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Earth System
Science
Data

Supplement of

A standardized database of Marine Isotope Stage 5e sea-level proxies in southern Africa (Angola, Namibia and South Africa)

J. Andrew G. Cooper and Andrew N. Green

Correspondence to: J. Andrew G. Cooper (jag.cooper@ulster.ac.uk)

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The data in this file were compiled in WALIS, the World Atlas of Last Interglacial Shorelines. WALIS is a product of the E

The sheets in this file contain the following information (if available):

- Summary RSL datapoints: RSL datapoints from stratigraphic records, U-Series from corals and U-Series from speleoth
- RSL proxies: RSL indicators from stratigraphic information, with grouped age details
- RSL indicators: list of types of RSL indicators used in the 'RSL proxies' sheet
- Elevation measurement techniques: list of elevation survey methods used both in the 'RSL proxies' sheet and in the e
- Geographic positioning: list of geographic positioning methods used in the 'RSL proxies' sheet
- Sea level datums: list of datums used both in the 'RSL proxies' sheet and in the datums fields of dated samples
- U-Series (mollusks): list of all the mollusks (or algae) samples dated with U-Series. This sheet contains all U-Series moll
- Amino Acid Racemization: list of all the samples dated with AAR. This sheet contains all AAR ages created by the user
- Luminescence: list of all the samples dated with luminescence. This sheet contains all luminescence ages created by t
- Chronostratigraphy: list of all the chronostratigraphic age constraints. This sheet contains all constraints created by
- References: list of all references contained in the culled database.

Information on each field can be found at: <https://walis-help.readthedocs.io/en/latest/>

Information on WALIS (Including data download) can be found at: <https://warmcoasts.eu/world-atlas.html>

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WALIS_ID	Latitude	Longitude
RSL_370	-12.620277	13.243611
RSL_371	-12.620277	13.243611
RSL_372	-15.133055	12.154722
RSL_373	-12.61	13.365
RSL_373	-12.61	13.365
RSL_373	-12.61	13.365
RSL_373	-12.61	13.365
RSL_377	-12.550833	13.439722
RSL_377	-12.550833	13.439722
RSL_379	-12.544166	13.463888
RSL_3435	-33.006137	27.925226
RSL_3436	-33.006137	27.925226
RSL_3437	-34.205183	22.049697
RSL_3438	-34.205183	22.049697

RSL_3439	-34.205183	22.049697
RSL_356	-34.0325	22.7978
RSL_358	-34.0325	22.7978
RSL_359	-34.056111	22.240555
RSL_360	-34.81722	20.0275
RSL_361	-34.0325	22.7977
RSL_362	-34.0325	22.7977
RSL_363	-34.0325	22.7978
RSL_364	-34.056111	22.24055
RSL_365	-32.994722	27.95
RSL_366	-33.006027	27.93131
RSL_367	-33.0225	27.9311
RSL_368	-27.50777	32.6975
RSL_369	-27.50777	32.6974
RSL_389	-34.088055	22.26111

RSL_390	-34.090833	22.2475
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RSL_391	-34.083833	22.253611
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RSL_392	-34.081666	22.2575
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RSL_393	-34.064722	22.208888
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RSL_394	-34.089444	22.263888
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RSL_395	-34.073055	22.26222
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RSL_396	-34.068888	22.257777
---------	------------	-----------

RSL_397	-34.078055	22.253611
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RSL_398	-34.1025	22.256388
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RSL_399	-34.056388	22.239722
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RSL_400	-34.056111	22.240558
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RSL_401	-34.055833	22.246388
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RSL_402	-34.055833	22.246388
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RSL_403	-34.055833	22.246388
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RSL_404	-34.055833	22.246388
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RSL_421	-27.969495	32.384141
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RSL_422	-30.25	30.816667
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RSL_422	-30.25	30.816667
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RSL_423	-30.25	30.816667
---------	--------	-----------

RSL_423	-30.25	30.816667
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RSL_444	-33.87108	25.623122
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Site	Subsite	Nation
Benguela Near Site Benguela A (Walker et al. 2016)	Near Site Benguela A (Walker et al. 2016)	Angola
Benguela Near Site Benguela A (Walker et al. 2016)	Near Site Benguela A (Walker et al. 2016)	Angola
Mossamedes		Angola
Benguela Benguela A	Benguela A	Angola
Benguela Benguela A	Benguela A	Angola
Benguela Benguela A	Benguela A	Angola
Benguela Benguela A	Benguela A	Angola
Benguela Site B	Site B	Angola
Benguela Site B	Site B	Angola
Benguela Site C	Site C	Angola
East London Blind River	Blind River	South Africa
East London Blind River2	Blind River2	South Africa
Dana Bay		South Africa
Dana Bay 1	1	South Africa

Dana Bay 2	2	South Africa
Swartvlei Estuary mouth 1	Estuary mouth 1	South Africa
Swartvlei Swartvlei estuary mouth 2	Swartvlei estuary mouth 2	South Africa
Groot Brak Estuary Mouth		South Africa
Cape Agulhas		South Africa
Swartvlei Swartvlei Estuary Mouth 3	Swartvlei Estuary Mouth 3	South Africa
Swartvlei Swartvlei Estuary Mouth 4	Swartvlei Estuary Mouth 4	South Africa
Swartvlei Swartvlei Estuary mouth 5	Swartvlei Estuary mouth 5	South Africa
Groot Brak Estuary Mouth Groot Brak Estuary Mouth	Groot Brak Estuary Mouth	South Africa
Nahoon Point Footprints site	Footprints site	South Africa
Nahoon Point East Beach1	East Beach1	South Africa
Nahoon Point East Beach	East Beach	South Africa
Sodwana Bay Two Mile Reef	Two Mile Reef	South Africa
Sodwana Bay Two Mile Reef 2	Two Mile Reef 2	South Africa
Mossel Bay -34m	-34m	South Africa

Mossel Bay -33m	-33m	South Africa
Mossel Bay -30m	-30m	South Africa
Mossel Bay -30m B	-30m B	South Africa
Mossel Bay Shoreline	Shoreline	South Africa
Mossel Bay -35m	-35m	South Africa
Mossel Bay -26m	-26m	South Africa
Mossel Bay -17m	-17m	South Africa
Mossel Bay -25m	-25m	South Africa
Mossel Bay -38m	-38m	South Africa
Groot Brak Estuary Mouth Site A	Site A	South Africa
Groot Brak Estuary Mouth Site B	Site B	South Africa
Groot Brak Estuary Mouth Site C	Site C	South Africa
Groot Brak Estuary Mouth Site C	Site C	South Africa
Groot Brak Estuary Mouth Site C	Site C	South Africa
Groot Brak Estuary Mouth Site C	Site C	South Africa

Groot Brak Estuary Mouth Site C	Site C	South Africa
Groot Brak Estuary Mouth Site C	Site C	South Africa
Groot Brak Estuary Mouth Site B.	Site B.	South Africa
Groot Brak Estuary Mouth Site B.	Site B.	South Africa
Langebaan Hominid footprint site	Hominid footprint site	South Africa
Langebaan Hominid footprint site	Hominid footprint site	South Africa
Langebaan Hominid footprint site	Hominid footprint site	South Africa
Langebaan Hominid footprint site	Hominid footprint site	South Africa
Langebaan Hominid footprint site	Hominid footprint site	South Africa
Durban Bluff Reunion Rocks	Reunion Rocks	South Africa
Coffee Bay		South Africa
Phinda Game Reserve		South Africa
Isipingo		South Africa
Isipingo		South Africa
Umdloti		South Africa

Listers Point

South Africa

Aliwal Shoal

South Africa

Aliwal Shoal

South Africa

Aliwal Shoal

South Africa

Aliwal Shoal

South Africa

Swartkops Estuary Mouth
Deal Party

Deal Party

South Africa

Region	Type of datapoint	RSL Indicator
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Namibe	Sea Level Indicator	Beach deposit or beachrock
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Benguela	Sea Level Indicator	Lagoonal deposit
Eastern Cape	Sea Level Indicator	Lagoonal deposit
Eastern Cape	Sea Level Indicator	Lagoonal deposit
Western Cape	Sea Level Indicator	Shoreface/foreshore contact
Western Cape	Sea Level Indicator	Shoreface/foreshore contact

Western Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Western Cape	Sea Level Indicator	Tidal inlet facies (Western Cape, South Africa)
Western Cape	Sea Level Indicator	Tidal inlet facies (Western Cape, South Africa)
Western Cape	Sea Level Indicator	Beach swash deposit
Western Cape	Sea Level Indicator	Foreshore deposits
Western Cape	Sea Level Indicator	Tidal inlet facies (Western Cape, South Africa)
Western Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Western Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Western Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Eastern Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Eastern Cape	Sea Level Indicator	Beach deposit or beachrock
Eastern Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
KwaZulu-Natal	Sea Level Indicator	Beach deposit or beachrock
KwaZulu-Natal	Sea Level Indicator	Beach deposit or beachrock
Western Cape	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator

Western Cape	Terrestrial Limiting	Foreshore deposits
Western Cape	Marine Limiting	Foreshore deposits
Western Cape	Sea Level Indicator	Shoreface/foreshore contact
Western Cape	Sea Level Indicator	Shoreface/foreshore contact
Western Cape	Sea Level Indicator	Lagoonal deposit
Western Cape	Sea Level Indicator	Lagoonal deposit
Western Cape	Sea Level Indicator	Lagoonal deposit
Western Cape	Sea Level Indicator	Lagoonal deposit
Western Cape	Sea Level Indicator	Lagoonal deposit
KwaZulu-Natal	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Eastern Cape	Sea Level Indicator	Shore platform
KwaZulu-Natal	Sea Level Indicator	Shore platform
KwaZulu-Natal	Sea Level Indicator	Beach swash deposit
KwaZulu-Natal	Sea Level Indicator	Shore platform
KwaZulu-Natal	Sea Level Indicator	Shore platform

KwaZulu-Natal	Marine Limiting	The datapoint is a marine or terrestrial limiting indicator
KwaZulu-Natal	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
KwaZulu-Natal	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
KwaZulu-Natal	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
KwaZulu-Natal	Terrestrial Limiting	The datapoint is a marine or terrestrial limiting indicator
Eastern Cape	Sea Level Indicator	Lagoonal deposit

RSL indicator description	Elevation measurement technique	Elevation (m)
The dated snells are from a sandy deposit interpreted as lagoonal from the faunal content	Not reported	11
Shell from a lagoonal assemblage	Not reported	11
Beach deposit on marine terrace	Not reported	15
	Not reported	25
	Not reported	25
	Not reported	25
	Not reported	25
	Not reported	25
	Not reported	25
	Not reported	25
Fine-medium bioturbated sand with occasional marine shells	Not reported	5
Fine-medium bioturbated sand with marine shells overlain conformably by gravel storm beach	Not reported	6.5
Associated shoreface/foreshore contact provides concise elevation for MI W	Differential GPS	5.2
Associated shoreface/foreshore contact provides concise elevation for MI W	Differential GPS	5.2

Aeolianite	Differential GPS	7.2
Tidal inlet facies (dated) overlain by aeolian facies (also dated). Sea level determined by	Total station or Auto/hand level	6.5
Sedimentary facies indicative of tidal inlet depositional environment	Total station or Auto/hand level	4.5
Sandy beach berm on high energy coast	Total station or Auto/hand level	9
Sandy foreshore deposits overlying gravel foreshore	Total station or Auto/hand level	5.6
Lower part of tidal inlet unit	Total station or Auto/hand level	0.5
Aeolianite unit overlying tidal inlet facies apparently conformably	Total station or Auto/hand level	11.7
	Total station or Auto/hand level	6.5
Aeolianite overlying beach berm facies.	Total station or Auto/hand level	10.5
Footprint-bearing aeolianite pre-dating (underlying) beach deposit of NHN1	Not reported	4.5
Coarse grained cemented shelly beach facies	Not reported	4.25
Aeolianite overlying earlier beach facies and incised by later beach facies	Not reported	6
Submerged beachrock from continental shelf	Cross-section from publication	-17
Beachrock on continental shelf	Cross-section from publication	-44
Aeolianite	Not reported	-34

