



5

Enderby Island Rock Art and Stone Structures

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Fieldwork on Enderby Island focused on seven sample transects (Areas) at the western end of the Island (Figure 5.1 and Figure 5.2). These were selected after consultation in early March 2016 with the Murujuga Circle of Elders, which included a visit by helicopter and boat to the island by senior men and the male project researchers. Systematic survey recorded panels and motifs in each of these sample areas as well as locating suitable excavation targets. Archaeological stone structures and artefacts were recorded opportunistically.

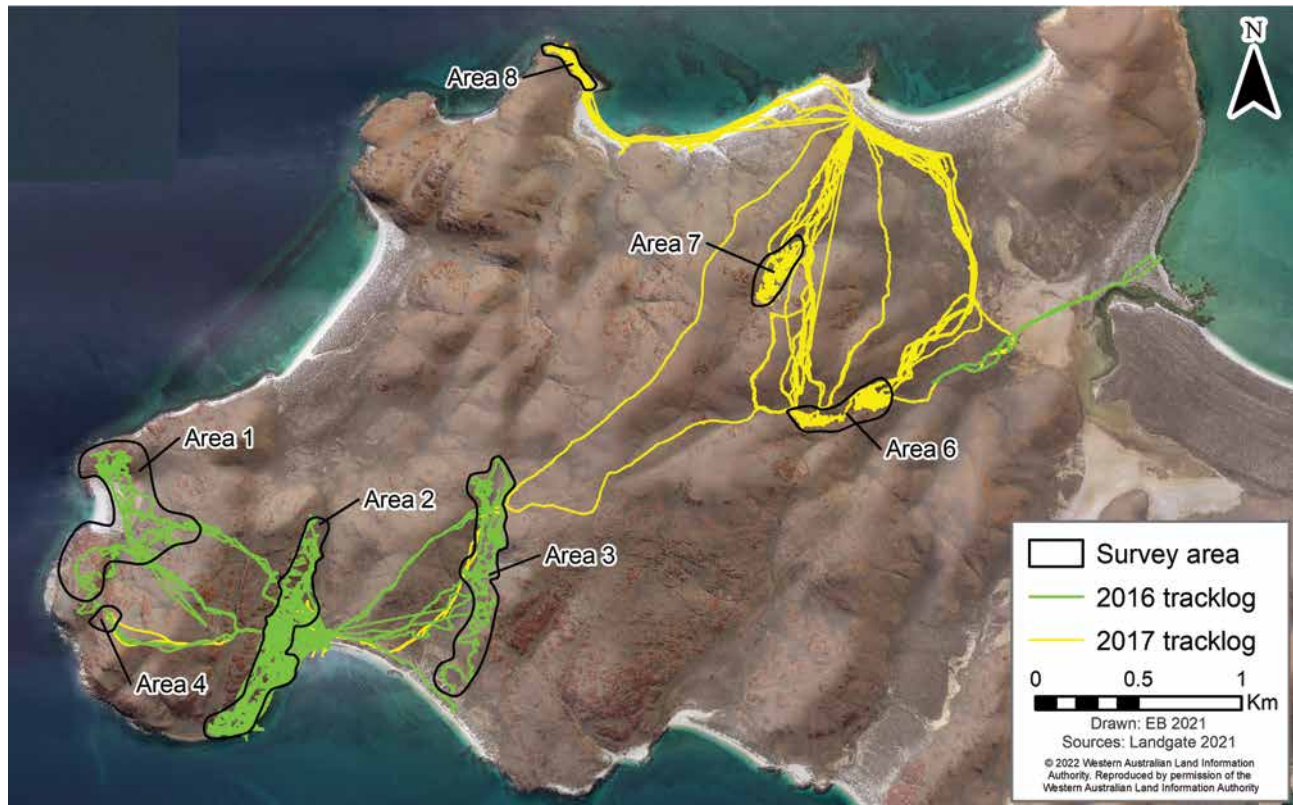


Figure 5.1. The western end of Enderby Island showing location of sample areas and indicative tracklogs.

The recorded rock art panels have now been audited and site boundaries designated based on all features located within 25 m of each other (see Chapter 2; following Vinnicombe 2002). A total of 39 sites have been recorded on Enderby Island (Table 5.1), with 4,830 motifs recorded from a total of 2,559 identified panels (Table 5.2). Five excavations were completed in a range of landscape contexts within these sample

areas (see Chapter 6). Gidley granophyre (Areas 1–3) and an unassigned basalt/andesite (Areas 6–8) are the dominant surface geology of these landscapes (Hickman and Strong 2003). It is noted that Fairweather (2019) has suggested that the granophyre designation should be reclassified as rhyodacite, based on thin-section analysis.

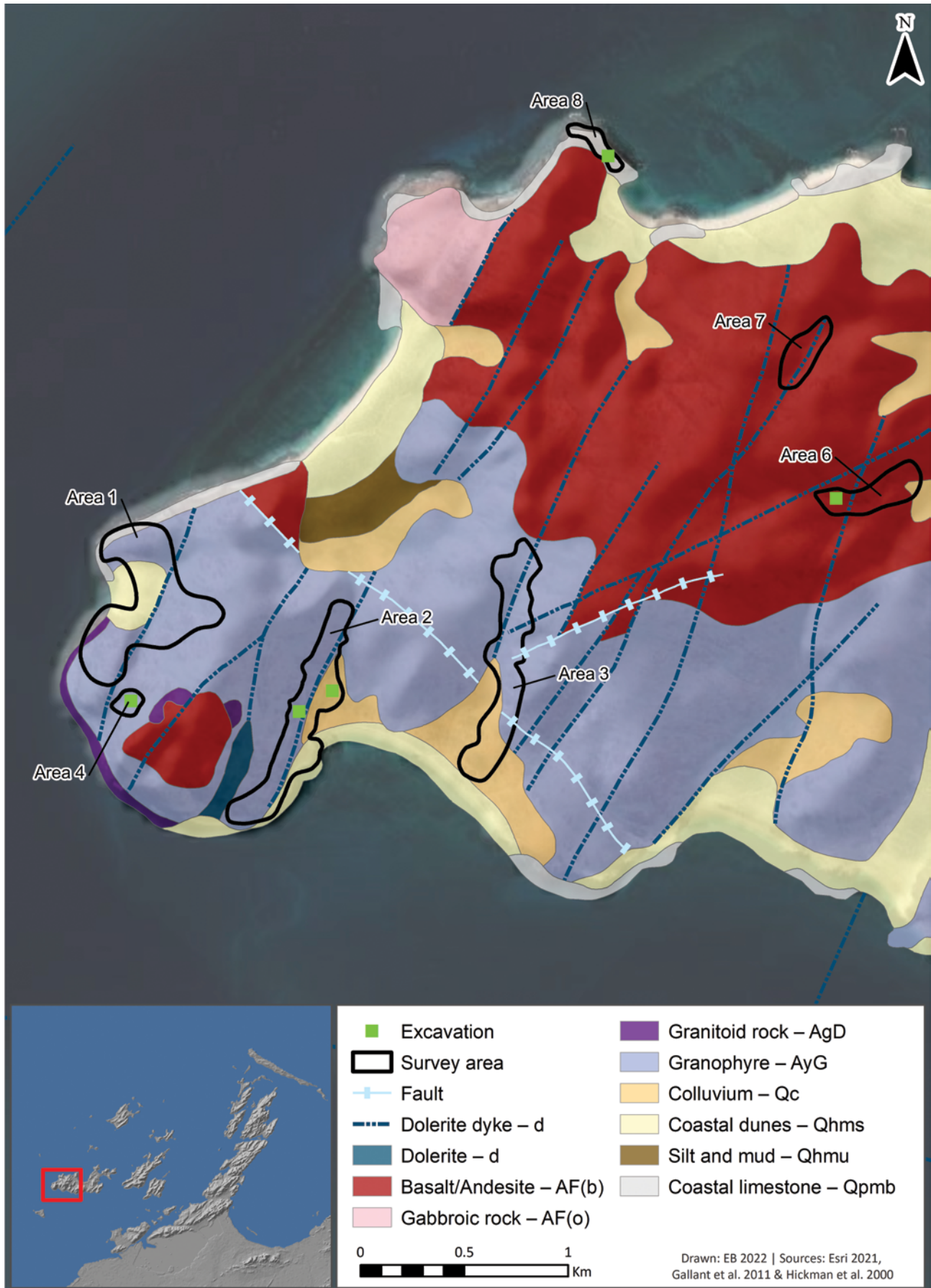


Figure 5.2. Enderby Island western end showing sample areas and underlying geological bedrock.

SITE TYPE	NO.	%	SITE TYPE	NO.	%
Art	25	64.1	Art; structure; scatter; quarry	1	2.6
Art; scatter	4	10.3	Historical; art; structure	1	2.6
Art; structure	3	7.7	Scatter	1	2.6
Art; structure; scatter	3	7.7	Archaeological deposit	1	2.6
Total				39	100.0

Table 5.1. Enderby Island site types.

AREA 1	AREA 2	AREA 3	AREA 4	AREA 6	AREA 7	AREA 8
MLP-EI001	MLP-EI002	MLP-EI003	MLP-EI004	MLP-EI006	MLP-EI007	MLP-EI008
MLP-EI005	MLP-EI009	MLP-EI012			MLP-EI034	MLP-EI036
MLP-EI023	MLP-EI010	MLP-EI013			MLP-EI035	
MLP-EI024	DPLH 11820 (MLP-EI011)	MLP-EI014				
MLP-EI025	MLP-EI020	MLP-EI015				
MLP-EI026	MLP-EI039	MLP-EI016				
MLP-EI027		MLP-EI017				
MLP-EI028		MLP-EI018				
MLP-EI029		MLP-EI019				
MLP-EI030		MLP-EI021				
MLP-EI031		MLP-EI022				
MLP-EI032		MLP-EI037				
MLP-EI033						
MLP-EI038						
666 motifs	1256 motifs	146 motifs	111 motifs	2071 motifs	540 motifs	170 motifs
305 panels	692 panels	95 panels	66 panel	1,068 panels	256 panels	77 panels
30 structures	12 structures	0 structures	9 structures	1 structure	0 structures	14 structures

Table 5.2. Enderby Island rock art sites recorded in each sample area, showing total panels and motifs recorded.

Analysis of the technique used to create individual motifs reflects the dominant surface geology. While pecking dominates generally, scratched, incised and

abraded techniques are used more frequently to create motifs on basaltic bedrock (Figure 5.3).

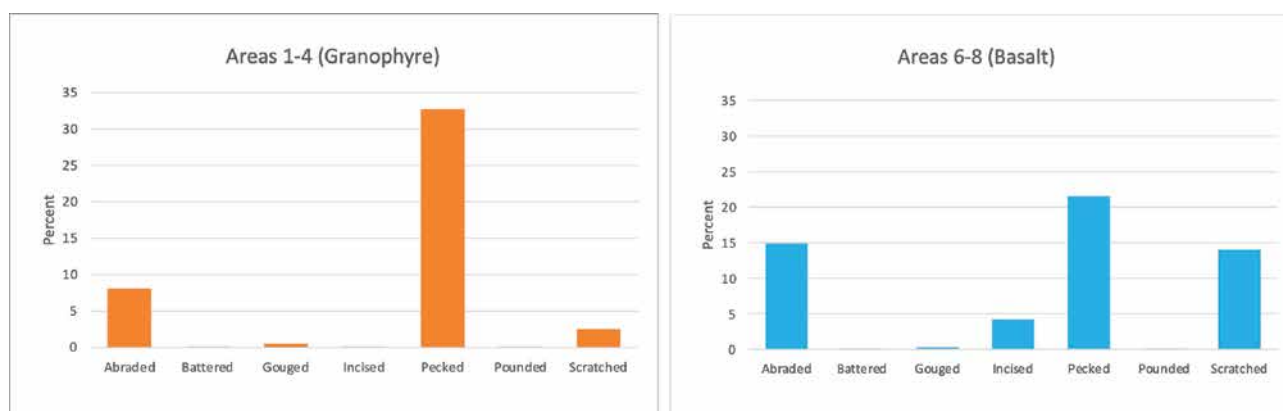


Figure 5.3. Motif techniques correlated with Enderby Island geology.

Sample Area 1

Sample Area 1 (Area 1) is located at the extreme western end of the island on mostly a granophyre surface geology (Figure 5.2). Survey and recording initially focused on the rocky slopes immediately adjacent to a beach with a fringing reef (Figure 5.4). Area 1 was extended southwards with the discovery of an extensive quarry of fine-grained granophyre (MLP-EI001) in this location

(Figure 5.5). Fourteen sites are recorded in Area 1 and 13 of these have rock art on 305 panels and 666 motifs (Table 5.3, Table 5.4, Figure 5.4). Thirty stone structures are recorded in three of the sites. Scattered artefacts were also identified as part of two sites, although this component was not recorded consistently across this Area.

SITE TYPES	NO.	%
Art	7	46.2
Art; scatter	3	23.1
Art; structure	2	15.4
Art; quarry; structure	1	7.7
Scatter	1	7.7
<i>Total</i>	<i>14</i>	<i>100.0</i>

Table 5.3. Enderby Island Area 1: site types.

SITE NAME	MOTIFS	SITE NAME	MOTIFS
MLP-EI023	209	MLP-EI026	7
MLP-EI001	160	MLP-EI027	7
MLP-EI038	115	MLP-EI033	4
MLP-EI031	95	MLP-EI029	3
MLP-EI032	32	MLP-EI024	1
MLP-EI030	24	MLP-EI005	1
MLP-EI028	8	<i>Total</i>	<i>666</i>

Table 5.4. Enderby Island Area 1: rock art sites and assemblage sizes.

A quarter of the motif assemblages here are small, but there are two site complexes recorded in this landscape – MLP-EI001 and MLP-EI023 (Table 5.5, Figure 5.5). MLP-EI001 is an extensive quarry site south of the beach that has rock art on many quarried blocks as well as on surrounding unknapped areas. Most of the stone structures recorded within this Area are in this site. There are 24 bedrock pits, two discrete placed stones, one standing stone and one arranged cluster/pile (Figure 5.6). The bedrock pits are the result of quarrying/extraction activities related to the exploitation of fine-grained materials and intensive knapping around these structures. One arranged cluster/pile (recorded as EIA01-2016-PF027) is a circular structure of freshly quarried cores and flakes. This structure is unique in the archipelago. The MLP-EI001 site complex has extremely high potential for future detailed research.

