	3.07	3.96	3.14	4.12	1.57
511701	7010475	Caboolture-078	MBC-053	2.56	2.42	0.14	1.11	2.7	214	0	2.74	3.20	3.08	4.02	3.15	4.18	1.58
512076	7010032	Caboolture-079	MBC-054	2.55	2.39	0.16	1.20	3.0	214	0	2.73	3.25	3.10	4.18	3.17	4.37	1.69
513283	7007901	Caboolture-083	MBC-055	2.31	2.14	0.17	1.31	2.9	249	0	2.51	3.06	2.91	4.04	2.99	4.24	1.60
513390	7007284	Caboolture-084	MBC-056	2.66	2.49	0.17	1.38	2.8	246	0	2.89	3.46	3.31	4.48	3.37	4.64	1.50

				Water Level mAHD 10000yr ARI Sea Level Rise Excluded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.58	2.40	0.18	1.51	2.9	149	0	2.84	3.46	3.29	4.56	3.37	4.74	1.49
514141	7006547	Caboolture-086	MBC-058	2.56	2.39	0.17	1.44	2.8	242	0	2.81	3.38	3.24	4.42	3.31	4.59	1.47
514958	7005756	Caboolture-088	MBC-059	2.47	2.29	0.18	1.41	3.0	250	0	2.69	3.27	3.12	4.31	3.20	4.52	1.56
515374	7005260	Caboolture-089	MBC-060	2.40	2.24	0.16	1.34	2.8	258	0	2.63	3.18	3.03	4.16	3.10	4.32	1.49
514730	7005140	Caboolture-090	MBC-061	2.37	2.24	0.13	1.07	2.4	118	0	2.55	2.97	2.87	3.73	2.93	3.85	1.45
514328	7005394	Caboolture-091	MBC-062	2.42	2.27	0.15	1.07	2.8	14	0	2.57	3.04	2.90	3.86	2.97	4.03	1.68
513269	7006199	Caboolture-093	MBC-063	2.52	2.37	0.15	1.20	2.7	20	0	2.72	3.21	3.08	4.09	3.15	4.27	1.56
511621	7007284	Caboolture-096	MBC-064	2.56	2.42	0.14	1.11	2.5	129	0	2.74	3.19	3.08	3.99	3.14	4.12	1.48
511339	7008048	Caboolture-097	MBC-065	2.59	2.46	0.13	1.03	2.3	129	0	2.76	3.15	3.07	3.88	3.12	4.00	1.43
511648	7008558	Caboolture-098	MBC-066	2.29	2.16	0.13	1.03	2.5	127	0	2.46	2.88	2.77	3.63	2.84	3.78	1.54
511835	7009040	Caboolture-099	MBC-067	2.38	2.24	0.14	1.03	2.6	123	0	2.54	2.97	2.85	3.74	2.92	3.89	1.60
511446	7009456	Caboolture-100	MBC-068	2.49	2.34	0.15	1.12	2.7	75	0	2.66	3.13	3.00	3.96	3.07	4.13	1.59
511058	7009456	Caboolture-101	MBC-069	2.54	2.39	0.15	1.14	2.6	12	0	2.72	3.18	3.07	4.02	3.14	4.18	1.54
510321	7009818	Caboolture-102	MBC-070	2.54	2.39	0.15	1.12	2.7	14	0	2.71	3.18	3.05	4.01	3.12	4.18	1.59
509784	7010233	Caboolture-103	MBC-071	2.53	2.37	0.16	1.25	2.8	79	0	2.73	3.24	3.11	4.16	3.18	4.34	1.56
509369	7010796	Caboolture-104	MBC-072	2.61	2.47	0.14	1.12	2.7	82	0	2.79	3.25	3.13	4.09	3.20	4.25	1.58
509034	7011198	Caboolture-105	MBC-073	2.85	2.71	0.14	1.11	2.6	43	0	3.03	3.48	3.37	4.28	3.44	4.44	1.51
508833	7011587	Caboolture-106	MBC-074	2.73	2.60	0.13	1.00	2.5	44	0	2.89	3.30	3.20	4.03	3.26	4.17	1.54
508752	7011869	Caboolture-107	MBC-075	2.63	2.49	0.14	1.17	2.5	20	0	2.83	3.29	3.19	4.12	3.25	4.25	1.45
508471	7012110	Caboolture-108	MBC-076	2.67	2.54	0.13	1.11	2.4	39	0	2.86	3.29	3.20	4.08	3.25	4.21	1.45
508926	7012177	Caboolture-109	MBC-077	2.74	2.60	0.14	1.04	2.6	138	0	2.90	3.33	3.22	4.10	3.28	4.25	1.58
509020	7012767	Caboolture-110	MBC-078	2.84	2.70	0.14	1.12	2.6	120	0	3.02	3.48	3.37	4.30	3.43	4.46	1.55
508565	7013276	Caboolture-111	MBC-079	2.98	2.86	0.12	1.01	2.3	129	0	3.15	3.55	3.45	4.27	3.50	4.39	1.45
508069	7013611	Caboolture-112	MBC-080	3.29	3.14	0.15	1.19	2.6	14	0	3.49	3.97	3.85	4.83	3.91	4.98	1.48
507667	7013960	Caboolture-113	MBC-081	3.39	3.26	0.13	1.10	2.4	35	0	3.58	4.01	3.91	4.79	3.97	4.92	1.45
507157	7014067	Caboolture-114	MBC-082	3.47	3.34	0.13	1.07	2.5	39	0	3.65	4.08	3.98	4.86	4.03	4.99	1.48
507171	7014777	Caboolture-115	MBC-083	3.31	3.17	0.14	1.09	2.5	39	0	3.49	3.93	3.82	4.73	3.87	4.86	1.49
507063	7015595	Caboolture-116	MBC-084	3.36	3.22	0.14	1.08	2.6	127	0	3.53	3.97	3.86	4.76	3.93	4.91	1.53
509121	6984944	Redcliffe-005	MBC-085	2.71	2.54	0.17	1.21	3.0	171	0	2.88	3.41	3.25	4.36	3.33	4.55	1.73
509533	6984891	Redcliffe-006	MBC-086	2.61	2.46	0.15	1.17	2.8	191	0	2.79	3.29	3.15	4.18	3.22	4.35	1.63
509892	6984691	Redcliffe-007	MBC-087	2.53	2.38	0.15	1.14	2.9	193	0	2.70	3.19	3.05	4.07	3.12	4.24	1.67
510464	6984279	Redcliffe-009	MBC-088	2.44	2.24	0.20	1.30	3.6	129	0	2.58	3.23	2.96	4.33	3.04	4.57	1.99
510783	6984638	Redcliffe-010	MBC-089	2.39	2.17	0.22	1.59	3.6	125	0	2.59	3.33	3.05	4.60	3.15	4.86	1.79
510969	6985516	Redcliffe-012	MBC-090	2.42	2.17	0.25	1.66	4.0	74	0	2.59	3.42	3.06	4.81	3.16	5.11	1.95
511076	6985889	Redcliffe-013	MBC-091	2.41	2.17	0.24	1.58	4.0	116	0	2.57	3.37	3.01	4.70	3.11	4.99	1.98
511488	6987365	Redcliffe-016	MBC-092	2.45	2.17	0.28	1.84	4.5	76	0	2.61	3.59	3.11	5.19	3.22	5.54	2.09
511768	6988017	Redcliffe-018	MBC-093	2.40	2.11	0.29	1.92	4.6	70	0	2.57	3.59	3.09	5.26	3.20	5.63	2.09
511648	6988496	Redcliffe-019	MBC-094	2.40	2.14	0.26	1.61	4.5	70	0	2.52	3.40	2.97	4.85	3.06	5.17	2.20
511741	6989254	Redcliffe-021	MBC-095	2.45	2.15	0.30	1.95	4.6	69	0	2.62	3.64	3.14	5.32	3.26	5.69	2.04
511874	6990079	Redcliffe-023	MBC-096	2.42	2.12	0.30	1.90	4.8	118	0	2.56	3.60	3.07	5.28	3.18	5.66	2.15
511648	6990451	Redcliffe-024	MBC-097	2.42	2.15	0.27	1.70	4.4	67	0	2.56	3.47	3.03	4.96	3.13	5.29	2.12
511661	6991063	Redcliffe-025	MBC-098	2.42	2.16	0.26	1.75	4.3	119	0	2.59	3.49	3.07	4.98	3.18	5.31	2.01
511568	6992087	Redcliffe-027	MBC-099	2.43	2.16	0.27	1.84	4.2	71	0	2.62	3.54	3.13	5.08	3.24	5.41	1.94
511475	6992513	Redcliffe-028	MBC-100	2.39	2.17	0.22	1.52	3.7	125	0	2.57	3.29	3.01	4.53	3.10	4.79	1.85
510916	6992713	Redcliffe-029	MBC-101	2.33	2.15	0.18	1.36	3.2	45	0	2.53	3.13	2.94	4.19	3.02	4.41	1.71
510531	6992472	Redcliffe-030	MBC-102	2.32	2.15	0.17	1.33	3.0	111	0	2.53	3.09	2.93	4.10	3.01	4.30	1.64
510161	6992164	Redcliffe-031	MBC-103	2.38	2.18	0.20	1.64	3.2	22	0	2.64	3.32	3.13	4.52	3.22	4.76	1.55
509833	6991712	Redcliffe-032	MBC-104	2.32	2.19	0.13	1.09	2.4	227	0	2.51	2.93	2.84	3.70	2.89	3.83	1.45
509525	6991322	Redcliffe-033	MBC-105	2.32	2.18	0.14	1.15	2.4	232	0	2.51	2.95	2.86	3.75	2.92	3.88	1.42
509155	6991199	Redcliffe-034	MBC-106	2.34	2.20	0.14	1.16	2.4	231	0	2.54	2.96	2.89	3.75	2.94	3.88	1.39
508478	6991343	Redcliffe-035	MBC-107	2.36	2.24	0.12	1.02	2.3	130	0	2.53	2.93	2.84	3.65	2.89	3.77	1.44
507965	6991487	Redcliffe-036	MBC-108	2.42	2.29	0.13	1.04	2.4	129	0	2.59	3.00	2.91	3.75	2.96	3.87	1.46
507205	6991589	Redcliffe-037	MBC-109	2.50	2.35	0.15	1.04	2.9	49	0	2.64	3.11	2.96	3.94	3.03	4.12	1.79
506548	6991836	Redcliffe-038	MBC-110	2.57	2.41	0.16	1.07	3.0	49	0	2.71	3.20	3.04	4.06	3.11	4.24	1.82
505830	6992082	Redcliffe-039	MBC-111	2.63	2.47	0.16	1.11	3.1	51	0	2.78	3.29	3.12	4.19	3.19	4.38	1.84
505358	6992267	Redcliffe-040	MBC-112	2.67	2.52	0.15	1.01	2.9	62	0	2.80	3.26	3.12	4.07	3.18	4.24	1.81

APPENDIX K

Cyclonic Design Water Level and Concurrent Wave Parameters – Including Greenhouse Related Climate Change

				Water Level mAHD 20yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.70	1.70		1.18	2.6	125	0							
506913	6982622	PineRiver-001	MBC-001	2.10	1.96	0.14	1.02	2.6	133	0	2.25	2.68	2.57	3.46	2.63	3.61	1.63
507065	6983136	PineRiver-002	MBC-002	2.13	1.99	0.14	1.04	2.7	146	0	2.29	2.73	2.61	3.51	2.67	3.67	1.63
507237	6983516	PineRiver-003	MBC-003	2.12	1.99	0.13	0.99	2.6	133	0	2.27	2.69	2.58	3.45	2.64	3.60	1.64
507198	6984049	PineRiver-004	MBC-004	2.16	2.04	0.12	0.94	2.5	133	0	2.31	2.70	2.60	3.40	2.66	3.54	1.59
506913	6984334	PineRiver-005	MBC-005	2.25	2.14	0.11	0.80	2.3	135	0	2.37	2.70	2.61	3.29	2.66	3.41	1.58
507046	6984696	PineRiver-006	MBC-006	2.32	2.21	0.11	0.82	2.2	147	0	2.44	2.78	2.69	3.37	2.74	3.49	1.52
507522	6984334	PineRiver-007	MBC-007	2.17	2.04	0.13	0.96	2.5	141	0	2.32	2.72	2.61	3.44	2.67	3.59	1.62
507769	6984239	PineRiver-008	MBC-008	2.14	1.98	0.16	1.19	3.0	131	0	2.32	2.83	2.68	3.75	2.75	3.94	1.69
506179	6982661	PineRiver-009	MBC-009	2.25	2.14	0.11	0.80	2.3	135	0	2.37	2.70	2.61	3.29	2.66	3.41	1.58
504927	6992513	Caboolture-001	MBC-010	2.12	1.97	0.15	1.03	2.9	73	0	2.26	2.72	2.58	3.54	2.64	3.70	1.77
504270	6992575	Caboolture-002	MBC-011	2.12	1.99	0.13	0.93	2.7	70	0	2.26	2.66	2.54	3.38	2.60	3.53	1.72
503633	6992841	Caboolture-003	MBC-012	2.22	2.09	0.13	0.96	2.7	74	0	2.36	2.78	2.66	3.52	2.72	3.67	1.69
503346	6993519	Caboolture-004	MBC-013	2.27	2.14	0.13	0.98	2.6	86	0	2.42	2.84	2.72	3.59	2.78	3.74	1.67
503613	6994402	Caboolture-005	MBC-014	2.31	2.19	0.12	0.90	2.4	135	0	2.45	2.82	2.72	3.49	2.78	3.62	1.58
504658	6996186	Caboolture-009	MBC-015	2.31	2.17	0.14	1.06	2.8	134	0	2.47	2.93	2.80	3.74	2.86	3.91	1.68
504477	6996546	Caboolture-010	MBC-016	2.39	2.26	0.13	1.01	2.5	64	0	2.55	2.96	2.86	3.70	2.92	3.85	1.54
504774	6997055	Caboolture-012	MBC-017	2.35	2.22	0.13	1.00	2.6	74	0	2.51	2.92	2.81	3.67	2.88	3.82	1.60
505039	6997331	Caboolture-013	MBC-018	2.34	2.21	0.13	0.94	2.7	75	0	2.48	2.89	2.77	3.63	2.83	3.78	1.73
505442	6998582	Caboolture-016	MBC-019	2.40	2.25	0.15	1.09	2.8	79	0	2.56	3.03	2.89	3.86	2.96	4.03	1.67
505671	6999062	Caboolture-017	MBC-020	2.42	2.27	0.15	1.00	2.9	85	0	2.55	3.01	2.86	3.82	2.93	3.99	1.84
505909	6999567	Caboolture-018	MBC-021	2.44	2.29	0.15	1.06	3.0	136	0	2.59	3.07	2.91	3.92	2.98	4.10	1.81
506361	7000127	Caboolture-019	MBC-022	2.47	2.31	0.16	1.13	2.9	140	0	2.63	3.12	2.98	4.00	3.05	4.18	1.72
506813	7000580	Caboolture-020	MBC-023	2.40	2.25	0.15	1.05	2.8	135	0	2.55	3.01	2.87	3.82	2.94	3.99	1.71
507266	7001010	Caboolture-021	MBC-024	2.39	2.22	0.17	1.19	3.2	134	0	2.55	3.10	2.91	4.07	2.98	4.27	1.85
507718	7001452	Caboolture-022	MBC-025	2.41	2.23	0.18	1.24	3.4	139	0	2.56	3.15	2.93	4.17	3.01	4.39	1.89
508289	7001850	Caboolture-023	MBC-026	2.40	2.21	0.19	1.26	3.4	139	0	2.55	3.15	2.92	4.19	3.00	4.41	1.90
508903	7002206	Caboolture-024	MBC-027	2.38	2.18	0.20	1.30	3.6	141	0	2.52	3.16	2.90	4.25	2.98	4.49	1.96
509355	7002550	Caboolture-025	MBC-028	2.36	2.17	0.19	1.28	3.5	143	0	2.51	3.13	2.89	4.21	2.97	4.44	1.95
509894	7002744	Caboolture-026	MBC-029	2.32	2.12	0.20	1.35	3.6	148	0	2.48	3.13	2.87	4.25	2.95	4.49	1.92
510475	7002852	Caboolture-027	MBC-030	2.29	2.10	0.19	1.31	3.5	149	0	2.45	3.08	2.83	4.17	2.92	4.41	1.93
511067	7003003	Caboolture-028	MBC-031	2.26	2.08	0.18	1.20	3.5	174	0	2.40	2.99	2.75	4.00	2.83	4.22	1.97
511477	7003251	Caboolture-029	MBC-032	2.27	2.12	0.15	1.06	2.9	149	0	2.42	2.89	2.75	3.72	2.81	3.89	1.73
512112	7003326	Caboolture-030	MBC-033	2.25	2.09	0.16	1.18	3.0	145	0	2.42	2.94	2.78	3.87	2.86	4.06	1.73
512694	7003455	Caboolture-031	MBC-034	2.22	2.06	0.16	1.12	3.1	167	0	2.37	2.88	2.71	3.78	2.78	3.97	1.82
513275	7003412	Caboolture-032	MBC-035	2.20	2.04	0.16	1.12	3.0	173	0	2.36	2.86	2.70	3.74	2.77	3.93	1.76
513911	7003746	Caboolture-033	MBC-036	2.18	2.05	0.13	1.02	2.5	125	0	2.35	2.76	2.66	3.50	2.72	3.65	1.53
514481	7004446	Caboolture-034	MBC-037	2.04	1.91	0.13	1.00	2.5	124	0	2.20	2.61	2.51	3.34	2.57	3.48	1.54
516248	7002647	Caboolture-038	MBC-038	2.01	1.78	0.23	1.57	3.9	218	0	2.18	2.96	2.63	4.28	2.72	4.56	1.95
517280	7002397	Caboolture-040	MBC-039	1.94	1.73	0.21	1.43	3.7	172	0	2.10	2.80	2.52	3.98	2.61	4.24	1.91
519611	7002925	Caboolture-044	MBC-040	1.91	1.62	0.29	1.92	4.4	113	0	2.09	3.07	2.61	4.69	2.73	5.04	1.97
520367	7003619	Caboolture-046	MBC-041	1.91	1.59	0.32	2.21	4.8	100	0	2.11	3.27	2.69	5.16	2.82	5.57	2.01
520284	7006303	Caboolture-051	MBC-042	1.92	1.58	0.34	2.05	5.6	54	0	2.03	3.25	2.56	5.21	2.68	5.67	2.46
516778	7013518	Caboolture-060	MBC-043	2.03	1.63	0.40	2.49	6.0	58	0	2.17	3.63	2.80	5.95	2.94	6.49	2.35
516320	7014796	Caboolture-061	MBC-044	2.02	1.64	0.38	2.33	5.9	58	0	2.15	3.53	2.74	5.74	2.88	6.25	2.43
507667	7015461	Caboolture-067	MBC-045	2.41	2.28	0.13	1.03	2.5	202	0	2.58	2.99	2.89	3.74	2.96	3.88	1.51
508591	7014764	Caboolture-069	MBC-046	2.40	2.25	0.15	1.20	2.6	218	0	2.60	3.08	2.96	3.94	3.03	4.11	1.51
509101	7014442	Caboolture-070	MBC-047	2.37	2.21	0.16	1.27	2.8	207	0	2.58	3.09	2.96	4.02	3.04	4.20	1.54
509543	7013236	Caboolture-072	MBC-048	2.26	2.11	0.15	1.18	2.7	218	0	2.45	2.93	2.81	3.81	2.88	3.98	1.56
509623	7012592	Caboolture-073	MBC-049	2.21	2.05	0.16	1.21	2.8	216	0	2.40	2.90	2.77	3.80	2.84	3.98	1.58
510253	7011212	Caboolture-075	MBC-050	2.11	1.96	0.15	1.24	2.7	205	0	2.32	2.82	2.70	3.72	2.77	3.90	1.53
510669	7010917	Caboolture-076	MBC-051	2.05	1.92	0.13	0.99	2.4	208	0	2.21	2.60	2.51	3.32	2.56	3.46	1.51
511138	7010769	Caboolture-077	MBC-052	2.06	1.92	0.14	1.06	2.6	151	0	2.23	2.66	2.55	3.44	2.61	3.60	1.56
511701	7010475	Caboolture-078	MBC-053	2.05	1.91	0.14	1.11	2.7	185	0	2.23	2.69	2.57	3.52	2.64	3.68	1.59
512076	7010032	Caboolture-079	MBC-054	2.05	1.89	0.16	1.18	3.0	205	0	2.22	2.74	2.58	3.65	2.66	3.84	1.70
513283	7007901	Caboolture-083	MBC-055	1.93	1.76	0.17	1.32	3.0	231	0	2.14	2.69	2.54	3.68	2.62	3.88	1.60
513390	7007284	Caboolture-084	MBC-056	2.07	1.91	0.16	1.33	2.8	231	0	2.29	2.83	2.70	3.79	2.78	3.97	1.51