Aeolianite	Not reported	-33
Aeolianite	Not reported	-30
Aeolianite	Not reported	-30
Massive deposit of medium- to coarse sand, moderately	Total station or Auto/hand level	0
Aeolianite	Not reported	-35
Massive deposit of medium- to coarse sand, moderately	Not reported	-26
Upper shoreface- trough cross-bedded sands	Not reported	-17
Deposit of beach or surfzone	Not reported	-25
Aeolianite	Not reported	-38
Upper shoreface unit	Total station or Auto/hand level	3.5
Aeolianite	Total station or Auto/hand level	11.1
Aeolianite	Total station or Auto/hand level	23.5
Aeolianite	Total station or Auto/hand level	20.2
Aeolianite	Total station or Auto/hand level	13.3
Aeolianite	Total station or Auto/hand level	10.4

Aeolianite	Total station or Auto/hand level	9.5
Upper shoreface	Total station or Auto/hand level	6
Beach-surf zone facies	Total station or Auto/hand level	9
Beach-surf zone facies	Total station or Auto/hand level	9
Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	Total station or Auto/hand level	1.3
Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	Total station or Auto/hand level	1.3
Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	Total station or Auto/hand level	1.3
Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	Total station or Auto/hand level	1.3
Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	Total station or Auto/hand level	1.3
Elephant tusk in eroded pothole on wave-cut surface ca 6 m ASL. Tusk must post-date formation	Not reported	6
Transported oyster on shore platform in case at 4.5 m. regarded as contemporaneous by	Not reported	4.5
Oyster in situ on hardground/rock platform at 4 m.	Not reported	4
Contemporary oyster beach facies assemblage from subtidal through beachface to backbeach	Total station or Auto/hand level	6
An erosional surface cut into earlier (also presumed 5e) regressive shoreline and topped with	Total station or Auto/hand level	5
Shore platform at 4 m above adjacent contemporary shore platform	Differential GPS	4

Corals growing on erosional terrace	Total station or Auto/hand level	4
Aeolianite	Differential GPS	-15
Aeolianite	Differential GPS	-15
Aeolianite	Differential GPS	-16
Aeolianite	Differential GPS	-16
Shells from terrace at +6.7 m, deemed contemporary with a +8 m terrace upstream	Not reported	8

Elevation error (m)	Paleo water depth estimate (m)	Upper limit of living range (m)
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1

1

1

1

1

1

1

1

1

1

0.5

0.5

0.02

0.02

0.02

2

0.1

1

0.1

0.1

0.1

0.1

0.1

0.1

1.75

0.1

2

2

1

1

1

1

0.1

1

1

1

1

1

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.1

0.1

0.1

0.1

0.1

1

1

0.1

1

1

0.1

0.1

1

1

1

1

1

Lower limit of living range (m)	RWL	IR
	-0.5	3
	-0.5	3
	0	4
	-0.5	3
	-0.5	3
	-0.5	3
	-0.5	3
	-0.5	3
	-0.5	3
	-0.5	3
	-1	4
	-1	4
	-1	0
	-1	0

-1

0

-2

3

-2

3

1.75

0.5

0

6

-1.5

4

0

1

0

1

0

1

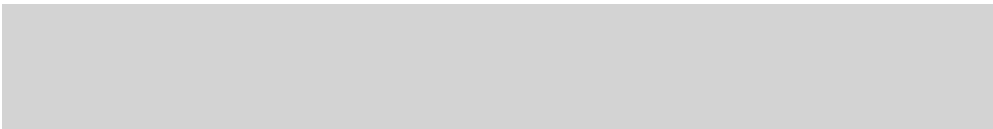


-1	4
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-1	4
----	---

-11.5	17
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-1	4
----	---





-1	4
-1	4

0 2

0 2

0 2

0 2

0 2



2.5 5

1	0
---	---

1.5 1

0	1
---	---

0 0



-1

4

Vertical datum	Paleo RSL (m)	Paleo RSL uncertainty (m)
Mean Sea Level / General definition	11.5	1.8
Mean Sea Level / General definition	11.5	1.8
Mean Sea Level / General definition	15	2.23
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	25.5	1.8
Mean Sea Level / General definition	6	2.06
Mean Sea Level / General definition	7.5	2.06
Mean Low Tide (MLT)	6.2	0.02
Mean Low Tide (MLT)	6.2	0.02

Mean Low Tide (MLT)	8.2	0.02
Mean Sea Level / General definition	8.5	2.5
Mean Sea Level / General definition	6.5	1.5
Mean Sea Level / General definition	7.25	1.03
Mean Sea Level / General definition	5.6	3
Mean Sea Level / General definition	2	2
Mean Sea Level / General definition		
Mean Sea Level / General definition		
Mean Sea Level / General definition		
Mean Sea Level / General definition		
Mean Sea Level / General definition	4.25	1.82
Mean Sea Level / General definition		
Mean Sea Level / General definition	-17	2.06
Mean Sea Level / General definition	-44	2.06
Mean Sea Level / General definition		

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

1

2

Mean Sea Level / General definition

Mean Sea Level / General definition

-25

2.23

Mean Sea Level / General definition

-5.5

8.55

Mean Sea Level / General definition

-24

2.23

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition

Mean Sea Level / General definition		
Mean Sea Level / General definition		
Mean Sea Level / General definition	10	2
Mean Sea Level / General definition	10	2
Mean Sea Level / General definition	1.3	1
Mean Sea Level / General definition	1.3	1
Mean Sea Level / General definition	1.3	1
Mean Sea Level / General definition	1.3	1
Mean Sea Level / General definition	1.3	1
Mean Sea Level / General definition		
Mean Sea Level / General definition	2	2.69
Mean Sea Level / General definition	3	0.1
Mean Sea Level / General definition	4.5	1.11
Mean Sea Level / General definition	5	1.11
Mean Sea Level / General definition	4	0.1

Mean Sea Level / General
definition

Mean Sea Level / General
definition

Mean Sea Level / General
definition

Mean Sea Level / General
definition

Mean Sea Level / General
definition

Mean Sea Level / General
definition

9

2.23

Dating technique	Timing constraint	Originally reported ID
U-Series	Equal to	AN57-1
U-Series	Equal to	AN57-2
U-Series	Equal to	AN40-2
Luminescence	Equal to	BNG10-6
Luminescence	Equal to	BNG10-7
Luminescence	Equal to	BNG10-8
Luminescence	Equal to	BNG10-9
Luminescence	Equal to	BNG10-10
Luminescence	Equal to	BNG10-11
Luminescence	Equal to	BNG10-12
Luminescence	Equal to	Sample1
Luminescence	Equal to	Sample2
Luminescence	Equal to	Dana7
Luminescence	Equal to	Dana6

Luminescence	Equal to	46882
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Luminescence	Equal to	UoW-234
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Luminescence	Equal to	SHFD07072
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Luminescence	Equal to	UOW-232
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Luminescence	Equal to	SHFD05019
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Luminescence	Equal to	SHFD04288
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Luminescence	Equal to	SHFD05038
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Luminescence	Equal to	UOW-235
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Luminescence	Equal to	UOW-233
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Luminescence	Equal to	NN1
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Luminescence	Equal to	NHN1
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Luminescence	Equal to	NHN2
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U-Series	Equal to	PTA-U-435
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U-Series	Equal to	PTA-U-487
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Luminescence	Equal to	HC30
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Luminescence Equal to HC26

Luminescence Equal to HC35

Luminescence Equal to HC36

Luminescence Equal to HCSH

Luminescence Equal to HC29

Luminescence Equal to HC40

Luminescence Equal to HC32

Luminescence Equal to HC39

Luminescence Equal to HC24

Luminescence Equal to 142833

Luminescence Equal to 142832

Luminescence Equal to 157206

Luminescence Equal to 157205

Luminescence Equal to 157204

Luminescence Equal to 157203

Luminescence	Equal to	157202
Luminescence	Equal to	142829
Luminescence	Equal to	142831
Luminescence	Equal to	142830
U-Series	Equal to	RB97-04
U-Series	Equal to	RB97-05
Luminescence	Equal to	RB97-01
Luminescence	Equal to	RB97-02
Luminescence	Equal to	RB97-03
U-Series	Older than	U415
U-Series	Equal to	PTA-U568
U-Series	Equal to	PTA-U565
Stratigraphic constraint	Younger than	Isipingo Formation on Durban Bluff
Stratigraphic constraint	Younger than	Isipingo Formation on Durban Bluff
Stratigraphic constraint	Younger than	Isipingo Formation on Durban Bluff

U-Series	Equal to	PTA-U565
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U-Series	Equal to	GC-4
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Luminescence	Equal to	GC-4
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U-Series	Equal to	GC-7
Luminescence	Equal to	GC-7

AAR	Equal to	PE-557
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Analysis ID	Material_type	Reported age (ka)
GI84-001-001	Mollusk or algae	
GI84-00-001	Mollusk or algae	
GI84-003-001	Mollusk or algae	
WA16-001-001	OSL	57.8
WA16-002-001	OSL	36.8
WA16-003-001	OSL	47
WA16-004-001	OSL	53.9
WA16-005-001	OSL	42.5
WA16-006-001	OSL	46.8
WA16-007-001	OSL	44.7
WA08-001-001	OSL	119
1	OSL	118
RO12-001-001	OSL	125
RO12-002-001	OSL	116

RO12-003-001	OSL	125
CA10-001-001	OSL	127
CA10-002-001	OSL	130
CA10-003-001	OSL	125
CA10-004-001	OSL	118
CA10-005-001	OSL	138
CA10-006-001	OSL	112
CA10-007-001	OSL	113
CA10-008-001	OSL	122
JA09-001-001	OSL	124.8
JA09-002-001	OSL	117.3
JA09-003-001	OSL	115.8
RA94-001-001	Mollusk or algae	
RA94-002-001	Mollusk or algae	
CA14-004-001	OSL	142

CA14-001-001	OSL	13.8
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CA14-005-001	OSL	134
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CA14-002-001	OSL	125
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CA14-003-001	OSL	122
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CA14-006-001	OSL	122
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CA14-007-001	OSL	117
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CA14-008-001	OSL	115
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CA14-009-001	OSL	103
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CA14-010-001	OSL	87
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CA18-007-001	OSL	116.1
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CA18-001-001	OSL	119.7
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CA18-002-001	OSL	118
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CA18-008-001	OSL	123.4
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CA18-009-001	OSL	135.4
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CA18-010-001	OSL	128.4
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CA18-011-001	OSL	128.1
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CA18-006-001	OSL	111.2
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CA18-003-001	OSL	124.3
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CA18-004-001	OSL	116.3
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RO97-001-001	Mollusk or algae	
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RO97-002-001	Mollusk or algae	
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RO97-001-001	IRSL	118
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RO97-002-001	TL	228
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RO97-003-001	IRSL	107
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RA93-001-001	Mollusk or algae	
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RA02-001-001	Mollusk or algae	
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RA02-002-001	Mollusk or algae	
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RA02-002-001