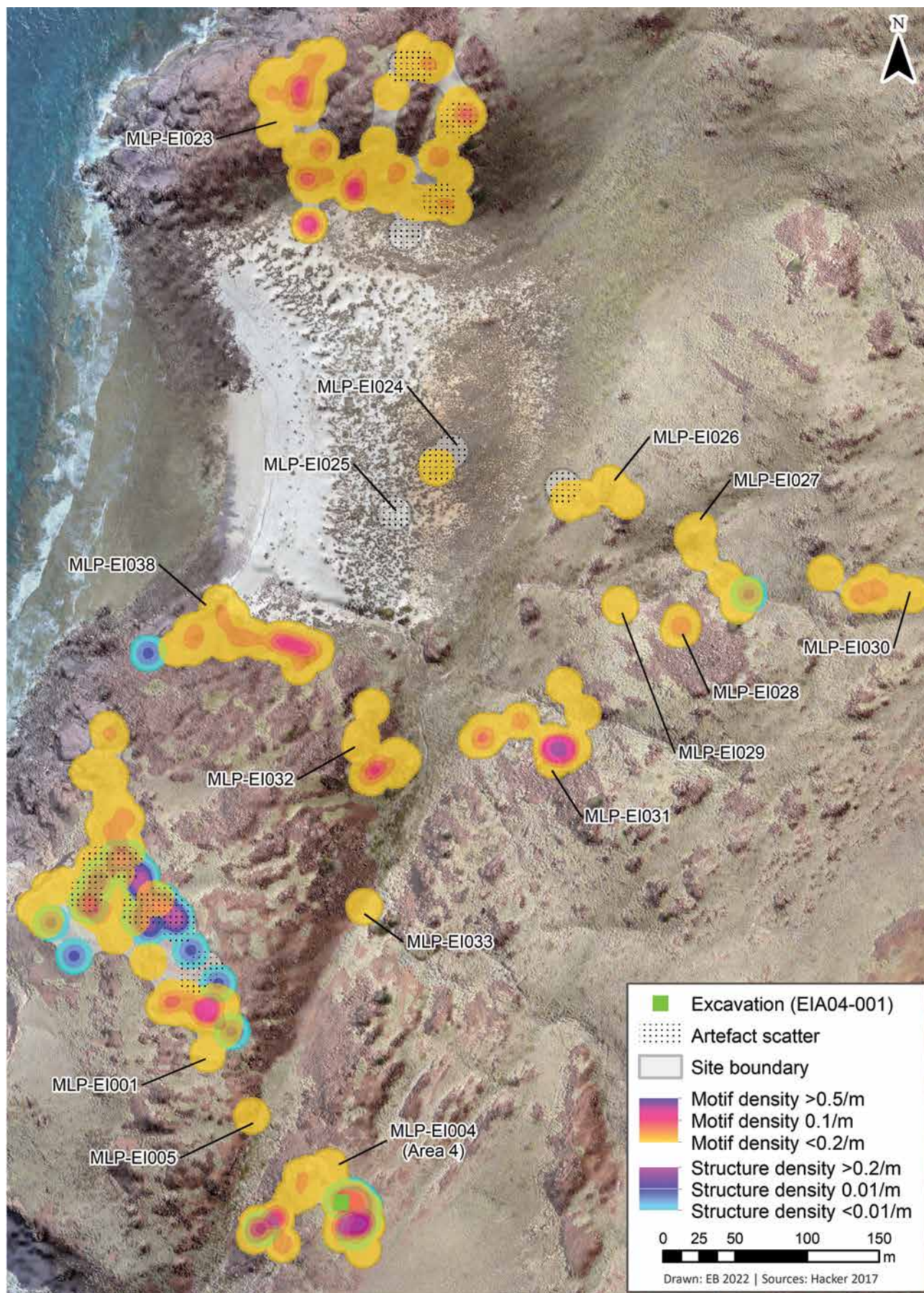


Figure 5.4. Enderby Island Area 1 and 4 showing location of all recorded sites and excavation square in Area 4.



Figure 5.5. Enderby Island Area 1: (top) looking south from site MLP-EI023 across the beach to MLP-EI038 and quarry site MLP-EI001; and (bottom) view over part of the extensive quarry with extensive reduction of stone material visible at MLP-EI001 looking towards the beach.



Figure 5.6. Enderby Island Area 2: recording (top) the quarry bedrock pits and an enormous boulder core; and (bottom) the unusual circular stone arrangement (EIA01-2016-PF027) made of flaked fine-grained lithics.

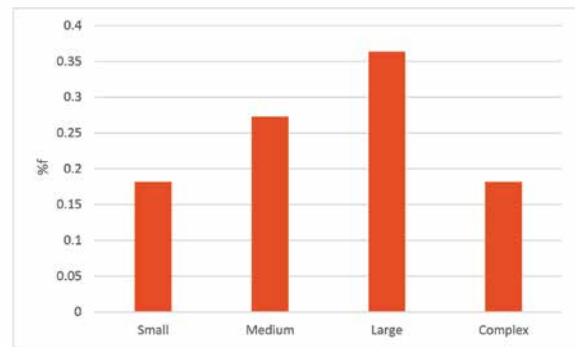
The other site complex, MLP-EI023, is on the northern slope above the beach and includes the flat area on top of the ridge (Figure 5.5). Two of the six large sites are adjacent to the beach (MLP-EI038) and upslope adjacent to a spring (MLP-EI031).

Over a third of the Area 1 motif assemblage is

SITE ASSEMBLAGE	COUNT	%
Small (1–5)	2	18.2
Medium (6–20)	3	27.3
Large (21–150)	4	36.4
Complex (>151)	2	18.2
<i>Total</i>	<i>11</i>	<i>100.0</i>

Table 5.5. Enderby Island Area 1: rock art site assemblage size proportions.

geometric (Table 5.6), with only a small proportion (3.5%) being classed as 'other' (six grinding patches and mostly random pecking). Ovals are the most common geometric subjects with arcs and linear and angular shapes also common (Table 5.7).



CLASS	COUNT	%	COUNT	%
Anthropomorphic	101	15.2	101	15.7
Geometric	249	37.4	249	38.8
Other	24	3.6		
Tracks	90	13.5	90	14.0
Zoomorphic	202	30.3	202	31.5
<i>Total</i>	<i>666</i>	<i>100.0</i>	<i>642</i>	<i>100</i>

Table 5.6. Enderby Island Area 1: class proportions.

SUBJECT	NO.	%	SUBJECT	NO.	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Decorative infill figure	1	0.1	Bird track	34	5.3
Face	1	0.1	Human foot	51	7.9
Linear figure	72	11.2	Macropod track	4	0.6
Outline figure	3	0.4	Turtle trail	1	0.1
Profile figure	1	0.1	<i>Zoomorphic</i>		
Solid figure	23	3.4	Marine tails	114	18.0
<i>Geometric</i>			Bird	9	1.4
Angular	24	3.6	Macropod	4	0.6
Arc	26	3.9	Crustacean	3	0.5
Circular	12	1.9	Fish	31	4.8
Complex	2	0.3	Quadruped	2	0.3
Dot	1	0.1	Snake	3	0.5
Linear	50	7.8	Stingray	3	0.5
Material culture	12	1.7	Terrestrial other	1	0.2
Oval	116	18.3	Turtle	33	5.1
Phytomorph	2	0.3			
Rayed	4	0.6	<i>Total</i>	<i>642</i>	<i>100.0</i>

Table 5.7. Enderby Island Area 1: subject proportions for identifiable motifs.

Zoomorphs are almost as prevalent as geometrics, and these are predominantly turtles (33) and fish (31). There is a large number (114) of marine tails (18% of the Area's assemblage), with this assemblage accounting for almost 25% of all recorded marine tails across the archipelago (Figure 5.7). There are nine birds, but only four macropods. Anthropomorphic motifs and tracks are roughly equivalent, and linear figures dominate the

anthropomorphs. There is one archaic face and one decorative-infilled anthropomorph, these two motifs associated with the Pleistocene repertoire. There is a distinctive style of small solid anthropomorphic depiction here – portrayed with elbows and bent-up legs, some with exaggerated genitalia and some with rayed hair / headdresses (Figure 5.8). These were found mainly in the quarry areas assemblage (with another cluster



Figure 5.7. Enderby Area 1: marine tail motifs including (top) multiples on the one panel and (bottom) turtle motifs, which are found in a variety of styles and as single or multiple motifs. Note that the turtles panel on the left is located on a heavily quarried block. [full page bleed_caption on adjacent page]

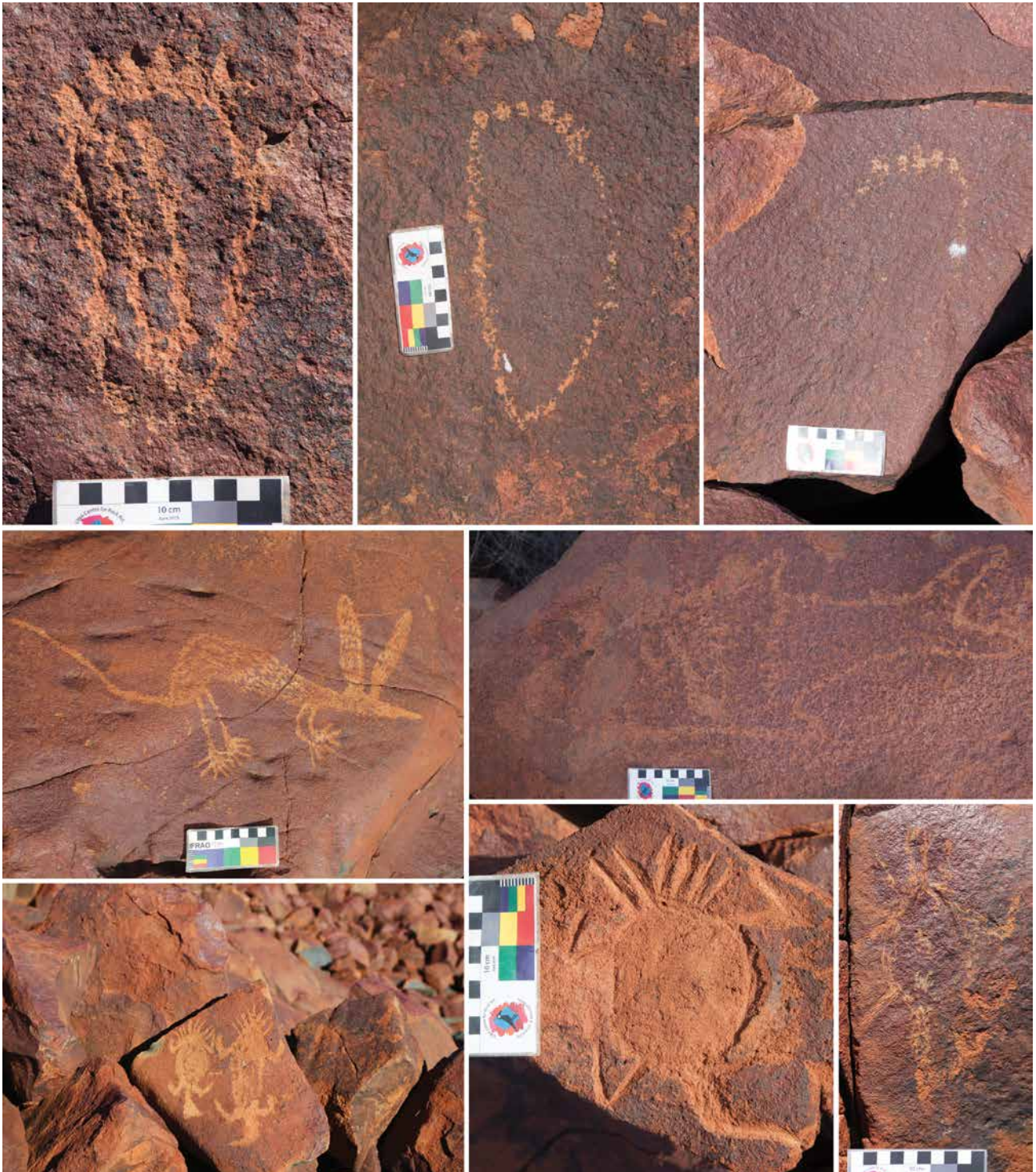


Figure 5.8. Enderby Area 1: (top to bottom) human footprints with six digits in different styles; bilby and finned fish; and a distinctive Enderby Island style of small oval-bodied anthropomorphic-zoomorphic depiction with bent-up legs and arms, rayed hair and lizard-like tails and a crab.

of this same style also recorded around the northern coastline in Area 8). Human feet occur in higher than general proportions here (Figure 5.8), outnumbering bird tracks. No graffiti was encountered in this sample area.

Birds and terrestrial motifs are found across the Area, distributed widely but with a definite focus on the vertical rock surfaces facing the beach, with some

located higher on the hills, while all other marine themes are scattered more widely across this Area. It is notable that the high ground to the north of the beach has not been systematically surveyed/recorded at this point and the absence of motifs here is purely because of this factor (Figure 5.9).