				Water Level mAHD 20yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.05	1.87	0.18	1.53	3.0	144	0	2.31	2.94	2.77	4.07	2.85	4.25	1.49
514141	7006547	Caboolture-086	MBC-058	2.04	1.87	0.17	1.45	2.8	247	0	2.29	2.87	2.73	3.91	2.80	4.08	1.47
514958	7005756	Caboolture-088	MBC-059	2.00	1.82	0.18	1.44	3.0	255	0	2.23	2.82	2.67	3.88	2.75	4.09	1.56
515374	7005260	Caboolture-089	MBC-060	1.96	1.79	0.17	1.37	2.8	261	0	2.19	2.76	2.60	3.76	2.67	3.93	1.50
514730	7005140	Caboolture-090	MBC-061	1.92	1.79	0.13	1.10	2.4	112	0	2.11	2.54	2.44	3.32	2.50	3.45	1.45
514328	7005394	Caboolture-091	MBC-062	1.95	1.81	0.14	1.04	2.7	107	0	2.11	2.55	2.43	3.33	2.49	3.49	1.62
513269	7006199	Caboolture-093	MBC-063	2.01	1.85	0.16	1.23	2.8	106	0	2.20	2.71	2.58	3.62	2.65	3.80	1.57
511621	7007284	Caboolture-096	MBC-064	2.02	1.88	0.14	1.12	2.5	125	0	2.21	2.66	2.55	3.47	2.60	3.60	1.48
511339	7008048	Caboolture-097	MBC-065	2.04	1.91	0.13	1.04	2.3	126	0	2.21	2.61	2.52	3.33	2.57	3.45	1.43
511648	7008558	Caboolture-098	MBC-066	1.90	1.77	0.13	1.01	2.5	137	0	2.06	2.47	2.37	3.21	2.43	3.36	1.55
511835	7009040	Caboolture-099	MBC-067	1.94	1.81	0.13	1.02	2.6	137	0	2.10	2.53	2.42	3.28	2.48	3.43	1.58
511446	7009456	Caboolture-100	MBC-068	1.99	1.86	0.13	1.04	2.5	130	0	2.16	2.59	2.48	3.35	2.54	3.50	1.56
511058	7009456	Caboolture-101	MBC-069	2.01	1.88	0.13	1.03	2.4	134	0	2.18	2.60	2.49	3.35	2.54	3.47	1.48
510321	7009818	Caboolture-102	MBC-070	2.00	1.88	0.12	0.98	2.4	127	0	2.16	2.56	2.46	3.27	2.52	3.41	1.52
509784	7010233	Caboolture-103	MBC-071	2.02	1.88	0.14	1.10	2.5	134	0	2.20	2.64	2.54	3.43	2.60	3.59	1.51
509369	7010796	Caboolture-104	MBC-072	2.06	1.93	0.13	1.04	2.5	133	0	2.23	2.65	2.55	3.41	2.61	3.56	1.53
509034	7011198	Caboolture-105	MBC-073	2.17	2.04	0.13	1.02	2.5	114	0	2.34	2.75	2.65	3.51	2.71	3.65	1.56
508833	7011587	Caboolture-106	MBC-074	2.11	1.99	0.12	0.94	2.4	142	0	2.26	2.65	2.55	3.34	2.60	3.48	1.57
508752	7011869	Caboolture-107	MBC-075	2.08	1.94	0.14	1.07	2.5	141	0	2.25	2.68	2.58	3.46	2.64	3.61	1.52
508471	7012110	Caboolture-108	MBC-076	2.10	1.97	0.13	1.00	2.4	142	0	2.26	2.67	2.56	3.40	2.61	3.52	1.49
508926	7012177	Caboolture-109	MBC-077	2.13	2.00	0.13	1.03	2.5	146	0	2.30	2.72	2.61	3.48	2.68	3.63	1.56
509020	7012767	Caboolture-110	MBC-078	2.19	2.05	0.14	1.11	2.6	142	0	2.37	2.83	2.71	3.65	2.78	3.81	1.56
508565	7013276	Caboolture-111	MBC-079	2.24	2.12	0.12	0.97	2.3	146	0	2.40	2.79	2.69	3.48	2.74	3.60	1.46
508069	7013611	Caboolture-112	MBC-080	2.39	2.25	0.14	1.15	2.6	340	0	2.58	3.04	2.93	3.88	3.00	4.04	1.51
507667	7013960	Caboolture-113	MBC-081	2.43	2.31	0.12	1.01	2.3	129	0	2.60	2.99	2.90	3.71	2.95	3.82	1.44
507157	7014067	Caboolture-114	MBC-082	2.46	2.34	0.12	1.00	2.3	128	0	2.63	3.02	2.93	3.74	2.98	3.85	1.46
507171	7014777	Caboolture-115	MBC-083	2.39	2.27	0.12	0.94	2.4	147	0	2.54	2.92	2.83	3.61	2.88	3.75	1.54
507063	7015595	Caboolture-116	MBC-084	2.42	2.29	0.13	1.02	2.5	142	0	2.59	3.00	2.90	3.74	2.96	3.89	1.53
509121	6984944	Redcliffe-005	MBC-085	2.10	1.93	0.17	1.19	3.2	174	0	2.26	2.80	2.62	3.76	2.69	3.96	1.80
509533	6984891	Redcliffe-006	MBC-086	2.05	1.89	0.16	1.14	2.9	183	0	2.21	2.71	2.56	3.60	2.63	3.78	1.71
509892	6984691	Redcliffe-007	MBC-087	2.01	1.85	0.16	1.12	3.0	189	0	2.17	2.66	2.51	3.54	2.58	3.73	1.75
510464	6984279	Redcliffe-009	MBC-088	1.97	1.78	0.19	1.31	3.5	130	0	2.13	2.76	2.51	3.85	2.60	4.08	1.92
510783	6984638	Redcliffe-010	MBC-089	1.95	1.73	0.22	1.59	3.6	127	0	2.15	2.89	2.61	4.15	2.71	4.42	1.78
510969	6985516	Redcliffe-012	MBC-090	1.98	1.74	0.24	1.65	3.9	114	0	2.16	2.97	2.63	4.32	2.73	4.60	1.87
511076	6985889	Redcliffe-013	MBC-091	1.98	1.74	0.24	1.58	4.0	118	0	2.14	2.93	2.58	4.26	2.68	4.55	1.96
511488	6987365	Redcliffe-016	MBC-092	2.02	1.74	0.28	1.85	4.5	112	0	2.19	3.16	2.69	4.75	2.80	5.10	2.05
511768	6988017	Redcliffe-018	MBC-093	2.00	1.71	0.29	1.89	4.6	113	0	2.16	3.17	2.67	4.82	2.78	5.19	2.10
511648	6988496	Redcliffe-019	MBC-094	1.98	1.73	0.25	1.59	4.4	111	0	2.11	2.98	2.55	4.40	2.65	4.72	2.19
511741	6989254	Redcliffe-021	MBC-095	2.03	1.73	0.30	1.96	4.6	116	0	2.20	3.23	2.73	4.92	2.84	5.30	2.06
511874	6990079	Redcliffe-023	MBC-096	2.01	1.72	0.29	1.90	4.7	119	0	2.17	3.19	2.68	4.86	2.79	5.24	2.12
511648	6990451	Redcliffe-024	MBC-097	1.99	1.73	0.26	1.66	4.3	109	0	2.14	3.01	2.59	4.46	2.70	4.79	2.10
511661	6991063	Redcliffe-025	MBC-098	2.01	1.74	0.27	1.76	4.3	118	0	2.17	3.08	2.66	4.58	2.76	4.90	2.01
511568	6992087	Redcliffe-027	MBC-099	2.01	1.74	0.27	1.73	4.4	77	0	2.16	3.07	2.63	4.57	2.74	4.90	2.07
511475	6992513	Redcliffe-028	MBC-100	1.96	1.74	0.22	1.53	3.6	124	0	2.15	2.87	2.59	4.11	2.68	4.37	1.84
510916	6992713	Redcliffe-029	MBC-101	1.90	1.73	0.17	1.29	2.9	245	0	2.10	2.64	2.49	3.60	2.57	3.79	1.59
510531	6992472	Redcliffe-030	MBC-102	1.92	1.74	0.18	1.26	3.3	297	0	2.08	2.67	2.46	3.68	2.54	3.90	1.82
510161	6992164	Redcliffe-031	MBC-103	1.95	1.75	0.20	1.44	3.3	175	0	2.15	2.79	2.57	3.92	2.66	4.16	1.74
509833	6991712	Redcliffe-032	MBC-104	1.89	1.76	0.13	1.10	2.4	229	0	2.08	2.50	2.41	3.28	2.47	3.41	1.44
509525	6991322	Redcliffe-033	MBC-105	1.89	1.75	0.14	1.15	2.4	230	0	2.08	2.51	2.43	3.31	2.49	3.44	1.42
509155	6991199	Redcliffe-034	MBC-106	1.90	1.76	0.14	1.17	2.4	227	0	2.10	2.53	2.45	3.32	2.51	3.45	1.39
508478	6991343	Redcliffe-035	MBC-107	1.91	1.78	0.13	1.03	2.3	126	0	2.08	2.48	2.39	3.20	2.44	3.32	1.44
507965	6991487	Redcliffe-036	MBC-108	1.96	1.81	0.15	1.03	2.9	53	0	2.10	2.56	2.42	3.38	2.48	3.55	1.78
507205	6991589	Redcliffe-037	MBC-109	1.99	1.84	0.15	1.02	2.9	52	0	2.13	2.59	2.44	3.40	2.51	3.57	1.80
506548	6991836	Redcliffe-038	MBC-110	2.02	1.87	0.15	1.04	3.0	53	0	2.16	2.64	2.48	3.48	2.55	3.66	1.84
505830	6992082	Redcliffe-039	MBC-111	2.06	1.90	0.16	1.09	3.0	63	0	2.21	2.70	2.54	3.57	2.61	3.75	1.80
505358	6992267	Redcliffe-040	MBC-112	2.08	1.93	0.15	1.01	2.9	66	0	2.21	2.67	2.53	3.48	2.59	3.65	1.81

				Water Level mAHD 50yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.81	1.81		1.18	2.6	125	0							
506913	6982622	PineRiver-001	MBC-001	2.27	2.13	0.14	1.09	2.5	129	0	2.45	2.88	2.78	3.67	2.84	3.82	1.51
507065	6983136	PineRiver-002	MBC-002	2.32	2.17	0.15	1.17	2.7	136	0	2.51	2.98	2.86	3.84	2.93	4.01	1.55
507237	6983516	PineRiver-003	MBC-003	2.30	2.17	0.13	1.05	2.5	128	0	2.48	2.90	2.80	3.66	2.86	3.81	1.52
507198	6984049	PineRiver-004	MBC-004	2.35	2.23	0.12	0.94	2.5	133	0	2.50	2.89	2.79	3.59	2.85	3.73	1.59
506913	6984334	PineRiver-005	MBC-005	2.47	2.36	0.11	0.82	2.3	133	0	2.59	2.93	2.84	3.53	2.89	3.65	1.55
507046	6984696	PineRiver-006	MBC-006	2.54	2.44	0.10	0.85	2.1	49	0	2.68	3.00	2.93	3.59	2.97	3.69	1.41
507522	6984334	PineRiver-007	MBC-007	2.37	2.24	0.13	0.96	2.5	141	0	2.52	2.92	2.81	3.64	2.87	3.79	1.62
507769	6984239	PineRiver-008	MBC-008	2.31	2.15	0.16	1.19	3.0	131	0	2.49	3.00	2.85	3.92	2.92	4.11	1.69
506179	6982661	PineRiver-009	MBC-009	2.47	2.36	0.11	0.82	2.3	133	0	2.59	2.93	2.84	3.53	2.89	3.65	1.55
504927	6992513	Caboolture-001	MBC-010	2.29	2.14	0.15	1.03	2.9	67	0	2.43	2.89	2.75	3.72	2.81	3.89	1.79
504270	6992575	Caboolture-002	MBC-011	2.30	2.17	0.13	0.94	2.6	76	0	2.44	2.84	2.73	3.57	2.79	3.72	1.69
503633	6992841	Caboolture-003	MBC-012	2.42	2.29	0.13	0.96	2.7	74	0	2.56	2.98	2.86	3.72	2.92	3.88	1.70
503346	6993519	Caboolture-004	MBC-013	2.48	2.35	0.13	0.98	2.6	86	0	2.63	3.05	2.93	3.80	2.99	3.95	1.67
503613	6994402	Caboolture-005	MBC-014	2.54	2.42	0.12	0.90	2.4	135	0	2.68	3.05	2.95	3.72	3.01	3.85	1.58
504658	6996186	Caboolture-009	MBC-015	2.53	2.39	0.14	1.06	2.7	73	0	2.69	3.14	3.02	3.95	3.08	4.11	1.64
504477	6996546	Caboolture-010	MBC-016	2.63	2.50	0.13	1.03	2.4	53	0	2.80	3.21	3.11	3.95	3.17	4.10	1.50
504774	6997055	Caboolture-012	MBC-017	2.57	2.44	0.13	1.00	2.5	72	0	2.73	3.14	3.04	3.88	3.10	4.03	1.57
505039	6997331	Caboolture-013	MBC-018	2.57	2.44	0.13	0.94	2.7	134	0	2.71	3.12	3.00	3.86	3.06	4.01	1.73
505442	6998582	Caboolture-016	MBC-019	2.64	2.49	0.15	1.09	2.8	133	0	2.80	3.27	3.13	4.10	3.20	4.27	1.66
505671	6999062	Caboolture-017	MBC-020	2.66	2.51	0.15	1.00	2.9	85	0	2.79	3.25	3.10	4.06	3.17	4.23	1.84
505909	6999567	Caboolture-018	MBC-021	2.68	2.53	0.15	1.07	3.0	133	0	2.83	3.31	3.16	4.17	3.23	4.35	1.79
506361	7000127	Caboolture-019	MBC-022	2.71	2.56	0.15	1.13	2.9	137	0	2.88	3.37	3.23	4.25	3.30	4.43	1.70
506813	7000580	Caboolture-020	MBC-023	2.64	2.49	0.15	1.05	2.9	134	0	2.79	3.25	3.11	4.07	3.18	4.24	1.74
507266	7001010	Caboolture-021	MBC-024	2.62	2.45	0.17	1.20	3.2	131	0	2.78	3.34	3.14	4.31	3.22	4.52	1.85
507718	7001452	Caboolture-022	MBC-025	2.64	2.46	0.18	1.25	3.4	136	0	2.80	3.39	3.17	4.41	3.25	4.63	1.88
508289	7001850	Caboolture-023	MBC-026	2.63	2.44	0.19	1.27	3.4	137	0	2.78	3.39	3.16	4.43	3.24	4.65	1.89
508903	7002206	Caboolture-024	MBC-027	2.59	2.39	0.20	1.31	3.6	139	0	2.73	3.38	3.12	4.47	3.20	4.71	1.95
509355	7002550	Caboolture-025	MBC-028	2.57	2.38	0.19	1.29	3.5	144	0	2.72	3.35	3.10	4.42	3.19	4.65	1.92
509894	7002744	Caboolture-026	MBC-029	2.53	2.33	0.20	1.35	3.6	147	0	2.69	3.34	3.08	4.46	3.16	4.69	1.91
510475	7002852	Caboolture-027	MBC-030	2.50	2.30	0.20	1.31	3.6	150	0	2.64	3.28	3.03	4.38	3.11	4.61	1.94
511067	7003003	Caboolture-028	MBC-031	2.45	2.27	0.18	1.20	3.5	174	0	2.59	3.18	2.94	4.19	3.02	4.41	1.97
511477	7003251	Caboolture-029	MBC-032	2.47	2.32	0.15	1.06	2.8	136	0	2.62	3.08	2.95	3.90	3.01	4.07	1.70
512112	7003326	Caboolture-030	MBC-033	2.44	2.28	0.16	1.18	3.0	148	0	2.61	3.14	2.97	4.06	3.05	4.26	1.75
512694	7003455	Caboolture-031	MBC-034	2.40	2.24	0.16	1.12	3.0	156	0	2.56	3.05	2.90	3.94	2.97	4.12	1.76
513275	7003412	Caboolture-032	MBC-035	2.37	2.22	0.15	1.12	2.9	156	0	2.54	3.02	2.88	3.89	2.95	4.06	1.69
513911	7003746	Caboolture-033	MBC-036	2.36	2.23	0.13	1.04	2.4	127	0	2.53	2.96	2.85	3.72	2.90	3.85	1.49
514481	7004446	Caboolture-034	MBC-037	2.19	2.06	0.13	1.00	2.5	124	0	2.35	2.76	2.66	3.49	2.72	3.63	1.54
516248	7002647	Caboolture-038	MBC-038	2.12	1.89	0.23	1.57	3.9	221	0	2.29	3.07	2.74	4.38	2.83	4.66	1.94
517280	7002397	Caboolture-040	MBC-039	2.04	1.83	0.21	1.43	3.7	176	0	2.20	2.90	2.62	4.09	2.71	4.34	1.92
519611	7002925	Caboolture-044	MBC-040	1.97	1.69	0.28	1.95	4.3	117	0	2.17	3.15	2.71	4.77	2.82	5.11	1.91
520367	7003619	Caboolture-046	MBC-041	1.97	1.65	0.32	2.26	4.7	105	0	2.19	3.35	2.79	5.25	2.92	5.66	1.96
520284	7006303	Caboolture-051	MBC-042	1.97	1.63	0.34	2.05	5.6	54	0	2.08	3.30	2.61	5.26	2.73	5.72	2.46
516778	7013518	Caboolture-060	MBC-043	2.09	1.69	0.40	2.49	6.0	58	0	2.23	3.69	2.86	6.01	3.00	6.55	2.35
516320	7014796	Caboolture-061	MBC-044	2.09	1.71	0.38	2.33	5.9	58	0	2.22	3.60	2.81	5.81	2.95	6.32	2.43
507667	7015461	Caboolture-067	MBC-045	2.63	2.50	0.13	1.03	2.5	202	0	2.80	3.21	3.11	3.96	3.18	4.10	1.51
508591	7014764	Caboolture-069	MBC-046	2.62	2.47	0.15	1.20	2.6	229	0	2.82	3.32	3.18	4.20	3.24	4.34	1.50
509101	7014442	Caboolture-070	MBC-047	2.59	2.42	0.17	1.31	2.9	163	0	2.80	3.34	3.19	4.31	3.27	4.51	1.58
509543	7013236	Caboolture-072	MBC-048	2.44	2.29	0.15	1.18	2.7	218	0	2.63	3.11	2.99	3.99	3.06	4.16	1.56
509623	7012592	Caboolture-073	MBC-049	2.39	2.23	0.16	1.21	2.8	216	0	2.58	3.08	2.95	3.98	3.02	4.16	1.58
510253	7011212	Caboolture-075	MBC-050	2.26	2.11	0.15	1.24	2.7	205	0	2.47	2.97	2.85	3.87	2.92	4.05	1.53
510669	7010917	Caboolture-076	MBC-051	2.19	2.06	0.13	0.99	2.4	208	0	2.35	2.74	2.65	3.46	2.70	3.60	1.51
511138	7010769	Caboolture-077	MBC-052	2.21	2.07	0.14	1.06	2.6	151	0	2.38	2.81	2.70	3.59	2.76	3.75	1.56
511701	7010475	Caboolture-078	MBC-053	2.20	2.05	0.15	1.12	2.7	199	0	2.37	2.84	2.71	3.67	2.78	3.83	1.58
512076	7010032	Caboolture-079	MBC-054	2.19	2.03	0.16	1.22	3.0	221	0	2.38	2.90	2.75	3.84	2.82	4.04	1.68
513283	7007901	Caboolture-083	MBC-055	2.03	1.86	0.17	1.32	3.0	231	0	2.24	2.79	2.64	3.78	2.72	3.98	1.60
513390	7007284	Caboolture-084	MBC-056	2.22	2.06	0.16	1.33	2.8	231	0	2.44	2.98	2.85	3.94	2.93	4.12	1.51