Mollusk or algae

BO12-001-001

Mollusk or algae

BO12-001-001

OSL

127

BO12-002-001

Mollusk or algae

BO12-002-001

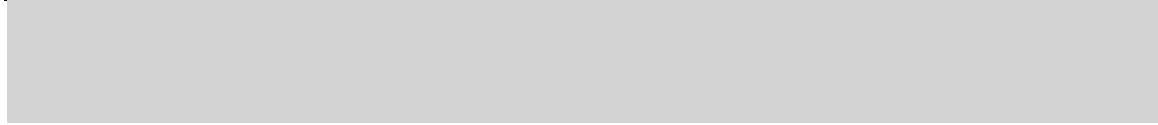
OSL

93

DA80-001-001

Estuarine mollusc

Reported age uncertainty (ka)	U-Series recalculated age (ka)	U-Series recalculate age uncertainty (ka)
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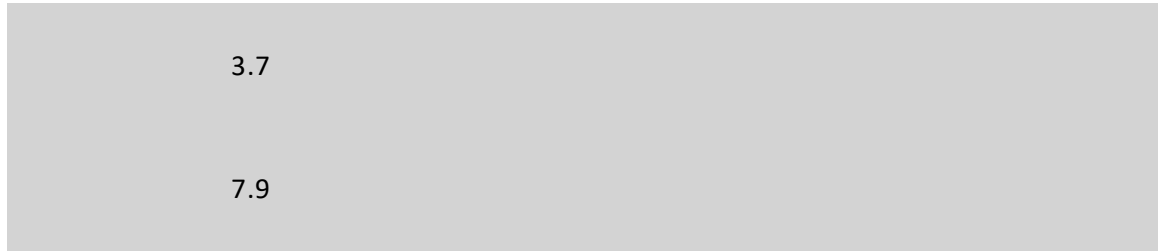


11.2

3.4

5.9

6.2



3.7

7.9

5.6



9

7



9

9

9

5.7

8.2

6.7

7.2

7.3

5.1

5.6

6.9

5.2

6.2

7.5

12

1.4

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12

15

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7.3

8.9

8.4

6.9

7.9

9.2

8.4

7.5

8.6

9.2

18

25

7



7



6

U-Series corrected age (speleothems, ka)	U-Series corrected age uncertainty (speleothems, ka)	Stratigraphy Upper Age (ka)
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	0	130
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130

		130
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57

57

57

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130



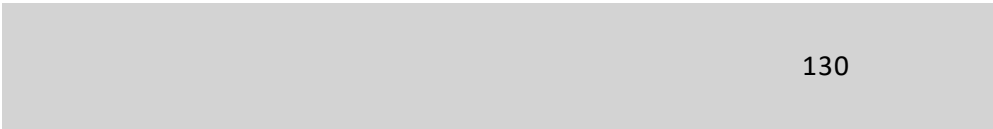
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130



130

130



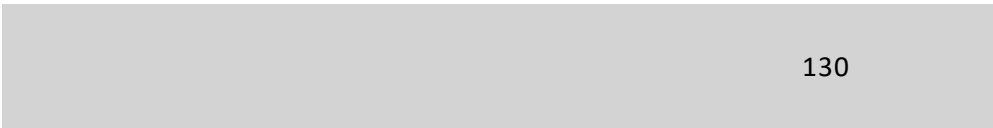
130

130



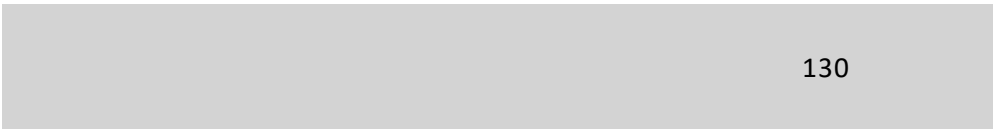
130

130



130

130



130

130





130



130

130

130

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130

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130

243

243

243

130

130

130

130

Stratigraphy Lower Age (ka)	MIS limit	Marine Isotopic Stage
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71	Equal to	MIS 5
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71	Equal to	MIS 5
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71	Equal to	MIS 5
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29	Equal to	MIS 3
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29	Equal to	MIS 3
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29	Equal to	MIS 3
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	Equal to	
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	Equal to	
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	Equal to	
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	Equal to	
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	Equal to	
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	Equal to	
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	Equal to	
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	Equal to	
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Equal to

71

Equal to

MIS 5

71

Equal to

MIS 5

71

Equal to

MIS 5

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MIS 5

71

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MIS 5

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MIS 7

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MIS 7

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Equal to

MIS 7

71

Equal to

MIS 5

71

Equal to

MIS 5

Equal to

71

Equal to

MIS 5

Equal to

71

Equal to

MIS 5

Quality of RSL information	Quality of age information	Reference(s)
2	1	Giresse et al., 1984
1	2	Giresse et al., 1984
1	1	Giresse et al., 1984
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Walker et al., 2016
3	4	Wang et al., 2008
3	4	Wang et al., 2008
0	0	Roberts, Karkanias et al., 2012
0	0	Roberts, Karkanias et al., 2012

0	0	Roberts, Karkanias et al., 2012
5	5	Carr et al., 2010
4	4	Carr et al., 2010
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3	4	Carr et al., 2010
4	4	Carr et al., 2010
1	4	Carr et al., 2010
1	4	Carr et al., 2010
1	4	Carr et al., 2010
1	4	Jacobs and Roberts, 2009
3	4	Jacobs and Roberts, 2009
1	4	Jacobs and Roberts, 2009
4	2	Ramsay, 1994
3	3	Ramsay, 1994
1	4	Cawthra 2014

1 4 Cawthra 2014

1 4 Cawthra 2014

1 4 Cawthra 2014

3 4 Cawthra 2014

1 4 Cawthra 2014

3 4 Cawthra 2014

2 4 Cawthra 2014

3 4 Cawthra 2014

1 4 Cawthra 2014

1 4 Cawthra et al., 2018

1 4 Cawthra et al., 2018

1 4 Cawthra et al., 2018

1 4 Cawthra et al., 2018

1 4 Cawthra et al., 2018

1 4 Cawthra et al., 2018

1	4	Cawthra et al., 2018
1	4	Cawthra et al., 2018
3	4	Cawthra et al., 2018
3	4	Cawthra et al., 2018
3	3	Roberts and Berger 1997
3	3	Roberts and Berger 1997
3	3	Roberts and Berger 1997
3	3	Roberts and Berger 1997
3	3	Roberts and Berger 1997
1	2	Ramsay et al. 1993
1	2	Ramsay and Cooper, 2002
2	3	Ramsay and Cooper, 2002 MR Cooper, 1999
4	1	Cooper and Flores, 1991 Porat and Botha, 2008
4	1	Cooper and Flores, 1991 Porat and Botha, 2008
4	1	Cooper and Green, 2016 Porat and Botha, 2008

1	1	Hobday, 1975 Ramsay, 1994 Ramsay and Cooper, 2002
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1	4	Bosman, 2012
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1	4	Bosman, 2012
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1	4	Bosman, 2012
1	4	Bosman, 2012

2	2	Davies, 1980
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Record Created by	Last Update
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Andrew Cooper	2020-04-08 05:16:22
Andrew Cooper	2020-04-08 05:16:28
Andrew Cooper	2020-04-08 05:16:37
Andrew Cooper	2020-04-08 05:16:37
Andrew Cooper	2020-04-08 05:16:37
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Andrew Cooper	2020-04-08 05:16:45
Andrew Cooper	2020-04-08 05:16:45
Andrew Cooper	2020-04-08 05:17:38
Andrew Cooper	2020-12-02 14:51:41
Andrew Cooper	2020-12-02 14:52:00
Andrew Cooper	2021-01-21 15:58:14
Andrew Cooper	2021-01-21 15:58:30

Andrew Cooper

2020-12-16 13:03:46

Andrew Cooper

2020-04-08 05:13:53

Andrew Cooper

2020-04-08 05:14:10

Andrew Cooper

2020-04-08 05:14:27

Andrew Cooper

2020-04-08 05:14:46

Andrew Cooper

2020-04-08 05:15:00

Andrew Cooper

2020-04-08 05:15:08

Andrew Cooper

2020-04-08 05:15:16

Andrew Cooper

2020-04-08 05:15:24

Andrew Cooper

2020-04-08 05:15:32

Andrew Cooper

2020-11-26 14:02:33

Andrew Cooper

2020-04-08 05:15:50

Andrew Cooper

2020-04-08 05:15:58

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2020-04-08 05:16:07

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2020-04-08 05:17:47

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2020-04-08 05:17:53

Andrew Cooper

2020-04-08 05:17:59

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2020-04-08 05:18:07

Andrew Cooper

2020-04-08 05:18:13

Andrew Cooper

2020-04-08 05:18:19

Andrew Cooper

2020-04-08 05:18:26

Andrew Cooper

2020-04-08 05:18:31

Andrew Cooper

2020-04-08 05:18:38

Andrew Cooper

2020-04-08 05:18:46

Andrew Cooper

2020-04-06 10:24:09

Andrew Cooper

2020-04-08 05:18:59

Andrew Cooper

2020-04-08 05:19:10

Andrew Cooper

2020-04-08 05:19:17

Andrew Cooper

2020-04-08 05:19:27

Andrew Cooper

2020-04-07 16:58:53

Andrew Cooper

2020-04-07 16:59:07

Andrew Cooper

2020-04-07 16:59:19

Andrew Cooper

2021-01-21 15:57:41

Andrew Cooper

2021-01-21 15:57:41

Andrew Cooper

2020-04-07 16:59:45

Andrew Cooper

2020-04-07 16:59:45

Andrew Cooper

2020-04-07 16:59:45

Andrew Cooper

2020-04-07 16:59:45

Andrew Cooper

2020-04-07 16:59:45

Andrew Cooper

2020-04-08 06:17:56

Andrew Cooper

2020-04-07 09:47:55

Andrew Cooper

2020-04-08 10:53:41

Andrew Cooper

2020-04-08 07:38:23

Andrew Cooper

2020-04-08 07:37:53

Andrew Cooper

2020-04-08 09:40:22

Andrew Cooper

2020-04-08 09:38:41

Andrew Cooper

2020-04-09 05:11:48

Andrew Cooper

2020-04-09 05:11:48

Andrew Cooper

2020-04-09 05:11:17

Andrew Cooper

2020-04-09 05:11:17

Andrew Cooper

2020-12-16 10:26:03

WALIS RSL ID	Is this datapoint public?	Site
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370	1	Benguela
371	1	Benguela
373	1	Benguela
377	1	Benguela
379	1	Benguela
372	1	Mossamedes
365	1	Nahoon Point
366	1	Nahoon Point
367	1	Nahoon Point
414	1	Coffee Bay
444	1	Swartkops Estuary Mouth
3435	0	East London
3436	0	East London
368	1	Sodwana Bay

369	1	Sodwana Bay
412	1	Durban Bluff
415	1	Phinda Game Reserve
417	1	Isipingo
418	1	Isipingo
420	1	Umdloti
421	1	Listers Point
422	1	Aliwal Shoal
423	1	Aliwal Shoal
356	1	Swartvlei
358	1	Swartvlei
359	1	Groot Brak Estuary Mouth
360	1	Cape Agulhas
361	1	Swartvlei
362	1	Swartvlei

363	1	Swartvlei
364	1	Groot Brak Estuary Mouth
389	1	Mossel Bay
390	1	Mossel Bay
391	1	Mossel Bay
392	1	Mossel Bay
393	1	Mossel Bay
394	1	Mossel Bay
395	1	Mossel Bay
396	1	Mossel Bay
397	1	Mossel Bay
398	1	Mossel Bay
399	1	Groot Brak Estuary Mouth
400	1	Groot Brak Estuary Mouth
401	1	Groot Brak Estuary Mouth