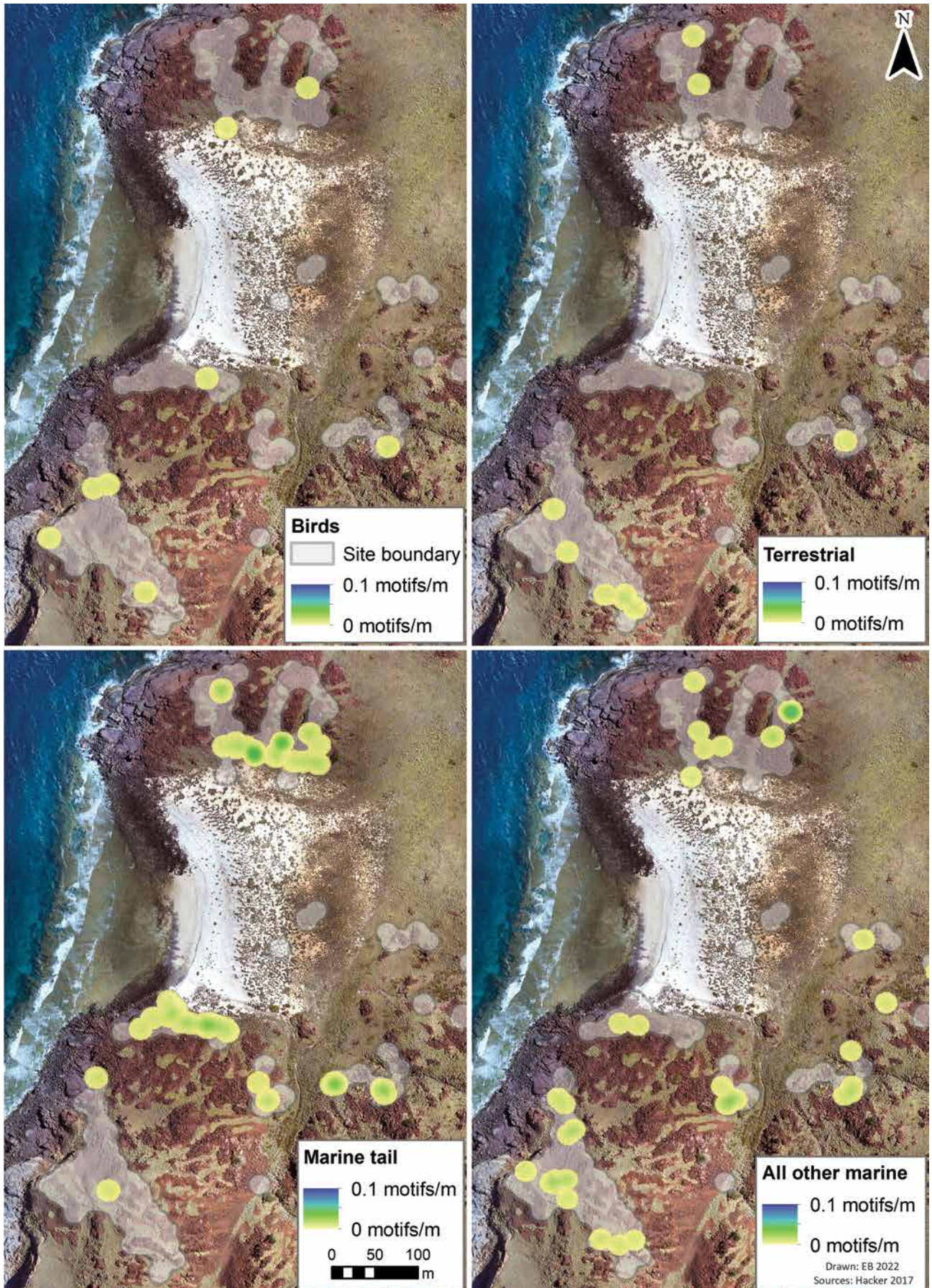


Figure 5.9. Enderby Area 1: density maps showing distribution of birds, terrestrial motifs, marine tails and all other marine motifs.

FORM	COUNT	%	FORM	COUNT	%
Linear	158	23.7	Outline; pattern	28	4.2
Linear; outline	34	5.1	Outline; pattern; solid	15	2.3
Linear; outline; pattern	6	0.9	Outline; scattered marks	1	0.2
Linear; outline; pattern; solid	2	0.3	Outline; solid	29	4.4
Linear; outline; scattered marks	1	0.2	Pattern; solid	1	0.2
Linear; outline; solid	6	0.9	Scattered marks	13	2.0
Linear; pattern; solid	1	0.2	Solid	100	15.0
Linear; solid	42	6.3			
Outline	229	34.4	<i>Total</i>	666	100.0

Table 5.8. Enderby Area 1: forms used in creating this rock art assemblage.

The most common motif form in Area 1 is outline (34%) followed by linear and then solid forms (Table 5.8). There is a lot of variation in the forms created here, including some patterned infill (7%) – mostly in the

Less than half (48.3%) of the assemblage is smaller than 30 cm in size (Table 5.10). Forty-nine motifs (7.5%) are larger than 1 m (these include fish, turtles, material

turtle carapaces. The predominant technique in Area 1 is pecking (c. 75%), followed by abrasion (11%), combinations of these and scratching (Table 5.9). Combination forms account for around 9% of the identifiable motifs. culture and barred ovals) and there are nine large whale tails measuring between 171 and 180 cm in length.

TECHNIQUE	NO.	%	TECHNIQUE	NO.	%
Abraded	74	11.1	Gouged; pecked	5	0.8
Abraded; gouged	3	0.5	Incised	4	0.6
Abraded; gouged; incised; pecked	1	0.2	NA	8	1.2
Abraded; pecked	27	4.1	Pecked	502	75.4
Abraded; pecked; scratched	1	0.2	Pecked; pounded	1	0.2
Abraded; scratched	3	0.5	Pecked; scratched	6	0.9
Battered; pecked	3	0.5	Scratched	25	3.8
Gouged	3	0.5	<i>Total</i>	666	100.0

Table 5.9. Enderby Area 1: techniques used in creating this rock art assemblage.

Most of the assemblage (61.5%) is contrast state 4 (CS4, Table 5.11); the second-highest weathering condition index is CS3 (27.7%). Contrast state provides an indication of chronology, and there is more art in the most recent phase (i.e. CS5) than found in the two earliest contrast state phases (CS1 and 2). A very small proportion of the assemblage has mixed patination or other discolouration such that an accurate assessment

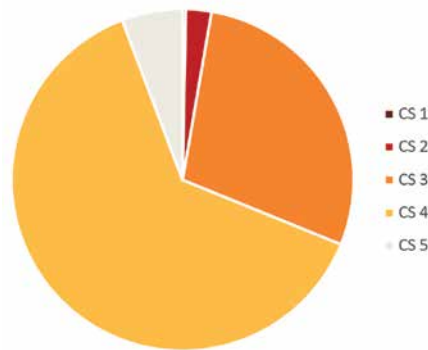
of weathering status cannot be made. The contrast state and subject matter depicted suggest that this sample area was used to create art in the Mid–Late Holocene, when the beach resources would have been the primary focus, as this is a turtle nesting location. The high proportion of marine tails suggests an intense interest in passing whales, which would be visible from this vantage point at the western end of the island.

SIZE (CM)	COUNT	%	SIZE (CM)	COUNT	%
1–10	62	9.9	91–100	16	2.5
11–20	132	21.0	101–110	5	0.8
21–30	117	18.6	111–120	1	0.2
31–40	81	12.5	121–130	3	0.5
41–50	49	7.4	131–140	9	1.4
51–60	30	4.2	141–150	1	0.2
61–70	23	3.8	161–170	3	0.5
71–80	38	6.2	171–180	10	1.6
81–90	42	6.5	NA	19	2.9

Table 5.10. Enderby Area 1: size of the assemblage.

CONTRAST STATE	NO.	%
CS1	2	0.3
CS2	16	2.4
CS3	184	27.6
CS4	410	61.6
CS5	37	5.6
NA	17	2.6
<i>Total</i>	<i>666</i>	<i>100.0</i>

Table 5.11. Enderby Area 1: contrast state recorded in this assemblage.



Sample Area 2

This sample transect (2 km x c. 200 m) included an interior valley with ephemeral drainage line joining the current beach and rocky headland, towards the western end of the island (Figure 5.10 and Figure 5.11). This is on granophyre geology, with a long dolerite dyke running along the transect (Figure 5.1). A semi-permanent rock hole in a tributary creek line crosses this transect (at

the Fig Tree location; see King 1818; and see Chapter 6). Rock art and stone structures are almost continuous throughout this transect, although five sites are recorded here by aggregating all features that fall within 25 m of each other (Table 5.12). The excavation in the sand sheet (see Chapter 6) is recorded as an archaeological deposit.

SITE	NO.	%
Art	3	50.0
Art; structure; scatter	2	33.3
Archaeological deposit	1	16.6
<i>Total</i>	<i>6</i>	<i>100.0</i>

Table 5.12. Enderby Area 2: site types.

All sites recorded in the survey transect have engravings. Not all stone artefacts and midden material encountered within the Area were recorded, and stone

Excavations here targeted a *Terebralia* midden in MLP-EI020, surrounded by rock art panels near a large fig tree (Figure 5.10, Figure 5.11). Another square (EIA02-998997) was positioned in the middle of this valley in an area with no surface archaeological manifestations but where the residual elevated sand sheet was assessed as having geomorphological potential (see Chapter 6). This is now site MLP-EI039.

structures were recorded at only two of the sites. The recorded structures included eight bedrock pits, three standing stones and one discrete placed stone.

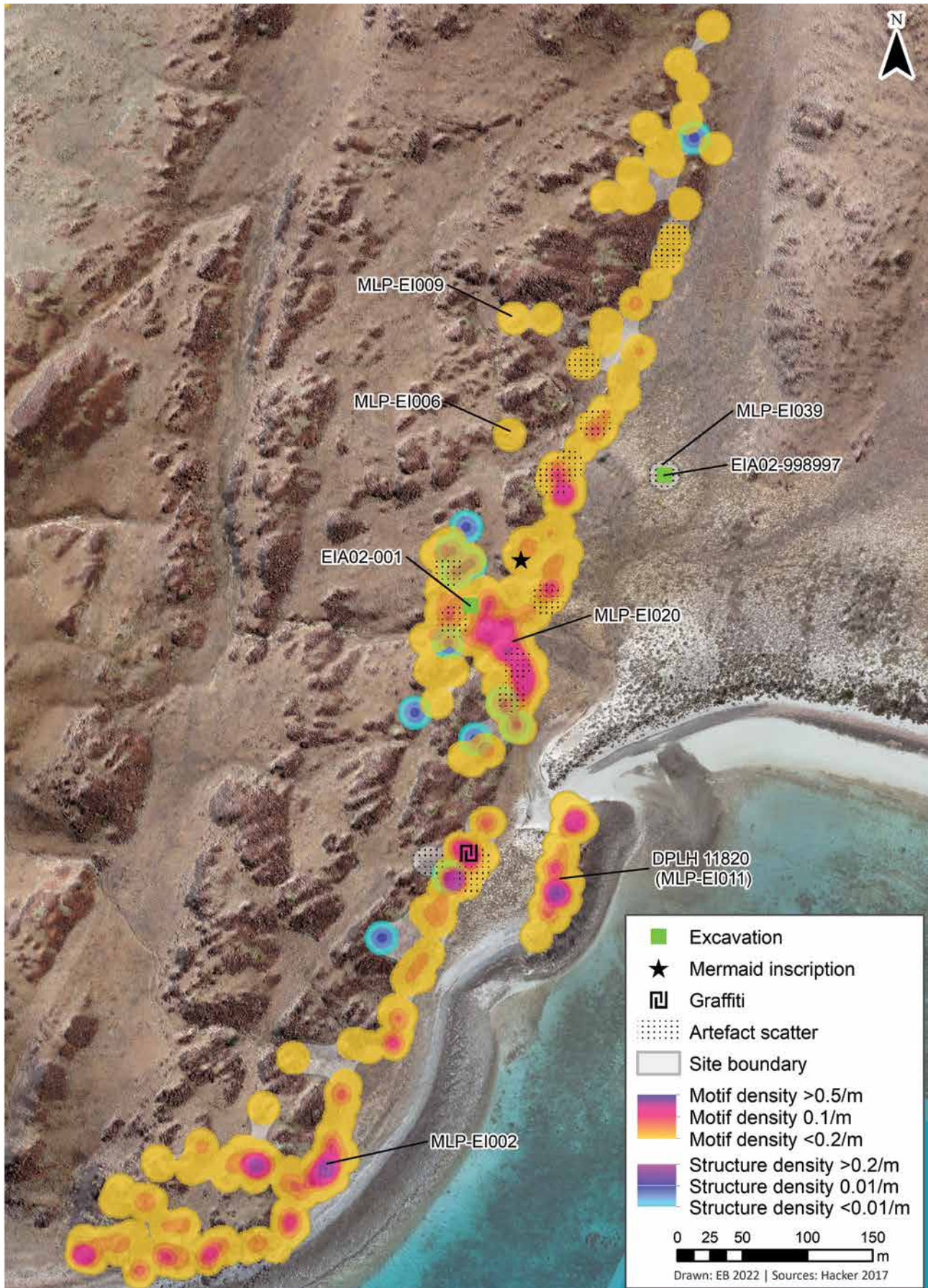


Figure 5.10. Enderby Area 2 showing site boundaries for recorded rock art and stone structures.



Figure 5.11. Enderby Area 2: (top) looking westward towards the 200 m wide corridor along the base and lower slopes; (middle, left) showing the southernmost interface with the sea and (right) mid-section of the transect; and (bottom) view from Fig Tree across the gully to the Holocene dune and our camp during fieldwork.

A total of 1,256 motifs and nine grinding patches were recorded on 692 panels. Area 2 has three of the site complex sized assemblage (>150 motifs) and two small assemblages (Table 5.13) with almost continuous rock art production within this surveyed landscape. Two of the site complexes are located at the coastal end of the transect, south of the creek line with the fig tree (Figure 5.11). The other site complex extends inland within the transect north from the fig tree waterhole and creek line (Figure 5.10). The absence of sites with medium or large assemblages here makes this a unique configuration for the archipelago (Table 5.14). This transect was

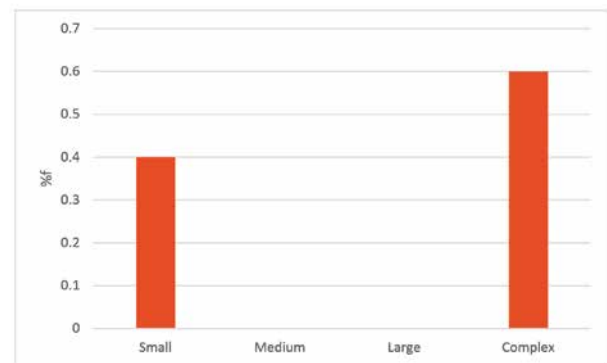
devised to be comparable with the Deep Gorge transect located on gabbro formation on the Burrup Peninsula (McDonald 2009). The Deep Gorge sample (similarly 2 km x 200 m) revealed very different assemblage characteristics. More than 66% of the 42 Deep Gorge sites were small (i.e. <25 motifs), but the main site complex, situated around a semi-permanent rock hole, has 2,915 motifs (McDonald 2009: Table 44) from a total of 3,471 recorded motifs. More recent work related to the installation of a boardwalk and walking trail at Nganjarli (as it has been renamed) recorded an additional 1,000 motifs (see McDonald et al. 2021).