				Water Level mAHD 50yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.18	2.00	0.18	1.53	3.0	144	0	2.44	3.07	2.90	4.20	2.98	4.38	1.49
514141	7006547	Caboolture-086	MBC-058	2.18	2.01	0.17	1.45	2.8	247	0	2.43	3.01	2.87	4.05	2.94	4.22	1.47
514958	7005756	Caboolture-088	MBC-059	2.12	1.94	0.18	1.44	3.0	255	0	2.35	2.94	2.79	4.00	2.87	4.21	1.56
515374	7005260	Caboolture-089	MBC-060	2.08	1.91	0.17	1.37	2.8	261	0	2.31	2.88	2.72	3.88	2.79	4.05	1.50
514730	7005140	Caboolture-090	MBC-061	2.04	1.91	0.13	1.10	2.4	112	0	2.23	2.66	2.56	3.44	2.62	3.57	1.45
514328	7005394	Caboolture-091	MBC-062	2.06	1.92	0.14	1.04	2.7	107	0	2.22	2.66	2.54	3.44	2.60	3.60	1.62
513269	7006199	Caboolture-093	MBC-063	2.14	1.98	0.16	1.23	2.8	106	0	2.33	2.84	2.71	3.75	2.78	3.93	1.57
511621	7007284	Caboolture-096	MBC-064	2.16	2.02	0.14	1.12	2.5	125	0	2.35	2.80	2.69	3.61	2.74	3.74	1.48
511339	7008048	Caboolture-097	MBC-065	2.18	2.05	0.13	1.04	2.3	126	0	2.35	2.75	2.66	3.47	2.71	3.59	1.43
511648	7008558	Caboolture-098	MBC-066	2.01	1.88	0.13	1.01	2.5	137	0	2.17	2.58	2.48	3.32	2.54	3.47	1.55
511835	7009040	Caboolture-099	MBC-067	2.06	1.93	0.13	1.02	2.6	137	0	2.22	2.65	2.54	3.40	2.60	3.55	1.58
511446	7009456	Caboolture-100	MBC-068	2.12	1.99	0.13	1.04	2.5	130	0	2.29	2.72	2.61	3.48	2.67	3.63	1.56
511058	7009456	Caboolture-101	MBC-069	2.15	2.02	0.13	1.06	2.5	110	0	2.33	2.75	2.65	3.52	2.72	3.67	1.52
510321	7009818	Caboolture-102	MBC-070	2.15	2.02	0.13	1.02	2.6	35	0	2.31	2.74	2.63	3.50	2.69	3.65	1.60
509784	7010233	Caboolture-103	MBC-071	2.15	2.01	0.14	1.10	2.5	134	0	2.33	2.77	2.67	3.56	2.73	3.72	1.51
509369	7010796	Caboolture-104	MBC-072	2.20	2.07	0.13	1.04	2.5	133	0	2.37	2.79	2.69	3.55	2.75	3.70	1.53
509034	7011198	Caboolture-105	MBC-073	2.35	2.21	0.14	1.07	2.5	22	0	2.52	2.95	2.85	3.73	2.91	3.88	1.52
508833	7011587	Caboolture-106	MBC-074	2.28	2.16	0.12	0.94	2.4	142	0	2.43	2.82	2.72	3.51	2.77	3.65	1.57
508752	7011869	Caboolture-107	MBC-075	2.23	2.09	0.14	1.07	2.5	141	0	2.40	2.83	2.73	3.61	2.79	3.76	1.52
508471	7012110	Caboolture-108	MBC-076	2.26	2.13	0.13	1.00	2.4	142	0	2.42	2.83	2.72	3.56	2.77	3.68	1.49
508926	7012177	Caboolture-109	MBC-077	2.29	2.16	0.13	1.03	2.5	146	0	2.46	2.88	2.77	3.64	2.84	3.79	1.56
509020	7012767	Caboolture-110	MBC-078	2.37	2.22	0.15	1.12	2.7	128	0	2.54	3.00	2.88	3.84	2.95	4.00	1.58
508565	7013276	Caboolture-111	MBC-079	2.45	2.32	0.13	1.02	2.4	12	0	2.62	3.02	2.92	3.76	2.97	3.87	1.47
508069	7013611	Caboolture-112	MBC-080	2.61	2.47	0.14	1.15	2.6	340	0	2.80	3.26	3.15	4.10	3.22	4.26	1.51
507667	7013960	Caboolture-113	MBC-081	2.65	2.53	0.12	1.01	2.3	129	0	2.82	3.21	3.12	3.93	3.17	4.04	1.44
507157	7014067	Caboolture-114	MBC-082	2.69	2.57	0.12	1.00	2.3	128	0	2.86	3.25	3.16	3.97	3.21	4.08	1.46
507171	7014777	Caboolture-116	MBC-083	2.62	2.49	0.13	1.06	2.5	131	0	2.80	3.24	3.12	4.01	3.18	4.14	1.50
507063	7015595	Caboolture-116	MBC-084	2.66	2.52	0.14	1.09	2.5	142	0	2.84	3.29	3.17	4.08	3.22	4.22	1.50
509121	6984944	Redcliffe-005	MBC-085	2.26	2.09	0.17	1.21	3.0	172	0	2.43	2.96	2.80	3.90	2.88	4.09	1.71
509533	6984891	Redcliffe-006	MBC-086	2.19	2.04	0.15	1.17	2.8	193	0	2.37	2.87	2.73	3.75	2.80	3.93	1.63
509892	6984691	Redcliffe-007	MBC-087	2.14	1.99	0.15	1.15	2.8	194	0	2.32	2.81	2.67	3.68	2.74	3.86	1.65
510464	6984279	Redcliffe-009	MBC-088	2.09	1.90	0.19	1.31	3.5	130	0	2.25	2.88	2.63	3.97	2.72	4.20	1.92
510783	6984638	Redcliffe-010	MBC-089	2.06	1.84	0.22	1.61	3.5	128	0	2.27	3.00	2.74	4.26	2.84	4.51	1.72
510969	6985516	Redcliffe-012	MBC-090	2.08	1.85	0.23	1.66	3.7	115	0	2.29	3.07	2.76	4.40	2.86	4.68	1.81
511076	6985889	Redcliffe-013	MBC-091	2.08	1.85	0.23	1.59	3.8	119	0	2.26	3.04	2.72	4.35	2.81	4.63	1.90
511488	6987365	Redcliffe-016	MBC-092	2.13	1.85	0.28	1.85	4.5	112	0	2.30	3.27	2.80	4.86	2.91	5.21	2.05
511768	6988017	Redcliffe-018	MBC-093	2.09	1.80	0.29	1.92	4.5	113	0	2.26	3.26	2.78	4.91	2.90	5.27	2.02
511648	6988496	Redcliffe-019	MBC-094	2.08	1.83	0.25	1.59	4.4	111	0	2.21	3.08	2.65	4.50	2.75	4.82	2.19
511741	6989254	Redcliffe-021	MBC-095	2.14	1.84	0.30	1.96	4.6	116	0	2.31	3.34	2.84	5.03	2.95	5.41	2.06
511874	6990079	Redcliffe-023	MBC-096	2.11	1.82	0.29	1.90	4.7	119	0	2.27	3.29	2.78	4.96	2.89	5.34	2.12
511648	6990451	Redcliffe-024	MBC-097	2.10	1.84	0.26	1.66	4.3	109	0	2.25	3.12	2.70	4.57	2.81	4.90	2.10
511661	6991063	Redcliffe-025	MBC-098	2.12	1.85	0.27	1.76	4.3	118	0	2.28	3.19	2.77	4.69	2.87	5.01	2.01
511568	6992087	Redcliffe-027	MBC-099	2.12	1.85	0.27	1.85	4.2	115	0	2.31	3.24	2.82	4.79	2.93	5.12	1.94
511475	6992513	Redcliffe-028	MBC-100	2.07	1.85	0.22	1.53	3.6	124	0	2.26	2.98	2.70	4.22	2.79	4.48	1.84
510916	6992713	Redcliffe-029	MBC-101	2.01	1.84	0.17	1.29	2.9	245	0	2.21	2.75	2.60	3.71	2.68	3.90	1.59
510531	6992472	Redcliffe-030	MBC-102	2.00	1.84	0.16	1.30	2.8	250	0	2.21	2.74	2.61	3.69	2.69	3.88	1.54
510161	6992164	Redcliffe-031	MBC-103	2.04	1.86	0.18	1.51	2.9	247	0	2.30	2.92	2.75	4.03	2.83	4.21	1.49
509833	6991712	Redcliffe-032	MBC-104	2.00	1.87	0.13	1.10	2.4	229	0	2.19	2.61	2.52	3.39	2.58	3.52	1.44
509525	6991322	Redcliffe-033	MBC-105	2.01	1.87	0.14	1.15	2.4	230	0	2.20	2.63	2.55	3.43	2.61	3.56	1.42
509155	6991199	Redcliffe-034	MBC-106	2.02	1.88	0.14	1.17	2.4	227	0	2.22	2.65	2.57	3.44	2.63	3.57	1.39
508478	6991343	Redcliffe-035	MBC-107	2.04	1.91	0.13	1.03	2.3	126	0	2.21	2.61	2.52	3.33	2.57	3.45	1.44
507965	6991487	Redcliffe-036	MBC-108	2.07	1.94	0.13	1.06	2.4	125	0	2.25	2.66	2.57	3.42	2.62	3.54	1.45
507205	6991589	Redcliffe-037	MBC-109	2.10	1.97	0.13	1.04	2.4	125	0	2.27	2.68	2.59	3.41	2.64	3.53	1.45
506548	6991836	Redcliffe-038	MBC-110	2.17	2.01	0.16	1.07	3.0	49	0	2.31	2.80	2.64	3.66	2.71	3.84	1.82
505830	6992082	Redcliffe-039	MBC-111	2.22	2.06	0.16	1.11	3.1	51	0	2.37	2.88	2.71	3.78	2.78	3.97	1.84
505357.8	6992266.6	Redcliffe-040	MBC-112	2.24	2.09	0.15	1.01	2.9	65	0	2.37	2.83	2.69	3.65	2.75	3.82	1.82

				Water Level mAHD 100yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.89	1.89		1.18	2.6	125	0							
506913	6982622	PineRiver-001	MBC-001	2.40	2.26	0.14	1.09	2.5	129	0	2.58	3.01	2.91	3.80	2.97	3.95	1.51
507065	6983136	PineRiver-002	MBC-002	2.45	2.30	0.15	1.17	2.7	136	0	2.64	3.11	2.99	3.97	3.06	4.14	1.55
507237	6983516	PineRiver-003	MBC-003	2.44	2.31	0.13	1.05	2.5	128	0	2.62	3.04	2.94	3.80	3.00	3.95	1.52
507198	6984049	PineRiver-004	MBC-004	2.49	2.37	0.12	0.98	2.4	130	0	2.65	3.06	2.95	3.78	3.00	3.89	1.50
506913	6984334	PineRiver-005	MBC-005	2.63	2.52	0.11	0.86	2.2	131	0	2.77	3.11	3.02	3.73	3.06	3.83	1.46
507046	6984696	PineRiver-006	MBC-006	2.72	2.61	0.11	0.88	2.2	139	0	2.86	3.20	3.12	3.82	3.17	3.93	1.44
507522	6984334	PineRiver-007	MBC-007	2.51	2.38	0.13	1.01	2.5	135	0	2.67	3.08	2.98	3.81	3.04	3.96	1.52
507769	6984239	PineRiver-008	MBC-008	2.44	2.28	0.16	1.24	2.8	128	0	2.64	3.15	3.01	4.08	3.09	4.26	1.59
506179	6982661	PineRiver-009	MBC-009	2.63	2.52	0.11	0.86	2.2	131	0	2.77	3.11	3.02	3.73	3.06	3.83	1.46
504927	6992513	Caboolture-001	MBC-010	2.40	2.27	0.13	1.04	2.5	118	0	2.57	2.99	2.89	3.75	2.95	3.90	1.53
504270	6992575	Caboolture-002	MBC-011	2.43	2.31	0.12	0.98	2.3	128	0	2.59	2.98	2.89	3.69	2.93	3.80	1.46
503633	6992841	Caboolture-003	MBC-012	2.57	2.44	0.13	0.98	2.6	71	0	2.72	3.14	3.02	3.88	3.08	4.04	1.65
503346	6993519	Caboolture-004	MBC-013	2.65	2.52	0.13	1.01	2.5	68	0	2.81	3.23	3.12	3.98	3.18	4.13	1.58
503613	6994402	Caboolture-005	MBC-014	2.71	2.59	0.12	0.92	2.4	74	0	2.85	3.24	3.13	3.92	3.19	4.06	1.59
504658	6996186	Caboolture-009	MBC-015	2.69	2.55	0.14	1.06	2.7	73	0	2.85	3.30	3.18	4.11	3.24	4.27	1.64
504477	6996546	Caboolture-010	MBC-016	2.80	2.67	0.13	1.03	2.4	53	0	2.97	3.38	3.28	4.12	3.34	4.27	1.50
504774	6997055	Caboolture-012	MBC-017	2.74	2.61	0.13	1.00	2.5	72	0	2.90	3.31	3.21	4.05	3.27	4.20	1.57
505039	6997331	Caboolture-013	MBC-018	2.74	2.61	0.13	0.94	2.7	134	0	2.88	3.29	3.17	4.03	3.23	4.18	1.73
505442	6998582	Caboolture-016	MBC-019	2.82	2.67	0.15	1.09	2.8	133	0	2.98	3.45	3.31	4.28	3.38	4.45	1.66
505671	6999062	Caboolture-017	MBC-020	2.84	2.69	0.15	1.00	2.9	85	0	2.97	3.43	3.28	4.24	3.35	4.41	1.84
505909	6999567	Caboolture-018	MBC-021	2.86	2.71	0.15	1.09	2.9	125	0	3.02	3.50	3.35	4.36	3.42	4.54	1.75
506361	7000127	Caboolture-019	MBC-022	2.90	2.75	0.15	1.14	2.8	129	0	3.08	3.56	3.42	4.43	3.49	4.61	1.66
506813	7000580	Caboolture-020	MBC-023	2.81	2.66	0.15	1.06	2.8	127	0	2.96	3.42	3.29	4.24	3.35	4.41	1.69
507266	7001010	Caboolture-021	MBC-024	2.79	2.62	0.17	1.20	3.2	131	0	2.95	3.51	3.31	4.48	3.39	4.69	1.85
507718	7001452	Caboolture-022	MBC-025	2.81	2.63	0.18	1.25	3.3	136	0	2.97	3.55	3.35	4.56	3.42	4.77	1.83
508289	7001850	Caboolture-023	MBC-026	2.79	2.61	0.18	1.27	3.3	137	0	2.96	3.55	3.34	4.58	3.42	4.80	1.85
508903	7002206	Caboolture-024	MBC-027	2.75	2.55	0.20	1.31	3.6	139	0	2.89	3.54	3.28	4.63	3.36	4.87	1.95
509355	7002550	Caboolture-025	MBC-028	2.73	2.54	0.19	1.29	3.5	148	0	2.88	3.51	3.26	4.59	3.35	4.82	1.94
509894	7002744	Caboolture-026	MBC-029	2.68	2.48	0.20	1.35	3.6	147	0	2.84	3.49	3.23	4.61	3.31	4.84	1.91
510475	7002852	Caboolture-027	MBC-030	2.64	2.44	0.20	1.31	3.6	154	0	2.78	3.43	3.17	4.53	3.25	4.77	1.96
511067	7003003	Caboolture-028	MBC-031	2.59	2.41	0.18	1.20	3.5	174	0	2.73	3.32	3.08	4.33	3.16	4.55	1.97
511477	7003251	Caboolture-029	MBC-032	2.62	2.47	0.15	1.06	2.8	147	0	2.77	3.23	3.10	4.06	3.16	4.23	1.72
512112	7003326	Caboolture-030	MBC-033	2.58	2.42	0.16	1.18	3.0	143	0	2.75	3.27	3.11	4.19	3.19	4.38	1.72
512694	7003455	Caboolture-031	MBC-034	2.54	2.38	0.16	1.12	3.0	163	0	2.70	3.20	3.04	4.09	3.11	4.28	1.79
513275	7003412	Caboolture-032	MBC-035	2.51	2.36	0.15	1.12	2.7	139	0	2.68	3.15	3.02	3.98	3.09	4.15	1.59
513911	7003746	Caboolture-033	MBC-036	2.50	2.37	0.13	1.04	2.4	127	0	2.67	3.10	2.99	3.86	3.04	3.99	1.49
514481	7004446	Caboolture-034	MBC-037	2.30	2.17	0.13	1.00	2.5	124	0	2.46	2.87	2.77	3.60	2.83	3.74	1.54
516248	7002647	Caboolture-038	MBC-038	2.20	1.97	0.23	1.57	3.9	221	0	2.37	3.15	2.82	4.46	2.91	4.74	1.94
517280	7002397	Caboolture-040	MBC-039	2.10	1.90	0.20	1.43	3.5	154	0	2.28	2.96	2.70	4.12	2.79	4.36	1.85
519611	7002925	Caboolture-044	MBC-040	2.02	1.74	0.28	1.95	4.3	117	0	2.22	3.20	2.76	4.82	2.87	5.16	1.91
520367	7003619	Caboolture-046	MBC-041	2.01	1.69	0.32	2.26	4.7	105	0	2.23	3.39	2.83	5.29	2.96	5.70	1.96
520284	7006303	Caboolture-051	MBC-042	2.01	1.67	0.34	2.05	5.6	54	0	2.12	3.34	2.65	5.30	2.77	5.76	2.46
516778	7013518	Caboolture-060	MBC-043	2.14	1.74	0.40	2.49	6.0	58	0	2.28	3.74	2.91	6.06	3.05	6.60	2.35
516320	7014796	Caboolture-061	MBC-044	2.14	1.76	0.38	2.33	5.9	58	0	2.27	3.65	2.86	5.86	3.00	6.37	2.43
507667	7015461	Caboolture-067	MBC-045	2.79	2.66	0.13	1.05	2.4	216	0	2.96	3.39	3.28	4.15	3.33	4.28	1.48
508591	7014764	Caboolture-069	MBC-046	2.78	2.63	0.15	1.27	2.7	227	0	3.00	3.52	3.38	4.44	3.45	4.59	1.49
509101	7014442	Caboolture-070	MBC-047	2.74	2.57	0.17	1.31	2.9	163	0	2.95	3.49	3.34	4.46	3.42	4.66	1.58
509543	7013236	Caboolture-072	MBC-048	2.58	2.43	0.15	1.18	2.7	218	0	2.77	3.25	3.13	4.13	3.20	4.30	1.56
509623	7012592	Caboolture-073	MBC-049	2.52	2.36	0.16	1.21	2.8	216	0	2.71	3.21	3.08	4.11	3.15	4.29	1.58
510253	7011212	Caboolture-075	MBC-050	2.38	2.23	0.15	1.24	2.7	205	0	2.59	3.09	2.97	3.99	3.04	4.17	1.53
510669	7010917	Caboolture-076	MBC-051	2.30	2.17	0.13	0.99	2.4	208	0	2.46	2.85	2.76	3.57	2.81	3.71	1.51
511138	7010769	Caboolture-077	MBC-052	2.32	2.18	0.14	1.06	2.6	151	0	2.49	2.92	2.81	3.70	2.87	3.86	1.56
511701	7010475	Caboolture-078	MBC-053	2.30	2.15	0.15	1.15	2.7	157	0	2.48	2.96	2.83	3.82	2.90	3.99	1.59
512076	7010032	Caboolture-079	MBC-054	2.30	2.13	0.17	1.27	3.0	152	0	2.49	3.04	2.88	4.02	2.96	4.21	1.68
513283	7007901	Caboolture-083	MBC-055	2.11	1.94	0.17	1.32	3.0	231	0	2.32	2.87	2.72	3.86	2.80	4.06	1.60
513390	7007284	Caboolture-084	MBC-056	2.33	2.17	0.16	1.33	2.8	231	0	2.55	3.09	2.96	4.05	3.04	4.23	1.51

				Water Level mAHD 100yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.28	2.10	0.18	1.53	3.0	144	0	2.54	3.17	3.00	4.30	3.08	4.48	1.49
514141	7006547	Caboolture-086	MBC-058	2.28	2.11	0.17	1.45	2.8	247	0	2.53	3.11	2.97	4.15	3.04	4.32	1.47
514958	7005756	Caboolture-088	MBC-059	2.21	2.03	0.18	1.44	3.0	255	0	2.44	3.03	2.88	4.09	2.96	4.30	1.56
515374	7005260	Caboolture-089	MBC-060	2.17	2.00	0.17	1.37	2.8	261	0	2.40	2.97	2.81	3.97	2.88	4.14	1.50
514730	7005140	Caboolture-090	MBC-061	2.12	1.99	0.13	1.10	2.4	112	0	2.31	2.74	2.64	3.52	2.70	3.65	1.45
514328	7005394	Caboolture-091	MBC-062	2.15	2.01	0.14	1.04	2.7	107	0	2.31	2.75	2.63	3.53	2.69	3.69	1.62
513269	7006199	Caboolture-093	MBC-063	2.24	2.08	0.16	1.23	2.8	106	0	2.43	2.94	2.81	3.85	2.88	4.03	1.57
511621	7007284	Caboolture-096	MBC-064	2.26	2.12	0.14	1.12	2.5	125	0	2.45	2.90	2.79	3.71	2.84	3.84	1.48
511339	7008048	Caboolture-097	MBC-065	2.29	2.16	0.13	1.04	2.3	126	0	2.46	2.86	2.77	3.58	2.82	3.70	1.43
511648	7008558	Caboolture-098	MBC-066	2.09	1.96	0.13	1.01	2.5	137	0	2.25	2.66	2.56	3.40	2.62	3.55	1.55
511835	7009040	Caboolture-099	MBC-067	2.15	2.02	0.13	1.02	2.6	137	0	2.31	2.74	2.63	3.49	2.69	3.64	1.58
511446	7009456	Caboolture-100	MBC-068	2.22	2.09	0.13	1.04	2.5	130	0	2.39	2.82	2.71	3.58	2.77	3.73	1.56
511058	7009456	Caboolture-101	MBC-069	2.26	2.12	0.14	1.11	2.5	117	0	2.44	2.90	2.78	3.71	2.84	3.84	1.49
510321	7009818	Caboolture-102	MBC-070	2.25	2.12	0.13	1.03	2.5	105	0	2.42	2.84	2.73	3.60	2.80	3.75	1.56
509784	7010233	Caboolture-103	MBC-071	2.26	2.12	0.14	1.10	2.5	134	0	2.44	2.88	2.78	3.67	2.84	3.83	1.51
509369	7010796	Caboolture-104	MBC-072	2.31	2.18	0.13	1.04	2.5	133	0	2.48	2.90	2.80	3.66	2.86	3.81	1.53
509034	7011198	Caboolture-105	MBC-073	2.48	2.34	0.14	1.07	2.5	22	0	2.65	3.08	2.98	3.86	3.04	4.01	1.52
508833	7011587	Caboolture-106	MBC-074	2.41	2.28	0.13	0.96	2.5	121	0	2.56	2.96	2.85	3.68	2.91	3.82	1.61
508752	7011869	Caboolture-107	MBC-075	2.34	2.20	0.14	1.11	2.6	129	0	2.52	2.97	2.86	3.78	2.93	3.93	1.52
508471	7012110	Caboolture-108	MBC-076	2.38	2.25	0.13	1.04	2.5	129	0	2.55	2.97	2.87	3.72	2.93	3.86	1.51
508926	7012177	Caboolture-109	MBC-077	2.42	2.28	0.14	1.05	2.6	135	0	2.58	3.01	2.90	3.79	2.97	3.95	1.57
509020	7012767	Caboolture-110	MBC-078	2.50	2.35	0.15	1.12	2.7	128	0	2.67	3.13	3.01	3.97	3.08	4.13	1.58
508565	7013276	Caboolture-111	MBC-079	2.58	2.46	0.12	1.02	2.3	132	0	2.75	3.15	3.06	3.87	3.11	3.99	1.44
508069	7013611	Caboolture-112	MBC-080	2.77	2.63	0.14	1.15	2.6	340	0	2.96	3.42	3.31	4.26	3.38	4.42	1.51
507667	7013960	Caboolture-113	MBC-081	2.83	2.70	0.13	1.04	2.3	130	0	3.00	3.39	3.31	4.11	3.36	4.23	1.41
507157	7014067	Caboolture-114	MBC-082	2.87	2.74	0.13	1.04	2.3	130	0	3.04	3.44	3.35	4.17	3.40	4.29	1.43
507171	7014777	Caboolture-116	MBC-083	2.78	2.65	0.13	1.06	2.5	131	0	2.96	3.40	3.28	4.17	3.34	4.30	1.50
507063	7015595	Caboolture-116	MBC-084	2.82	2.68	0.14	1.09	2.6	130	0	3.00	3.43	3.33	4.23	3.39	4.38	1.53
509121	6984944	Redcliffe-005	MBC-085	2.39	2.22	0.17	1.21	3.0	172	0	2.56	3.09	2.93	4.03	3.01	4.22	1.71
509533	6984891	Redcliffe-006	MBC-086	2.31	2.16	0.15	1.17	2.8	193	0	2.49	2.99	2.85	3.87	2.92	4.05	1.63
509892	6984691	Redcliffe-007	MBC-087	2.25	2.10	0.15	1.15	2.8	194	0	2.43	2.92	2.78	3.79	2.85	3.97	1.65
510464	6984279	Redcliffe-009	MBC-088	2.18	1.99	0.19	1.32	3.4	131	0	2.35	2.96	2.74	4.04	2.82	4.26	1.84
510783	6984638	Redcliffe-010	MBC-089	2.14	1.92	0.22	1.61	3.5	128	0	2.35	3.08	2.82	4.34	2.92	4.59	1.72
510969	6985516	Redcliffe-012	MBC-090	2.16	1.93	0.23	1.66	3.7	115	0	2.37	3.15	2.84	4.48	2.94	4.76	1.81
511076	6985889	Redcliffe-013	MBC-091	2.16	1.93	0.23	1.59	3.8	119	0	2.34	3.12	2.80	4.43	2.89	4.71	1.90
511488	6987365	Redcliffe-016	MBC-092	2.21	1.93	0.28	1.87	4.4	113	0	2.39	3.35	2.90	4.93	3.01	5.28	1.99
511768	6988017	Redcliffe-018	MBC-093	2.17	1.88	0.29	1.92	4.5	113	0	2.34	3.34	2.86	4.99	2.98	5.35	2.02
511648	6988496	Redcliffe-019	MBC-094	2.16	1.91	0.25	1.60	4.3	111	0	2.30	3.15	2.74	4.55	2.84	4.86	2.10
511741	6989254	Redcliffe-021	MBC-095	2.21	1.91	0.30	1.96	4.6	116	0	2.38	3.41	2.91	5.10	3.02	5.48	2.06
511874	6990079	Redcliffe-023	MBC-096	2.18	1.89	0.29	1.92	4.5	119	0	2.35	3.36	2.87	5.01	2.99	5.37	2.04
511648	6990451	Redcliffe-024	MBC-097	2.18	1.92	0.26	1.66	4.3	109	0	2.33	3.20	2.78	4.65	2.89	4.98	2.10
511661	6991063	Redcliffe-025	MBC-098	2.20	1.93	0.27	1.76	4.3	118	0	2.36	3.27	2.85	4.77	2.95	5.09	2.01
511568	6992087	Redcliffe-027	MBC-099	2.20	1.93	0.27	1.85	4.2	115	0	2.39	3.32	2.90	4.87	3.01	5.20	1.94
511475	6992513	Redcliffe-028	MBC-100	2.15	1.93	0.22	1.53	3.6	124	0	2.34	3.06	2.78	4.30	2.87	4.56	1.84
510916	6992713	Redcliffe-029	MBC-101	2.11	1.92	0.19	1.32	3.4	57	0	2.28	2.90	2.67	3.97	2.75	4.19	1.85
510531	6992472	Redcliffe-030	MBC-102	2.08	1.92	0.16	1.30	2.8	250	0	2.29	2.82	2.69	3.77	2.77	3.96	1.54
510161	6992164	Redcliffe-031	MBC-103	2.13	1.95	0.18	1.51	2.9	247	0	2.39	3.01	2.84	4.12	2.92	4.30	1.49
509833	6991712	Redcliffe-032	MBC-104	2.08	1.95	0.13	1.10	2.4	229	0	2.27	2.69	2.60	3.47	2.66	3.60	1.44
509525	6991322	Redcliffe-033	MBC-105	2.09	1.95	0.14	1.15	2.4	230	0	2.28	2.71	2.63	3.51	2.69	3.64	1.42
509155	6991199	Redcliffe-034	MBC-106	2.10	1.96	0.14	1.17	2.4	227	0	2.30	2.73	2.65	3.52	2.71	3.65	1.39
508478	6991343	Redcliffe-035	MBC-107	2.13	2.00	0.13	1.03	2.3	126	0	2.30	2.70	2.61	3.42	2.66	3.54	1.44
507965	6991487	Redcliffe-036	MBC-108	2.16	2.03	0.13	1.06	2.4	125	0	2.34	2.75	2.66	3.51	2.71	3.63	1.45
507205	6991589	Redcliffe-037	MBC-109	2.21	2.08	0.13	1.04	2.4	125	0	2.38	2.79	2.70	3.52	2.75	3.64	1.45
506548	6991836	Redcliffe-038	MBC-110	2.28	2.12	0.16	1.07	3.0	49	0	2.42	2.91	2.75	3.77	2.82	3.95	1.82
505830	6992082	Redcliffe-039	MBC-111	2.33	2.17	0.16	1.11	3.0	61	0	2.48	2.98	2.82	3.86	2.89	4.04	1.77
505357.8	6992266.6	Redcliffe-040	MBC-112	2.36	2.21	0.15	1.02	2.9	64	0	2.50	2.96	2.81	3.77	2.88	3.94	1.79