402	1	Groot Brak Estuary Mouth
403	1	Groot Brak Estuary Mouth
404	1	Groot Brak Estuary Mouth
405	1	Groot Brak Estuary Mouth
406	1	Groot Brak Estuary Mouth
407	1	Groot Brak Estuary Mouth
408	1	Langebaan
3437	0	Dana Bay
3438	0	Dana Bay
3439	0	Dana Bay

Subsite	Nation	Region
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Near Site Benguela A
(Walker et al. 2016)

Angola

Benguela

Near Site Benguela A
(Walker et al. 2016)

Angola

Benguela

Benguela A

Angola

Benguela

Site B

Angola

Benguela

Site C

Angola

Benguela

Angola

Namibe

Footprints site

South Africa

Eastern Cape

East Beach1

South Africa

Eastern Cape

East Beach

South Africa

Eastern Cape

South Africa

Eastern Cape

Deal Party

South Africa

Eastern Cape

Blind River

South Africa

Eastern Cape

Blind River2

South Africa

Eastern Cape

Two Mile Reef

South Africa

KwaZulu-Natal

Two Mile Reef 2	South Africa	KwaZulu-Natal
Reunion Rocks	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
	South Africa	KwaZulu-Natal
Estuary mouth 1	South Africa	Western Cape
Swartvlei estuary mouth 2	South Africa	Western Cape
	South Africa	Western Cape
	South Africa	Western Cape
Swartvlei Estuary Mouth 3	South Africa	Western Cape
Swartvlei Estuary Mouth 4	South Africa	Western Cape

Swartvlei Estuary mouth 5	South Africa	Western Cape
Groot Brak Estuary Mouth	South Africa	Western Cape
-34m	South Africa	Western Cape
-33m	South Africa	Western Cape
-30m	South Africa	Western Cape
-30m B	South Africa	Western Cape
Shoreline	South Africa	Western Cape
-35m	South Africa	Western Cape
-26m	South Africa	Western Cape
-17m	South Africa	Western Cape
-25m	South Africa	Western Cape
-38m	South Africa	Western Cape
Site A	South Africa	Western Cape
Site B	South Africa	Western Cape
Site C	South Africa	Western Cape

Site C	South Africa	Western Cape
Site C	South Africa	Western Cape
Site C	South Africa	Western Cape
Site C	South Africa	Western Cape
Site C	South Africa	Western Cape
Site B.	South Africa	Western Cape
Hominid footprint site	South Africa	Western Cape
	South Africa	Western Cape
1	South Africa	Western Cape
2	South Africa	Western Cape

Main reference	Additional references	Latitude (decimal degrees)
Giresse et al., 1984	N/A	-12.620277
Giresse et al., 1984	N/A	-12.620277
Walker et al., 2016	N/A	-12.61
Walker et al., 2016	N/A	-12.550833
Walker et al., 2016	N/A	-12.544166
Giresse et al., 1984	N/A	-15.133055
Jacobs and Roberts, 2009	N/A	-32.994722
Jacobs and Roberts, 2009	N/A	-33.006027
Jacobs and Roberts, 2009	N/A	-33.0225
Ramsay and Cooper, 2002	N/A	-31.987624
Davies, 1980	N/A	-33.87108
Wang et al., 2008	N/A	-33.006137
Wang et al., 2008	N/A	-33.006137
Ramsay, 1994	N/A	-27.50777

Ramsay, 1994	N/A	-27.50777
Ramsay et al. 1993	N/A	-29.98444
Ramsay and Cooper, 2002	MR Cooper, 1999	-27.878164
Cooper and Flores, 1991	N/A	-29.998439
Cooper and Flores, 1991	N/A	-29.998439
Cooper and Green, 2016	N/A	-29.666704
Hobday, 1975	Ramsay, 1994	-27.969495
Bosman, 2012	N/A	-30.25
Bosman, 2012	N/A	-30.25
Carr et al., 2010	N/A	-34.0325
Carr et al., 2010	N/A	-34.0325
Carr et al., 2010	N/A	-34.056111
Carr et al., 2010	N/A	-34.81722
Carr et al., 2010	N/A	-34.0325
Carr et al., 2010	N/A	-34.0325

Carr et al., 2010	N/A	-34.0325
Carr et al., 2010	N/A	-34.056111
Cawthra 2014	N/A	-34.088055
Cawthra 2014	N/A	-34.090833
Cawthra 2014	N/A	-34.083833
Cawthra 2014	N/A	-34.081666
Cawthra 2014	N/A	-34.064722
Cawthra 2014	N/A	-34.089444
Cawthra 2014	N/A	-34.073055
Cawthra 2014	N/A	-34.068888
Cawthra 2014	N/A	-34.078055
Cawthra 2014	N/A	-34.1025
Cawthra et al., 2018	N/A	-34.056388
Cawthra et al., 2018	N/A	-34.056111
Cawthra et al., 2018	N/A	-34.055833

Cawthra et al., 2018	N/A	-34.055833
Cawthra et al., 2018	N/A	-34.055833
Cawthra et al., 2018	N/A	-34.055833
Cawthra et al., 2018	N/A	-34.055833
Cawthra et al., 2018	N/A	-34.055833
Cawthra et al., 2018	N/A	-34.056111
Roberts and Berger 1997	N/A	-33.152777
Roberts, Karkanias et al., 2012	N/A	-34.205183
Roberts, Karkanias et al., 2012	N/A	-34.205183
Roberts, Karkanias et al., 2012	N/A	-34.205183

Longitude (decimal degrees)	Horizontal Positioning Technique	Is this a marine/terrestrial limiting record?
13.243611	Not Specified	Sea Level Indicator
13.243611	Not Specified	Sea Level Indicator
13.365	Not Specified	Sea Level Indicator
13.439722	Not Specified	Sea Level Indicator
13.463888	Not Specified	Sea Level Indicator
12.154722	Not Specified	Sea Level Indicator
27.95	Google Earth from publication map	Terrestrial Limiting
27.93131	Google Earth from publication map	Sea Level Indicator
27.9311	Google Earth from publication map	Terrestrial Limiting
29.152102	Not Specified	Sea Level Indicator
25.623122	Not Specified	Sea Level Indicator
27.925226	Google Earth from location name	Sea Level Indicator
27.925226	Google Earth from publication map	Sea Level Indicator
32.6975	Not Specified	Sea Level Indicator

32.6974	Not Specified	Sea Level Indicator
30.96545	Google Earth from location name	Terrestrial Limiting
32.3299	Not Specified	Sea Level Indicator
30.948873	Google Earth from publication map	Sea Level Indicator
30.948873	Google Earth from publication map	Sea Level Indicator
31.122319	Google Earth from publication map	Sea Level Indicator
32.384141	Not Specified	Marine Limiting
30.816667	Not Specified	Terrestrial Limiting
30.816667	Not Specified	Terrestrial Limiting
22.7978	Google Earth from publication map	Sea Level Indicator
22.7978	Not Specified	Sea Level Indicator
22.240555	Google Earth from location name	Sea Level Indicator
20.0275	Google Earth from publication map	Sea Level Indicator
22.7977	Google Earth from publication map	Sea Level Indicator
22.7977	Google Earth from location name	Terrestrial Limiting

22.7978	Google Earth from publication map	Terrestrial Limiting
22.24055	Google Earth from location name	Terrestrial Limiting
22.26111	Not Specified	Terrestrial Limiting
22.2475	Not Specified	Terrestrial Limiting
22.253611	Not Specified	Terrestrial Limiting
22.2575	Not Specified	Terrestrial Limiting
22.208888	Not Specified	Sea Level Indicator
22.263888	Not Specified	Terrestrial Limiting
22.26222	Not Specified	Sea Level Indicator
22.257777	Not Specified	Sea Level Indicator
22.253611	Google Earth from publication map	Sea Level Indicator
22.256388	Not Specified	Terrestrial Limiting
22.239722	Not Specified	Marine Limiting
22.240558	Not Specified	Terrestrial Limiting
22.246388	Not Specified	Terrestrial Limiting

22.246388	Not Specified	Terrestrial Limiting
22.246388	Not Specified	Terrestrial Limiting
22.246388	Not Specified	Terrestrial Limiting
22.246388	Not Specified	Terrestrial Limiting
22.246388	Not Specified	Marine Limiting
22.240555	Not Specified	Sea Level Indicator
18.038333	Not Specified	Sea Level Indicator
22.049697	Differential GPS	Sea Level Indicator
22.049697	Differential GPS	Sea Level Indicator
22.049697	Differential GPS	Terrestrial Limiting

Type of RSL Indicator	Indicator description	Upper limit of modern analog (m)
Lagoonal deposit	The dated shells are from a sandy deposit interpreted as lagoonal from the faunal content	1
Lagoonal deposit	Shell from a lagoonal assemblage	1
Lagoonal deposit		1
Lagoonal deposit		1
Lagoonal deposit		1
Beach deposit or beachrock	Beach deposit on marine terrace	2
The datapoint is a marine or terrestrial limiting indicator	Footprint-bearing aeolianite pre-dating (underlying) beach deposit of NHH1	
Beach deposit or beachrock	Coarse grained cemented shelly beach facies	0.5
The datapoint is a marine or terrestrial limiting indicator	Aeolianite overlying earlier beach facies and incised by later beach transported oyster on shore platform in case at 4.5 m. regarded as contemporaneous by shells from terrace at +6.7 m, deemed contemporary with a +8 m terrace upstream	
Shore platform		5
Lagoonal deposit		1
Lagoonal deposit	Fine-medium bioturbated sand with occasional marine shells	1
Lagoonal deposit	Fine-medium bioturbated sand with marine shells overlain conformably by gravel storm beach	1
Beach deposit or beachrock	Submerged beachrock from continental shelf	0.5

Beach deposit or beachrock	Beachrock on continental shelf	0.5
The datapoint is a marine or terrestrial limiting indicator	Elephant tusk in eroded pothole on wave-cut surface ca 6 m ASL. Tusk must post-date formation of oyster in situ on hardground/rock platform at 4 m.	1
Shore platform	Contemporary oyster beach facies assemblage from subtidal through beachface to backbeach	2
Beach swash deposit	An erosional surface cut into earlier (also presumed 5e) regressive shoreline and topped with shore platform at 4m	0.5
Shore platform	above adjacent contemporary shore platform	0
The datapoint is a marine or terrestrial limiting indicator	Corals growing on erosional terrace	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
Tidal inlet facies (Western Cape, South Africa)	Tidal inlet facies (dated) overlain by aeolian facies (also dated). Sea level determined by sedimentary facies indicative of tidal inlet depositional environment	-0.5
Tidal inlet facies (Western Cape, South Africa)		-0.5
Beach swash deposit	Sandy beach berm on high energy coast	2
Foreshore deposits	Sandy foreshore deposits overlying gravel foreshore	3
Tidal inlet facies (Western Cape, South Africa)	Lower part of tidal inlet unit	0.5
The datapoint is a marine or terrestrial limiting indicator	Aeolianite unit overlying tidal inlet facies apparently conformably	

The datapoint is a marine or terrestrial limiting indicator		
The datapoint is a marine or terrestrial limiting indicator	Aeolianite overlying beach berm facies.	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
Foreshore deposits	massive deposit or medium- to coarse sand, moderately	1
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
Foreshore deposits	massive deposit or medium- to coarse sand, moderately	1
Foreshore deposits	Upper shoreface- trough cross-bedded sands	-3
Foreshore deposits	Deposit of beach or surfzone	1
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	
Foreshore deposits	Upper shoreface unit	
Foreshore deposits	Aeolianite	
Foreshore deposits	Aeolianite	