SITE NAME	MOTIFS AND GRINDING PATCHES
MLP-EI002	562
MLP-EI020	523
DPLH 11820 (MLP-EI011)	166
MLP-EI006	3
MLP-EI009	2
MLP-EI039	0
<i>Total</i>	<i>1,256</i>

Table 5.13. Enderby Area 2: rock art sites and assemblage sizes

ASSEMBLAGE SIZE	NO.	%F
Small (1–5)	2	40
Medium (6–20)	–	–
Large (21–150)	–	–
Complex (>151)	3	60

Table 5.14. Enderby Area 2: rock art site assemblage size proportions.



Almost 40% of the Area 2 assemblage is geometric with 11% of the recorded marks classed as 'other', including 99 grinding patches and four graffiti/historic elements (Table 5.15). When these non-depictive (and

non-Aboriginal) art productions are removed, geometric motifs account for almost 45% of this assemblage, followed by zoomorphs, anthropomorphs and then tracks (Figure 5.12).

	TOTAL	%	TOTAL DEPICTIVE	%
Anthropomorphic	145	11.5	145	13.0
Geometric	501	39.9	501	44.9
Other	140	11.1	–	–
Tracks	123	9.8	123	11.0
Zoomorphic	347	27.6	347	31.1
<i>Total</i>	<i>1,256</i>	<i>100.0</i>	<i>1,116</i>	<i>100.0</i>

Table 5.15. Enderby Area 2: class proportions (depictive motifs minus 'other' class).

One of these historic motifs is a ship, which we interpret to be a depiction of HMV *Mermaid* (Paterson et al. 2019) produced by Phillip Parker King's crew when they visited Enderby Island in 1812 (Figure 5.13). Other, more recent markings are scratched historic initials/dates (ABEL K 194–; AL; INE 1949) made after World

War II, all located high on the same large block relatively close to the beach.

Several of the subject proportions differ significantly from those found in Area 1. Ovals and linear motifs are still the most common geometrics here but there are many more arcs and dot motifs (most of which are

singular or small groups, but one of which is recorded as a group of 27 cupules: Table 5.16).

In the zoomorphic class there are even more fish and turtle motifs here than found in Area 1 but fewer marine tails ($n = 52$), a crocodile and nine stingrays. Turtle trails are equally uncommon in Area 2 as in Area 1. Macropods ($n = 51$) and quadrupeds ($n = 17$) occur much more frequently here than in Area 1, and there is a pair of thylacines (Figure 5.12). Bird tracks are again dominant, but there are more macropod tracks and many

fewer human tracks. Human figures are dominated by linear forms, and there are fewer solid figures (including the distinctive form with elbows) here than found at the western and northern shore samples (Table 5.16). While there are no archaic faces here in the older art repertoire, there are two decorative infill figures present in this assemblage (Figure 5.13). There is a small number of distinct later-phase stylistically characteristic Murujuga anthropomorphs (e.g. 'rainbow figures' and those with exaggerated hands and feet).

SUBJECT	NO.	%	SUBJECT	NO.	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Combination figure	2	0.2	Bird track	67	6.0
DI figure	2	0.2	Human foot	35	3.1
Linear figure	110	9.9	Human hand	4	0.4
Outline figure	5	0.4	Macropod track	13	1.2
Profile figure	8	0.7	Other track	5	0.4
Solid figure	18	1.6	<i>Zoomorphic</i>		
<i>Geometric</i>			Marine tails	52	4.7
Arc	93	8.3	Bird	30	2.7
Complex	5	0.4	Crustacean	1	0.1
Circular	25	2.2	Lizard	6	0.5
Angular	36	3.2	Macropod	51	4.6
Dot	41	3.7	Snake	5	0.4
Dot and line	2	0.2	Fish	90	8.1
Dumb-bell	4	0.4	Dugong	2	0.2
Linear	84	7.5	Marine other	5	0.4
Material culture	23	2.1	Quadruped	17	1.5
Oval	176	15.8	Stingray	9	0.8
Phytomorph	4	0.4	Terrestrial other	11	1.0
Rayed	7	0.6	Turtle	68	6.1
			<i>Total</i>	<i>1,116</i>	<i>100.0</i>

Table 5.16. Enderby Area 2: subject proportions.

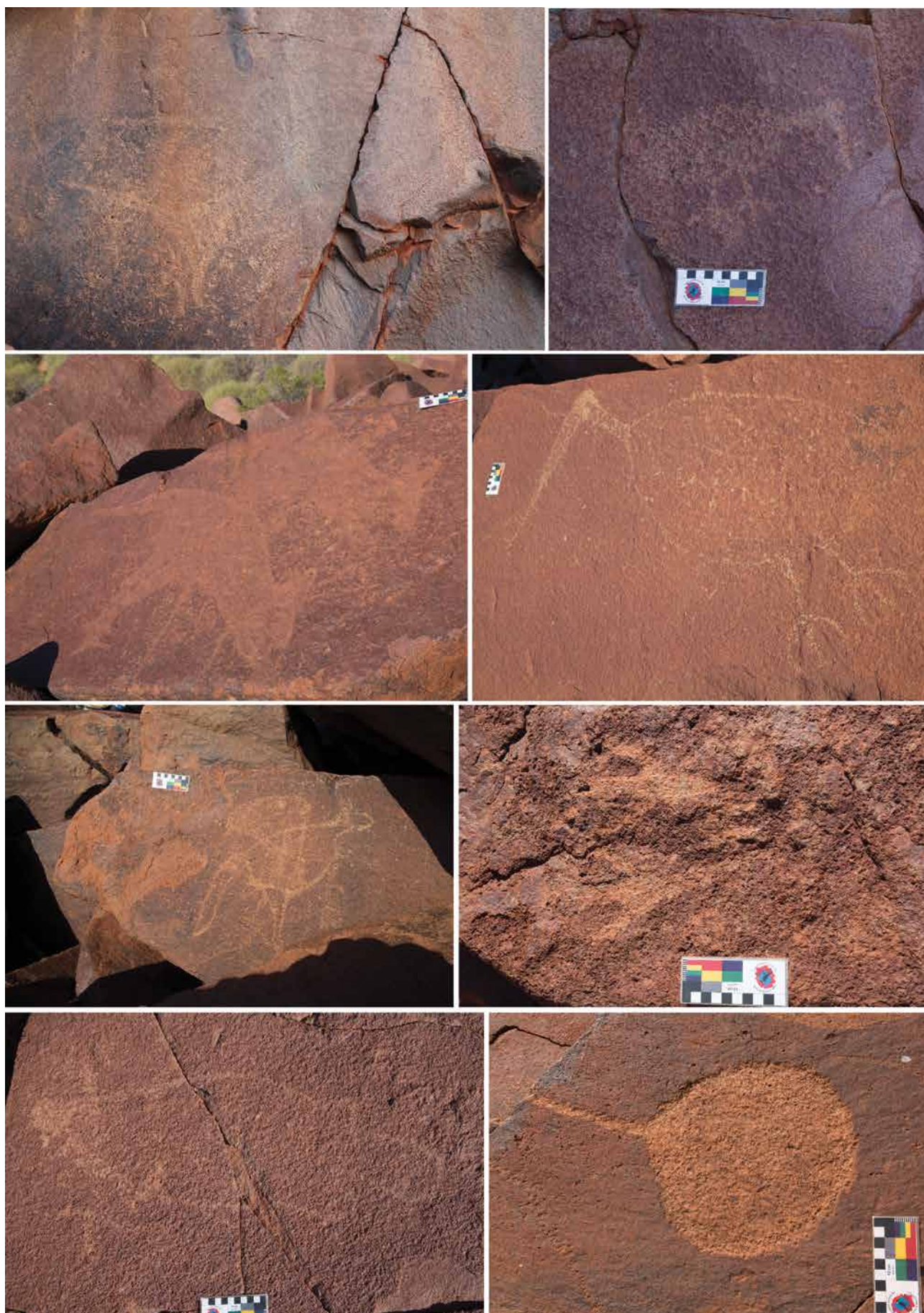


Figure 5.12. Enderby Area 2 examples of rock art: (top) thylacines, kangaroos and birds, and barramundi and stingray (bottom).



Figure 5.13 . Enderby Area 2 : (top) Male custodians , rangers and researchers under taking clearance survey in Area 2 , March 2 016; and (bottom) the scratched ship motif interpreted as P.P. King's *Mermaid* from their 1818 visit to the fig tree location.

The most common motif forms in Area 2 are linear and outline, followed by solid forms (Table 5.17). There

is a lot of variation in the forms created here, with a relatively low proportion of patterned infill, particularly

compared to Area 1 (3.2%). The predominant technique here is pecking (c. 77%), followed by abrasion and then scratching (Table 5.18). Note that the 99 grinding

A little over half of this assemblage (53.2%) is smaller than 30 cm in size (Table 5.19). An unusually large number of motifs ($n = 50$) are larger than 1 m (4.1%) in size and three of these are larger than 2 m: one of these is

patches contribute to the abraded counts. Combination forms account for around 6% of the identifiable motifs.

an older style macropod (CS2), another is a large turtle of a more recent style with a bisected carapace (CS5) and the third is a bisected oval (CS4), associated with several other geometric motifs.

FORM	N	%	FORM	N	%
Linear	328	26.1	Outline; pattern	23	2.1
Linear; outline	98	7.8	Outline; pattern; solid	3	0.3
Linear; outline; pattern	13	1.1	Outline; scattered marks	11	0.9
Linear; outline; pattern; solid	2	0.2	Outline; scattered marks; solid	2	0.2
Linear; outline; scattered marks	1	0.1	Outline; solid	27	2.1
Linear; outline; solid	11	1.0	Pattern	5	0.4
Linear; pattern; solid	2	0.2	Pattern; solid	2	0.2
Linear; scattered marks; solid	3	0.3	Scattered marks	16	1.3
Linear; solid	127	11.5	Solid	284	22.6
Outline	294	26.6	<i>Total</i>	<i>1,256</i>	<i>100.0</i>

Table 5.17. Enderby Area 2: forms used in creating this rock art assemblage.

TECHNIQUE	COUNT	%	TECHNIQUE	COUNT	%
Abraded	246	19.6	Pecked	873	69.5
Abraded; pecked	39	3.1	Pecked; pounded	1	0.1
Abraded; scratched	6	0.5	Pecked; scratched	13	1.0
Gouged	4	0.3	Pounded	2	0.2
Gouged; pecked	6	0.5	Scratched	57	4.5
NA	8	0.8	<i>Total</i>	<i>1,256</i>	<i>100.0</i>

Table 5.18. Enderby Area 2: techniques used in creating this rock art assemblage.

SIZE	COUNT	%	SIZE	COUNT	%
1–10	72	5.7	121–130	6	0.5
11–20	309	24.6	131–140	9	0.8
21–30	265	21.1	141–150	9	0.6
31–40	159	12.7	161–170	1	0.1
41–50	141	11.2	171–180	3	0.3
51–60	68	5.4	181–190	1	0.1
61–70	62	4.9	201–210	2	0.2
71–80	51	4.1	241–250	1	0.1
81–90	16	1.3	501–510	1	0.1
91–100	14	1.1	NA	47	3.7
101–110	11	1.0	<i>Total</i>	<i>1,256</i>	<i>100.0</i>
111–120	8	0.6			

Table 5.19. Enderby Area 2: size increments for all motifs (size bins with zero counts excluded).

Almost half of the assemblage (45%) is contrast state 4 (CS4); the second-highest colouration contrast is CS3 (32%). There is a low proportion of engraved motifs in the earliest phase (CS1), but more motifs are in CS2 than in CS1 and CS5 combined (Table 5.20). Around 8% of this assemblage has mixed patination. Very little art was produced here in the earliest phases of Murujuga art production, with relatively more produced in the middle to later phases.

CONTRAST STATE	COUNT	%
CS1	19	1.5
CS2	109	8.7
CS3	403	32.1
CS4	565	45.0
CS5	60	4.8
NA	100	8.0
<i>Total</i>	<i>1,256</i>	<i>100.0</i>

Table 5.20. Enderby Area 2: contrast state recorded in this assemblage.

Sample Area 3

This sample transect was positioned to include an interior valley system on granophyre bedrock. This creek line is truncated from the sea by an extensive Holocene sand dune formation: the mouth of this creek line was closed at the time of our fieldwork (Figure 5.14). There is a semi-permanent rock hole midway along the creek line here with an extensive calcium carbonate drape deposit (Figure 5.15). This natural drape was cored (in 2017 by Matthias Leopold and Joe Dortch) to investigate its chronological and environmental proxies. This core is now being analysed by Dr Caroline Mather as part of the Dating Murujuga's Rock Art Project (LP190100724).

There is a *Terebralia* spp. midden (with artefacts and some *Melo* sp. shell) immediately upslope of the rock hole (Figure 5.14) which was not recorded in detail but is spatially related with the panels in MLP-EI012. Surface shell samples from this were submitted for radiocarbon dating. The two age determinations returned from these were Early Holocene: 7,502 cal. BP (median age; *Melo*; Wk47201); and 8,303 cal. BP (median; *Terebralia*; Wk47200). All rock art encountered was recorded in this transect, but not all stone artefacts and midden material. No stone features were identified within the Area 3 transect.



Figure 5.15. Looking northward into the upper reaches of Area 3, with the small spring and rock hole marked by the fig tree (top); (bottom, left) the calcium carbonate drape under a fig tree at the rock hole; and (right) looking south down the valley from the small *Terebralia* midden located above the rock hole (MLP-EI012), with flaked stone artefacts and grindstone visible amongst the spinifex.



Figure 5.14. Location map for Enderby Island Sample Area 3, showing distribution and density of rock art panels within the newly recorded sites.

Twelve engraving sites were recorded in this transect (Table 5.21). A total of 146 cultural markings (132 motifs) were recorded from 95 panels (Table 5.22). Most of the

sites are small and the largest site assemblage has 84 motifs (Table 5.22, Table 5.23).

	COUNT	%
Art	11	92.0
Art and midden	1	8.0
<i>Total</i>	<i>12</i>	<i>100.0</i>

Table 5.21. Enderby Area 3: site types.

SITE NAME	TOTAL MOTIFS	SITE NAME	TOTAL MOTIFS
MLP-EI003	84	MLP-EI013	2
MLP-EI012 (with midden)	31	MLP-EI014	2
MLP-EI015	7	MLP-EI017	2
MLP-EI021	7	MLP-EI037	2
MLP-EI019	4	MLP-EI016	1
MLP-EI022	3	MLP-EI018	1
<i>Total</i>	<i>146</i>		

Table 5.22. Enderby Area 3: rock art sites and assemblage sizes.