				Water Level mAHD 200yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	1.96	1.96		1.21	2.7	104	0							
506913	6982622	PineRiver-001	MBC-001	2.52	2.38	0.14	1.09	2.5	129	0	2.70	3.13	3.03	3.92	3.09	4.07	1.51
507065	6983136	PineRiver-002	MBC-002	2.59	2.44	0.15	1.17	2.7	136	0	2.78	3.25	3.13	4.11	3.20	4.28	1.55
507237	6983516	PineRiver-003	MBC-003	2.57	2.44	0.13	1.05	2.5	128	0	2.75	3.17	3.07	3.93	3.13	4.08	1.52
507198	6984049	PineRiver-004	MBC-004	2.63	2.51	0.12	0.98	2.4	130	0	2.79	3.20	3.09	3.92	3.14	4.03	1.50
506913	6984334	PineRiver-005	MBC-005	2.79	2.68	0.11	0.86	2.2	131	0	2.93	3.27	3.18	3.89	3.22	3.99	1.46
507046	6984696	PineRiver-006	MBC-006	2.89	2.78	0.11	0.88	2.2	139	0	3.03	3.37	3.29	3.99	3.34	4.10	1.44
507522	6984334	PineRiver-007	MBC-007	2.65	2.52	0.13	1.01	2.5	135	0	2.81	3.22	3.12	3.95	3.18	4.10	1.52
507769	6984239	PineRiver-008	MBC-008	2.57	2.41	0.16	1.24	2.8	128	0	2.77	3.28	3.14	4.21	3.22	4.39	1.59
506179	6982661	PineRiver-009	MBC-009	2.79	2.68	0.11	0.86	2.2	131	0	2.93	3.27	3.18	3.89	3.22	3.99	1.46
504927	6992513	Caboolture-001	MBC-010	2.55	2.40	0.15	1.09	2.8	60	0	2.71	3.18	3.04	4.03	3.11	4.20	1.70
504270	6992575	Caboolture-002	MBC-011	2.56	2.44	0.12	0.98	2.3	128	0	2.72	3.11	3.02	3.82	3.06	3.93	1.46
503633	6992841	Caboolture-003	MBC-012	2.72	2.59	0.13	1.02	2.6	64	0	2.88	3.31	3.20	4.07	3.26	4.22	1.59
503346	6993519	Caboolture-004	MBC-013	2.81	2.68	0.13	1.05	2.4	129	0	2.98	3.41	3.30	4.17	3.35	4.29	1.47
503613	6994402	Caboolture-005	MBC-014	2.87	2.75	0.12	0.94	2.3	130	0	3.02	3.40	3.30	4.08	3.36	4.21	1.50
504658	6996186	Caboolture-009	MBC-015	2.85	2.71	0.14	1.08	2.7	127	0	3.02	3.48	3.35	4.30	3.42	4.46	1.64
504477	6996546	Caboolture-010	MBC-016	2.98	2.85	0.13	1.03	2.4	130	0	3.15	3.57	3.46	4.33	3.51	4.45	1.50
504774	6997055	Caboolture-012	MBC-017	2.91	2.78	0.13	1.03	2.5	130	0	3.08	3.49	3.39	4.24	3.46	4.38	1.51
505039	6997331	Caboolture-013	MBC-018	2.90	2.77	0.13	0.95	2.6	126	0	3.04	3.45	3.34	4.19	3.39	4.33	1.69
505442	6998582	Caboolture-016	MBC-019	2.99	2.84	0.15	1.13	2.7	128	0	3.17	3.63	3.51	4.47	3.58	4.63	1.57
505671	6999062	Caboolture-017	MBC-020	3.01	2.87	0.14	1.03	2.8	127	0	3.16	3.61	3.48	4.41	3.54	4.57	1.69
505909	6999567	Caboolture-018	MBC-021	3.04	2.89	0.15	1.11	2.9	127	0	3.21	3.69	3.54	4.54	3.61	4.72	1.69
506361	7000127	Caboolture-019	MBC-022	3.08	2.93	0.15	1.16	2.8	132	0	3.26	3.75	3.62	4.61	3.69	4.79	1.60
506813	7000580	Caboolture-020	MBC-023	2.97	2.83	0.14	1.08	2.7	129	0	3.14	3.59	3.47	4.41	3.54	4.58	1.63
507266	7001010	Caboolture-021	MBC-024	2.95	2.78	0.17	1.23	3.2	123	0	3.12	3.68	3.49	4.67	3.57	4.88	1.81
507718	7001452	Caboolture-022	MBC-025	2.98	2.80	0.18	1.27	3.3	129	0	3.15	3.74	3.53	4.76	3.61	4.98	1.83
508289	7001850	Caboolture-023	MBC-026	2.95	2.77	0.18	1.28	3.4	130	0	3.12	3.72	3.50	4.76	3.58	4.98	1.85
508903	7002206	Caboolture-024	MBC-027	2.90	2.71	0.19	1.32	3.5	132	0	3.06	3.70	3.45	4.79	3.53	5.03	1.92
509355	7002550	Caboolture-025	MBC-028	2.88	2.69	0.19	1.30	3.5	134	0	3.04	3.66	3.42	4.73	3.50	4.96	1.90
509894	7002744	Caboolture-026	MBC-029	2.83	2.63	0.20	1.35	3.6	148	0	2.99	3.64	3.38	4.76	3.46	5.00	1.92
510475	7002852	Caboolture-027	MBC-030	2.78	2.59	0.19	1.31	3.5	148	0	2.94	3.57	3.32	4.66	3.41	4.90	1.93
511067	7003003	Caboolture-028	MBC-031	2.72	2.55	0.17	1.21	3.2	151	0	2.88	3.44	3.25	4.42	3.33	4.62	1.82
511477	7003251	Caboolture-029	MBC-032	2.76	2.62	0.14	1.08	2.7	138	0	2.93	3.39	3.26	4.21	3.33	4.37	1.64
512112	7003326	Caboolture-030	MBC-033	2.72	2.56	0.16	1.19	2.9	137	0	2.90	3.41	3.26	4.32	3.34	4.50	1.65
512694	7003455	Caboolture-031	MBC-034	2.66	2.51	0.15	1.12	2.8	141	0	2.83	3.31	3.17	4.16	3.24	4.34	1.66
513275	7003412	Caboolture-032	MBC-035	2.65	2.49	0.16	1.12	3.0	177	0	2.81	3.31	3.15	4.20	3.22	4.38	1.78
513911	7003746	Caboolture-033	MBC-036	2.63	2.50	0.13	1.04	2.4	127	0	2.80	3.23	3.12	3.99	3.17	4.12	1.49
514481	7004446	Caboolture-034	MBC-037	2.40	2.27	0.13	1.02	2.4	125	0	2.57	2.99	2.87	3.74	2.92	3.86	1.50
516248	7002647	Caboolture-038	MBC-038	2.29	2.06	0.23	1.57	3.9	221	0	2.46	3.24	2.91	4.55	3.00	4.83	1.94
517280	7002397	Caboolture-040	MBC-039	2.19	1.98	0.21	1.43	3.7	176	0	2.35	3.05	2.77	4.24	2.86	4.49	1.92
519611	7002925	Caboolture-044	MBC-040	2.07	1.79	0.28	1.95	4.3	117	0	2.27	3.25	2.81	4.87	2.92	5.21	1.91
520367	7003619	Caboolture-046	MBC-041	2.07	1.74	0.33	2.33	4.7	107	0	2.30	3.48	2.91	5.41	3.05	5.82	1.91
520284	7006303	Caboolture-051	MBC-042	2.05	1.71	0.34	2.05	5.6	54	0	2.16	3.38	2.69	5.34	2.81	5.80	2.46
516778	7013518	Caboolture-060	MBC-043	2.19	1.79	0.40	2.49	6.0	58	0	2.33	3.79	2.96	6.11	3.10	6.65	2.35
516320	7014796	Caboolture-061	MBC-044	2.19	1.81	0.38	2.33	5.9	58	0	2.32	3.70	2.91	5.91	3.05	6.42	2.43
507667	7015461	Caboolture-067	MBC-045	2.95	2.82	0.13	1.08	2.4	215	0	3.13	3.56	3.46	4.34	3.51	4.47	1.47
508591	7014764	Caboolture-069	MBC-046	2.94	2.79	0.15	1.27	2.7	227	0	3.16	3.68	3.54	4.60	3.61	4.75	1.49
509101	7014442	Caboolture-070	MBC-047	2.90	2.73	0.17	1.35	2.8	223	0	3.12	3.66	3.53	4.64	3.61	4.83	1.51
509543	7013236	Caboolture-072	MBC-048	2.73	2.57	0.16	1.26	2.8	227	0	2.93	3.45	3.32	4.37	3.39	4.55	1.54
509623	7012592	Caboolture-073	MBC-049	2.65	2.49	0.16	1.30	2.8	225	0	2.86	3.40	3.26	4.35	3.34	4.54	1.56
510253	7011212	Caboolture-075	MBC-050	2.50	2.34	0.16	1.25	2.7	219	0	2.70	3.20	3.08	4.11	3.16	4.29	1.51
510669	7010917	Caboolture-076	MBC-051	2.41	2.28	0.13	0.99	2.4	216	0	2.57	2.96	2.87	3.68	2.92	3.81	1.50
511138	7010769	Caboolture-077	MBC-052	2.42	2.28	0.14	1.10	2.6	154	0	2.60	3.04	2.93	3.85	3.00	4.01	1.54
511701	7010475	Caboolture-078	MBC-053	2.41	2.26	0.15	1.15	2.7	157	0	2.59	3.07	2.94	3.93	3.01	4.10	1.59
512076	7010032	Caboolture-079	MBC-054	2.40	2.23	0.17	1.27	3.0	152	0	2.59	3.14	2.98	4.12	3.06	4.31	1.68
513283	7007901	Caboolture-083	MBC-055	2.19	2.02	0.17	1.32	3.0	231	0	2.40	2.95	2.80	3.94	2.88	4.14	1.60
513390	7007284	Caboolture-084	MBC-056	2.44	2.27	0.17	1.34	2.9	278	0	2.66	3.20	3.06	4.18	3.14	4.37	1.54

				Water Level mAHD 200yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.38	2.20	0.18	1.53	3.0	144	0	2.64	3.27	3.10	4.40	3.18	4.58	1.49
514141	7006547	Caboolture-086	MBC-058	2.38	2.21	0.17	1.45	2.8	247	0	2.63	3.21	3.07	4.25	3.14	4.42	1.47
514958	7005756	Caboolture-088	MBC-059	2.30	2.12	0.18	1.44	3.0	255	0	2.53	3.12	2.97	4.18	3.05	4.39	1.56
515374	7005260	Caboolture-089	MBC-060	2.25	2.08	0.17	1.37	2.8	261	0	2.48	3.05	2.89	4.05	2.96	4.22	1.50
514730	7005140	Caboolture-090	MBC-061	2.21	2.08	0.13	1.10	2.4	112	0	2.40	2.83	2.73	3.61	2.79	3.74	1.45
514328	7005394	Caboolture-091	MBC-062	2.24	2.10	0.14	1.04	2.7	107	0	2.40	2.84	2.72	3.62	2.78	3.78	1.62
513269	7006199	Caboolture-093	MBC-063	2.34	2.18	0.16	1.23	2.8	106	0	2.53	3.04	2.91	3.95	2.98	4.13	1.57
511621	7007284	Caboolture-096	MBC-064	2.36	2.22	0.14	1.16	2.5	127	0	2.56	3.01	2.91	3.83	2.97	3.97	1.45
511339	7008048	Caboolture-097	MBC-065	2.39	2.26	0.13	1.06	2.3	128	0	2.56	2.96	2.88	3.69	2.93	3.80	1.40
511648	7008558	Caboolture-098	MBC-066	2.18	2.05	0.13	1.04	2.5	128	0	2.35	2.77	2.67	3.53	2.73	3.68	1.53
511835	7009040	Caboolture-099	MBC-067	2.24	2.11	0.13	1.02	2.6	137	0	2.40	2.83	2.72	3.58	2.78	3.73	1.58
511446	7009456	Caboolture-100	MBC-068	2.33	2.18	0.15	1.19	2.7	17	0	2.52	3.01	2.89	3.89	2.96	4.06	1.56
511058	7009456	Caboolture-101	MBC-069	2.37	2.22	0.15	1.22	2.7	12	0	2.57	3.07	2.94	3.95	3.02	4.13	1.53
510321	7009818	Caboolture-102	MBC-070	2.37	2.22	0.15	1.19	2.8	14	0	2.56	3.06	2.92	3.94	3.00	4.12	1.59
509784	7010233	Caboolture-103	MBC-071	2.37	2.22	0.15	1.18	2.7	119	0	2.56	3.04	2.92	3.90	2.99	4.07	1.53
509369	7010796	Caboolture-104	MBC-072	2.43	2.29	0.14	1.10	2.6	120	0	2.61	3.06	2.94	3.87	3.01	4.03	1.57
509034	7011198	Caboolture-105	MBC-073	2.60	2.47	0.13	1.07	2.5	122	0	2.78	3.22	3.11	4.00	3.16	4.12	1.49
508833	7011587	Caboolture-106	MBC-074	2.52	2.39	0.13	0.98	2.5	127	0	2.67	3.07	2.97	3.80	3.03	3.94	1.56
508752	7011869	Caboolture-107	MBC-075	2.45	2.31	0.14	1.11	2.6	129	0	2.63	3.08	2.97	3.89	3.04	4.04	1.52
508471	7012110	Caboolture-108	MBC-076	2.49	2.36	0.13	1.04	2.5	129	0	2.66	3.08	2.98	3.83	3.04	3.97	1.51
508926	7012177	Caboolture-109	MBC-077	2.54	2.40	0.14	1.05	2.6	135	0	2.70	3.13	3.02	3.91	3.09	4.07	1.57
509020	7012767	Caboolture-110	MBC-078	2.63	2.48	0.15	1.17	2.7	143	0	2.82	3.29	3.17	4.14	3.24	4.31	1.53
508565	7013276	Caboolture-111	MBC-079	2.73	2.60	0.13	1.05	2.3	133	0	2.90	3.30	3.22	4.03	3.27	4.14	1.41
508069	7013611	Caboolture-112	MBC-080	2.93	2.79	0.14	1.15	2.6	340	0	3.12	3.58	3.47	4.42	3.54	4.58	1.51
507667	7013960	Caboolture-113	MBC-081	3.00	2.87	0.13	1.04	2.3	130	0	3.17	3.56	3.48	4.28	3.53	4.40	1.41
507157	7014067	Caboolture-114	MBC-082	3.04	2.91	0.13	1.04	2.3	130	0	3.21	3.61	3.52	4.34	3.57	4.46	1.43
507171	7014777	Caboolture-115	MBC-083	2.94	2.81	0.13	1.09	2.5	132	0	3.13	3.56	3.46	4.35	3.51	4.48	1.47
507063	7015595	Caboolture-116	MBC-084	2.99	2.85	0.14	1.09	2.6	130	0	3.17	3.60	3.50	4.40	3.56	4.55	1.53
509121	6984944	Redcliffe-005	MBC-085	2.51	2.34	0.17	1.21	3.0	172	0	2.68	3.21	3.05	4.15	3.13	4.34	1.71
509533	6984891	Redcliffe-006	MBC-086	2.42	2.27	0.15	1.17	2.8	193	0	2.60	3.10	2.96	3.98	3.03	4.16	1.63
509892	6984691	Redcliffe-007	MBC-087	2.35	2.20	0.15	1.15	2.8	194	0	2.53	3.02	2.88	3.89	2.95	4.07	1.65
510464	6984279	Redcliffe-009	MBC-088	2.27	2.08	0.19	1.32	3.4	131	0	2.44	3.05	2.83	4.13	2.91	4.35	1.84
510783	6984638	Redcliffe-010	MBC-089	2.22	2.00	0.22	1.61	3.5	128	0	2.43	3.16	2.90	4.42	3.00	4.67	1.72
510969	6985516	Redcliffe-012	MBC-090	2.24	2.01	0.23	1.66	3.7	115	0	2.45	3.23	2.92	4.56	3.02	4.84	1.81
511076	6985889	Redcliffe-013	MBC-091	2.24	2.01	0.23	1.59	3.8	119	0	2.42	3.20	2.88	4.51	2.97	4.79	1.90
511488	6987365	Redcliffe-016	MBC-092	2.29	2.01	0.28	1.87	4.4	113	0	2.47	3.43	2.98	5.01	3.09	5.36	1.99
511768	6988017	Redcliffe-018	MBC-093	2.24	1.95	0.29	1.92	4.5	113	0	2.41	3.41	2.93	5.06	3.05	5.42	2.02
511648	6988496	Redcliffe-019	MBC-094	2.24	1.99	0.25	1.60	4.3	111	0	2.38	3.23	2.82	4.63	2.92	4.94	2.10
511741	6989254	Redcliffe-021	MBC-095	2.29	1.99	0.30	1.98	4.5	116	0	2.47	3.49	3.00	5.17	3.12	5.53	1.99
511874	6990079	Redcliffe-023	MBC-096	2.26	1.97	0.29	1.92	4.5	119	0	2.43	3.44	2.95	5.09	3.07	5.45	2.04
511648	6990451	Redcliffe-024	MBC-097	2.25	1.99	0.26	1.66	4.3	109	0	2.40	3.27	2.85	4.72	2.96	5.05	2.10
511661	6991063	Redcliffe-025	MBC-098	2.28	2.01	0.27	1.76	4.3	118	0	2.44	3.35	2.93	4.85	3.03	5.17	2.01
511568	6992087	Redcliffe-027	MBC-099	2.28	2.01	0.27	1.85	4.2	115	0	2.47	3.40	2.98	4.95	3.09	5.28	1.94
511475	6992513	Redcliffe-028	MBC-100	2.23	2.01	0.22	1.53	3.6	124	0	2.42	3.14	2.86	4.38	2.95	4.64	1.84
510916	6992713	Redcliffe-029	MBC-101	2.18	1.99	0.19	1.32	3.4	57	0	2.35	2.97	2.74	4.04	2.82	4.26	1.85
510531	6992472	Redcliffe-030	MBC-102	2.16	2.00	0.16	1.30	2.8	250	0	2.37	2.90	2.77	3.85	2.85	4.04	1.54
510161	6992164	Redcliffe-031	MBC-103	2.23	2.03	0.20	1.51	3.3	41	0	2.45	3.11	2.89	4.28	2.98	4.52	1.69
509833	6991712	Redcliffe-032	MBC-104	2.17	2.04	0.13	1.13	2.4	226	0	2.37	2.79	2.71	3.57	2.76	3.70	1.41
509525	6991322	Redcliffe-033	MBC-105	2.17	2.03	0.14	1.19	2.4	227	0	2.37	2.81	2.73	3.62	2.79	3.75	1.39
509155	6991199	Redcliffe-034	MBC-106	2.20	2.05	0.15	1.26	2.5	224	0	2.42	2.86	2.80	3.71	2.86	3.85	1.37
508478	6991343	Redcliffe-035	MBC-107	2.22	2.09	0.13	1.06	2.3	128	0	2.39	2.79	2.71	3.52	2.76	3.64	1.41
507965	6991487	Redcliffe-036	MBC-108	2.26	2.13	0.13	1.06	2.4	125	0	2.44	2.85	2.76	3.61	2.81	3.73	1.45
507205	6991589	Redcliffe-037	MBC-109	2.33	2.18	0.15	1.04	2.9	44	0	2.47	2.94	2.79	3.77	2.86	3.95	1.79
506548	6991836	Redcliffe-038	MBC-110	2.39	2.23	0.16	1.07	3.0	49	0	2.53	3.02	2.86	3.88	2.93	4.06	1.82
505830	6992082	Redcliffe-039	MBC-111	2.45	2.29	0.16	1.11	3.0	61	0	2.60	3.10	2.94	3.98	3.01	4.16	1.77
505358	6992267	Redcliffe-040	MBC-112	2.48	2.33	0.15	1.02	3.0	61	0	2.62	3.08	2.93	3.90	3.00	4.08	1.82