Foreshore deposits	Aeolianite	
Foreshore deposits	Aeolianite	
Foreshore deposits	Aeolianite	
Foreshore deposits	Aeolianite	
Foreshore deposits	Upper shoreface	
Shoreface/foreshore contact	Beach-surf zone facies	1
Lagoonal deposit	Marginal lagoonal deposit with contemporaneous aeolian deposits adjacent	1
	ASSOCIATED	
Shoreface/foreshore contact	shoreface/foreshore contact provides concise elevation for MI W	-1
	ASSOCIATED	
Shoreface/foreshore contact	shoreface/foreshore contact provides concise elevation for MI W	-1
The datapoint is a marine or terrestrial limiting indicator	Aeolianite	-1

Lower limit of modern analog (m)	Quantification of indicative meaning	Sea level datum
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
-2	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
-0.5	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
0	Modern analog data	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-0.5	Modern analog data	Mean Sea Level / General definition

-0.5	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
1	Modern analog data	Mean Sea Level / General definition
1	Modern analog data	Mean Sea Level / General definition
-0.5	Modern analog data	Mean Sea Level / General definition
0	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
-3.5	Modern analog data	Mean Sea Level / General definition
-3.5	Modern analog data	Mean Sea Level / General definition
1.5	Modern analog data	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-3.5	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition

	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-20	Modern analog data	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition

	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
	N/A	Mean Sea Level / General definition
-3	Modern analog data	Mean Sea Level / General definition
-1	Modern analog data	Mean Sea Level / General definition
-1	Modern analog data	Mean Low Tide (MLT)
-1	Modern analog data	Mean Low Tide (MLT)
-1	Modern analog data	Mean Low Tide (MLT)

Elevation measurement technique	Do you want to insert upper and lower elevation limits?	Upper elevation of indicator (m)
Not reported	Yes	12
Not reported	Yes	12
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	Yes	6
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Not reported	No	
Cross-section from publication	No	

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Not reported No

Not reported No

Not reported No

Not reported No

Total station or
Auto/hand level No

Not reported No

Not reported No

Not reported No

Not reported No

Not reported No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Total station or
Auto/hand level No

Differential GPS No

Differential GPS No

Differential GPS No

Lower elevation of indicator (m)	Upper/Lower elevation measurement error (1-sigma) (m)	RSL indicator elevation (m)
----------------------------------	---	-----------------------------

10

11

10

11

25

25

25

15

4.5

2.5

4.25

6

4.5

8

5

6.5

-17

-44

6

4

6

5

4

4

-15

-16

6.5

4.5

9

5.6

0.5

11.7

6.5

10.5

-34

-33

-30

-30

0

-35

-26

-17

-25

-38

3.5

11.1

23.5

20.2

13.3

10.4

9.5

6

9

1.3

5.2

5.2

7.2

RSL indicator elevation error (m)	Notes on elevation and indicative range	Reference Water Level (m)
-----------------------------------	---	---------------------------

1		-0.5
---	--	------

1		-0.5
---	--	------

1		-0.5
---	--	------

1		-0.5
---	--	------

1		-0.5
---	--	------

1		0
---	--	---

0.1		
-----	--	--

1.75		0
------	--	---

0.1	elevation is of contact between littoral (beachrock) and aeolianite units	
-----	--	--

1		2.5
---	--	-----

1		-1
---	--	----

0.5	estimated measurement error	-1
-----	--------------------------------	----

0.5	estimated measurement error	-1
-----	--------------------------------	----

2		0
---	--	---

2		0
1		
0.1		1
1	comparison to modern beachface-backbeach elevation	1.5
1	comparison to modern erosional platforms in KwaZulu-Natal	0
0.1	ancient potholed platform adjacent to contemporary equivalent	0
0.1		
1		
1		
2	This elevation marks the peak of the transgression	-2
0.1		-2
1		1.75
0.1		0
0.1	Lowermost section of tidal inlet unit	-1.5
0.1		

0.1

0.1

1

1

1

1

0.1

-1

1

1

-1

1

-11.5

1

-1

1

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

0.05

-1

0.1

0

0.02

Levelled to Land levelling
datum

-1

0.02

Levelled to Land levelling
datum

-1

0.02

Levelled to Land levelling
datum

-1

Indicative Range (m)	Paleo Relative Sea Level (m)	Paleo Relative Sea Level Uncertainty (m)
----------------------	------------------------------	--

3	11.5	1.8
3	11.5	1.8
3	25.5	1.8
3	25.5	1.8
3	25.5	1.8
4	15	2.23
1	4.25	1.82
5	2	2.69
4	9	2.23
4	6	2.06
4	7.5	2.06
1	-17	2.06

1	-44	2.06
0	3	0.1
1	4.5	1.11
1	5	1.11
0	4	0.1
3	8.5	2.5
3	6.5	1.5
0.5	7.25	1.03
6	5.6	3
4	2	2

4	1	2
4	-25	2.23
17	-5.5	8.55
4	-24	2.23

4	10	2
2	1.3	1
0	6.2	0.02
0	6.2	0.02
0	8.2	0.02

Is data on vertical land movements (independent from the sea level record) available?	Tectonic category	Comments on tectonic category
--	--------------------------	--------------------------------------

No

No

No

No

No

No

No

No

No

No

No

No

No

No

No

No

No

No

No

Published VLM rate (m/ky)	Published VLM rate uncertainty (m/ky)	Interpreted VLM rate (m/ky)
--------------------------------------	--	--

Interpreted VLM rate (m/ky) uncertainty	Comments on VLM rates	Age attribution
--	-----------------------	-----------------

U-Series

U-Series

Luminescence

Luminescence

Luminescence

U-Series

Luminescence

Luminescence

Luminescence

U-Series

Amino Acid Racemization

Luminescence

Luminescence

U-Series

U-Series

U-Series

U-Series

Chronostratigraphy

Chronostratigraphy

Chronostratigraphy

U-Series

U-Series
Luminescence

U-Series
Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

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Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

Luminescence

U-Series
Luminescence

Luminescence

Luminescence

Luminescence

U-Series constraint	U-series age IDs	AAR constraint
---------------------	------------------	----------------

Equal to GI84-001-001

Equal to GI84-00-001

Equal to GI84-003-001

Equal to RA02-001-001

Equal to

Equal to

Equal to

Equal to

Equal to

Equal to RA94-001-001

Equal to RA94-002-001

Older than RA93-001-001

Equal to RA02-002-001

Equal to RA02-002-001

Equal to BO12-001-001

Equal to BO12-002-001

Equal to

RO97-001-001
RO97-002-001

Equal to

Equal to

Equal to

Equal to

Equal to

Equal to

Amino Acid Racemization age IDs	ESR constraint	Electro Spin Resonance age IDs
--	-----------------------	---

DA80-001-001

Equal to

Equal to

Equal to

Equal to

Equal to

Luminescence constraint	Luminescence age IDs	Stratigraphic constraint
-------------------------	----------------------	--------------------------

Equal to WA16-004-001
WA16-003-001
WA16-002-001
WA16-001-001

Equal to WA16-006-001
WA16-005-001

Equal to WA16-007-001

Equal to JA09-001-001

Equal to JA09-002-001

Equal to JA09-003-001

Equal to WA08-001-001

Equal to 1

Younger than

Younger than

Younger than

Equal to BO12-001-001

Equal to BO12-002-001

Equal to CA10-001-001

CA10-002-001

Equal to CA10-003-001

Equal to CA10-004-001

Equal to CA10-005-001

Equal to CA10-006-001

Equal to CA10-007-001

Equal to CA10-008-001

Equal to CA14-004-001

Equal to CA14-001-001

Equal to CA14-005-001

Equal to CA14-002-001

Equal to CA14-003-001

Equal to CA14-006-001

Equal to CA14-007-001

Equal to CA14-008-001

Equal to CA14-009-001

Equal to CA14-010-001

Equal to CA18-007-001

Equal to CA18-001-001

Equal to CA18-002-001

Equal to CA18-008-001

Equal to CA18-009-001

Equal to CA18-010-001

Equal to CA18-011-001

Equal to CA18-006-001

Equal to CA18-003-001
CA18-004-001

Equal to RO97-003-001
RO97-002-001
RO97-001-001

Equal to RO12-001-001

Equal to RO12-002-001

Equal to RO12-003-001

Stratigraphic context/age IDs	Other age constraint	Other age constraints IDs
--	-----------------------------	----------------------------------

Equal to

Equal to

Isipingo Formation on
Durban Bluff

Isipingo Formation on
Durban Bluff

Isipingo Formation on
Durban Bluff

Equal to

Equal to

Equal to

Quality of RSL data	Quality of age information	Quality notes
---------------------	----------------------------	---------------

2	1	These dates are inconsistent with later OSL dates from higher elevations
1	2	
3	4	
3	4	
3	4	
1	1	
1	4	
3	4	
1	4	
1	2	
2	2	
3	4	uncertainty in indicative meaning but stratigraphically consistent OSL date
3	4	uncertainty in indicative meaning of estuary deposits. Good quality modern date
4	2	

3	3
1	2
2	3
4	1
4	1
4	1
1	1
1	4
1	4
5	5
4	4
3	4
3	4
4	4
1	4

Terrestrial limiting date
only

1 4

1 4

1 4

1 4

1 4

1 4

3 4

1 4

3 4

2 4

3 4

1 4

1 4

1 4

1 4

1	4
1	4
1	4
1	4
1	4
3	4
3	3
0	0
0	0
0	0

Record created by	Record updated by	Last Update
-------------------	-------------------	-------------

Andrew Cooper	Andrew Cooper	2020-04-08 05:16:15
Andrew Cooper	Andrew Cooper	2020-04-08 05:16:22
Andrew Cooper	Andrew Cooper	2020-04-08 05:16:37
Andrew Cooper	Andrew Cooper	2020-04-08 05:16:45
Andrew Cooper	Andrew Cooper	2020-04-08 05:17:38
Andrew Cooper	Andrew Cooper	2020-04-08 05:16:28
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:32
Andrew Cooper	Andrew Cooper	2020-11-26 14:02:33
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:50
Andrew Cooper		2020-04-07 09:47:55
Andrew Cooper	WALIS Admin	2020-12-16 10:26:03
Andrew Cooper	Andrew Cooper	2020-12-02 14:51:41
Andrew Cooper	Andrew Cooper	2020-12-02 14:52:00
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:58

Andrew Cooper	Andrew Cooper	2020-04-08 05:16:07
Andrew Cooper	Andrew Cooper	2020-04-08 06:17:56
Andrew Cooper	Andrew Cooper	2020-04-08 10:53:41
Andrew Cooper	Andrew Cooper	2020-04-08 07:38:23
Andrew Cooper	Andrew Cooper	2020-04-08 07:37:53
Andrew Cooper	Andrew Cooper	2020-04-08 09:40:22
Andrew Cooper	Andrew Cooper	2020-04-08 09:38:41
Andrew Cooper	Andrew Cooper	2020-04-09 05:11:48
Andrew Cooper	Andrew Cooper	2020-04-09 05:11:17
Andrew Cooper	Andrew Cooper	2020-04-08 05:13:53
Andrew Cooper	Andrew Cooper	2020-04-08 05:14:10
Andrew Cooper	Andrew Cooper	2020-04-08 05:14:27
Andrew Cooper	Andrew Cooper	2020-04-08 05:14:46
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:00
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:08