SITE ASSEMBLAGE	NO.	%
Small (1–5)	8	66.7
Medium (6–20)	2	16.7
Large (21–150)	2	16.7
Complex (>151)	0	0
<i>Total</i>	<i>12</i>	<i>100.0</i>

Table 5.23. Enderby Area 3: assemblage size proportions.

A relatively small proportion ($n = 14$; 9.6%) of the Area 3 assemblage is classed as 'other': 12 grinding patches and two random pecking areas. Most of the 132 motifs here are in the geometric class, closely followed by

zoomorphs. Anthropomorphs are relatively rare and tracks are very rare, with only a single three-toe bird track (Table 5.24). No graffiti was encountered here.

CLASS	TOTAL	%	DEPICTIVE	%
Anthropomorphic	20	13.7	20	15.2
Geometric	60	41.1	60	45.5
Other	14	9.6		
Tracks	1	0.7	1	0.8
Zoomorphic	51	34.9	51	38.6
<i>Total</i>	<i>146</i>	<i>100.0</i>	<i>132</i>	<i>100.0</i>

Table 5.24. Enderby Area 3: class proportions (depictive motifs minus 'other' class).

Ovals and linear motifs are the most common geometrics depicted here (Table 5.25). Macropods, in various styles, dominate the zoomorphs (Figure 5.16) and there are several other terrestrial species (including lizards) depicted. There are more birds than fish and turtles. The relatively few human figures are dominated by linear forms, but there are almost as many profile and outline

figures. There are not any characteristically early Murujuga human forms, i.e. archaic faces, decorative infill figures or disarticulated dot-head figures, in this area. Although this is a relatively small sample, in comparison to the other south-west Enderby Island survey areas, the absence of track motifs in this sample area is significant.

SUBJECT	NO.	%	SUBJECT	NO.	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Linear figure	7	5.3	Bird track	1	0.8
Profile figure	5	3.8	<i>Geometric</i>		
Outline figure	5	3.8	Angular	3	2.3
Solid figure	3	2.3	Arc	11	8.3
<i>Zoomorphic</i>			Circular	5	3.8
Bird	6	4.5	Complex	1	0.8
Fish	5	3.8	Dot	4	3.0
Lizard	2	1.5	Linear	15	11.4
Macropod	28	21.2	Oval	18	13.6
Quadruped	2	1.5	Phytomorph	1	0.8
Terrestrial other	4	3.0	Rayed	2	1.5
Turtle	4	3.0	<i>Total</i>	<i>132</i>	<i>100.0</i>

Table 5.25. Enderby Area 3: subject proportions.

The most common (32%) motif form in Area 3 is outline, followed by linear and linear + outlined forms (Table

5.26). There is very little form variation created here and almost no patterned infill (1.6%).

	COUNT	%		COUNT	%
Linear	31	21.2	Outline	42	28.8
Linear; outline	25	17.1	Outline; pattern	1	0.7
Linear; outline; pattern	1	0.7	Outline; scattered marks	1	0.7
Linear; outline; scattered marks; solid	1	0.7	Outline; scattered marks; solid	1	0.7
Linear; outline; solid	4	3.0	Outline; solid	3	2.3
Linear; scattered marks; solid	1	0.7	Solid	24	16.4
Linear; solid	9	6.2	<i>Total</i>	<i>146</i>	<i>100.0</i>

Table 5.26. Enderby Area 3: forms used in creating this rock art assemblage..

The predominant technique (83.6%) in Area 3 is pecking

(Table 5.27). Combination forms are rare here.

Over half of the assemblage (60%) is smaller than 30 cm in size (Table 5.28). Eleven motifs are larger than

1 m in size. Seven of these large motifs are macropods and there is one large emu.

TECHNIQUE	NO.	%
Abraded	14	9.6
Abraded; pecked	4	2.7
Abraded; scratched	1	0.7
Gouged; pecked	3	2.1
Pecked	122	83.6
Pounded	2	1.4
<i>Total</i>	<i>146</i>	<i>100.0</i>

Table 5.27. Enderby Area 3: techniques used in creating this rock art assemblage..

SIZE	COUNT	%	SIZE	COUNT	%
1–10	3	2.3	101–110	2	1.4
11–20	43	29.5	121–130	2	1.4
21–30	41	28.1	131–140	1	0.7
31–40	18	12.3	141–150	1	0.7
41–50	9	6.8	151–160	1	0.7
51–60	7	4.8	181–190	2	1.4
61–70	9	6.2	201–210	1	0.7
71–80	3	2.1	221–230	1	0.7
91–100	1	0.7	NA	1	0.7
			<i>Total</i>	<i>146</i>	<i>100.0</i>

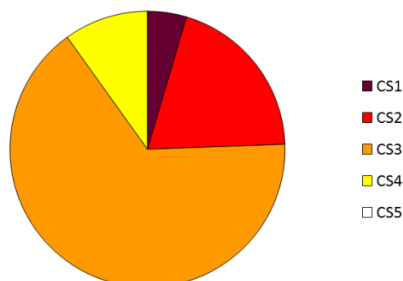
Table 5.28. Enderby Area 3: size of the assemblage.

Most of the assemblage (60%) is contrast state 3; and significantly more of the assemblage is in the earlier contrast states (CS1 and CS2) compared to the later ones. No art was recorded from the most recent period (with CS5, Table 5.29). A very small proportion of this assemblage (<1%) has mixed patination (NA). Both the

size of the faunal depictions, the relative absence of marine fauna and the contrast state information all lead to an interpretation that this interior valley assemblage was created prior to sea level rise and is probably contemporaneous with the Early Holocene midden found near the rock hole.

CONTRAST STATE	COUNT	%
CS1	6	4.1
CS2	26	17.8
CS3	88	60.3
CS4	13	8.9
CS5	0	0.0
NA	13	0.8
<i>Total</i>	<i>146</i>	<i>100.0</i>

Table 5.29. Enderby Area 3: contrast state recorded in this assemblage.



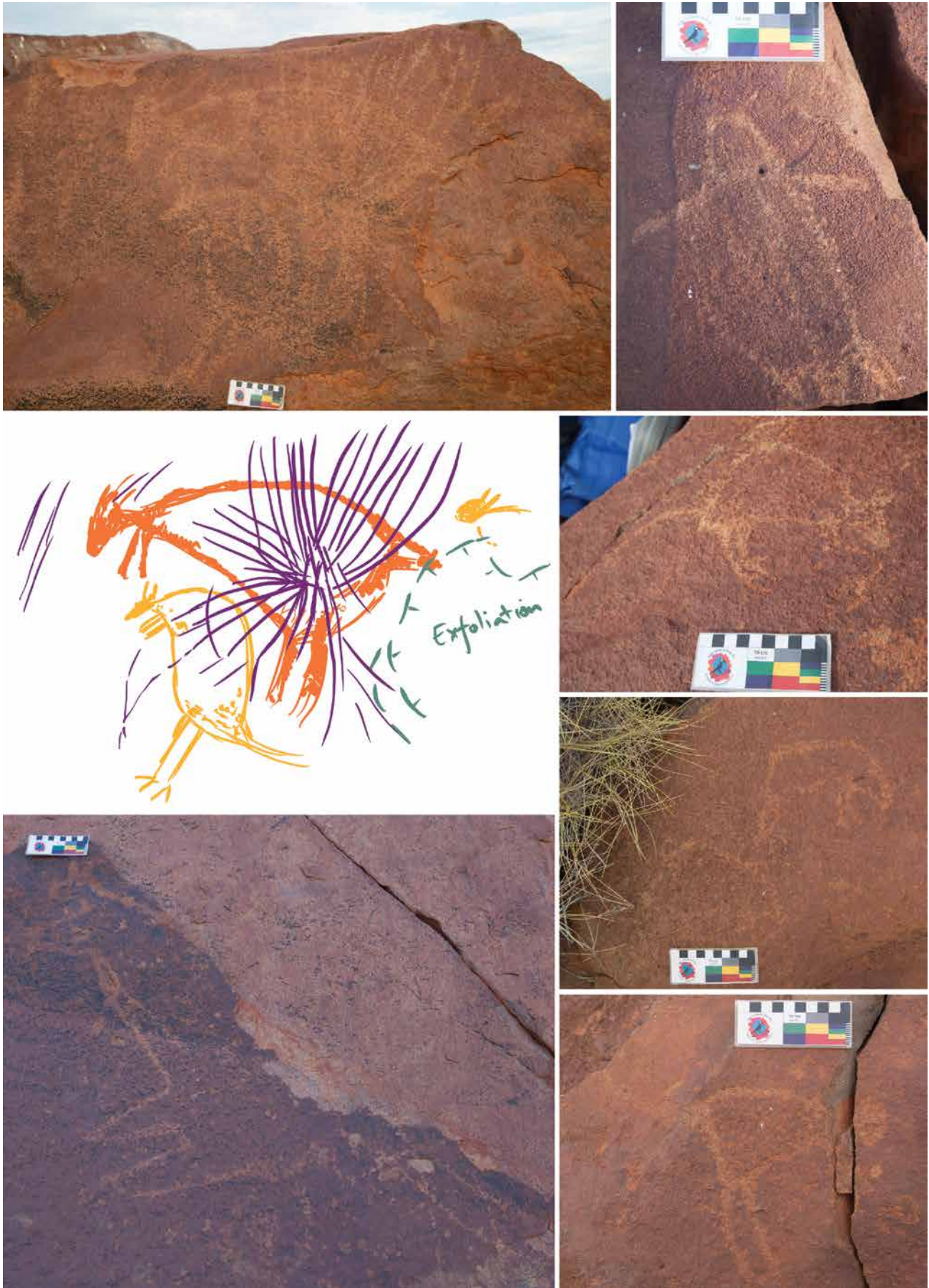


Figure 5.16. Enderby Area 3: examples of macropod motifs, showing the size ranges and stylistic variability. Top left is a composition with two (maybe three) macropods (also sketched, middle left), with a radiating set of lines over the main kangaroo, possibly indicating a spearing; (middle right) a small marsupial and pair of quadrupeds; (top right) a turtle (rare in this Area); and (bottom, left) a large outlined kangaroo and (right) a smaller, different style of macropod.

Sample Area 4

Area 4 is also located at the extreme western end of the island, to the south of the western beach targeted by Area 1 and on a high ridge with an overlooking aspect to the south and west (Figure 5.1, Figure 5.2 and Figure 5.4). It is on the opposite side of a fault line / dolerite dyke declination from the southern end of Area 1, which is

located some 300 m to the north-west (Figure 5.4). This sample area was added to our survey inventory when circular stone structures (clearings/enclosures) located here were encountered on our way back to camp from recording work within Area 1.

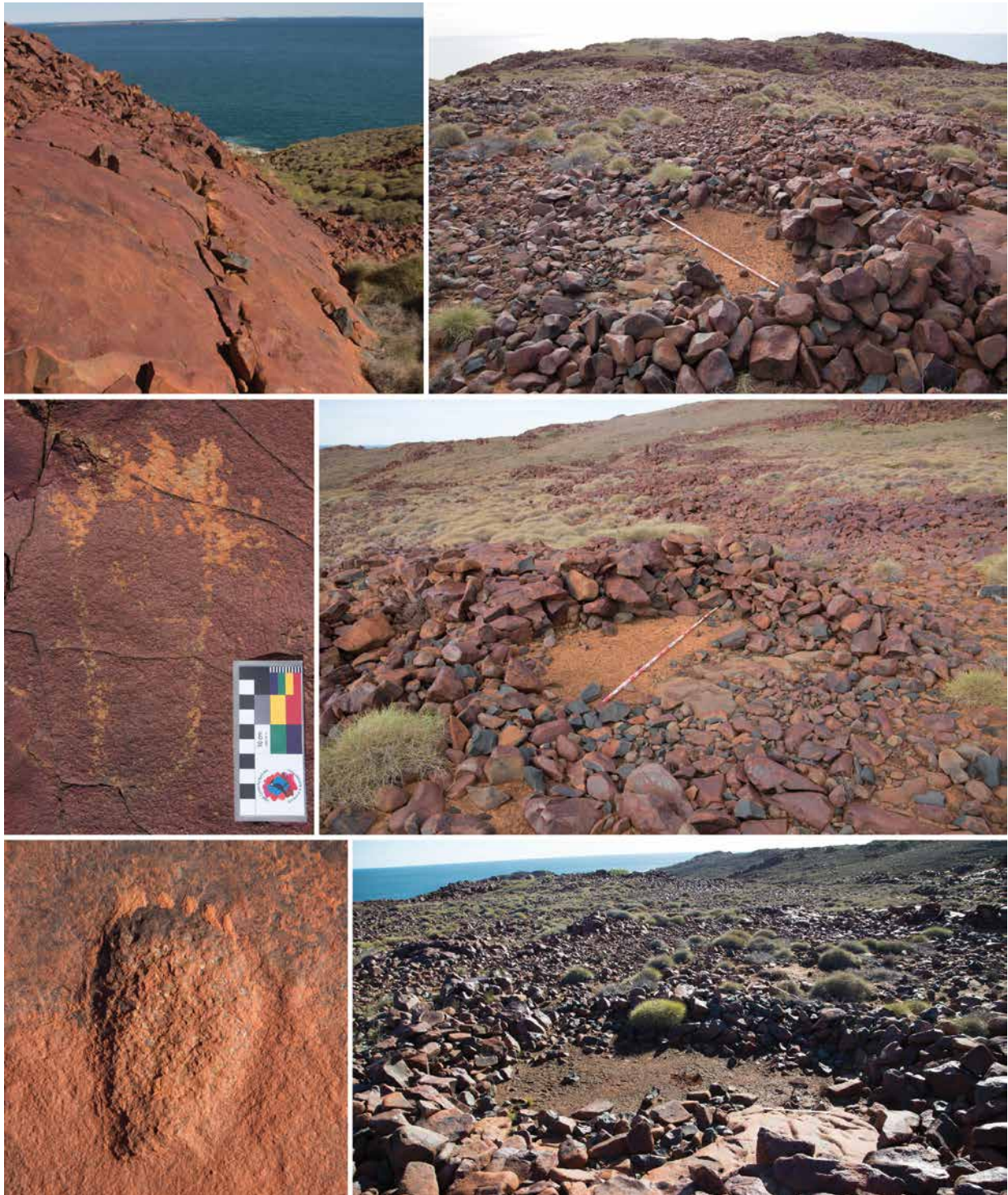


Figure 5.17. Enderby Area 4: (top left) small standing stones jammed in platform crack; (right hand side) three examples of the cleared enclosures; and (left) two of the human foot motifs recorded.