				Water Level mAHD 500yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	2.07	2.07		1.21	2.7	104	0							
506913	6982622	PineRiver-001	MBC-001	2.69	2.55	0.14	1.11	2.5	130	0	2.87	3.31	3.21	4.11	3.27	4.24	1.46
507065	6983136	PineRiver-002	MBC-002	2.76	2.61	0.15	1.23	2.7	137	0	2.97	3.46	3.34	4.35	3.41	4.53	1.51
507237	6983516	PineRiver-003	MBC-003	2.75	2.62	0.13	1.07	2.5	129	0	2.93	3.36	3.26	4.14	3.31	4.27	1.48
507198	6984049	PineRiver-004	MBC-004	2.82	2.70	0.12	0.98	2.4	130	0	2.98	3.39	3.28	4.11	3.33	4.22	1.50
506913	6984334	PineRiver-005	MBC-005	3.00	2.89	0.11	0.86	2.2	131	0	3.14	3.48	3.39	4.10	3.43	4.20	1.46
507046	6984696	PineRiver-006	MBC-006	3.11	3.00	0.11	0.88	2.2	139	0	3.25	3.59	3.51	4.21	3.56	4.32	1.44
507522	6984334	PineRiver-007	MBC-007	2.84	2.71	0.13	1.01	2.5	135	0	3.00	3.41	3.31	4.14	3.37	4.29	1.52
507769	6984239	PineRiver-008	MBC-008	2.74	2.58	0.16	1.24	2.8	128	0	2.94	3.45	3.31	4.38	3.39	4.56	1.59
506179	6982661	PineRiver-009	MBC-009	3.00	2.89	0.11	0.86	2.2	131	0	3.14	3.48	3.39	4.10	3.43	4.20	1.46
504927	6992513	Caboolture-001	MBC-010	2.72	2.57	0.15	1.09	2.8	60	0	2.88	3.35	3.21	4.20	3.28	4.37	1.70
504270	6992575	Caboolture-002	MBC-011	2.75	2.62	0.13	0.99	2.6	61	0	2.91	3.32	3.21	4.06	3.27	4.21	1.61
503633	6992841	Caboolture-003	MBC-012	2.92	2.79	0.13	1.04	2.5	66	0	3.09	3.51	3.41	4.28	3.47	4.42	1.54
503346	6993519	Caboolture-004	MBC-013	3.02	2.89	0.13	1.05	2.4	129	0	3.19	3.62	3.51	4.38	3.56	4.50	1.47
503613	6994402	Caboolture-005	MBC-014	3.10	2.98	0.12	0.94	2.3	130	0	3.25	3.63	3.53	4.31	3.59	4.44	1.50
504658	6996186	Caboolture-009	MBC-015	3.07	2.93	0.14	1.08	2.7	127	0	3.24	3.70	3.57	4.52	3.64	4.68	1.64
504477	6996546	Caboolture-010	MBC-016	3.21	3.08	0.13	1.03	2.4	130	0	3.38	3.80	3.69	4.56	3.74	4.68	1.50
504774	6997055	Caboolture-012	MBC-017	3.14	3.01	0.13	1.03	2.5	130	0	3.31	3.72	3.62	4.47	3.69	4.61	1.51
505039	6997331	Caboolture-013	MBC-018	3.13	3.00	0.13	0.95	2.6	126	0	3.27	3.68	3.57	4.42	3.62	4.56	1.69
505442	6998582	Caboolture-016	MBC-019	3.22	3.07	0.15	1.13	2.7	128	0	3.40	3.86	3.74	4.70	3.81	4.86	1.57
505671	6999062	Caboolture-017	MBC-020	3.24	3.10	0.14	1.03	2.8	127	0	3.39	3.84	3.71	4.64	3.77	4.80	1.69
505909	6999567	Caboolture-018	MBC-021	3.28	3.13	0.15	1.11	2.9	127	0	3.45	3.93	3.78	4.78	3.85	4.96	1.69
506361	7000127	Caboolture-019	MBC-022	3.32	3.17	0.15	1.16	2.8	132	0	3.50	3.99	3.86	4.85	3.93	5.03	1.60
506813	7000580	Caboolture-020	MBC-023	3.20	3.06	0.14	1.08	2.7	129	0	3.37	3.82	3.70	4.64	3.77	4.81	1.63
507266	7001010	Caboolture-021	MBC-024	3.17	3.00	0.17	1.24	3.1	126	0	3.35	3.90	3.72	4.87	3.80	5.07	1.74
507718	7001452	Caboolture-022	MBC-025	3.21	3.03	0.18	1.27	3.3	129	0	3.38	3.97	3.76	4.99	3.84	5.21	1.83
508289	7001850	Caboolture-023	MBC-026	3.17	2.99	0.18	1.30	3.3	132	0	3.35	3.94	3.73	4.98	3.81	5.19	1.79
508903	7002206	Caboolture-024	MBC-027	3.11	2.92	0.19	1.33	3.4	133	0	3.28	3.90	3.67	4.99	3.76	5.22	1.86
509355	7002550	Caboolture-025	MBC-028	3.09	2.90	0.19	1.31	3.4	136	0	3.25	3.87	3.64	4.93	3.72	5.16	1.84
509894	7002744	Caboolture-026	MBC-029	3.02	2.82	0.20	1.37	3.5	140	0	3.19	3.83	3.59	4.94	3.67	5.18	1.84
510475	7002852	Caboolture-027	MBC-030	2.97	2.78	0.19	1.33	3.4	140	0	3.14	3.76	3.53	4.84	3.62	5.07	1.85
511067	7003003	Caboolture-028	MBC-031	2.91	2.74	0.17	1.21	3.1	143	0	3.08	3.62	3.45	4.58	3.52	4.77	1.76
511477	7003251	Caboolture-029	MBC-032	2.96	2.82	0.14	1.08	2.7	138	0	3.13	3.59	3.46	4.41	3.53	4.57	1.64
512112	7003326	Caboolture-030	MBC-033	2.91	2.75	0.16	1.19	2.9	137	0	3.09	3.60	3.45	4.51	3.53	4.69	1.65
512694	7003455	Caboolture-031	MBC-034	2.85	2.69	0.16	1.12	3.0	154	0	3.01	3.50	3.35	4.39	3.42	4.57	1.75
513275	7003412	Caboolture-032	MBC-035	2.83	2.67	0.16	1.12	3.0	177	0	2.99	3.49	3.33	4.38	3.40	4.56	1.78
513911	7003746	Caboolture-033	MBC-036	2.80	2.67	0.13	1.06	2.4	127	0	2.98	3.40	3.30	4.15	3.35	4.27	1.46
514481	7004446	Caboolture-034	MBC-037	2.54	2.41	0.13	1.02	2.4	125	0	2.71	3.13	3.01	3.88	3.06	4.00	1.50
516248	7002647	Caboolture-038	MBC-038	2.40	2.17	0.23	1.57	3.9	221	0	2.57	3.35	3.02	4.66	3.11	4.94	1.94
517280	7002397	Caboolture-040	MBC-039	2.28	2.07	0.21	1.43	3.7	176	0	2.44	3.14	2.86	4.33	2.95	4.58	1.92
519611	7002925	Caboolture-044	MBC-040	2.13	1.85	0.28	1.95	4.3	117	0	2.33	3.31	2.87	4.93	2.98	5.27	1.91
520367	7003619	Caboolture-046	MBC-041	2.13	1.80	0.33	2.33	4.7	107	0	2.36	3.54	2.97	5.47	3.11	5.88	1.91
520284	7006303	Caboolture-051	MBC-042	2.11	1.77	0.34	2.05	5.6	54	0	2.22	3.44	2.75	5.40	2.87	5.86	2.46
516778	7013518	Caboolture-060	MBC-043	2.26	1.86	0.40	2.49	6.0	58	0	2.40	3.86	3.03	6.18	3.17	6.72	2.35
516320	7014796	Caboolture-061	MBC-044	2.26	1.88	0.38	2.33	5.9	58	0	2.39	3.77	2.98	5.98	3.12	6.49	2.43
507667	7015461	Caboolture-067	MBC-045	3.17	3.04	0.13	1.08	2.4	215	0	3.35	3.78	3.68	4.56	3.73	4.69	1.47
508591	7014764	Caboolture-069	MBC-046	3.16	3.00	0.16	1.32	2.7	226	0	3.38	3.92	3.78	4.87	3.85	5.03	1.48
509101	7014442	Caboolture-070	MBC-047	3.11	2.93	0.18	1.46	2.9	222	0	3.35	3.94	3.79	4.99	3.88	5.20	1.50
509543	7013236	Caboolture-072	MBC-048	2.92	2.75	0.17	1.36	2.9	227	0	3.14	3.69	3.55	4.69	3.63	4.88	1.53
509623	7012592	Caboolture-073	MBC-049	2.83	2.66	0.17	1.40	2.9	225	0	3.06	3.63	3.49	4.66	3.57	4.86	1.54
510253	7011212	Caboolture-075	MBC-050	2.65	2.49	0.16	1.29	2.7	221	0	2.86	3.38	3.26	4.31	3.33	4.49	1.50
510669	7010917	Caboolture-076	MBC-051	2.55	2.42	0.13	0.99	2.4	216	0	2.71	3.10	3.01	3.82	3.06	3.95	1.50
511138	7010769	Caboolture-077	MBC-052	2.56	2.42	0.14	1.10	2.6	154	0	2.74	3.18	3.07	3.99	3.14	4.15	1.54
511701	7010475	Caboolture-078	MBC-053	2.55	2.40	0.15	1.15	2.7	216	0	2.73	3.20	3.08	4.05	3.15	4.21	1.55
512076	7010032	Caboolture-079	MBC-054	2.54	2.37	0.17	1.29	3.0	236	0	2.74	3.29	3.13	4.28	3.21	4.48	1.66
513283	7007901	Caboolture-083	MBC-055	2.29	2.12	0.17	1.34	3.0	248	0	2.50	3.06	2.91	4.07	2.99	4.27	1.60
513390	7007284	Caboolture-084	MBC-056	2.59	2.42	0.17	1.35	2.8	250	0	2.81	3.35	3.22	4.33	3.30	4.52	1.51

				Water Level mAHD 500yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.51	2.33	0.18	1.53	3.0	144	0	2.77	3.40	3.23	4.53	3.31	4.71	1.49
514141	7006547	Caboolture-086	MBC-058	2.51	2.34	0.17	1.45	2.8	247	0	2.76	3.34	3.20	4.38	3.27	4.55	1.47
514958	7005756	Caboolture-088	MBC-059	2.42	2.24	0.18	1.44	3.0	255	0	2.65	3.24	3.09	4.30	3.17	4.51	1.56
515374	7005260	Caboolture-089	MBC-060	2.36	2.19	0.17	1.37	2.8	261	0	2.59	3.16	3.00	4.16	3.07	4.33	1.50
514730	7005140	Caboolture-090	MBC-061	2.32	2.19	0.13	1.10	2.4	112	0	2.51	2.94	2.84	3.72	2.90	3.85	1.45
514328	7005394	Caboolture-091	MBC-062	2.35	2.21	0.14	1.04	2.7	107	0	2.51	2.95	2.83	3.73	2.89	3.89	1.62
513269	7006199	Caboolture-093	MBC-063	2.47	2.31	0.16	1.23	2.8	106	0	2.66	3.17	3.04	4.08	3.11	4.26	1.57
511621	7007284	Caboolture-096	MBC-064	2.50	2.36	0.14	1.16	2.5	127	0	2.70	3.15	3.05	3.97	3.11	4.11	1.45
511339	7008048	Caboolture-097	MBC-065	2.53	2.40	0.13	1.06	2.3	128	0	2.70	3.10	3.02	3.83	3.07	3.94	1.40
511648	7008558	Caboolture-098	MBC-066	2.28	2.15	0.13	1.04	2.5	128	0	2.45	2.87	2.77	3.63	2.83	3.78	1.53
511835	7009040	Caboolture-099	MBC-067	2.36	2.22	0.14	1.06	2.6	109	0	2.53	2.96	2.85	3.74	2.91	3.89	1.55
511446	7009456	Caboolture-100	MBC-068	2.46	2.31	0.15	1.19	2.7	17	0	2.65	3.14	3.02	4.02	3.09	4.19	1.56
511058	7009456	Caboolture-101	MBC-069	2.50	2.35	0.15	1.22	2.7	12	0	2.70	3.20	3.07	4.08	3.15	4.26	1.53
510321	7009818	Caboolture-102	MBC-070	2.50	2.35	0.15	1.19	2.8	14	0	2.69	3.19	3.05	4.07	3.13	4.25	1.59
509784	7010233	Caboolture-103	MBC-071	2.50	2.35	0.15	1.20	2.7	92	0	2.70	3.19	3.06	4.07	3.13	4.24	1.56
509369	7010796	Caboolture-104	MBC-072	2.58	2.43	0.15	1.14	2.7	119	0	2.76	3.23	3.11	4.07	3.17	4.23	1.56
509034	7011198	Caboolture-105	MBC-073	2.77	2.64	0.13	1.07	2.5	122	0	2.95	3.39	3.28	4.17	3.33	4.29	1.49
508833	7011587	Caboolture-106	MBC-074	2.68	2.55	0.13	1.00	2.5	129	0	2.84	3.24	3.15	3.97	3.21	4.12	1.53
508752	7011869	Caboolture-107	MBC-075	2.60	2.46	0.14	1.11	2.6	124	0	2.78	3.23	3.12	4.04	3.19	4.20	1.54
508471	7012110	Caboolture-108	MBC-076	2.65	2.52	0.13	1.04	2.5	129	0	2.82	3.24	3.14	3.99	3.20	4.13	1.51
508926	7012177	Caboolture-109	MBC-077	2.70	2.56	0.14	1.10	2.5	135	0	2.88	3.32	3.22	4.11	3.28	4.27	1.51
509020	7012767	Caboolture-110	MBC-078	2.80	2.65	0.15	1.20	2.7	132	0	3.00	3.48	3.36	4.35	3.43	4.52	1.51
508565	7013276	Caboolture-111	MBC-079	2.91	2.78	0.13	1.05	2.3	133	0	3.08	3.48	3.40	4.21	3.45	4.32	1.41
508069	7013611	Caboolture-112	MBC-080	3.14	3.00	0.14	1.15	2.6	340	0	3.33	3.79	3.68	4.63	3.75	4.79	1.51
507667	7013960	Caboolture-113	MBC-081	3.22	3.09	0.13	1.04	2.3	130	0	3.39	3.78	3.70	4.50	3.75	4.62	1.41
507157	7014067	Caboolture-114	MBC-082	3.27	3.14	0.13	1.04	2.3	130	0	3.44	3.84	3.75	4.57	3.80	4.69	1.43
507171	7014777	Caboolture-115	MBC-083	3.15	3.02	0.13	1.09	2.5	132	0	3.34	3.77	3.67	4.56	3.72	4.69	1.47
507063	7015595	Caboolture-116	MBC-084	3.20	3.06	0.14	1.09	2.6	130	0	3.38	3.81	3.71	4.61	3.77	4.76	1.53
509121	6984944	Redcliffe-005	MBC-085	2.67	2.50	0.17	1.21	3.0	172	0	2.84	3.37	3.21	4.31	3.29	4.50	1.71
509533	6984891	Redcliffe-006	MBC-086	2.57	2.42	0.15	1.17	2.8	193	0	2.75	3.25	3.11	4.13	3.18	4.31	1.63
509892	6984691	Redcliffe-007	MBC-087	2.49	2.34	0.15	1.16	2.8	195	0	2.67	3.16	3.03	4.02	3.10	4.19	1.59
510464	6984279	Redcliffe-009	MBC-088	2.38	2.19	0.19	1.32	3.4	131	0	2.55	3.16	2.94	4.24	3.02	4.46	1.84
510783	6984638	Redcliffe-010	MBC-089	2.32	2.10	0.22	1.61	3.5	128	0	2.53	3.26	3.00	4.52	3.10	4.77	1.72
510969	6985516	Redcliffe-012	MBC-090	2.35	2.12	0.23	1.66	3.7	115	0	2.56	3.34	3.03	4.67	3.13	4.95	1.81
511076	6985889	Redcliffe-013	MBC-091	2.35	2.12	0.23	1.59	3.8	119	0	2.53	3.31	2.99	4.62	3.08	4.90	1.90
511488	6987365	Redcliffe-016	MBC-092	2.39	2.11	0.28	1.87	4.4	113	0	2.57	3.53	3.08	5.11	3.19	5.46	1.99
511768	6988017	Redcliffe-018	MBC-093	2.34	2.05	0.29	1.92	4.5	113	0	2.51	3.51	3.03	5.16	3.15	5.52	2.02
511648	6988496	Redcliffe-019	MBC-094	2.34	2.09	0.25	1.60	4.3	111	0	2.48	3.33	2.92	4.73	3.02	5.04	2.10
511741	6989254	Redcliffe-021	MBC-095	2.40	2.10	0.30	1.98	4.5	116	0	2.58	3.60	3.11	5.28	3.23	5.64	1.99
511874	6990079	Redcliffe-023	MBC-096	2.36	2.07	0.29	1.92	4.5	119	0	2.53	3.54	3.05	5.19	3.17	5.55	2.04
511648	6990451	Redcliffe-024	MBC-097	2.36	2.10	0.26	1.68	4.3	110	0	2.51	3.39	2.98	4.83	3.08	5.15	2.05
511661	6991063	Redcliffe-025	MBC-098	2.38	2.12	0.26	1.78	4.2	119	0	2.56	3.46	3.05	4.96	3.16	5.28	1.96
511568	6992087	Redcliffe-027	MBC-099	2.38	2.11	0.27	1.87	4.1	115	0	2.58	3.50	3.10	5.04	3.21	5.37	1.89
511475	6992513	Redcliffe-028	MBC-100	2.32	2.11	0.21	1.55	3.6	125	0	2.52	3.24	2.97	4.47	3.06	4.73	1.78
510916	6992713	Redcliffe-029	MBC-101	2.29	2.10	0.19	1.32	3.4	57	0	2.46	3.08	2.85	4.15	2.93	4.37	1.85
510531	6992472	Redcliffe-030	MBC-102	2.26	2.10	0.16	1.32	2.7	238	0	2.48	3.00	2.88	3.95	2.95	4.10	1.46
510161	6992164	Redcliffe-031	MBC-103	2.32	2.14	0.18	1.57	2.9	234	0	2.59	3.20	3.07	4.30	3.14	4.48	1.43
509833	6991712	Redcliffe-032	MBC-104	2.28	2.15	0.13	1.13	2.4	226	0	2.48	2.90	2.82	3.68	2.87	3.81	1.41
509525	6991322	Redcliffe-033	MBC-105	2.28	2.14	0.14	1.19	2.4	227	0	2.48	2.92	2.84	3.73	2.90	3.86	1.39
509155	6991199	Redcliffe-034	MBC-106	2.31	2.16	0.15	1.26	2.5	224	0	2.53	2.97	2.91	3.82	2.97	3.96	1.37
508478	6991343	Redcliffe-035	MBC-107	2.34	2.21	0.13	1.06	2.3	128	0	2.51	2.91	2.83	3.64	2.88	3.76	1.41
507965	6991487	Redcliffe-036	MBC-108	2.39	2.26	0.13	1.09	2.4	128	0	2.58	2.98	2.91	3.74	2.96	3.86	1.41
507205	6991589	Redcliffe-037	MBC-109	2.44	2.31	0.13	1.07	2.3	128	0	2.62	3.02	2.94	3.76	2.99	3.88	1.41
506548	6991836	Redcliffe-038	MBC-110	2.52	2.37	0.15	1.13	2.9	51	0	2.69	3.18	3.04	4.06	3.11	4.24	1.70
505830	6992082	Redcliffe-039	MBC-111	2.60	2.44	0.16	1.19	3.0	55	0	2.78	3.30	3.14	4.23	3.21	4.42	1.72
505358	6992267	Redcliffe-040	MBC-112	2.64	2.49	0.15	1.08	2.9	58	0	2.80	3.27	3.13	4.12	3.20	4.29	1.73