Andrew Cooper	Andrew Cooper	2020-04-08 05:15:16
Andrew Cooper	Andrew Cooper	2020-04-08 05:15:24
Andrew Cooper	Andrew Cooper	2020-04-08 05:17:47
Andrew Cooper	Andrew Cooper	2020-04-08 05:17:53
Andrew Cooper	Andrew Cooper	2020-04-08 05:17:59
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:07
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:13
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:19
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:26
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:31
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:38
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:46
Andrew Cooper	Andrew Cooper	2020-04-06 10:24:09
Andrew Cooper	Andrew Cooper	2020-04-08 05:18:59
Andrew Cooper	Andrew Cooper	2020-04-08 05:19:10

Andrew Cooper	Andrew Cooper	2020-04-08 05:19:17
Andrew Cooper	Andrew Cooper	2020-04-08 05:19:27
Andrew Cooper	Andrew Cooper	2020-04-07 16:58:53
Andrew Cooper	Andrew Cooper	2020-04-07 16:59:07
Andrew Cooper	Andrew Cooper	2020-04-07 16:59:19
Andrew Cooper	WALIS Admin	2021-01-21 15:57:41
Andrew Cooper	Andrew Cooper	2020-04-07 16:59:45
Andrew Cooper	WALIS Admin	2021-01-21 15:58:14
Andrew Cooper	WALIS Admin	2021-01-21 15:58:30
Andrew Cooper	WALIS Admin	2020-12-16 13:03:46

11

29

30

15

14

36

0

32

Name of RSL indicator

Beach deposit or beachrock

Beach swash deposit

Foreshore deposits

Lagoonal deposit

Shore platform

Shoreface/foreshore contact

The datapoint is a marine or terrestrial limiting indicator

Tidal inlet facies (Western Cape, South Africa)

Description of RSL indicator

Definition by Mauz et al., 2015: "Beachrocks are lithified coastal deposits that are organized in sequences of slabs with seaward inclination generally between 5° and 15°". Definition of indicative meaning from Rovere et al., 2016.

part of the beach face located between mean sea level and foredune

Beach deposits characterized by a horizontal or gentle seaward-dipping lamination.

Lagoonal deposits consist of silty and/or clayey sediments, horizontally laminated (Zecchin et al., 2004) and associated with fossils of brackish or marine water fauna. Definition of indicative meaning from Rovere et al., 2016.

Kennedy, 2015 defines shore platforms as "sub-horizontal rocky surfaces that interrupt vertical cliffs at or near sea-level". Definition of indicative meaning adapted by Rovere et al., 2016 from Kennedy, 2015.

Highest elevation of contact between cross-bedded gravelly shoreface sands and planar bedded, gently seaward dipping, foreshore sands,. Occurs at MLW.

See detailed indicator description

Coarse-grained, thickly bedded, trough cross bedding, herringbone cross bedding, multiple scours, Ophiomorpha and Skolithos trace fossils.

Description of RWL

$(\text{Ordinary berm} + \text{breaking depth}) / 2$

$(\text{Upper limit} + \text{Lower limit}) / 2$
Upper limit = spring tidal range / 2 or MHHW
Lower limit = MSL

$(\text{MHHW to MLLW}) / 2$

$(\text{MLLW} + \text{modern Lagoon depth}) / 2$

$[\text{Mean Higher High Water} + (\text{Breaking depth} - \text{MLLW}) / 2] / 2$

The indicator marks exactly Mean Low Water

No RWL Available

Midpoint of the Indicative range

Description of IR

Ordinary berm - breaking depth

(Upper limit - Lower limit)

Upper limit = spring tidal range / 2 or MHHW

Lower limit = MSL

MHHW to MLLW

MLLW to modern Lagoon depth

Mean Higher High Water - (Breaking depth-MLLW)/2

As the indicator is reported to mark exactly the MLW, the IR is zero.

No IR available

-0.5m to -3.5m with respect to MSL

Indicator reference(s)

Mauz et al., 2015
Rovere et al., 2016

Rovere et al., 2016
Zecchin et al., 2004

Kennedy, 2015
Rovere et al., 2016

Roberts, Karkanis et al., 2012

Carr et al., 2010

Record created by

Alessio Rovere

Deirdre Ryan

Alessio Rovere

Alessio Rovere

Alessio Rovere

Andrew Cooper

Andrew Cooper

Record updated by

WALIS Admin

WALIS Admin

Alessio Rovere

WALIS Admin

Alessio Rovere

WALIS Admin

WALIS Admin

WALIS Admin

Last Update

2021-01-05

2021-01-05

2020-04-19

2021-01-05

2020-04-19

2021-01-21

2020-04-02

2020-12-16

WALIS ElevMeas ID

14

8

7

9

Measurement technique

Cross-section from publication

Differential GPS

Not reported

Total station or Auto/hand level

Description

The elevation was extracted from a published sketch/topographic section.

GPS positions acquired in the field and corrected either in real time or during post-processing with respect to the known position of a base station or a geostationary satellite system (e.g. Omnistar). Accuracy depends on satellite signal strength, distance from base station, and number of static positions acquired at the same location

The elevation measurement technique was not reported, most probably hand level or metered tape.

Total stations or levels measure slope distances from the instrument to a particular point and triangulate relative to the XYZ coordinates of the base station. The accuracy of this process depends on how well defined the reference point and on the distance of the surveyed point from the base station. Thus, it is necessary to benchmark the reference station with a nearby tidal

Typical accuracy

Variable, depending on the scale of the sketch or topographic section.

$\pm 0.02/\pm 0.08$ m, depending on survey conditions and instruments used (e.g., single-band vs dual-band receivers)

20% of the original elevation reported added in root mean square to the sea level datum error

$\pm 0.1/\pm 0.2$ m for total station
 $\pm 0.2/\pm 0.4$ m for hand level

Record created by

Alessio Rovere

Alessio Rovere

Alessio Rovere

Alessio Rovere

Record updated by

Alessio Rovere

Alessio Rovere

Alessio Rovere

Last Update

2020-04-19 14:13:26

2020-04-19 14:10:31

2020-01-31 11:06:03

2019-04-04 04:49:38

WALIS GeoPos ID

12

9

4

1

Measurement technique

Differential GPS

Google Earth from location name

Google Earth from publication map

Not Specified

Description

GPS receiving differential corrections from satellite or on-land base stations.

The location name was geocoded in Google Earth.

Location data is presented in a map within the publication, coordinates were extracted by georeferencing the map into Google Earth and digitizing points of interest.

The original study does not specify how the location of sites/samples was measured.

Typical accuracy

Few centimeters, depending on accuracy.

Depending on how precise is the Google Earth geocoding.

Up to tens of meters, depending on how precise is the originally published map.

Not available or not reported

Record created by

Alessio Rovere

Alessio Rovere

Alessio Rovere

Alessio Rovere

Record updated by

Alessio Rovere

Alessio Rovere

Alessio Rovere

Alessio Rovere

Last Update

2020-05-08 03:23:48

2020-04-19 13:51:23

2020-04-19 13:50:54

2020-04-19 14:02:33

17

1

13

Datum name

Mean Low Tide (MLT)

Mean Sea Level / General definition

Not reported

Datum description

From tideschart.com: "The Mean Low Tide (or Mean Low Water) is the average height of all low tides in a given place, deriving from a long series of observations (NTDE) of all levels of low tide in that spot."

General definition of MSL, with no indications on the datum to which it is referred to.

The sea level datum is not reported and impossible to derive from metadata.

Datum uncertainty

Depends

A datum uncertainty may be established on a case-by-case basis.

N/A

Reference(s)

Record created by

Alessio Rovere

Alessio Rovere

Alessio Rovere

Record updated by

Alessio Rovere

Last Update

2020-04-07 14:33:32

2020-04-19 14:25:12

2020-04-07 14:27:03

WALIS U-Series ID	Is this datapoint public?	Material type
1684	0	Mollusk or algae
1685	0	Mollusk or algae
793	0	Mollusk or algae
792	0	Mollusk or algae
794	0	Mollusk or algae
1682	0	Mollusk or algae
1683	0	Mollusk or algae
1681	0	Mollusk or algae
790	0	Mollusk or algae
791	0	Mollusk or algae
806	0	Mollusk or algae
808	0	Mollusk or algae

Details on dated material	Type of spectrometry	Reference(s)
Aeolianite cement	Mass spectrometer	Bosman, 2012
Aeolianite cement	Mass spectrometer	Bosman, 2012
	Alpha	Giresse et al., 1984
	Alpha	Giresse et al., 1984
	Alpha	Giresse et al., 1984
Oyster shell (transported)	Alpha	Ramsay and Cooper, 2002
Oyster on hardground/rock	Alpha	Ramsay and Cooper, 2002
Elephant tusk in pothole on marine terrace	Alpha	Ramsay et al. 1993
Beachrock	Mass spectrometer	Ramsay, 1994
Beachrock	Mass spectrometer	Ramsay, 1994
Hominid footprint- bearing lagoonal sediments	Alpha	Roberts and Berger 1997
Hominid footprint- bearing lagoonal sediments	Alpha	Roberts and Berger 1997

IGSN	Sample ID	Analysis ID
------	-----------	-------------

BO12-001 BO12-001-001

BO12-002 BO12-002-001

GI84-002 GI84-00-001

GI84-001 GI84-001-001

GI84-003 GI84-003-001

RA02-001 RA02-001-001

RA02-002 RA02-002-001

RA93-001 RA93-001-001

RA94-001 RA94-001-001

RA94-002 RA94-002-001

RO97-001 RO97-001-001

RO97-002 RO97-002-001

Reported ID	Date of analysis	Accepted?
-------------	------------------	-----------

GC-4

Yes

GC-7

Yes

AN57-2

Yes

AN57-1

Yes

AN40-2

Yes

PTA-U568

Yes

PTA-U565

Yes

U415

Yes

PTA-U-435

Yes

PTA-U-487

Yes

RB97-04

Yes

RB97-05

Yes

Reason for rejection	Screening	Latitude (decimal degrees)
----------------------	-----------	----------------------------

-30.25

-30.25

-12.620277

-12.620277

-15.133055

-31.987624

-27.878164

-29.98444

-27.50777

-27.50777

-33.152777

-33.152777

Longitude (decimal degrees)	Reported Latitude	Reported Longitude
-----------------------------	-------------------	--------------------

30.816667

30.816667

13.243611

13.243611

12.154722

29.152102

32.3299

30.96545

32.6975

32.6974

18.038333

18.038333

Are Lat/Long estimated?	Comments on geographic coordinates	Original elevation datum used
-------------------------	------------------------------------	-------------------------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
-----	--	--------------

Yes		Not reported
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Yes		Not reported
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Yes		Not reported
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		Not reported
--	--	--------------

Yes		Not reported
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Elevation measurement method	Reported elevation (m)	Reported elevation uncertainty (m)
Not reported	-15	1
Not reported	-16	1
Not reported	10-12	N/A
Not reported	10-12	N/A
Not reported	15	N/A
Not reported	4.5	1
Not reported	4	0.1
Not reported	6	1
Cross-section from publication	-17	N/A
Not reported	-44	2
Not reported	1.7	0.1
Not reported	1.7	0.1

Elevation above MSL (m)	Elevation uncertainty used (m)	Elevation comments
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	Tusk was in a pothole on a wave-cut surface in aeolianite. It post-dates
N/A	N/A	
N/A	N/A	
N/A	N/A	
N/A	N/A	

Terrace ID	Facies description	Reported as in situ?
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No

Beachrock

Reported as in growth position?	Taxa information (as reported)	Family
--	---------------------------------------	---------------