All the structures and rock art panels located in this area are within 25 m of each other and this sample area has a single recorded site: MLP-EI004. The area was subject to drone photography, and an archaeological excavation was conducted inside one of the stone structures (see Chapter 6). Site MLP-EI004 has 66 panels, 111 recorded motifs and nine stone structures. One of the stone structures is a pair of small standing stones, while the other eight are classified as a clearing/ enclosure. These structures have a cleared space created by removing stones from a central area (see Chapter 3) with the enclosed space being of varying shapes. Half of the cleared structures in Area 4 are circular and 37.5% are curvilinear. The remaining structure (12.5%) has an amorphous shape. Although many panels were recorded in proximity, no art was found inside (or on the fabric of) the stone structures, most of which are made up

of small to medium-sized rounded rocks (Figure 5.18). The one recorded 'standing stone' comprised two very small upright individual stones wedged within one of the cracks of an area with larger sloping bedrock panels (Figure 5.17).

Most of the art is produced on flat and sloping platforms and blocks between the stone structures and the gully down to the rock platforms adjacent to the sea (Figure 5.19).

While this rock art assemblage is relatively small, its proportions are like those found in nearby Area 1. Geometrics dominate the assemblage; however, there are less zoomorphs here – and a much higher proportion of tracks than found in the nearby sample from around the beach (Table 5.30). No grinding patches were found in this area: all the 'other' motifs are random pecking and/or scratching.

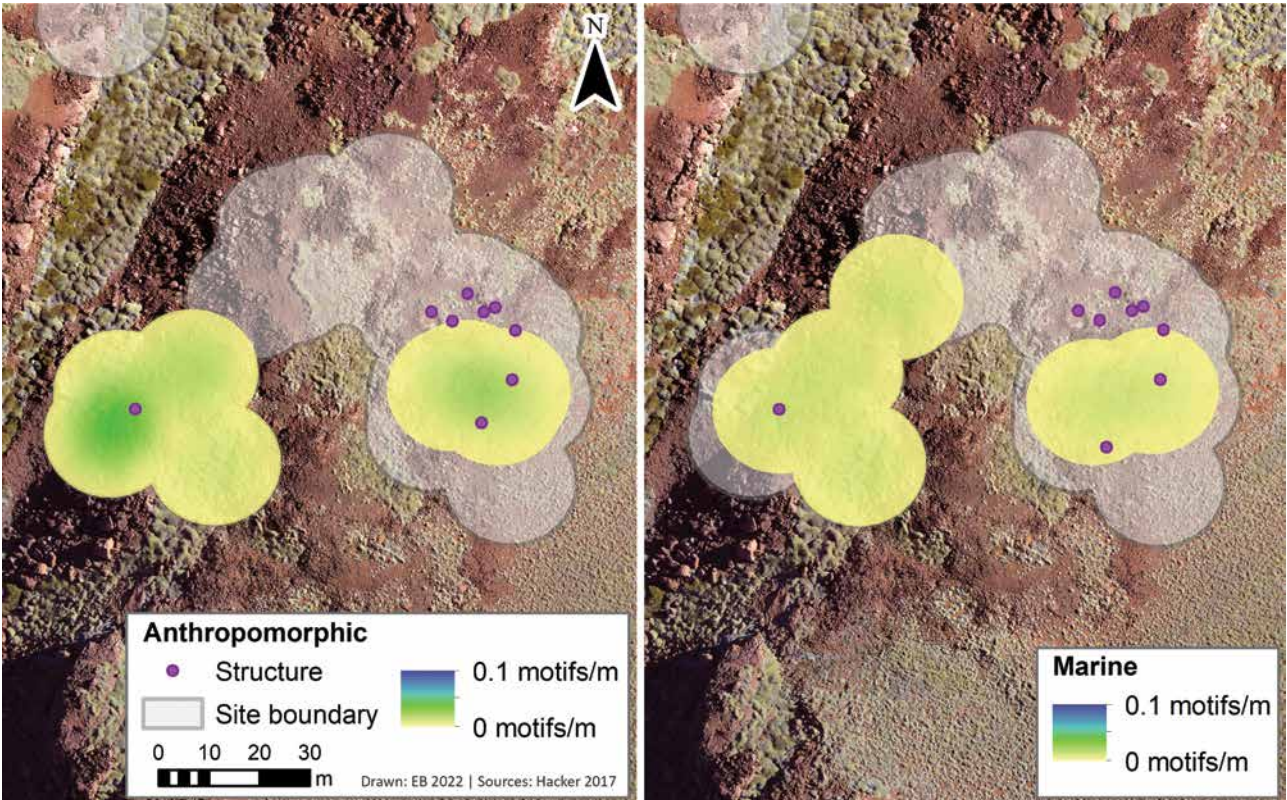


Figure 5.18. Enderby Area 4: density of recorded motifs around the stone structures (purple dots).

	TOTAL	%	DEPICTIVE	%
Anthropomorphic	16	14.4	16	16.0
Geometric	37	33.3	37	37.0
Other	11	9.9		
Tracks	26	23.4	26	26.0
Zoomorphic	21	18.9	21	21.0
Total	111	100.0	100	100.0

Table 5.30. Enderby Area 4: class proportions for the recorded assemblage (depictive motifs minus 'other' class).

The most common geometric motifs are material culture items (e.g. hooked, stick, boomerang, shield and spear thrower: Figure 5.19): ovals, linear designs and angular shapes are common geometrics (Table 5.31). Human feet are the most common track motifs. Four of these have more than six toes; the remainder are anatomically correct. In one case a natural depression has toes added to form the footprint (Figure 5.17). A human track with an interior line was recorded as a sandal motif (Figure 5.19).

The human figures are all relatively recent (mostly CS4 and CS5), mostly linear, and many with exaggerated hands, feet and genitalia. There are five female figures

Bird tracks are the next most common track; these being a mixture of three and four-toed varieties, many of these incised rather than pecked (Figure 5.19). Lizards are the most common zoomorphs, followed by quadrupeds and turtles in equal numbers. Only one (partial) macropod is depicted, and there are only two marine tails in this assemblage and one fish. One of the birds and one of the quadrupeds are depicted in a spread-eagled (as opposed to in-profile) posture.

and a number of these are shown in coitus. There are several groups of figures holding hands in a row .

SUBJECT	COUNT	%	SUBJECT	COUNT	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Combination figure	1	1.0	Bird track	9	9.0
Linear figure	12	12.0	Human foot	13	13.0
Solid figure	3	3.0	Macropod track	4	4.0
<i>Geometric</i>			<i>Zoomorphic</i>		
Angular	5	5.0	Bird	2	2.0
Animal part	2	2.0	Fish	2	2.0
Arc	3	3.0	Lizard	5	5.0
Dot	2	2.0	Macropod	1	1.0
Linear	9	9.0	Quadruped	4	4.0
Material culture	9	9.0	Terrestrial other	1	1.0
Oval	9	9.0	Turtle	4	4.0
<i>Total</i>			<i>100 100.0</i>		

Table 5.31. Enderby Area 4: subject proportions.

	NO.	%
Linear	37	33.3
Linear; outline	4	3.6
Linear; outline; pattern	2	1.8
Linear; outline; pattern; solid	1	0.9
Linear; outline; solid	2	1.8
Linear; solid	21	18.9
Outline	6	5.4
Outline; pattern	1	0.9
Outline; pattern; solid	1	0.9
Outline; scattered marks	1	0.9
Outline; solid	10	9.0
Pattern; solid	1	0.9
Scattered marks	8	7.2
Solid	16	14.4
<i>Total</i>	<i>111</i>	<i>100.0</i>

Table 5.32. Enderby Area 4: forms used in the recorded assemblage.

Most motif forms in Area 4 (37%) are linear, followed by linear + solid forms (19%) and then solid forms (14%: Table 5.32). While there is a lot of variation in the forms created here, there is a relatively low proportion of patterned infill (3%).

	COUNT	%
Abraded	8	7.2
Abraded; scratched	9	8.1
Gouged	1	0.9
Gouged; pecked	2	1.8
Incised	4	3.6
Pecked	69	62.2
Pecked; scratched	3	2.7
Scratched	15	13.5
<i>Total</i>	<i>111</i>	<i>100.0</i>

Table 5.33. Enderby Area 4: techniques used to create this assemblage.

Pecking is the most common technique in this Area (62%), followed by scratching and abrasion (28% combined) (Table 5.33). Relatively few other combination techniques are used in this small assemblage.

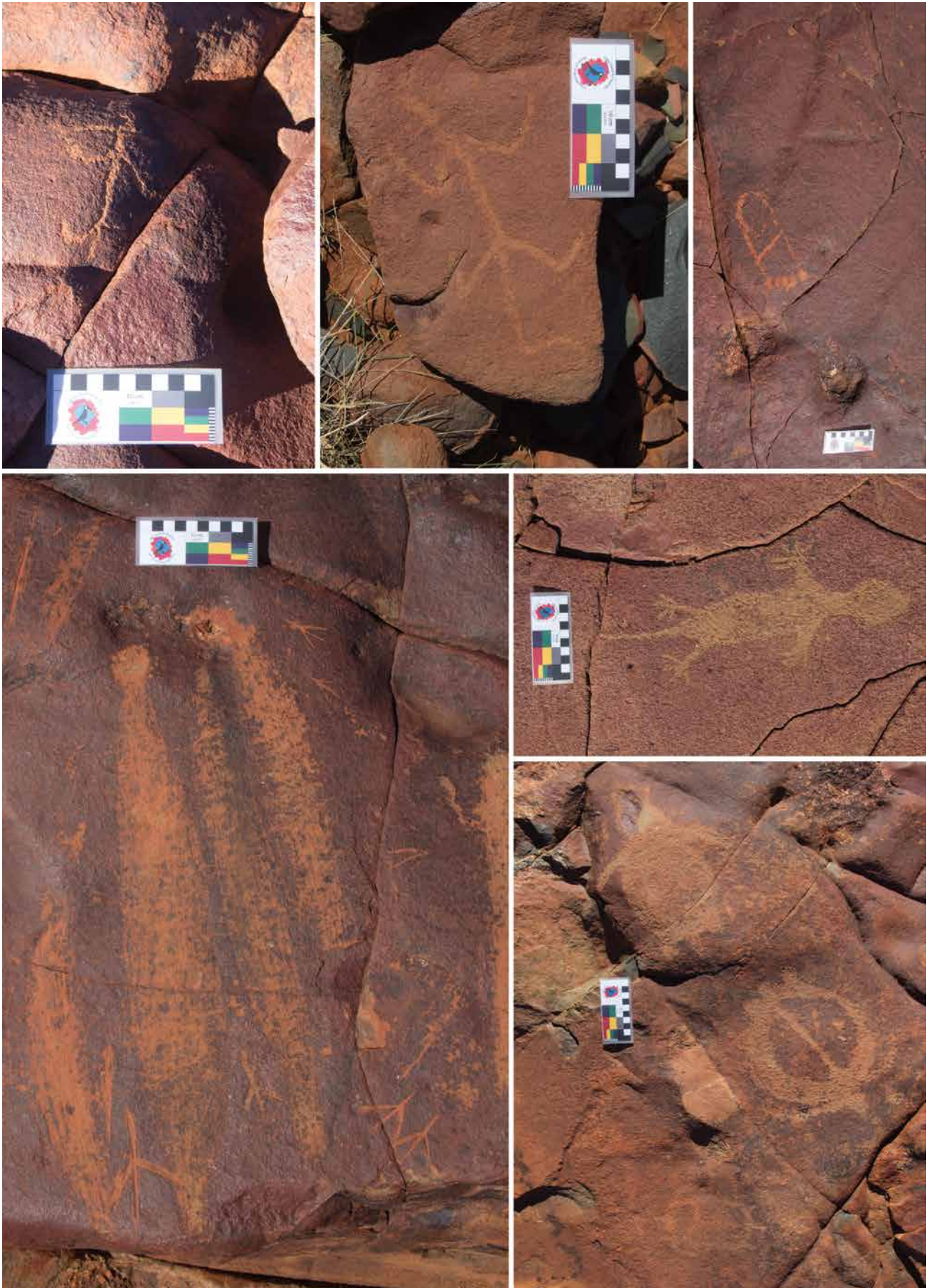


Figure 5.19. Enderby Area 4 linear human and lizard forms: (clockwise from top left) human foot with sandal (top right); (middle) chubby solid lizard; (bottom right) three different turtle forms and designs; (lower left) composition of geometric forms (spear throwers?) and tiny scratched and incised bird tracks, mostly with four toes.

Most (69%) of the assemblage is smaller than 30 cm in size (Table 5.34). There are only two motifs larger than 1 m, one of which is a pair of (mixed gender) of human figures in coitus (end to end rather than side by side, which is the more common schema). These larger size ranges are possible due to the large canvases provided

by the large horizontal platforms in this south-western corner of the island (see Figure 5.17). A cluster of larger motifs (between 31 and 60 cm; 25%) includes a range of geometrics, grouped human figures and one large human track.

SIZE	COUNT	%	SIZE	COUNT	%
1-10	24	21.6	61-70	1	0.9
11-20	37	33.3	71-80	1	0.9
21-30	17	15.3	81-90	2	1.8
31-40	7	6.3	141-150	1	0.9
41-50	11	9.9	191-200	1	0.9
51-60	9	8.1	<i>Total</i>	<i>111</i>	<i>100.0</i>

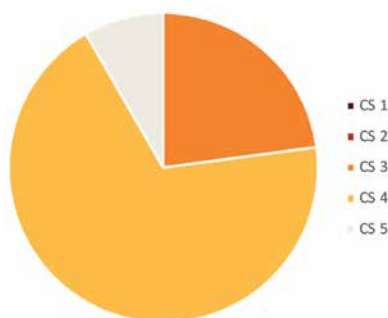
Table 5.34. Enderby Area 4: size of the recorded assemblage.

None of the art produced here is in the earliest two contrast states. Contrast state 4 is the most common weathering state, accounting for two-thirds of the

assemblage, followed by CS3 (Table 5.35), and then there is also relatively little art produced in the most recent period.