				Water Level mAHD 1000yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
516482	6972941	BrisbaneBar	BrisbaneBar	2.14	2.14		1.21	2.7	104	0							
506913	6982622	PineRiver-001	MBC-001	2.82	2.68	0.14	1.11	2.5	130	0	3.00	3.44	3.34	4.24	3.40	4.37	1.46
507065	6983136	PineRiver-002	MBC-002	2.90	2.75	0.15	1.23	2.7	137	0	3.11	3.60	3.48	4.49	3.55	4.67	1.51
507237	6983516	PineRiver-003	MBC-003	2.88	2.75	0.13	1.07	2.5	129	0	3.06	3.49	3.39	4.27	3.44	4.40	1.48
507198	6984049	PineRiver-004	MBC-004	2.96	2.84	0.12	1.00	2.3	131	0	3.13	3.52	3.43	4.24	3.48	4.35	1.46
506913	6984334	PineRiver-005	MBC-005	3.16	3.05	0.11	0.88	2.1	132	0	3.30	3.64	3.56	4.25	3.60	4.35	1.42
507046	6984696	PineRiver-006	MBC-006	3.28	3.17	0.11	0.91	2.1	140	0	3.43	3.77	3.70	4.39	3.74	4.50	1.40
507522	6984334	PineRiver-007	MBC-007	2.98	2.85	0.13	1.03	2.4	136	0	3.15	3.57	3.46	4.32	3.51	4.44	1.48
507769	6984239	PineRiver-008	MBC-008	2.87	2.71	0.16	1.26	2.8	129	0	3.07	3.58	3.46	4.51	3.53	4.69	1.54
506179	6982661	PineRiver-009	MBC-009	3.16	3.05	0.11	0.88	2.1	132	0	3.30	3.64	3.56	4.25	3.60	4.35	1.42
504927	6992513	Caboolture-001	MBC-010	2.85	2.70	0.15	1.10	2.8	62	0	3.01	3.48	3.35	4.32	3.42	4.49	1.66
504270	6992575	Caboolture-002	MBC-011	2.88	2.75	0.13	1.01	2.5	63	0	3.04	3.46	3.35	4.20	3.41	4.35	1.57
503633	6992841	Caboolture-003	MBC-012	3.08	2.95	0.13	1.06	2.5	64	0	3.26	3.68	3.58	4.45	3.65	4.60	1.52
503346	6993519	Caboolture-004	MBC-013	3.18	3.05	0.13	1.08	2.4	131	0	3.36	3.78	3.69	4.54	3.74	4.66	1.44
503613	6994402	Caboolture-005	MBC-014	3.26	3.14	0.12	0.96	2.3	132	0	3.42	3.80	3.70	4.49	3.75	4.60	1.46
504658	6996186	Caboolture-009	MBC-015	3.23	3.09	0.14	1.08	2.7	130	0	3.40	3.85	3.73	4.67	3.80	4.84	1.63
504477	6996546	Caboolture-010	MBC-016	3.39	3.26	0.13	1.06	2.4	132	0	3.57	3.99	3.89	4.74	3.94	4.86	1.46
504774	6997055	Caboolture-012	MBC-017	3.31	3.18	0.13	1.03	2.5	130	0	3.48	3.89	3.79	4.64	3.86	4.78	1.51
505039	6997331	Caboolture-013	MBC-018	3.29	3.16	0.13	0.96	2.6	129	0	3.44	3.85	3.73	4.58	3.79	4.73	1.67
505442	6998582	Caboolture-016	MBC-019	3.40	3.25	0.15	1.13	2.7	128	0	3.58	4.04	3.92	4.88	3.99	5.04	1.57
505671	6999062	Caboolture-017	MBC-020	3.42	3.28	0.14	1.04	2.7	128	0	3.58	4.02	3.90	4.81	3.96	4.97	1.64
505909	6999567	Caboolture-018	MBC-021	3.46	3.31	0.15	1.12	2.8	129	0	3.63	4.10	3.97	4.95	4.04	5.12	1.63
506361	7000127	Caboolture-019	MBC-022	3.51	3.36	0.15	1.18	2.7	132	0	3.70	4.18	4.06	5.05	4.13	5.22	1.55
506813	7000580	Caboolture-020	MBC-023	3.37	3.23	0.14	1.08	2.7	129	0	3.54	3.99	3.87	4.81	3.94	4.98	1.63
507266	7001010	Caboolture-021	MBC-024	3.34	3.17	0.17	1.24	3.1	126	0	3.52	4.07	3.89	5.04	3.97	5.24	1.74
507718	7001452	Caboolture-022	MBC-025	3.38	3.20	0.18	1.27	3.3	131	0	3.55	4.13	3.93	5.15	4.01	5.37	1.81
508289	7001850	Caboolture-023	MBC-026	3.34	3.16	0.18	1.30	3.3	132	0	3.52	4.11	3.90	5.15	3.98	5.36	1.79
508903	7002206	Caboolture-024	MBC-027	3.27	3.08	0.19	1.33	3.4	133	0	3.44	4.06	3.83	5.15	3.92	5.38	1.86
509355	7002550	Caboolture-025	MBC-028	3.25	3.06	0.19	1.31	3.5	151	0	3.41	4.04	3.79	5.13	3.88	5.36	1.92
509894	7002744	Caboolture-026	MBC-029	3.17	2.97	0.20	1.37	3.6	155	0	3.33	4.00	3.73	5.14	3.82	5.38	1.93
510475	7002852	Caboolture-027	MBC-030	3.12	2.92	0.20	1.33	3.6	156	0	3.27	3.92	3.66	5.03	3.74	5.27	1.94
511067	7003003	Caboolture-028	MBC-031	3.05	2.88	0.17	1.21	3.1	143	0	3.22	3.76	3.59	4.72	3.66	4.91	1.76
511477	7003251	Caboolture-029	MBC-032	3.10	2.96	0.14	1.08	2.7	138	0	3.27	3.73	3.60	4.55	3.67	4.71	1.64
512112	7003326	Caboolture-030	MBC-033	3.05	2.89	0.16	1.19	3.0	158	0	3.23	3.75	3.59	4.68	3.67	4.88	1.73
512694	7003455	Caboolture-031	MBC-034	2.98	2.82	0.16	1.12	3.0	162	0	3.14	3.63	3.48	4.52	3.55	4.70	1.76
513275	7003412	Caboolture-032	MBC-035	2.94	2.80	0.14	1.14	2.6	138	0	3.13	3.59	3.48	4.43	3.55	4.59	1.54
513911	7003746	Caboolture-033	MBC-036	2.94	2.81	0.13	1.06	2.4	127	0	3.12	3.54	3.44	4.29	3.49	4.41	1.46
514481	7004446	Caboolture-034	MBC-037	2.65	2.52	0.13	1.02	2.4	125	0	2.82	3.24	3.12	3.99	3.17	4.11	1.50
516248	7002647	Caboolture-038	MBC-038	2.48	2.25	0.23	1.65	3.8	235	0	2.68	3.47	3.15	4.80	3.25	5.09	1.84
517280	7002397	Caboolture-040	MBC-039	2.35	2.14	0.21	1.43	3.7	176	0	2.51	3.21	2.93	4.40	3.02	4.65	1.92
519611	7002925	Caboolture-044	MBC-040	2.19	1.90	0.29	1.98	4.2	118	0	2.39	3.37	2.94	4.99	3.06	5.33	1.87
520367	7003619	Caboolture-046	MBC-041	2.17	1.84	0.33	2.33	4.7	107	0	2.40	3.58	3.01	5.51	3.15	5.92	1.91
520284	7006303	Caboolture-051	MBC-042	2.15	1.81	0.34	2.05	5.6	54	0	2.26	3.48	2.79	5.44	2.91	5.90	2.46
516778	7013518	Caboolture-060	MBC-043	2.31	1.91	0.40	2.49	6.0	58	0	2.45	3.91	3.08	6.23	3.22	6.77	2.35
516320	7014796	Caboolture-061	MBC-044	2.31	1.93	0.38	2.33	5.9	58	0	2.44	3.82	3.03	6.03	3.17	6.54	2.43
507667	7015461	Caboolture-067	MBC-045	3.33	3.20	0.13	1.08	2.4	215	0	3.51	3.94	3.84	4.72	3.89	4.85	1.47
508591	7014764	Caboolture-069	MBC-046	3.32	3.16	0.16	1.32	2.7	226	0	3.54	4.08	3.94	5.03	4.01	5.19	1.48
509101	7014442	Caboolture-070	MBC-047	3.27	3.09	0.18	1.46	2.9	222	0	3.51	4.10	3.95	5.15	4.04	5.36	1.50
509543	7013236	Caboolture-072	MBC-048	3.06	2.89	0.17	1.36	2.9	227	0	3.28	3.83	3.69	4.83	3.77	5.02	1.53
509623	7012592	Caboolture-073	MBC-049	2.96	2.79	0.17	1.40	2.9	225	0	3.19	3.76	3.62	4.79	3.70	4.99	1.54
510253	7011212	Caboolture-075	MBC-050	2.76	2.60	0.16	1.35	2.8	221	0	2.99	3.54	3.40	4.53	3.47	4.69	1.49
510669	7010917	Caboolture-076	MBC-051	2.65	2.52	0.13	1.03	2.4	218	0	2.82	3.23	3.13	3.98	3.18	4.10	1.48
511138	7010769	Caboolture-077	MBC-052	2.67	2.53	0.14	1.12	2.5	141	0	2.86	3.32	3.20	4.14	3.25	4.27	1.49
511701	7010475	Caboolture-078	MBC-053	2.65	2.50	0.15	1.20	2.7	216	0	2.85	3.33	3.21	4.22	3.28	4.39	1.54
512076	7010032	Caboolture-079	MBC-054	2.65	2.47	0.18	1.40	3.1	223	0	2.86	3.46	3.29	4.53	3.37	4.74	1.64
513283	7007901	Caboolture-083	MBC-055	2.37	2.20	0.17	1.34	3.0	248	0	2.58	3.14	2.99	4.15	3.07	4.35	1.60
513390	7007284	Caboolture-084	MBC-056	2.69	2.52	0.17	1.45	2.9	246	0	2.94	3.53	3.38	4.58	3.45	4.76	1.48

				Water Level mAHD 1000yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{sm}
513444	7006735	Caboolture-085	MBC-057	2.63	2.43	0.20	1.64	3.1	146	0	2.90	3.58	3.39	4.77	3.47	4.97	1.49
514141	7006547	Caboolture-086	MBC-058	2.61	2.44	0.17	1.45	2.8	247	0	2.86	3.44	3.30	4.48	3.37	4.65	1.47
514958	7005756	Caboolture-088	MBC-059	2.51	2.33	0.18	1.44	3.0	255	0	2.74	3.33	3.18	4.39	3.26	4.60	1.56
515374	7005260	Caboolture-089	MBC-060	2.45	2.28	0.17	1.37	2.8	261	0	2.68	3.25	3.09	4.25	3.16	4.42	1.50
514730	7005140	Caboolture-090	MBC-061	2.41	2.28	0.13	1.10	2.4	112	0	2.60	3.03	2.93	3.81	2.99	3.94	1.45
514328	7005394	Caboolture-091	MBC-062	2.44	2.30	0.14	1.04	2.7	107	0	2.60	3.04	2.92	3.82	2.98	3.98	1.62
513269	7006199	Caboolture-093	MBC-063	2.57	2.40	0.17	1.32	2.9	108	0	2.78	3.32	3.18	4.30	3.26	4.49	1.57
511621	7007284	Caboolture-096	MBC-064	2.60	2.46	0.14	1.16	2.5	127	0	2.80	3.25	3.15	4.07	3.21	4.21	1.45
511339	7008048	Caboolture-097	MBC-065	2.63	2.50	0.13	1.06	2.3	128	0	2.80	3.20	3.12	3.93	3.17	4.04	1.40
511648	7008558	Caboolture-098	MBC-066	2.36	2.23	0.13	1.04	2.5	132	0	2.53	2.95	2.85	3.71	2.91	3.85	1.52
511835	7009040	Caboolture-099	MBC-067	2.45	2.31	0.14	1.10	2.6	123	0	2.63	3.08	2.96	3.89	3.03	4.05	1.56
511446	7009456	Caboolture-100	MBC-068	2.55	2.40	0.15	1.19	2.7	17	0	2.74	3.23	3.11	4.11	3.18	4.28	1.56
511058	7009456	Caboolture-101	MBC-069	2.60	2.45	0.15	1.22	2.7	12	0	2.80	3.30	3.17	4.18	3.25	4.36	1.53
510321	7009818	Caboolture-102	MBC-070	2.60	2.45	0.15	1.19	2.8	14	0	2.79	3.29	3.15	4.17	3.23	4.35	1.59
509784	7010233	Caboolture-103	MBC-071	2.61	2.45	0.16	1.28	2.8	18	0	2.82	3.34	3.21	4.28	3.28	4.46	1.55
509369	7010796	Caboolture-104	MBC-072	2.69	2.54	0.15	1.20	2.7	122	0	2.89	3.37	3.25	4.26	3.32	4.43	1.54
509034	7011198	Caboolture-105	MBC-073	2.89	2.76	0.13	1.07	2.5	122	0	3.07	3.51	3.40	4.29	3.45	4.41	1.49
508833	7011587	Caboolture-106	MBC-074	2.80	2.67	0.13	1.00	2.5	129	0	2.96	3.36	3.27	4.09	3.33	4.24	1.53
508752	7011869	Caboolture-107	MBC-075	2.71	2.57	0.14	1.17	2.5	131	0	2.91	3.37	3.27	4.21	3.33	4.35	1.46
508471	7012110	Caboolture-108	MBC-076	2.77	2.63	0.14	1.12	2.5	131	0	2.96	3.40	3.30	4.20	3.35	4.33	1.46
508926	7012177	Caboolture-109	MBC-077	2.82	2.68	0.14	1.10	2.5	135	0	3.00	3.44	3.34	4.23	3.40	4.39	1.51
509020	7012767	Caboolture-110	MBC-078	2.93	2.78	0.15	1.20	2.7	132	0	3.13	3.61	3.49	4.48	3.56	4.65	1.51
508565	7013276	Caboolture-111	MBC-079	3.05	2.92	0.13	1.05	2.3	133	0	3.22	3.62	3.54	4.35	3.59	4.46	1.41
508069	7013611	Caboolture-112	MBC-080	3.30	3.16	0.14	1.15	2.6	340	0	3.49	3.95	3.84	4.79	3.91	4.95	1.51
507667	7013960	Caboolture-113	MBC-081	3.38	3.25	0.13	1.04	2.3	130	0	3.55	3.94	3.86	4.66	3.91	4.78	1.41
507157	7014067	Caboolture-114	MBC-082	3.44	3.31	0.13	1.04	2.3	130	0	3.61	4.01	3.92	4.74	3.97	4.86	1.43
507171	7014777	Caboolture-115	MBC-083	3.31	3.18	0.13	1.09	2.5	132	0	3.50	3.93	3.83	4.72	3.88	4.85	1.47
507063	7015595	Caboolture-116	MBC-084	3.37	3.23	0.14	1.09	2.6	130	0	3.55	3.98	3.88	4.78	3.94	4.93	1.53
509121	6984944	Redcliffe-005	MBC-085	2.78	2.62	0.16	1.23	2.9	193	0	2.97	3.49	3.35	4.43	3.42	4.62	1.65
509533	6984891	Redcliffe-006	MBC-086	2.68	2.53	0.15	1.19	2.8	193	0	2.87	3.36	3.23	4.25	3.31	4.42	1.58
509892	6984691	Redcliffe-007	MBC-087	2.59	2.44	0.15	1.16	2.8	195	0	2.77	3.26	3.13	4.12	3.20	4.29	1.59
510464	6984279	Redcliffe-009	MBC-088	2.47	2.28	0.19	1.32	3.4	131	0	2.64	3.25	3.03	4.33	3.11	4.55	1.84
510783	6984638	Redcliffe-010	MBC-089	2.40	2.18	0.22	1.61	3.5	128	0	2.61	3.34	3.08	4.60	3.18	4.85	1.72
510969	6985516	Redcliffe-012	MBC-090	2.43	2.20	0.23	1.66	3.7	115	0	2.64	3.42	3.11	4.75	3.21	5.03	1.81
511076	6985889	Redcliffe-013	MBC-091	2.43	2.20	0.23	1.59	3.8	119	0	2.61	3.39	3.07	4.70	3.16	4.98	1.90
511488	6987365	Redcliffe-016	MBC-092	2.47	2.19	0.28	1.87	4.4	113	0	2.65	3.61	3.16	5.19	3.27	5.54	1.99
511768	6988017	Redcliffe-018	MBC-093	2.41	2.12	0.29	1.92	4.5	113	0	2.58	3.58	3.10	5.23	3.22	5.59	2.02
511648	6988496	Redcliffe-019	MBC-094	2.42	2.17	0.25	1.60	4.3	111	0	2.56	3.41	3.00	4.81	3.10	5.12	2.10
511741	6989254	Redcliffe-021	MBC-095	2.47	2.17	0.30	1.98	4.5	116	0	2.65	3.67	3.18	5.35	3.30	5.71	1.99
511874	6990079	Redcliffe-023	MBC-096	2.43	2.14	0.29	1.92	4.5	119	0	2.60	3.61	3.12	5.26	3.24	5.62	2.04
511648	6990451	Redcliffe-024	MBC-097	2.43	2.17	0.26	1.68	4.5	68	0	2.57	3.48	3.03	4.97	3.13	5.30	2.15
511661	6991063	Redcliffe-025	MBC-098	2.46	2.20	0.26	1.78	4.2	119	0	2.64	3.54	3.13	5.04	3.24	5.36	1.96
511568	6992087	Redcliffe-027	MBC-099	2.46	2.19	0.27	1.87	4.1	115	0	2.66	3.58	3.18	5.12	3.29	5.45	1.89
511475	6992513	Redcliffe-028	MBC-100	2.40	2.19	0.21	1.55	3.6	125	0	2.60	3.32	3.05	4.55	3.14	4.81	1.78
510916	6992713	Redcliffe-029	MBC-101	2.36	2.17	0.19	1.35	3.3	58	0	2.54	3.15	2.94	4.22	3.03	4.44	1.77
510531	6992472	Redcliffe-030	MBC-102	2.36	2.18	0.18	1.32	3.1	222	0	2.55	3.13	2.95	4.15	3.03	4.36	1.71
510161	6992164	Redcliffe-031	MBC-103	2.42	2.22	0.20	1.59	3.2	32	0	2.66	3.34	3.14	4.53	3.23	4.77	1.60
509833	6991712	Redcliffe-032	MBC-104	2.36	2.23	0.13	1.13	2.4	226	0	2.56	2.98	2.90	3.76	2.95	3.89	1.41
509525	6991322	Redcliffe-033	MBC-105	2.37	2.23	0.14	1.19	2.4	227	0	2.57	3.01	2.93	3.82	2.99	3.95	1.39
509155	6991199	Redcliffe-034	MBC-106	2.42	2.25	0.17	1.30	2.9	50	0	2.62	3.16	3.02	4.13	3.10	4.33	1.59
508478	6991343	Redcliffe-035	MBC-107	2.44	2.30	0.14	1.06	2.7	50	0	2.60	3.05	2.93	3.86	2.99	4.03	1.66
507965	6991487	Redcliffe-036	MBC-108	2.50	2.35	0.15	1.10	2.8	50	0	2.66	3.13	3.00	3.97	3.07	4.14	1.64
507205	6991589	Redcliffe-037	MBC-109	2.56	2.41	0.15	1.10	2.8	49	0	2.72	3.19	3.06	4.03	3.13	4.20	1.64
506548	6991836	Redcliffe-038	MBC-110	2.63	2.48	0.15	1.13	2.9	51	0	2.80	3.29	3.15	4.17	3.22	4.35	1.70
505830	6992082	Redcliffe-039	MBC-111	2.72	2.56	0.16	1.19	3.0	55	0	2.90	3.42	3.26	4.35	3.33	4.54	1.72
505358	6992267	Redcliffe-040	MBC-112	2.76	2.61	0.15	1.08	2.8	60	0	2.92	3.38	3.25	4.22	3.32	4.39	1.69