Genus	Species	Pa/Th age?
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Yes

Yes

No

No

14C age?	Instrument	Decay constants
----------	------------	-----------------

TIMS

No Info

TIMS

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

Not reported

No Info

No

Not reported

No Info

No

Not reported

No Info

Comments on decay constants	Calibration method for $^{230}\text{Th}/^{238}\text{U}$ ratio	Calibration method for $^{234}\text{U}/^{238}\text{U}$ ratio
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SE

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Comments on spike calibration	Published % calcite	Interpreted % calcite
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[230Th/232Th]ACT backcalculated?	[232Th/238U]ACT backcalculated?	[230Th/238U]ACT backcalculated?
---	--	--

[²³⁴ Th/ ²³⁸ U]ACT backcalculated?	[²³² Th] (ppb)	[²³² Th] (ppb) uncertainty (±2σ)
--	----------------------------	---

[238U] (ppm)	[238U] (ppm) uncertainty ($\pm 2\sigma$)	Atomic ratio ($^{232}\text{Th}/^{238}\text{U}$)* 10^5
--------------	---	--

Initial $^{230}\text{Th}/^{232}\text{Th}$	$[^{230}\text{Th}/^{232}\text{Th}]_{\text{ACT}}$	$[^{230}\text{Th}/^{232}\text{Th}]_{\text{ACT}}$ uncertainty ($\pm 2\sigma$)
---	--	---

[²³² Th/ ²³⁸ U]ACT	[²³² Th/ ²³⁸ U]ACT uncertainty ($\pm 2\sigma$)	[²³⁰ Th/ ²³⁴ U]ACT
---	--	---

[²³⁰Th/²³⁴U]ACT uncertainty ($\pm 2\sigma$)	Reference material name for ²³⁰Th/²³⁸U	Reference material name for ²³⁴U/²³⁸U
---	---	--

Correction factor for $^{230}\text{Th}/^{238}\text{U}$	Correction factor for $^{230}\text{Th}/^{238}\text{U}$ uncertainty ($\pm 2\sigma$)	Correction factor for $^{234}\text{U}/^{238}\text{U}$
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Correction factor for 234U/238U uncertainty ($\pm 2\sigma$)	Comments	Recalculated [230Th/238U]ACT
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Recalculated [²³⁰ Th/ ²³⁸ U]ACT uncertainty ($\pm 2\sigma$)	Recalculated [²³⁴ U/ ²³⁸ U]ACT	Recalculated [²³⁴ U/ ²³⁸ U]ACT uncertainty ($\pm 2\sigma$)
--	--	---

Age is Older/Equal/Younger than	Marine Isotopic Stage	Age determination
Equal to	MIS 5	U series age = 121785. Error 6812
Equal to	MIS 5	U series age = 90520. Error 2658
Equal to	MIS 5	Th date = 107+/- 6 ka
Equal to	MIS 5	Pa date = 136+28, -17 Th Age is 92+/-3 ka
Equal to	MIS 5	Pa age is 91+/-6 ka Th age = 133 +/- 10 ka
Equal to	MIS 5	Pa Age = 174 +x - 80
Equal to	MIS 5	Oyster shell deposited on top of 4.5 m terrace in cave. Regarded as near
Equal to	MIS 5	U/Th = 95.7 +/- 4 ka
Equal to	MIS 5	Age = 112+/- 23 ka
Equal to	MIS 5	84,000 +/- 3000
Equal to	MIS 5	117,000 +/- 7000
Equal to	MIS 5	U/Th = 103 +/- 7 ka
Equal to	MIS 5	U/Th= 102+/- 7 ka

Record created by	Record updated by	Last Update
Andrew Cooper	WALIS Admin	2020-12-16 11:03:02
Andrew Cooper	WALIS Admin	2020-12-16 11:03:21
Andrew Cooper	WALIS Admin	2020-12-16 11:01:49
Andrew Cooper	WALIS Admin	2020-12-16 11:01:12
Andrew Cooper	WALIS Admin	2020-12-16 11:02:09
Andrew Cooper	WALIS Admin	2020-12-16 11:05:22
Andrew Cooper	Andrew Cooper	2020-12-16 11:05:48
Andrew Cooper	Andrew Cooper	2020-12-16 11:07:49
Andrew Cooper	Andrew Cooper	2020-12-16 11:04:23
Andrew Cooper	WALIS Admin	2020-12-16 11:04:49
Andrew Cooper	Andrew Cooper	2020-12-16 11:06:40
Andrew Cooper	Andrew Cooper	2020-12-16 11:07:07

WALIS AAR ID	Is this datapoint public?	Reference(s)
--------------	---------------------------	--------------

128

1

Davies, 1980

IGSN	Sample ID	Analysis ID
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DA80-001

DA80-001-001

Reported ID	Date of analysis	Laboratory name
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PE-557

University of Colorado

Sample Type	Taxonomy	Sample position
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Estuarine mollusc

Whole-Rock?	Grain Size (μm)	Carbonate (%)
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No

Fraction (μm)	Notes and comments on sample quality	Collection Context
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Depth of burial (m)	Accepted?	Reason for rejection
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unknown

Yes

Reported Latitude	Reported Longitude	Latitude (decimal degrees)
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-33.87108

Longitude (decimal degrees)	Are Lat/Long estimated?	Original elevation datum used
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25.623122

Yes

Elevation measurement method	Reported elevation (m)	Reported elevation uncertainty (m)
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6.5

N/A

Elevation above MSL (m)	Elevation uncertainty used (m)	Elevation comments
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8

N/A

Age is Older/Equal/Younger than	Marine Isotopic Stage	Comments/details on MIS designation
Equal to	MIS 5	From Davies (1980) "PE-557, Deal Party, bar at mouth of Swartkops River,

Reported age (ka)	Reported age uncertainty ($\pm 2\sigma$) (ka)	Current Annual Mean Temperature ($^{\circ}\text{C}$)
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Preparation procedure	Method of chromatography	Stationary phase of the column
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unknown

Number of replicates (samples)	Number of sample replicates (injections)	Ratio type
---	---	-------------------

Pyrolysis experiment available	Level of uncertainty	Aspartic
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1-sigma

Aspartic uncertainty	Glutamic	Glutamic uncertainty
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Serine	Serine uncertainty	Alanine
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Alanine uncertainty	Valine	Valine uncertainty
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*A/I	*A/I uncertainty	Leucine
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Leucine uncertainty	Notes/Comments	Independent age constraints available?
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No

Calibration data available?	Are free AAR ratios available?	Level of uncertainty free AAR
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No

No

N/A

Aspartic (free AAR)	Aspartic uncertainty (free AAR)	Glutamic (free AAR)
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Glutamic uncertainty (free AAR)	Serine (free AAR)	Serine uncertainty (free AAR)
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Alanine (free AAR)	Alanine uncertainty (free AAR)	Valine (free AAR)
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Valine uncertainty (free AAR)	*A/I (free AAR)	*A/I uncertainty (free AAR)
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Leucine (free AAR)	Leucine uncertainty (free AAR)	Notes/Comments free AAR
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Calibration method	Amino Acid age equation	Calibration laboratory
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Calibration laboratory ID	Calibration reference	Calibration D/L value
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Calibration D/L value uncertainty ($\pm 1\sigma$)	Calibration age (ka)	Calibration age (ka) uncertainty ($\pm 1\sigma$)
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Independent age choice	Independent age method	Independent age laboratory
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Independent age laboratory ID	Independent age result	Independent age reference
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U-Series age constraint	ESR age constraint	Luminescence age constraint
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Stratigraphic age constraint	Record created by	Record updated by
-------------------------------------	--------------------------	--------------------------

Andrew Cooper

WALIS Admin

Last Update

2020-12-16 11:08:52

WALIS LUM ID	Is this datapoint public?	Luminescence method
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287		OSL
166	1	OSL
167	1	OSL
100	1	OSL
101	1	OSL
102	1	OSL
103	1	OSL
104	1	OSL
105	1	OSL
106	1	OSL
107	1	OSL
122	1	OSL
124	1	OSL
125	1	OSL
121	1	OSL
123	1	OSL

126	1	OSL
127	1	OSL
128	1	OSL
129	1	OSL
130	1	OSL
131	1	OSL
132	1	OSL
133	1	OSL
134	1	OSL
135	1	OSL
136	1	OSL
137	1	OSL
138	1	OSL
139	1	OSL
140	1	OSL
108	1	OSL
109	1	OSL

110	1	OSL
288		OSL
289		OSL
290		OSL
141	1	IRSL
142	1	TL
143	1	IRSL
144	1	IRSL
286		OSL
111	1	OSL
112	1	OSL
113	1	OSL
114	1	OSL
115	1	OSL
116	1	OSL
117	1	OSL

IGSN	Reference (s)	Sample ID
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	Wang et al., 2008	SAMPLE2
	Bosman, 2012	BO12-001
	Bosman, 2012	BO12-002
	Carr et al., 2010	CA10-001
	Carr et al., 2010	CA10-002
	Carr et al., 2010	CA10-003
	Carr et al., 2010	CA10-004
	Carr et al., 2010	CA10-005
	Carr et al., 2010	CA10-006
	Carr et al., 2010	CA10-007
	Carr et al., 2010	CA10-008
	Cawthra 2014	CA14-001
	Cawthra 2014	CA14-002
	Cawthra 2014	CA14-003
	Cawthra 2014	CA14-004
	Cawthra 2014	CA14-005

Cawthra 2014	CA14-006
Cawthra 2014	CA14-007
Cawthra 2014	CA14-008
Cawthra 2014	CA14-009
Cawthra 2014	CA14-010
Cawthra et al., 2018	CA18-001
Cawthra et al., 2018	CA18-002
Cawthra et al., 2018	CA18-003
Cawthra et al., 2018	CA18-004
Cawthra et al., 2018	CA18-006
Cawthra et al., 2018	CA18-007
Cawthra et al., 2018	CA18-008
Cawthra et al., 2018	CA18-009
Cawthra et al., 2018	CA18-010
Cawthra et al., 2018	CA18-011
Jacobs and Roberts, 2009	JA09-001
Jacobs and Roberts, 2009	JA09-002

Jacobs and Roberts, 2009	JA09-003
Roberts, Karkanias et al., 2012	RO12-001
Roberts, Karkanias et al., 2012	RO12-002
Roberts, Karkanias et al., 2012	RO12-003
Roberts and Berger 1997	RO97-001
Roberts and Berger 1997	RO97-002
Roberts and Berger 1997	RO97-003
Roberts and Berger 1997	RO97-004
Wang et al., 2008	WA08-001
Walker et al., 2016	WA16-001
Walker et al., 2016	WA16-002
Walker et al., 2016	WA16-003
Walker et al., 2016	WA16-004
Walker et al., 2016	WA16-005
Walker et al., 2016	WA16-006
Walker et al., 2016	WA16-007

Analysis ID	Reported ID	Laboratory name
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1	Sample2	Wollongong
BO12-001-001	GC-4	Wollongong
BO12-002-001	GC-7	Wollongong
CA10-001-001	UoW-234	
CA10-002-001	SHFD07072	
CA10-003-001	UOW-232	
CA10-004-001	SHFD05019	
CA10-005-001	SHFD04288	
CA10-006-001	SHFD05038	
CA10-007-001	UOW-235	
CA10-008-001	UOW-233	
CA14-001-001	HC26	Wollongong
CA14-002-001	HC36	Wollongong
CA14-003-001	HCSH	Wollongong
CA14-004-001	HC30	Wollongong
CA14-005-001	HC35	Wollongong