CONTRAST STATE	COUNT	%
CS1	0	-
CS2	0	-
CS3	26	23.4
CS4	73	65.8
CS5	9	8.1
NA	3	2.7
<i>Total</i>	<i>111</i>	<i>100.0</i>

Table 5.35. Enderby Area 4: contrast state.



Sample Area 6

Area 6 is in the centre of the island (Figure 5.1 and Figure 5.2) and this valley contains a continuous set of archaeological evidence above, around and below several permanent pools (Figure 5.20 and Figure 5.21). Originally known as Enderby 10, this site was initially recorded during the assessment of the outer islands during the National Heritage Listing process (McDonald and Veth 2006). Areas of higher motif and grinding patch density are situated around the permanent pools (Figure 5.21). A section along the southern bank, around the creek bend in the middle of the site, has not been surveyed. This site complex, with its almost continuous archaeological

evidence, is now called MLP-EI010. A surface *Terebralia* sp. shell collected in 2006 was dated by RTIO (this age determination was c. 9,000 cal. BP: ANU-18636) and this site has been test excavated (Chapter 6).

Site MLP-EI010 has an assemblage of 2,071 motifs recorded on 1,068 panels (Figure 5.21). It also has one recorded stone structure (clearing/enclosure). Our systematic transect was limited to the gorge and its immediate surrounds, and this site complex has no recorded satellite sites. We did not systematically record surface artefacts, portable grindstones or shell material within the transect.



Figure 5.20. Enderby Area 6: (top) the view from above the top pool at MLP-EI006 towards the large bay at the north of the island; and (bottom) the landscape around the lower pool at the northern end of the site.

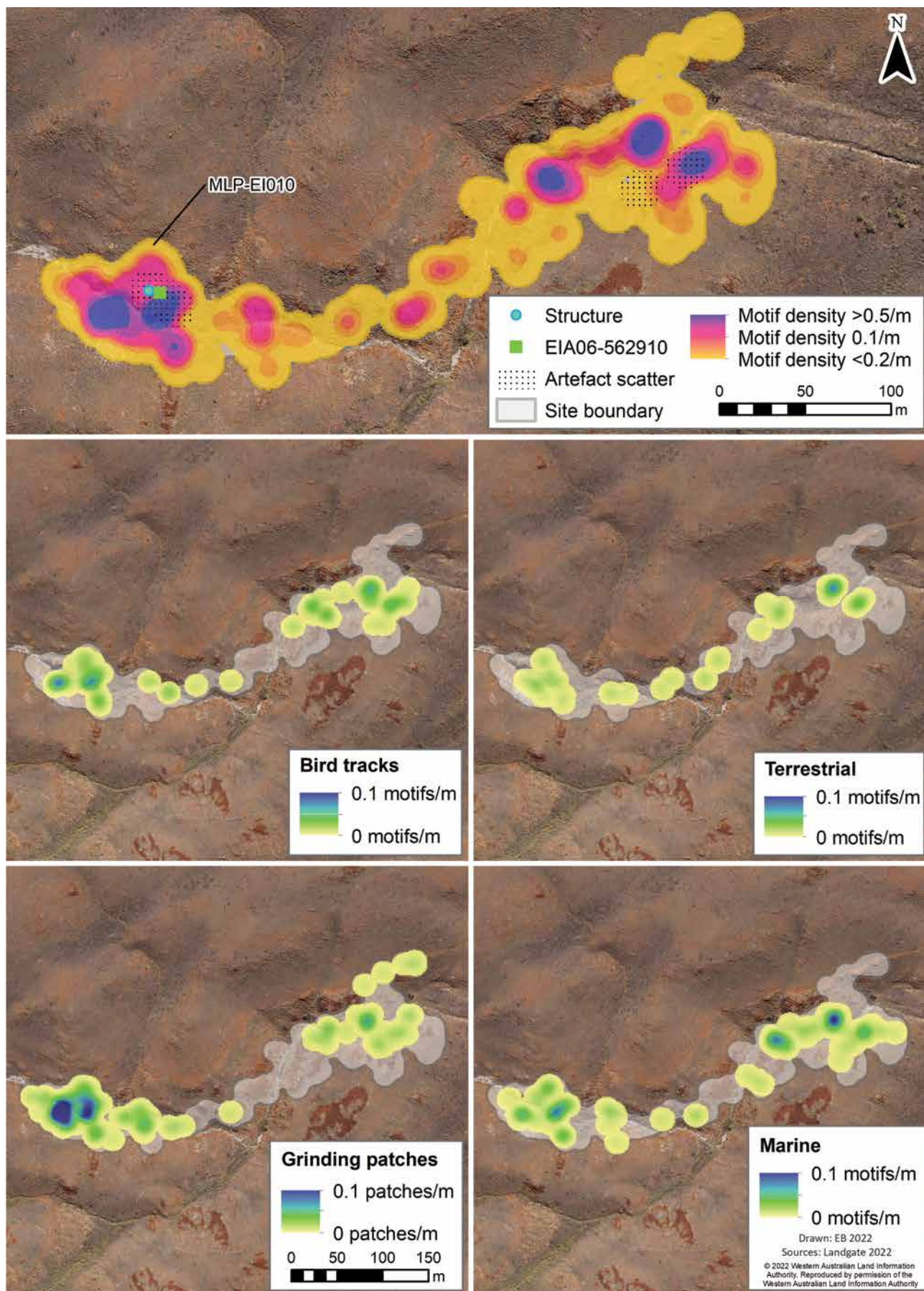


Figure 5.21. Site MLP-EI010 showing the location of the excavation square within the recorded assemblage shows as density mapping of motifs and stone structures.

More than a quarter (c. 25.9%) of the total assemblage of 2,071 human-made marks at site

MLP-EI010 are in the 'other' class, including 274 grinding patches. These represent almost 60% of grinding

patches recorded across the Enderby Island sample areas. There are also many incised line sets ($n = 125$). Random scratching ($n = 109$) and pecking areas ($n = 24$) make up the remainder of this class. These assemblage components are indicative of the extensive domestic uses undertaken at this site, of which rock art appears to be a part. Grinding patches are interspersed amongst the art and the extensive midden deposit. The soft, smooth bedrock surfaces seem to have encouraged the extensive production of the incised line sets, the function of which is unclear (see Figure 6.39 and Figure 6.40 in chapter 6). No graffiti was encountered in this sample area. Once these non-depictive art productions are removed, geometrics account for almost 52% of this assemblage, followed by anthropomorphs, then zoomorphs and tracks (Table 5.36).

There are five marine tails and three dugongs. Tracks are dominated by bird tracks (a mixture of three and four-toed varieties), followed by human tracks (some in pairs) and a lot of macropod tracks. There is one turtle trail.

Linear motifs (including many scratched parallel lines), ovals and arcs are the most common geometrics

here followed closely by angular shapes (Table 5.37). Human figures are dominated by linear forms, and there are also many solid figures and profile figures. There are 13 headdress figures and two older decorative infill figures (one with a disarticulated dot head). No archaic faces were recorded here.

Turtles ($n = 73$) followed by fish ($n = 49$) are the most common zoomorphs (see Figure 6.74); but there is a lot of variety in terrestrial and maritime themes (Figure 5.23) with many birds ($n = 26$) and macropods ($n = 28$).

The most common (49%) motif form across this site complex is linear; followed by solid, solid + linear and outlined forms (Table 5.38). There is a lot of variation in the forms created here, but still relatively little patterned infill (1.2%).

Around a third of the motifs in this Area have been pecked (35.4%), followed by abrasion (25.3%; 13.4% accounted for by grinding patches) and scratching (23.6%) (Table 5.39 and Figure 5.22). Combination forms are highly variable. This characteristic set of techniques is likely related to the basalt bedrock in this area and its smooth cortical surfaces.

	TOTAL	%	DEPCTIVE	%
Anthropomorphic	333	16.5	333	21.9
Geometric	762	37.8	762	50.2
Other	553	27.4		0.0
Tracks	199	9.9	199	13.1
Zoomorphic	224	11.1	224	14.8
Total	2,071	100	1,518	100

Table 5.36. Enderby Area 6: class proportions for the recorded assemblage (depictive motifs minus 'other' class).

SUBJECT	COUNT	%	SUBJECT	COUNT	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Combination figure	2	0.1	Bird track	145	9.6
DI figure	2	0.1	Human foot	31	2.0
Linear figure	235	15.5	Human hand	1	0.1
Outline figure	6	0.4	Macropod track	18	1.2
Profile figure	25	1.6	Other track	3	0.2
Solid figure	63	4.2	Turtle trail	1	0.1
<i>Geometric</i>		0.0	<i>Zoomorphic</i>		
Angular	72	4.7	Bird	26	1.7
Animal part	8	0.5	Dugong	3	0.2
Arc	107	7.0	Fish	49	3.2
Circular	8	0.5	Lizard	8	0.5
Complex	7	0.5	Macropod	28	1.8
Dot	13	0.9	Marine other	3	0.2
Linear	318	20.9	Quadruped	13	0.9
Material culture	26	1.7	Snake	3	0.2
Oval	179	11.8	Stingray	9	0.6
Phytomorph	3	0.2	Terrestrial other	1	0.1
Rayed	29	1.9	Turtle	73	4.8
			Total	1,518	100.0

Table 5.37. Site MLP-EI010: subject proportions in the depictive assemblage.

FORM	COUNT	%	FORM	COUNT	%
Linear	1018	49.2	Outline	115	5.6
Linear; outline	108	5.2	Outline; pattern	20	1.0
Linear; outline; pattern	6	0.3	Outline; pattern; scattered marks	1	0.1
Linear; outline; pattern; scattered marks	1	0.1	Outline; pattern; solid	4	0.3
Linear; outline; pattern; solid	1	0.1	Outline; scattered marks	2	0.1
Linear; outline; scattered marks	2	0.1	Outline; solid	30	2.0
Linear; outline; solid	8	0.4	Pattern	1	0.1
Linear; pattern	3	0.2	Pattern; solid	3	0.2
Linear; scattered marks	7	0.3	Scattered marks; solid	22	1.1
Linear; scattered marks; solid	1	0.1	Solid	511	24.7
Linear; solid	205	9.9	<i>Total</i>	<i>2,071</i>	<i>100.0</i>

Table 5.38. Site MLP-EI010: form in the recorded assemblage.

TECHNIQUE	COUNT	%	TECHNIQUE	COUNT	%
Abraded	525	25.3	Incised; pecked	3	0.1
Abraded; gouged; pecked	1	0.1	Incised; scratched	14	0.7
Abraded; incised	8	0.4	NA	4	0.1
Abraded; incised; pecked; scratched	4	0.2	Pecked	733	35.4
Abraded; pecked	41	0.1	Pecked; pounded	1	0.1
Abraded; pecked; scratched	2	2.0	Pecked; scratched	9	0.4
Abraded; scratched	31	1.5	Pounded	2	0.1
Battered; pecked	1	0.1	Pounded; scratched	1	0.1
Gouged	8	0.4	Scratched	488	23.6
Gouged; pecked/incised	2	0.1	<i>Total</i>	<i>2,071</i>	<i>100.0</i>
Incised	192	9.3			

Table 5.39. Site MLP-EI010: techniques used in the recorded assemblage.

The assemblage is predominantly (85%) smaller than 30 cm in size (Table 5.40). Another 10% of the assemblage is medium-sized (31–60 cm). Only one motif

in this assemblage is larger than 1 m in size. This in part reflects the generally smaller panel size options across this site, because of the blockier basalt bedrock.

SIZE INCREMENTS	COUNT	%	SIZE INCREMENTS	COUNT	%
1–10	505	24.4	61–70	16	0.8
11–20	794	38.3	81–90	3	0.1
21–30	458	22.1	91–100	1	0.0
31–40	171	8.3	111–120	1	0.0
41–50	55	2.7	NA	45	1.1
51–60	22	1.1	<i>Total</i>	<i>2,071</i>	<i>100.0</i>

Table 5.40. Site MLP-EI010: size of the recorded assemblage.

Over a third of the assemblage (34%) is CS4, followed closely by CS3 (32%). Significantly more of the assemblage falls within the earliest two phases of contrast (Table 5.41), while very little (3%) of the assemblage falls within the most recent phase of production. A relatively high proportion (20%) has mixed patination, meaning that the weathering state cannot be assessed (this includes most of the grinding patches). The basalt bedrock here may well affect these contrast state statistics, especially given the high proportion

of scratching and abrading techniques – and lack of penetration through the exterior patina as a result.

CONTRAST STATE	COUNT	%
CS1	107	5.2
CS2	249	12.0
CS3	541	26.1
CS4	706	34.1
CS5	45	2.2
NA	423	20.4
Total	2,071	100.0

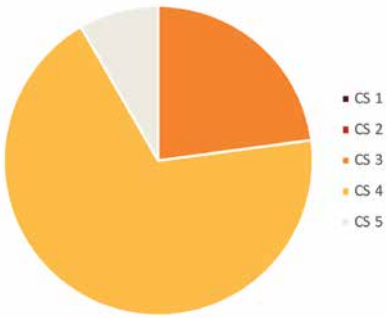


Table 5.41. Site MLP-EI010: contrast state in the recorded assemblage.



Figure 5.22. Site MLP-EI010: (top) typical grinding patches; (middle, left) incised line patterns with bird track and anthropomorphic variations and (right) a notched block edge; and (bottom, left) barbed spear and (right) human foot with re-grooved toes.



Figure 5.23. Site MLP-El010: (top and middle rows) macropod style and technique variations; (bottom left) with a recent bird motif and (right) several bird mixed-age track types, plus (bottom right) an older style geometric design.

Sample Area 7

Area 7 is located around an interior creek line which drains towards the central northern beach at the western end of Enderby Island (Figure 5.1). This contains an

almost continuous set of archaeological evidence above and below a permanent pool (Site MLP-EI007) although the suitable bedrock is not continuous.



Figure 5.24. Enderby Area 7: (top) the upper reaches of the valley facing south; and (bottom) the mid and lower reaches of the valley facing north, showing the discontinuous nature of the bedrock on either side of the steeply incised creek line.



Figure 5.25. Enderby Area 7: (top left) waterhole at the top of the Area showing the landscape context and calcium carbonate encrustation along the creek line here; (top right) an artefact found amongst the recorded panels; and (bottom) the midden above the creek line where the human cranium was found (right).