				Water Level mAHD 10000yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50%Exceedence		Wave Run-up (mAHD) 2%Exceedence		Wave Run-up (mAHD) 1%Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_m
516482	6972941	BrisbaneBar	BrisbaneBar	2.40	2.40		1.21	2.7	104	0.00							
506913	6982622	PineRiver-001	MBC-001	3.24	3.10	0.14	1.11	2.5	130	0.00	3.42	3.86	3.76	4.66	3.82	4.79	1.46
507065	6983136	PineRiver-002	MBC-002	3.34	3.19	0.15	1.23	2.7	137	0.00	3.55	4.04	3.92	4.93	3.99	5.11	1.51
507237	6983516	PineRiver-003	MBC-003	3.32	3.19	0.13	1.07	2.5	129	0.00	3.50	3.93	3.83	4.71	3.88	4.84	1.48
507198	6984049	PineRiver-004	MBC-004	3.43	3.31	0.12	1.00	2.3	131	0.00	3.60	3.99	3.90	4.71	3.95	4.82	1.46
506913	6984334	PineRiver-005	MBC-005	3.69	3.58	0.11	0.88	2.1	132	0.00	3.83	4.17	4.09	4.78	4.13	4.88	1.42
507046	6984696	PineRiver-006	MBC-006	3.84	3.73	0.11	0.91	2.1	140	0.00	3.99	4.33	4.26	4.95	4.30	5.06	1.40
507522	6984334	PineRiver-007	MBC-007	3.45	3.32	0.13	1.03	2.4	136	0.00	3.62	4.04	3.93	4.79	3.98	4.91	1.48
507769	6984239	PineRiver-008	MBC-008	3.30	3.14	0.16	1.26	2.8	129	0.00	3.50	4.01	3.89	4.94	3.96	5.12	1.54
506179	6982661	PineRiver-009	MBC-009	3.69	3.58	0.11	0.88	2.1	132	0.00	3.83	4.17	4.09	4.78	4.13	4.88	1.42
504927	6992513	Caboolture-001	MBC-010	3.27	3.12	0.15	1.12	2.8	61	0.00	3.44	3.91	3.78	4.76	3.85	4.93	1.62
504270	6992575	Caboolture-002	MBC-011	3.32	3.19	0.13	1.02	2.5	62	0.00	3.49	3.90	3.80	4.65	3.86	4.79	1.55
503633	6992841	Caboolture-003	MBC-012	3.58	3.45	0.13	1.06	2.5	64	0.00	3.76	4.18	4.08	4.95	4.15	5.10	1.52
503346	6993519	Caboolture-004	MBC-013	3.71	3.58	0.13	1.08	2.4	131	0.00	3.89	4.31	4.22	5.07	4.27	5.19	1.44
503613	6994402	Caboolture-005	MBC-014	3.82	3.70	0.12	0.96	2.3	132	0.00	3.98	4.36	4.26	5.05	4.31	5.16	1.46
504658	6996186	Caboolture-009	MBC-015	3.76	3.62	0.14	1.08	2.7	127	0.00	3.93	4.39	4.26	5.21	4.33	5.37	1.64
504477	6996546	Caboolture-010	MBC-016	3.97	3.84	0.13	1.06	2.4	132	0.00	4.15	4.57	4.47	5.32	4.52	5.44	1.46
504774	6997055	Caboolture-012	MBC-017	3.87	3.74	0.13	1.03	2.5	130	0.00	4.04	4.45	4.35	5.20	4.42	5.34	1.51
505039	6997331	Caboolture-013	MBC-018	3.85	3.72	0.13	0.96	2.6	129	0.00	4.00	4.41	4.29	5.14	4.35	5.29	1.67
505442	6998582	Caboolture-016	MBC-019	3.97	3.82	0.15	1.13	2.7	105	0.00	4.15	4.61	4.49	5.46	4.56	5.62	1.59
505671	6999062	Caboolture-017	MBC-020	4.00	3.86	0.14	1.04	2.7	128	0.00	4.16	4.60	4.48	5.39	4.54	5.55	1.64
505909	6999567	Caboolture-018	MBC-021	4.06	3.91	0.15	1.12	2.8	129	0.00	4.23	4.70	4.57	5.55	4.64	5.72	1.63
506361	7000127	Caboolture-019	MBC-022	4.11	3.96	0.15	1.18	2.7	132	0.00	4.30	4.78	4.66	5.65	4.73	5.82	1.55
506813	7000580	Caboolture-020	MBC-023	3.95	3.81	0.14	1.08	2.7	129	0.00	4.12	4.57	4.45	5.39	4.52	5.56	1.63
507266	7001010	Caboolture-021	MBC-024	3.90	3.73	0.17	1.24	3.1	126	0.00	4.08	4.63	4.45	5.60	4.53	5.80	1.74
507718	7001452	Caboolture-022	MBC-025	3.94	3.76	0.18	1.27	3.2	133	0.00	4.11	4.69	4.49	5.70	4.57	5.92	1.80
508289	7001850	Caboolture-023	MBC-026	3.89	3.71	0.18	1.30	3.3	132	0.00	4.07	4.66	4.45	5.70	4.53	5.91	1.79
508903	7002206	Caboolture-024	MBC-027	3.80	3.61	0.19	1.35	3.3	134	0.00	3.98	4.60	4.38	5.67	4.47	5.90	1.79
509355	7002550	Caboolture-025	MBC-028	3.76	3.57	0.19	1.33	3.3	136	0.00	3.93	4.54	4.33	5.60	4.41	5.82	1.78
509894	7002744	Caboolture-026	MBC-029	3.66	3.47	0.19	1.39	3.4	140	0.00	3.85	4.48	4.26	5.59	4.34	5.82	1.78
510475	7002852	Caboolture-027	MBC-030	3.59	3.40	0.19	1.35	3.3	140	0.00	3.77	4.39	4.17	5.46	4.26	5.69	1.78
511067	7003003	Caboolture-028	MBC-031	3.51	3.34	0.17	1.22	3.0	142	0.00	3.69	4.22	4.06	5.16	4.13	5.36	1.70
511477	7003251	Caboolture-029	MBC-032	3.59	3.45	0.14	1.08	2.7	138	0.00	3.76	4.22	4.09	5.04	4.16	5.20	1.64
512112	7003326	Caboolture-030	MBC-033	3.51	3.35	0.16	1.19	2.9	141	0.00	3.69	4.20	4.05	5.12	4.13	5.31	1.68
512694	7003455	Caboolture-031	MBC-034	3.42	3.27	0.15	1.12	2.9	146	0.00	3.59	4.07	3.93	4.94	4.00	5.11	1.69
513275	7003412	Caboolture-032	MBC-035	3.38	3.24	0.14	1.14	2.6	138	0.00	3.57	4.03	3.92	4.87	3.99	5.03	1.54
513911	7003746	Caboolture-033	MBC-036	3.38	3.25	0.13	1.06	2.4	127	0.00	3.56	3.98	3.88	4.73	3.93	4.85	1.46
514481	7004446	Caboolture-034	MBC-037	3.00	2.87	0.13	1.02	2.4	125	0.00	3.17	3.59	3.47	4.34	3.52	4.46	1.50
516248	7002647	Caboolture-038	MBC-038	2.75	2.52	0.23	1.65	3.8	235	0.00	2.95	3.74	3.42	5.07	3.52	5.36	1.84
517280	7002397	Caboolture-040	MBC-039	2.58	2.38	0.20	1.44	3.3	136	0.00	2.78	3.42	3.20	4.55	3.29	4.79	1.74
519611	7002925	Caboolture-044	MBC-040	2.36	2.07	0.29	1.98	4.2	118	0.00	2.56	3.54	3.11	5.16	3.23	5.50	1.87
520367	7003619	Caboolture-046	MBC-041	2.31	1.98	0.33	2.33	4.7	107	0.00	2.54	3.72	3.15	5.65	3.29	6.06	1.91
520284	7006303	Caboolture-051	MBC-042	2.27	1.94	0.33	2.09	5.3	74	0.00	2.41	3.60	2.95	5.52	3.08	5.96	2.29
516778	7013518	Caboolture-060	MBC-043	2.47	2.08	0.39	2.52	5.6	74	0.00	2.64	4.06	3.29	6.33	3.43	6.84	2.21
516320	7014796	Caboolture-061	MBC-044	2.47	2.10	0.37	2.34	5.6	75	0.00	2.62	3.96	3.22	6.10	3.36	6.59	2.28
507667	7015461	Caboolture-067	MBC-045	3.87	3.74	0.13	1.08	2.4	215	0.00	4.05	4.48	4.38	5.26	4.43	5.39	1.47
508591	7014764	Caboolture-069	MBC-046	3.85	3.69	0.16	1.32	2.7	226	0.00	4.07	4.61	4.47	5.56	4.54	5.72	1.48
509101	7014442	Caboolture-070	MBC-047	3.78	3.60	0.18	1.46	2.9	222	0.00	4.02	4.61	4.46	5.66	4.55	5.87	1.50
509543	7013236	Caboolture-072	MBC-048	3.52	3.35	0.17	1.36	2.9	227	0.00	3.74	4.29	4.15	5.29	4.23	5.48	1.53
509623	7012592	Caboolture-073	MBC-049	3.38	3.21	0.17	1.40	2.9	225	0.00	3.61	4.18	4.04	5.21	4.12	5.41	1.54
510253	7011212	Caboolture-075	MBC-050	3.14	2.98	0.16	1.35	2.8	221	0.00	3.37	3.92	3.78	4.91	3.85	5.07	1.49
510669	7010917	Caboolture-076	MBC-051	3.00	2.87	0.13	1.03	2.4	218	0.00	3.17	3.58	3.48	4.33	3.53	4.45	1.48
511138	7010769	Caboolture-077	MBC-052	3.03	2.89	0.14	1.12	2.5	141	0.00	3.22	3.68	3.56	4.50	3.61	4.63	1.49
511701	7010475	Caboolture-078	MBC-053	3.00	2.85	0.15	1.20	2.7	216	0.00	3.20	3.68	3.56	4.57	3.63	4.74	1.54
512076	7010032	Caboolture-079	MBC-054	2.99	2.81	0.18	1.40	3.1	223	0.00	3.20	3.80	3.63	4.87	3.71	5.08	1.64
513283	7007901	Caboolture-083	MBC-055	2.65	2.46	0.19	1.53	3.1	247	0.00	2.89	3.53	3.35	4.67	3.44	4.90	1.59
513390	7007284	Caboolture-084	MBC-056	3.05	2.88	0.17	1.45	2.9	246	0.00	3.30	3.89	3.74	4.94	3.81	5.12	1.48

				Water Level mAHD 10000yr ARI Sea Level Rise Exlcuded		Wave Parameters					Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence		
X MGA94	Y MGA94	Location Name	Location Index R2461	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)	Tide Range Correction (m)	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	ξ_{om}
513444	7006735	Caboolture-085	MBC-057	2.96	2.76	0.20	1.64	3.1	146	0.00	3.23	3.91	3.72	5.10	3.80	5.30	1.49
514141	7006547	Caboolture-086	MBC-058	2.95	2.77	0.18	1.54	2.9	244	0.00	3.21	3.82	3.68	4.92	3.75	5.10	1.45
514958	7005756	Caboolture-088	MBC-059	2.83	2.63	0.20	1.59	3.1	253	0.00	3.08	3.74	3.56	4.91	3.65	5.14	1.56
515374	7005260	Caboolture-089	MBC-060	2.74	2.56	0.18	1.48	2.9	260	0.00	2.99	3.60	3.43	4.68	3.51	4.86	1.49
514730	7005140	Caboolture-090	MBC-061	2.72	2.56	0.16	1.24	2.7	23	0.00	2.92	3.42	3.30	4.32	3.37	4.50	1.53
514328	7005394	Caboolture-091	MBC-062	2.75	2.59	0.16	1.20	3.0	14	0.00	2.93	3.45	3.30	4.38	3.37	4.56	1.69
513269	7006199	Caboolture-093	MBC-063	2.89	2.72	0.17	1.32	2.9	21	0.00	3.10	3.64	3.50	4.61	3.58	4.81	1.56
511621	7007284	Caboolture-096	MBC-064	2.93	2.79	0.14	1.16	2.5	127	0.00	3.13	3.58	3.48	4.40	3.54	4.54	1.45
511339	7008048	Caboolture-097	MBC-065	2.98	2.85	0.13	1.06	2.3	128	0.00	3.15	3.55	3.47	4.28	3.52	4.39	1.40
511648	7008558	Caboolture-098	MBC-066	2.63	2.50	0.13	1.07	2.5	129	0.00	2.81	3.25	3.14	4.03	3.19	4.16	1.49
511835	7009040	Caboolture-099	MBC-067	2.74	2.60	0.14	1.10	2.6	123	0.00	2.92	3.37	3.25	4.18	3.32	4.34	1.56
511446	7009456	Caboolture-100	MBC-068	2.87	2.72	0.15	1.19	2.7	17	0.00	3.06	3.55	3.43	4.43	3.50	4.60	1.56
511058	7009456	Caboolture-101	MBC-069	2.94	2.79	0.15	1.22	2.7	12	0.00	3.14	3.64	3.51	4.52	3.59	4.70	1.53
510321	7009818	Caboolture-102	MBC-070	2.93	2.78	0.15	1.19	2.8	14	0.00	3.12	3.62	3.48	4.50	3.56	4.68	1.59
509784	7010233	Caboolture-103	MBC-071	2.94	2.78	0.16	1.28	2.8	18	0.00	3.15	3.67	3.54	4.61	3.61	4.79	1.55
509369	7010796	Caboolture-104	MBC-072	3.05	2.90	0.15	1.20	2.7	122	0.00	3.25	3.73	3.61	4.62	3.68	4.79	1.54
509034	7011198	Caboolture-105	MBC-073	3.31	3.18	0.13	1.07	2.5	122	0.00	3.49	3.93	3.82	4.71	3.87	4.83	1.49
508833	7011587	Caboolture-106	MBC-074	3.19	3.06	0.13	1.00	2.5	129	0.00	3.35	3.75	3.66	4.48	3.72	4.63	1.53
508752	7011869	Caboolture-107	MBC-075	3.07	2.93	0.14	1.17	2.5	131	0.00	3.27	3.73	3.63	4.57	3.69	4.71	1.46
508471	7012110	Caboolture-108	MBC-076	3.16	3.02	0.14	1.12	2.5	131	0.00	3.35	3.79	3.69	4.59	3.74	4.72	1.46
508926	7012177	Caboolture-109	MBC-077	3.22	3.08	0.14	1.10	2.5	135	0.00	3.40	3.84	3.74	4.63	3.80	4.79	1.51
509020	7012767	Caboolture-110	MBC-078	3.36	3.21	0.15	1.20	2.7	132	0.00	3.56	4.04	3.92	4.91	3.99	5.08	1.51
508565	7013276	Caboolture-111	MBC-079	3.52	3.39	0.13	1.05	2.3	133	0.00	3.69	4.09	4.01	4.82	4.06	4.93	1.41
508069	7013611	Caboolture-112	MBC-080	3.82	3.68	0.14	1.15	2.6	340	0.00	4.01	4.47	4.36	5.31	4.43	5.47	1.51
507667	7013960	Caboolture-113	MBC-081	3.93	3.80	0.13	1.04	2.3	130	0.00	4.10	4.49	4.41	5.21	4.46	5.33	1.41
507157	7014067	Caboolture-114	MBC-082	4.00	3.87	0.13	1.04	2.3	130	0.00	4.17	4.57	4.48	5.30	4.53	5.42	1.43
507171	7014777	Caboolture-115	MBC-083	3.83	3.70	0.13	1.09	2.5	132	0.00	4.02	4.45	4.35	5.24	4.40	5.37	1.47
507063	7015595	Caboolture-116	MBC-084	3.91	3.77	0.14	1.10	2.6	104	0.00	4.09	4.53	4.42	5.33	4.49	5.49	1.52
509121	6984944	Redcliffe-005	MBC-085	3.17	3.01	0.16	1.23	2.9	193	0.00	3.36	3.88	3.74	4.82	3.81	5.01	1.65
509533	6984891	Redcliffe-006	MBC-086	3.05	2.90	0.15	1.19	2.8	193	0.00	3.24	3.73	3.60	4.62	3.68	4.79	1.58
509892	6984691	Redcliffe-007	MBC-087	2.94	2.79	0.15	1.16	2.8	195	0.00	3.12	3.61	3.48	4.47	3.55	4.64	1.59
510464	6984279	Redcliffe-009	MBC-088	2.77	2.58	0.19	1.32	3.4	131	0.00	2.94	3.55	3.33	4.63	3.41	4.85	1.84
510783	6984638	Redcliffe-010	MBC-089	2.66	2.44	0.22	1.61	3.5	128	0.00	2.87	3.60	3.34	4.86	3.44	5.11	1.72
510969	6985516	Redcliffe-012	MBC-090	2.70	2.47	0.23	1.66	3.7	115	0.00	2.91	3.69	3.38	5.02	3.48	5.30	1.81
511076	6985889	Redcliffe-013	MBC-091	2.70	2.47	0.23	1.59	3.8	119	0.00	2.88	3.66	3.34	4.97	3.43	5.25	1.90
511488	6987365	Redcliffe-016	MBC-092	2.74	2.46	0.28	1.87	4.4	113	0.00	2.92	3.88	3.43	5.46	3.54	5.81	1.99
511768	6988017	Redcliffe-018	MBC-093	2.65	2.36	0.29	1.92	4.5	113	0.00	2.82	3.82	3.34	5.47	3.46	5.83	2.02
511648	6988496	Redcliffe-019	MBC-094	2.68	2.42	0.26	1.60	4.5	70	0.00	2.80	3.68	3.24	5.13	3.34	5.46	2.24
511741	6989254	Redcliffe-021	MBC-095	2.73	2.43	0.30	1.98	4.5	116	0.00	2.91	3.93	3.44	5.61	3.56	5.97	1.99
511874	6990079	Redcliffe-023	MBC-096	2.68	2.39	0.29	1.92	4.5	119	0.00	2.85	3.86	3.37	5.51	3.49	5.87	2.04
511648	6990451	Redcliffe-024	MBC-097	2.69	2.43	0.26	1.68	4.5	68	0.00	2.83	3.74	3.29	5.23	3.39	5.56	2.15
511661	6991063	Redcliffe-025	MBC-098	2.72	2.46	0.26	1.78	4.2	119	0.00	2.90	3.80	3.39	5.30	3.50	5.62	1.96
511568	6992087	Redcliffe-027	MBC-099	2.72	2.45	0.27	1.87	4.1	115	0.00	2.92	3.84	3.44	5.38	3.55	5.71	1.89
511475	6992513	Redcliffe-028	MBC-100	2.67	2.46	0.21	1.55	3.6	125	0.00	2.87	3.59	3.32	4.82	3.41	5.08	1.78
510916	6992713	Redcliffe-029	MBC-101	2.62	2.43	0.19	1.35	3.3	58	0.00	2.80	3.41	3.20	4.48	3.29	4.70	1.77
510531	6992472	Redcliffe-030	MBC-102	2.62	2.44	0.18	1.33	3.2	328	0.00	2.81	3.41	3.21	4.45	3.29	4.67	1.75
510161	6992164	Redcliffe-031	MBC-103	2.69	2.49	0.20	1.59	3.2	32	0.00	2.93	3.61	3.41	4.80	3.50	5.04	1.60
509833	6991712	Redcliffe-032	MBC-104	2.64	2.51	0.13	1.13	2.4	226	0.00	2.84	3.26	3.18	4.04	3.23	4.17	1.41
509525	6991322	Redcliffe-033	MBC-105	2.65	2.50	0.15	1.19	2.7	48	0.00	2.84	3.33	3.21	4.20	3.28	4.37	1.54
509155	6991199	Redcliffe-034	MBC-106	2.70	2.53	0.17	1.37	2.9	50	0.00	2.92	3.48	3.34	4.48	3.42	4.68	1.53
508478	6991343	Redcliffe-035	MBC-107	2.73	2.59	0.14	1.09	2.6	49	0.00	2.91	3.35	3.24	4.16	3.30	4.32	1.57
507965	6991487	Redcliffe-036	MBC-108	2.81	2.67	0.14	1.13	2.7	49	0.00	3.00	3.46	3.34	4.29	3.41	4.46	1.56
507205	6991589	Redcliffe-037	MBC-109	2.89	2.75	0.14	1.12	2.7	48	0.00	3.07	3.53	3.41	4.36	3.48	4.52	1.56
506548	6991836	Redcliffe-038	MBC-110	2.99	2.84	0.15	1.16	2.8	50	0.00	3.17	3.66	3.53	4.53	3.60	4.70	1.61
505830	6992082	Redcliffe-039	MBC-111	3.10	2.94	0.16	1.22	2.9	56	0.00	3.29	3.81	3.66	4.73	3.73	4.92	1.65
505358	6992267	Redcliffe-040	MBC-112	3.16	3.01	0.15	1.10	2.8	59	0	3.32	3.79	3.66	4.63	3.73	4.80	1.66