CA14-006-001	HC29	Wollongong
CA14-007-001	HC40	Wollongong
CA14-008-001	HC32	Wollongong
CA14-009-001	HC39	Wollongong
CA14-010-001	HC24	Wollongong
CA18-001-001	142832	Wollongong
CA18-002-001	157206	
CA18-003-001	142831	Wollongong
CA18-004-001	142830	Wollongong
CA18-006-001	142829	Wollongong
CA18-007-001	142833	Wollongong
CA18-008-001	157205	Wollongong
CA18-009-001	157204	Wollongong
CA18-010-001	157203	Wollongong
CA18-011-001	157202	Wollongong
JA09-001-001	NN1	
JA09-002-001	NHN1	

JA09-003-001	NHN2
RO12-001-001	Dana7
RO12-002-001	Dana6
RO12-003-001	46882
RO97-001-001	RB97-01
RO97-002-001	RB97-02
RO97-003-001	RB97-03
RO97-004-001	RB97-03
WA08-001-001	Sample1
WA16-001-001	BNG10-6
WA16-002-001	BNG10-7
WA16-003-001	BNG10-8
WA16-004-001	BNG10-9
WA16-005-001	BNG10-10
WA16-006-001	BNG10-11
WA16-007-001	BNG10-12

Mineral type	Grain size	Date of analysis
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Accepted?	Reason for rejection	Reported Latitude
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Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No "regarded as unreliable
because of the lower dose
rate involved"

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Reported Longitude	Sample latitude (decimal degrees)	Sample longitude (decimal degrees)
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	-33.006137	27.925226
	-30.25	30.816667
	-30.25	30.816667
	-34.0325	22.7977
	-34.0325	22.7977
	-34.05611	22.240555
	-34.81722	20.0275
	-34.0325	22.7978
	-34.0325	22.7977
	-34.0325	22.7978
	-34.056111	22.24055
	-34.090833	22.2475
	-34.081666	22.2575
	-34.064722	22.208888
	-34.088055	22.26111
	-34.083833	22.253611

-34.089444	22.23888
-34.073055	22.26222
-34.068888	22.25777
-34.078055	22.253611
-34.1025	22.256388
-34.056111	22.240558
-34.055833	22.246388
-34.056111	22.240558
-34.056111	22.240558
-34.055833	22.246388
-34.056388	22.239722
-34.055833	22.246388
-34.055833	22.246388
-34.055833	22.246388
-34.055833	22.246388
-32.994722	27.95
-33.006327	27.93131

-33.0225	27.9311
-34.20763	22.029954
-34.20763	22.029954
-34.20763	22.029954
-33.152777	18.038333
-33.152777	18.038333
-33.152777	18.038333
-33.152777	18.038333
-33.006137	27.925226
-12.61	13.365
-12.61	13.365
-12.61	13.365
-12.61	13.365
-12.550833	13.439722
-12.550833	13.439722
-12.544166	13.463888

Are Lat/Long estimated?	Original elevation datum used	Elevation measurement method
Yes	Mean Sea Level / General definition	Not reported
Yes	N/A	N/A
Yes	N/A	N/A
Yes	Mean Sea Level / General definition	Total station or Auto/hand level
Yes	Mean Sea Level / General definition	Total station or Auto/hand level
Yes	N/A	N/A
Yes	N/A	N/A
Yes	Mean Sea Level / General definition	Total station or Auto/hand level
Yes	Mean Sea Level / General definition	N/A
Yes	Mean Sea Level / General definition	Total station or Auto/hand level
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A

Yes	N/A	N/A
Yes	N/A	N/A
	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	N/A	N/A
Yes	Mean Sea Level / General definition	N/A
Yes	N/A	N/A

Reported elevation (m)	Reported elevation uncertainty (m)	Elevation above MSL (m)
------------------------	------------------------------------	-------------------------

6.5	1	N/A
-15	1	N/A
-16	1	N/A
6.5	N/A	6.5
4.5	N/A	4.5
9	N/A	N/A
5.6	N/A	N/A
0.5	0.1	N/A
11.7	0.1	11.7
6.5	N/A	N/A
10.5	0.1	N/A
-33	N/A	N/A
-30	N/A	N/A
0	N/A	N/A
-34	N/A	N/A
-30	N/A	N/A

-35	N/A	N/A
-26	N/A	N/A
-17	N/A	N/A
-25	N/A	N/A
-38	N/A	N/A
11.1	0.05	N/A
23.5	0.05	N/A
9	0.05	N/A
9	0.05	N/A
6	0.05	N/A
3.5	0.05	N/A
20.2	0.05	N/A
13.3	0.05	N/A
10.4	0.05	N/A
9.5	0.05	N/A
4.5	N/A	N/A
2.5-6	N/A	N/A

Elevation uncertainty used (m)	Comments on elevation	Age is Older/Equal/Younger than
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to
N/A		Equal to

Marine Isotopic Stage	Comments/details on MIS designation or age	Age (ka)
N/A		118
N/A		127
N/A		93
MIS 5		127
MIS 5		130
MIS 5		125
MIS 5		118
MIS 5	lowermost part of tidal inlet unit	138
MIS 5		112
MIS 5		113
MIS 5		122
N/A		13.8
N/A		125
N/A		122
N/A		142
N/A		134

N/A	122
N/A	117
N/A	115
N/A	103
N/A	87
N/A	119.7
N/A	118
N/A	124.3
N/A	116.3
N/A	111.2
N/A	116.1
MIS 5	123.4
MIS 5	135.4
MIS 5	128.4
MIS 5	128.1
MIS 5	124.8
MIS 5	117.3

MIS 5	115.8
N/A	125
N/A	116
N/A	125
N/A	118
N/A	228
N/A	107
N/A	107
N/A	119
MIS 3	57.8
MIS 3	36.8
MIS 3	47
N/A	53.9
N/A	42.5
N/A	46.8
N/A	44.7

Age uncertainty (ka)	Aliquot size	Equivalent Dose measurement protocol
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7

7

6

5.7

8.2

6.7

7.2

7.3

5.1

5.6

6.9

1.4

12

15

12

13

10

11

9

8

9

8.9

8.4

8.6

9.2

7.5

7.3

6.9

7.9

9.2

8.4

5.2

6.2

7.5

9

9

9

18

25

7

7

9

11.2

3.4

5.9

6.2

3.7

7.9

5.6

Treatment during measurement	Statistical model for burial dose	Machine type
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Detection unit	Stimulation unit	Optical Filters used for Detection
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Number of aliquots/ single grains run	Number of aliquots/ single grains used in sample	Uncertainty level
--	--	-------------------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

N/A	N/A	undefined
-----	-----	-----------

Equivalent dose (Gy)	Equivalent dose uncertainty (Gy)	Overdispersion value (%)
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Overdispersion value uncertainty (%)	Depth of burial (m)	Approach of dose rate dermination
--------------------------------------	---------------------	-----------------------------------

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

Uncertainty levels	Uranium content (ppm)	Uranium content uncertainty (ppm)
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Thorium content (ppm)	Thorium content uncertainty (ppm)	Potassium content (%)
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Potassium content uncertainty (%)	Rubidium content (ppm)	Rubidium content uncertainty (ppm)
--	-------------------------------	---

Alpha dose rate (Gy/ka)	Alpha dose rate uncertainty (Gy/ka)	Gamma dose rate (Gy/ka)
--------------------------------	--	--------------------------------

Gamma dose rate uncertainty (Gy/ka)	Beta dose rate (Gy/ka)	Beta dose rate uncertainty (Gy/ka)
--	-------------------------------	---

Cosmic dose rate (Gy/ka)	Cosmic dose rate uncertainty (Gy/ka)	Field water content (% of dry mass)
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Water content determination method	Water Content used in Final Age Calculation (% of dry mass)	Water Content used in Final Age Calculation uncertainty (% of dry mass)
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Alpha attenuation factor	Dose Rate conversion factors	Total dose rate (Gy/Ka)
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Total dose rate uncertainty (Gy/ka)	Was fading correction applied?	Method of fading correction
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g-value (% per decade)	g-value ($\pm 1\sigma$) (% per decade)	Comments
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Andrew Cooper	WALIS Admin	2020-12-16 11:26:05

WALIS Strat ID	Is this datapoint public?	Chronostratigraphy ID
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57

1

Isipingo Formation on
Durban Bluff

Reference(s)	Description for chronostratigraphic constraint	Unit thickness (m)
Porat and Botha, 2008	Isipingo Formation aeolianite dated on Durban Bluff at 182+/- 18	

Age is Older/Equal/Younger than	Marine Isotopic Stage	Comments/details on MIS designation
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Equal to

MIS 7

Upper Age (ka)	Lower Age (ka)	Notes on age determination
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Is this an official stratigraphic designation?	Has duration estimated in years?	Duration (yrs)
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Yes

Duration uncertainty (yrs)	Is a subzone of a parent Chronostratigraphy entry?	Parent record (WALIS Strat ID)
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Record created by	Record updated by	Last Update
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Andrew Cooper

Andrew Cooper

2020-04-08 07:28:43

WALIS reference ID	Reference
1330	Bosman, 2012
772	Carr et al., 2010
1313	Cawthra 2014
1315	Cawthra et al., 2018
1326	Cooper and Flores, 1991
1327	Cooper and Green, 2016
1341	Davies, 1980
738	Giresse et al., 1984
1325	Hobday, 1975
769	Jacobs and Roberts, 2009
1078	Kennedy, 2015
1329	MR Cooper, 1999
1075	Mauz et al., 2015
1324	Porat and Botha, 2008
751	Ramsay and Cooper, 2002
1321	Ramsay et al. 1993
1296	Ramsay, 1994
1316	Roberts and Berger 1997
1706	Roberts, Karkanis et al., 2012
1068	Rovere et al., 2016
1298	Walker et al., 2016
1705	Wang et al., 2008
621	Zecchin et al., 2004

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Journal	Year	doi
	2012	
Quaternary Research	2010	https://doi.org/10.1016/j.ygres.2009.0
Doctoral dissertation, University of Cape Town	2014	
	2018	
	1991	
	2016	
	1980	
Journal of African Earth Sciences	1984	https://doi.org/10.1016/S0731-7247(8
	1975	
Quaternary Geochronology	2009	https://doi.org/10.1016/j.quageo.2008
Earth Science Reviews	2015	https://doi.org/10.1016/j.earscirev.201
	1999	
Marine Geology	2015	https://doi.org/10.1016/j.margeo.2015
	2008	
Quaternary Research	2002	https://doi.org/10.1006/qres.2001.229
	1993	
Marine Geology	1994	
	1997	
	2012	
Earth Science Reviews	2016	https://doi.org/10.1016/j.earscirev.201
	2016	
Anthropological Review	2008	
Sedimentary Geology	2004	https://doi.org/10.1016/j.sedgeo.2004

Link	Nation
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Language	Timeframe
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EN	Holocene, Pleistocene, MIS 5
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EN	Pleistocene

Record created by	Record updated by
Andrew Cooper	
Deirdre Ryan	Ann-Kathrin Petersen
Andrew Cooper	WALIS Admin
Andrew Cooper	Andrew Cooper
Andrew Cooper	
Andrew Cooper	Andrew Cooper
Andrew Cooper	
Deirdre Ryan	Ann-Kathrin Petersen
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Alessio Rovere	Ann-Kathrin Petersen
Andrew Cooper	Ann-Kathrin Petersen
Alessio Rovere	Ann-Kathrin Petersen
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Deirdre Ryan	Ann-Kathrin Petersen
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Deirdre Ryan	Ann-Kathrin Petersen

Last Update	Type of paper
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