APPENDIX L

Storm Tide Planning Levels

				Planning Levels - 100-Year ARI Event, Freeboard and SLR Included		Water Level mAHD 100yr ARI Sea-Level Rise and Freeboard Excluded													
						Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Water Level without tide Correction and without local setup (mAHD)	Wave Parameters				Tide Range Correction (m)	Wave Run-up (mAHD) 50% Exceedence		Wave Run-up (mAHD) 2% Exceedence		Wave Run-up (mAHD) 1% Exceedence	
X MGA94	Y MGA94	Location Name	Location Index R2504	100-Year Planning Level - 2109	50-Year Planning Level - 2059				Local Setup (m)	Hs (m)	Tz (s)	Dir (deg)		Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H	Beach 1V:15H Slope	Rock Revetment 1V:2H
506913	6982622	PineRiver-001	MBC-001	3.50	3.00	2.40	2.26	2.26	0.14	1.09	2.5	129	0	2.58	3.01	2.91	3.80	2.97	3.95
507065	6983136	PineRiver-002	MBC-002	3.55	3.05	2.45	2.30	2.30	0.15	1.17	2.7	136	0	2.64	3.11	2.99	3.97	3.06	4.14
507237	6983516	PineRiver-003	MBC-003	3.54	3.04	2.44	2.31	2.31	0.13	1.05	2.5	128	0	2.62	3.04	2.94	3.80	3.00	3.95
507198	6984049	PineRiver-004	MBC-004	3.59	3.09	2.49	2.37	2.37	0.12	0.98	2.4	130	0	2.65	3.06	2.95	3.78	3.00	3.89
506913	6984334	PineRiver-005	MBC-005	3.73	3.23	2.63	2.52	2.52	0.11	0.86	2.2	131	0	2.77	3.11	3.02	3.73	3.06	3.83
507046	6984696	PineRiver-006	MBC-006	3.82	3.32	2.72	2.61	2.61	0.11	0.88	2.2	139	0	2.86	3.20	3.12	3.82	3.17	3.93
507522	6984334	PineRiver-007	MBC-007	3.61	3.11	2.51	2.38	2.38	0.13	1.01	2.5	135	0	2.67	3.08	2.98	3.81	3.04	3.96
507769	6984239	PineRiver-008	MBC-008	3.54	3.04	2.44	2.28	2.28	0.16	1.24	2.8	128	0	2.64	3.15	3.01	4.08	3.09	4.26
506179	6982661	PineRiver-009	MBC-009	3.73	3.23	2.63	2.52	2.52	0.11	0.86	2.2	131	0	2.77	3.11	3.02	3.73	3.06	3.83
504927	6992513	Caboolture-001	MBC-010	3.50	3.00	2.40	2.27	2.27	0.13	1.04	2.5	118	0	2.57	2.99	2.89	3.75	2.95	3.90
504270	6992575	Caboolture-002	MBC-011	3.53	3.03	2.43	2.31	2.31	0.12	0.98	2.3	128	0	2.59	2.98	2.89	3.69	2.93	3.80
503633	6992841	Caboolture-003	MBC-012	3.67	3.17	2.57	2.44	2.44	0.13	0.98	2.6	71	0	2.72	3.14	3.02	3.88	3.08	4.04
503346	6993519	Caboolture-004	MBC-013	3.75	3.25	2.65	2.52	2.52	0.13	1.01	2.5	68	0	2.81	3.23	3.12	3.98	3.18	4.13
503613	6994402	Caboolture-005	MBC-014	3.81	3.31	2.71	2.59	2.59	0.12	0.92	2.4	74	0	2.85	3.24	3.13	3.92	3.19	4.06
504658	6996186	Caboolture-009	MBC-015	3.79	3.29	2.69	2.55	2.55	0.14	1.06	2.7	73	0	2.85	3.30	3.18	4.11	3.24	4.27
504477	6996546	Caboolture-010	MBC-016	3.90	3.40	2.80	2.67	2.67	0.13	1.03	2.4	53	0	2.97	3.38	3.28	4.12	3.34	4.27
504774	6997055	Caboolture-012	MBC-017	3.84	3.34	2.74	2.61	2.61	0.13	1.00	2.5	72	0	2.90	3.31	3.21	4.05	3.27	4.20
505039	6997331	Caboolture-013	MBC-018	3.84	3.34	2.74	2.61	2.61	0.13	0.94	2.7	134	0	2.88	3.29	3.17	4.03	3.23	4.18
505442	6998582	Caboolture-016	MBC-019	3.92	3.42	2.82	2.67	2.67	0.15	1.09	2.8	133	0	2.98	3.45	3.31	4.28	3.38	4.45
505671	6999062	Caboolture-017	MBC-020	3.94	3.44	2.84	2.69	2.69	0.15	1.00	2.9	85	0	2.97	3.43	3.28	4.24	3.35	4.41
505909	6999567	Caboolture-018	MBC-021	3.96	3.46	2.86	2.71	2.71	0.15	1.09	2.9	125	0	3.02	3.50	3.35	4.36	3.42	4.54
506361	7000127	Caboolture-019	MBC-022	4.00	3.50	2.90	2.75	2.75	0.15	1.14	2.8	129	0	3.08	3.56	3.42	4.43	3.49	4.61
506813	7000580	Caboolture-020	MBC-023	3.91	3.41	2.81	2.66	2.66	0.15	1.06	2.8	127	0	2.96	3.42	3.29	4.24	3.35	4.41
507266	7001010	Caboolture-021	MBC-024	3.89	3.39	2.79	2.62	2.62	0.17	1.20	3.2	131	0	2.95	3.51	3.31	4.48	3.39	4.69
507718	7001452	Caboolture-022	MBC-025	3.91	3.41	2.81	2.63	2.63	0.18	1.25	3.3	136	0	2.97	3.55	3.35	4.56	3.42	4.77
508289	7001850	Caboolture-023	MBC-026	3.89	3.39	2.79	2.61	2.61	0.18	1.27	3.3	137	0	2.96	3.55	3.34	4.58	3.42	4.80
508903	7002206	Caboolture-024	MBC-027	3.85	3.35	2.75	2.55	2.55	0.20	1.31	3.6	139	0	2.89	3.54	3.28	4.63	3.36	4.87
509355	7002550	Caboolture-025	MBC-028	3.83	3.33	2.73	2.54	2.54	0.19	1.29	3.5	148	0	2.88	3.51	3.26	4.59	3.35	4.82
509894	7002744	Caboolture-026	MBC-029	3.78	3.28	2.68	2.48	2.48	0.20	1.35	3.6	147	0	2.84	3.49	3.23	4.61	3.31	4.84
510475	7002852	Caboolture-027	MBC-030	3.74	3.24	2.64	2.44	2.44	0.20	1.31	3.6	154	0	2.78	3.43	3.17	4.53	3.25	4.77
511067	7003003	Caboolture-028	MBC-031	3.69	3.19	2.59	2.41	2.41	0.18	1.20	3.5	174	0	2.73	3.32	3.08	4.33	3.16	4.55
511477	7003251	Caboolture-029	MBC-032	3.72	3.22	2.62	2.47	2.47	0.15	1.06	2.8	147	0	2.77	3.23	3.10	4.06	3.16	4.23
512112	7003326	Caboolture-030	MBC-033	3.68	3.18	2.58	2.42	2.42	0.16	1.18	3.0	143	0	2.75	3.27	3.11	4.19	3.19	4.38
512694	7003455	Caboolture-031	MBC-034	3.64	3.14	2.54	2.38	2.38	0.16	1.12	3.0	163	0	2.70	3.20	3.04	4.09	3.11	4.28
513275	7003412	Caboolture-032	MBC-035	3.61	3.11	2.51	2.36	2.36	0.15	1.12	2.7	139	0	2.68	3.15	3.02	3.98	3.09	4.15
513911	7003746	Caboolture-033	MBC-036	3.60	3.10	2.50	2.37	2.37	0.13	1.04	2.4	127	0	2.67	3.10	2.99	3.86	3.04	3.99
514481	7004446	Caboolture-034	MBC-037	3.40	2.90	2.30	2.17	2.17	0.13	1.00	2.5	124	0	2.46	2.87	2.77	3.60	2.83	3.74
516248	7002647	Caboolture-038	MBC-038	3.30	2.80	2.20	1.97	1.97	0.23	1.57	3.9	221	0	2.37	3.15	2.82	4.46	2.91	4.74
517280	7002397	Caboolture-040	MBC-039	3.20	2.70	2.10	1.90	1.90	0.20	1.43	3.5	154	0	2.28	2.96	2.70	4.12	2.79	4.36
519611	7002925	Caboolture-044	MBC-040	3.12	2.62	2.02	1.74	1.74	0.28	1.95	4.3	117	0	2.22	3.20	2.76	4.82	2.87	5.16
520367	7003619	Caboolture-046	MBC-041	3.11	2.61	2.01	1.69	1.69	0.32	2.26	4.7	105	0	2.23	3.39	2.83	5.29	2.96	5.70
520284	7006303	Caboolture-051	MBC-042	3.11	2.61	2.01	1.67	1.67	0.34	2.05	5.6	54	0	2.12	3.34	2.65	5.30	2.77	5.76
516778	7013518	Caboolture-060	MBC-043	3.24	2.74	2.14	1.74	1.74	0.40	2.49	6.0	58	0	2.28	3.74	2.91	6.06	3.05	6.60
516320	7014796	Caboolture-061	MBC-044	3.24	2.74	2.14	1.76	1.76	0.38	2.33	5.9	58	0	2.27	3.65	2.86	5.86	3.00	6.37
507667	7015461	Caboolture-067	MBC-045	3.89	3.39	2.79	2.66	2.66	0.13	1.05	2.4	216	0	2.96	3.39	3.28	4.15	3.33	4.28
508591	7014764	Caboolture-069	MBC-046	3.88	3.38	2.78	2.63	2.63	0.15	1.27	2.7	227	0	3.00	3.52	3.38	4.44	3.45	4.59
509101	7014442	Caboolture-070	MBC-047	3.84	3.34	2.74	2.57	2.57	0.17	1.31	2.9	163	0	2.95	3.49	3.34	4.46	3.42	4.66
509543	7013236	Caboolture-072	MBC-048	3.68	3.18	2.58	2.43	2.43	0.15	1.18	2.7	218	0	2.77	3.25	3.13	4.13	3.20	4.30
509623	7012592	Caboolture-073	MBC-049	3.62	3.12	2.52	2.36	2.36	0.16	1.21	2.8	216	0	2.71	3.21	3.08	4.11	3.15	4.29
510253	7011212	Caboolture-075	MBC-050	3.48	2.98	2.38	2.23	2.23	0.15	1.24	2.7	205	0	2.59	3.09	2.97	3.99	3.04	4.17
510669	7010917	Caboolture-076	MBC-051	3.40	2.90	2.30	2.17	2.17	0.13	0.99	2.4	208	0	2.46	2.85	2.76	3.57	2.81	3.71
511138	7010769	Caboolture-077	MBC-052	3.42	2.92	2.32	2.18	2.18	0.14	1.06	2.6	151	0	2.49	2.92	2.81	3.70	2.87	3.86
511701	7010475	Caboolture-078	MBC-053	3.40	2.90	2.30	2.15	2.15	0.15	1.15	2.7	157	0	2.48	2.96	2.83	3.82	2.90	3.99
512076	7010032	Caboolture-079	MBC-054	3.40	2.90	2.30	2.13	2.13	0.17	1.27	3.0	152	0	2.49	3.04	2.88	4.02	2.96	4.21
513283	7007901	Caboolture-083	MBC-055	3.21	2.71	2.11	1.94	1.94	0.17	1.32	3.0	231	0	2.32	2.87	2.72	3.86	2.80	4.06
513390	7007284	Caboolture-084	MBC-056	3.43	2.93	2.33	2.17	2.17	0.16	1.33	2.8	231	0	2.55	3.09	2.96	4.05	3.04	4.23
513444	7006735	Caboolture-085	MBC-057	3.38	2.88	2.28	2.10	2.10	0.18	1.53	3.0	144	0	2.54	3.17	3.00	4.30	3.08	4.48

X MGA94	Y MGA94	Location Name	Location Index R2504	Planning Levels - 100-Year ARI Event, Freeboard and SLR Included: 100-Year Planning Level - 2109	Planning Levels - 100-Year ARI Event, Freeboard and SLR Included: 50-Year Planning Level - 2059	Total Water Level - with Setup (mAHD)	Water Level - without setup (mAHD)	Water Level without tide Correction and without local setup (mAHD)	Wave Parameters: Local Setup (m)	Wave Parameters: Hs (m)	Wave Parameters: Tz (s)	Wave Parameters: Dir (deg)	Tide Range Correction (m)	Wave Run-up (mAHD) 50% Exceedence: Beach 1V:15H Slope	Wave Run-up (mAHD) 50% Exceedence: Rock Revetment 1V:2H	Wave Run-up (mAHD) 2% Exceedence: Beach 1V:15H Slope	Wave Run-up (mAHD) 2% Exceedence: Rock Revetment 1V:2H	Wave Run-up (mAHD) 1% Exceedence: Beach 1V:15H Slope	Wave Run-up (mAHD) 1% Exceedence: Rock Revetment 1V:2H
514141	7006547	Caboolture-086	MBC-058	3.38	2.88	2.28	2.11	2.11	0.17	1.45	2.8	247	0	2.53	3.11	2.97	4.15	3.04	4.32
514958	7005756	Caboolture-088	MBC-059	3.31	2.81	2.21	2.03	2.03	0.18	1.44	3.0	255	0	2.44	3.03	2.88	4.09	2.96	4.30
515374	7005260	Caboolture-089	MBC-060	3.27	2.77	2.17	2.00	2.00	0.17	1.37	2.8	261	0	2.40	2.97	2.81	3.97	2.88	4.14
514730	7005140	Caboolture-090	MBC-061	3.22	2.72	2.12	1.99	1.99	0.13	1.10	2.4	112	0	2.31	2.74	2.64	3.52	2.70	3.65
514328	7005394	Caboolture-091	MBC-062	3.25	2.75	2.15	2.01	2.01	0.14	1.04	2.7	107	0	2.31	2.75	2.63	3.53	2.69	3.69
513269	7006199	Caboolture-093	MBC-063	3.34	2.84	2.24	2.08	2.08	0.16	1.23	2.8	106	0	2.43	2.94	2.81	3.85	2.88	4.03
511621	7007284	Caboolture-096	MBC-064	3.36	2.86	2.26	2.12	2.12	0.14	1.12	2.5	125	0	2.45	2.90	2.79	3.71	2.84	3.84
511339	7008048	Caboolture-097	MBC-065	3.39	2.89	2.29	2.16	2.16	0.13	1.04	2.3	126	0	2.46	2.86	2.77	3.58	2.82	3.70
511648	7008558	Caboolture-098	MBC-066	3.19	2.69	2.09	1.96	1.96	0.13	1.01	2.5	137	0	2.25	2.66	2.56	3.40	2.62	3.55
511835	7009040	Caboolture-099	MBC-067	3.25	2.75	2.15	2.02	2.02	0.13	1.02	2.6	137	0	2.31	2.74	2.63	3.49	2.69	3.64
511446	7009456	Caboolture-100	MBC-068	3.32	2.82	2.22	2.09	2.09	0.13	1.04	2.5	130	0	2.39	2.82	2.71	3.58	2.77	3.73
511058	7009456	Caboolture-101	MBC-069	3.36	2.86	2.26	2.12	2.12	0.14	1.11	2.5	117	0	2.44	2.90	2.78	3.71	2.84	3.84
510321	7009818	Caboolture-102	MBC-070	3.35	2.85	2.25	2.12	2.12	0.13	1.03	2.5	105	0	2.42	2.84	2.73	3.60	2.80	3.75
509784	7010233	Caboolture-103	MBC-071	3.36	2.86	2.26	2.12	2.12	0.14	1.10	2.5	134	0	2.44	2.88	2.78	3.67	2.84	3.83
509369	7010796	Caboolture-104	MBC-072	3.41	2.91	2.31	2.18	2.18	0.13	1.04	2.5	133	0	2.48	2.90	2.80	3.66	2.86	3.81
509034	7011198	Caboolture-105	MBC-073	3.58	3.08	2.48	2.34	2.34	0.14	1.07	2.5	22	0	2.65	3.08	2.98	3.86	3.04	4.01
508833	7011587	Caboolture-106	MBC-074	3.51	3.01	2.41	2.28	2.28	0.13	0.96	2.5	121	0	2.56	2.96	2.85	3.68	2.91	3.82
508752	7011869	Caboolture-107	MBC-075	3.44	2.94	2.34	2.20	2.20	0.14	1.11	2.6	129	0	2.52	2.97	2.86	3.78	2.93	3.93
508471	7012110	Caboolture-108	MBC-076	3.48	2.98	2.38	2.25	2.25	0.13	1.04	2.5	129	0	2.55	2.97	2.87	3.72	2.93	3.86
508926	7012177	Caboolture-109	MBC-077	3.52	3.02	2.42	2.28	2.28	0.14	1.05	2.6	135	0	2.58	3.01	2.90	3.79	2.97	3.95
509020	7012767	Caboolture-110	MBC-078	3.60	3.10	2.50	2.35	2.35	0.15	1.12	2.7	128	0	2.67	3.13	3.01	3.97	3.08	4.13
508565	7013276	Caboolture-111	MBC-079	3.68	3.18	2.58	2.46	2.46	0.12	1.02	2.3	132	0	2.75	3.15	3.06	3.87	3.11	3.99
508069	7013611	Caboolture-112	MBC-080	3.87	3.37	2.77	2.63	2.63	0.14	1.15	2.6	340	0	2.96	3.42	3.31	4.26	3.38	4.42
507667	7013960	Caboolture-113	MBC-081	3.93	3.43	2.83	2.70	2.70	0.13	1.04	2.3	130	0	3.00	3.39	3.31	4.11	3.36	4.23
507157	7014067	Caboolture-114	MBC-082	3.97	3.47	2.87	2.74	2.74	0.13	1.04	2.3	130	0	3.04	3.44	3.35	4.17	3.40	4.29
507171	7014777	Caboolture-116	MBC-083	3.88	3.38	2.78	2.65	2.65	0.13	1.06	2.5	131	0	2.96	3.40	3.28	4.17	3.34	4.30
507063	7015595	Caboolture-116	MBC-084	3.92	3.42	2.82	2.68	2.68	0.14	1.09	2.6	130	0	3.00	3.43	3.33	4.23	3.39	4.38
509121	6984944	Redcliffe-005	MBC-085	3.49	2.99	2.39	2.22	2.22	0.17	1.21	3.0	172	0	2.56	3.09	2.93	4.03	3.01	4.22
509533	6984891	Redcliffe-006	MBC-086	3.41	2.91	2.31	2.16	2.16	0.15	1.17	2.8	193	0	2.49	2.99	2.85	3.87	2.92	4.05
509892	6984691	Redcliffe-007	MBC-087	3.35	2.85	2.25	2.10	2.10	0.15	1.15	2.8	194	0	2.43	2.92	2.78	3.79	2.85	3.97
510464	6984279	Redcliffe-009	MBC-088	3.28	2.78	2.18	1.99	1.99	0.19	1.32	3.4	131	0	2.35	2.96	2.74	4.04	2.82	4.26
510783	6984638	Redcliffe-010	MBC-089	3.24	2.74	2.14	1.92	1.92	0.22	1.61	3.5	128	0	2.35	3.08	2.82	4.34	2.92	4.59
510969	6985516	Redcliffe-012	MBC-090	3.26	2.76	2.16	1.93	1.93	0.23	1.66	3.7	115	0	2.37	3.15	2.84	4.48	2.94	4.76
511076	6985889	Redcliffe-013	MBC-091	3.26	2.76	2.16	1.93	1.93	0.23	1.59	3.8	119	0	2.34	3.12	2.80	4.43	2.89	4.71
511488	6987365	Redcliffe-016	MBC-092	3.31	2.81	2.21	1.93	1.93	0.28	1.87	4.4	113	0	2.39	3.35	2.90	4.93	3.01	5.28
511768	6988017	Redcliffe-018	MBC-093	3.27	2.77	2.17	1.88	1.88	0.29	1.92	4.5	113	0	2.34	3.34	2.86	4.99	2.98	5.35
511648	6988496	Redcliffe-019	MBC-094	3.26	2.76	2.16	1.91	1.91	0.25	1.60	4.3	111	0	2.30	3.15	2.74	4.55	2.84	4.86
511741	6989254	Redcliffe-021	MBC-095	3.31	2.81	2.21	1.91	1.91	0.30	1.96	4.6	116	0	2.38	3.41	2.91	5.10	3.02	5.48
511874	6990079	Redcliffe-023	MBC-096	3.28	2.78	2.18	1.89	1.89	0.29	1.92	4.5	119	0	2.35	3.36	2.87	5.01	2.99	5.37
511648	6990451	Redcliffe-024	MBC-097	3.28	2.78	2.18	1.92	1.92	0.26	1.66	4.3	109	0	2.33	3.20	2.78	4.65	2.89	4.98
511661	6991063	Redcliffe-025	MBC-098	3.30	2.80	2.20	1.93	1.93	0.27	1.76	4.3	118	0	2.36	3.27	2.85	4.77	2.95	5.09
511568	6992087	Redcliffe-027	MBC-099	3.30	2.80	2.20	1.93	1.93	0.27	1.85	4.2	115	0	2.39	3.32	2.90	4.87	3.01	5.20
511475	6992513	Redcliffe-028	MBC-100	3.25	2.75	2.15	1.93	1.93	0.22	1.53	3.6	124	0	2.34	3.06	2.78	4.30	2.87	4.56
510916	6992713	Redcliffe-029	MBC-101	3.21	2.71	2.11	1.92	1.92	0.19	1.32	3.4	57	0	2.28	2.90	2.67	3.97	2.75	4.19
510531	6992472	Redcliffe-030	MBC-102	3.18	2.68	2.08	1.92	1.92	0.16	1.30	2.8	250	0	2.29	2.82	2.69	3.77	2.77	3.96
510161	6992164	Redcliffe-031	MBC-103	3.23	2.73	2.13	1.95	1.95	0.18	1.51	2.9	247	0	2.39	3.01	2.84	4.12	2.92	4.30
509833	6991712	Redcliffe-032	MBC-104	3.18	2.68	2.08	1.95	1.95	0.13	1.10	2.4	229	0	2.27	2.69	2.60	3.47	2.66	3.60
509525	6991322	Redcliffe-033	MBC-105	3.19	2.69	2.09	1.95	1.95	0.14	1.15	2.4	230	0	2.28	2.71	2.63	3.51	2.69	3.64
509155	6991199	Redcliffe-034	MBC-106	3.20	2.70	2.10	1.96	1.96	0.14	1.17	2.4	227	0	2.30	2.73	2.65	3.52	2.71	3.65
508478	6991343	Redcliffe-035	MBC-107	3.23	2.73	2.13	2.00	2.00	0.13	1.03	2.3	126	0	2.30	2.70	2.61	3.42	2.66	3.54
507965	6991487	Redcliffe-036	MBC-108	3.26	2.76	2.16	2.03	2.03	0.13	1.06	2.4	125	0	2.34	2.75	2.66	3.51	2.71	3.63
507205	6991589	Redcliffe-037	MBC-109	3.31	2.81	2.21	2.08	2.08	0.13	1.04	2.4	125	0	2.38	2.79	2.70	3.52	2.75	3.64
506548	6991836	Redcliffe-038	MBC-110	3.38	2.88	2.28	2.12	2.12	0.16	1.07	3.0	49	0	2.42	2.91	2.75	3.77	2.82	3.95
505830	6992082	Redcliffe-039	MBC-111	3.43	2.93	2.33	2.17	2.17	0.16	1.11	3.0	61	0	2.48	2.98	2.82	3.86	2.89	4.04
505358	6992267	Redcliffe-040	MBC-112	3.46	2.96	2.36	2.21	2.21	0.15	1.02	2.9	64	0	2.50	2.96	2.81	3.77	2.88	3.94