There is a dense *Terebralia* midden on a flat area above the semi-permanent pool at the top end of this Area (Figure 5.25). A partial human cranial vault was observed protruding from this midden. For cultural sensitivity reasons, no further investigation was undertaken at this location or upslope where rock art was observed to continue. The existence of human remains was reported to Murujuga Aboriginal Corporation and the relevant state authorities at the time.

As well as this continuous site complex (Site

MLP-EI007), there is a small site in the creek line further downstream (MLP-EI034) with three grinding patches, and another isolated site (MLP-EI035) further up the slope which has three geometric and track motifs (Table 5.42 and Table 5.43). The highest density of motifs in Area 7 is clustered around the rock hole, although there is an almost continuous distribution of art having been produced at multiple elevations throughout this transect (Figure 5.26). The recording made here has not defined the boundaries of this site, except downstream.

	NO.	%
Art	2	50.0
Art; scatter; burial	1	50.0
Total	3	100.0

Table 5.42. Enderby Area 7: site types.

Most of the 376 depictive motifs in Area 7 are geometric (60%) followed by almost equal numbers of tracks and anthropomorphs then zoomorphs. A large proportion (26%) of the assemblage is classed as 'other' (including 70 grinding patches, 52 areas of random pecking and scratching and 15 incised lines sets) (Table 5.44 and Figure 5.27). No graffiti was encountered in this sample transect.

	TOTAL	%	DEPICTIVE	%
Anthropomorphic	53	9.8	53	14.1
Geometric	226	41.9	226	60.1
Other	164	30.4		
Tracks	62	11.5	62	16.5
Zoomorphic	35	6.5	35	9.3
Total	540	100.0	376	100.0

Table 5.44. Enderby Area 7: class proportions (depictive motifs minus 'other' class).

SITE ID	MOTIF TOTALS
MLP-EI007	534
MLP-EI034	3
MLP-EI035	3
Total	540

Table 5.43. Enderby Area 7: rock art sites and assemblage sizes.

Linear motifs are the most common geometrics here followed by ovals and arcs (Table 5.45). Tracks are dominated by bird tracks, with more four-toed than three-toed varieties. Human tracks are common, and around half of these have five toes, the remainder having six toes or more. Human figures are dominated by linear forms, followed by solid figures, profile figures and several outline figures. There is only one headdress figure. There is only one older human form here: a disarticulated dot-head figure. There are no decorative infill figures or archaic faces. There are, however, several very weathered older style motifs with fully pecked interiors (Figure 5.27). Birds, macropods and turtles dominate the zoomorphs (Figure 5.28), with a fairly even mixture of marine and terrestrial forms here. There is a single marine tail. There are several distinctive pointy nosed quadrupeds here, somewhat different to those found in several other Enderby assemblages.

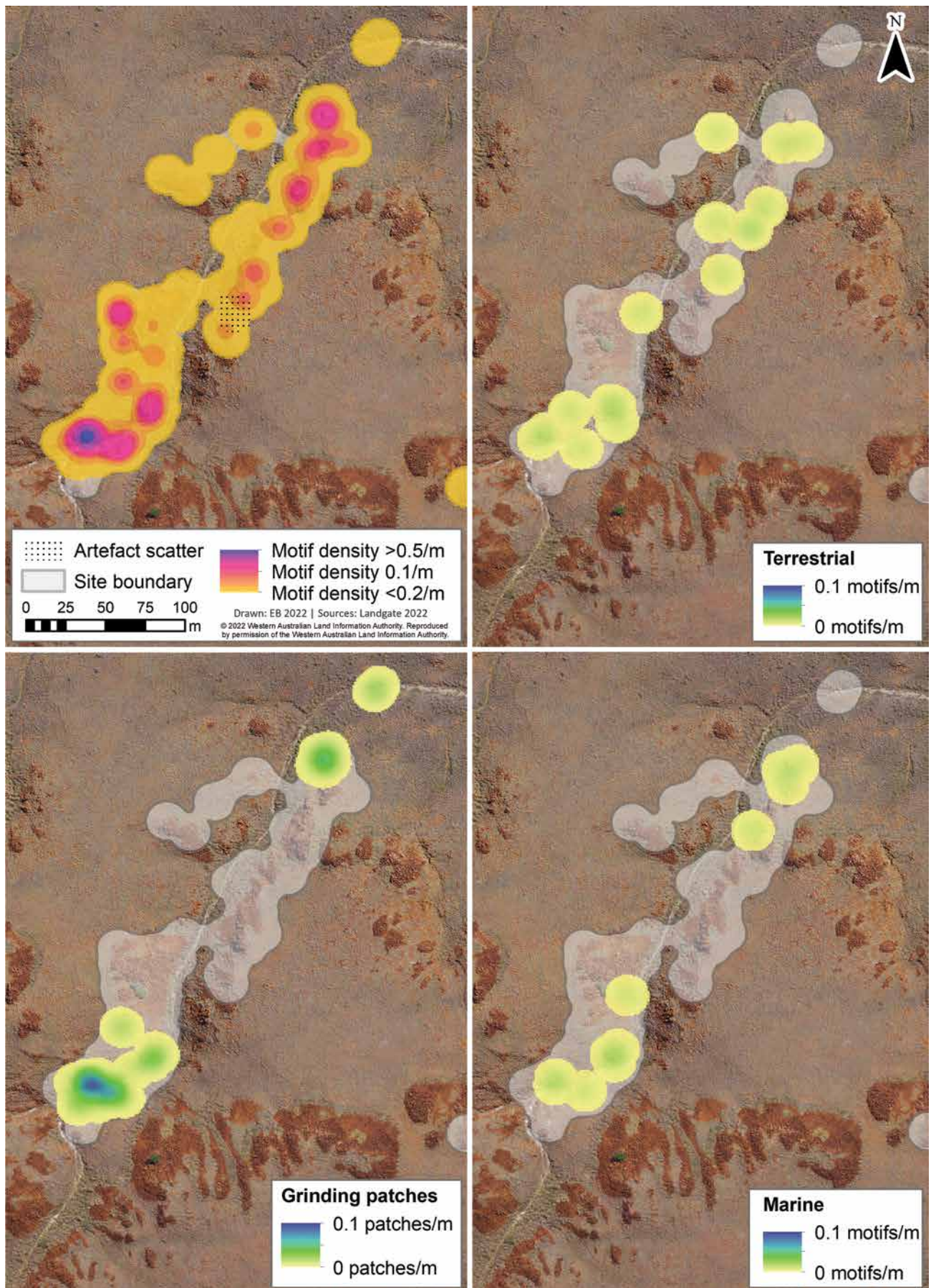


Figure 5.26. Enderby Area 7 transect showing location of *Terebralia* midden upslope of the main pool and the density of art production along the creek line for several dominant motif types and grinding patches.



Figure 5.27. Animal and track motifs found in Area 7: (top) a bird, a fish (likely a flounder, *Pseudorhombus* sp.) and abraded line sets; (middle) a very weathered panel with three birds and four human figures, and (right) a coiled snake; and (bottom) two different styles of human feet.

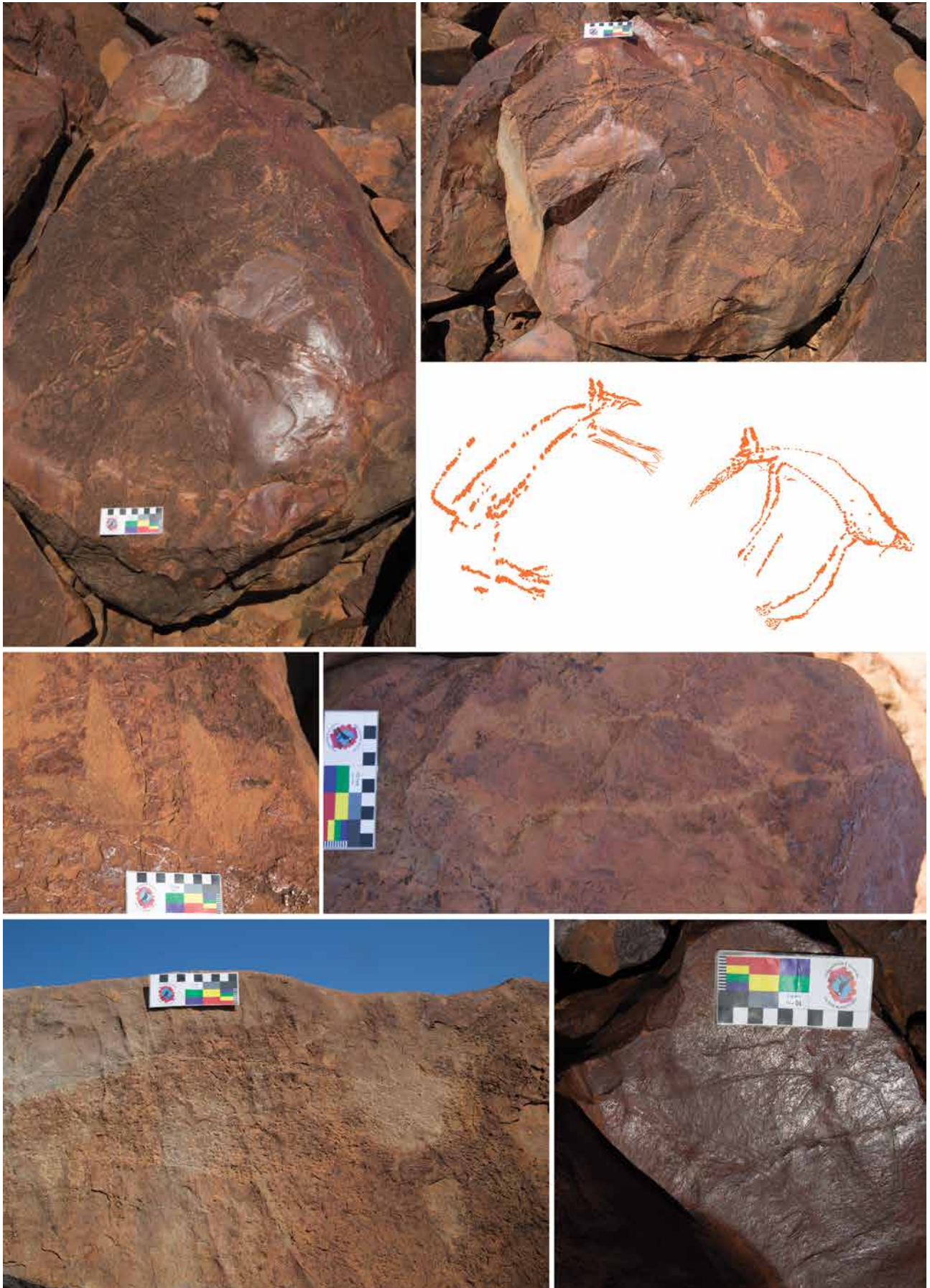


Figure 5.28. Zoomorphs from Area 7 including (top) a pair of pointy-nosed quadrupeds from adjacent panels in the lower reaches of the valley; (middle) a pair of solid kangaroo tracks and a small pecked lizard with scratched digits on its back feet; and (bottom left) a pecked dugong and (right) incised echidna.

SUBJECT	NO.	%	SUBJECT	NO.	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Combination figure	1	0.3	Bird track	21	5.8
Linear figure	28	7.7	Human foot	10	2.8
Outline figure	4	1.1	Macropod track	7	1.9
Profile figure	8	2.2	Other track	24	6.6
Solid figure	12	3.3	<i>Zoomorphic</i>		
<i>Geometric</i>			Bird	8	2.2
Angular	20	5.5	Dugong	1	0.3
Arc	27	7.4	Fish	3	0.8
Circular	3	0.8	Lizard	3	0.8
Dot	3	0.8	Macropod	7	1.9
Dumb-bell	1	0.3	Quadruped	5	1.4
Linear	96	32.5	Snake	1	0.3
Material culture	2	0.6	Turtle	6	1.7
Oval	64	17.6	Animal part	1	0.3
Rayed	10	2.8	<i>Total</i>	<i>373</i>	<i>100.0</i>

Table 5.45. Enderby Area 7: subject proportions.

The most common (46%) motif form in Area 7 is linear, followed by solid forms (these including the 70 grinding patches: Table 5.46). There is a lot of variation in the

forms created here, but relatively little patterned infill (1%).

FORM	NO.	%	FORM	NO.	%
Linear	242	44.8	Outline; pattern	5	0.9
Linear; outline	30	5.6	Outline; pattern; solid	2	0.4
Linear; outline; pattern	2	0.4	Outline; scattered marks	3	0.6
Linear; outline; scattered marks	1	0.2	Outline; solid	14	2.6
Linear; outline; solid	3	0.6	Scattered marks	32	5.9
Linear; scattered marks; solid	1	0.2	Scattered marks; solid	1	0.2
Linear; Solid	32	5.9	Solid	125	23.1
Outline	43	8.0	NA	4	0.7
			<i>Total</i>	<i>540</i>	<i>100.0</i>

Table 5.46. Enderby Area 7: form in the recorded assemblage.

Pecking only accounts for less than half (40%) of the techniques used in this Area, while scratching (24%), incising (13%) and abrasion (16%; 2% when grinding patches removed) are more common than often encountered (Table 5.47). Again, this suite of techniques

is thought to reflect the smooth-surfaced basalt geology in this Area. Combination forms are relatively rare, although where these occur often anatomical detail is added (e.g. toes/digits on a pecked lizard; Figure 5.28).

TECHNIQUE	NO.	%	TECHNIQUE	NO.	%
Abraded	85	15.7	Incised; scratched	16	3.0
Abraded; pecked	5	0.9	Pecked	215	39.8
Abraded; scratched	6	1.1	Pecked; scratched	3	0.6
Gouged	2	0.4	Pounded	1	0.2
Gouged; pecked	4	0.7	Scratched	132	24.4
Incised	68	12.6	NA	4	0.6
			<i>Total</i>	<i>540</i>	<i>100.0</i>

Table 5.47. Enderby Area 7: techniques used in the recorded assemblage.

The assemblage is predominantly (80%) smaller than 30 cm in size (Table 5.48). There are only two motifs larger than 1 m in size.

SIZE INCREMENTS (CM)	NO.	%	SIZE INCREMENTS (CM)	NO.	%
1–10	150	27.8	61–70	5	0.9
11–20	175	32.4	81–90	1	0.2
21–30	106	19.6	121–130	1	0.2
31–40	47	8.7	141–150	1	0.2
41–50	23	4.3	NA	22	4.1
51–60	9	1.7	<i>Total</i>	<i>540</i>	<i>100.0</i>

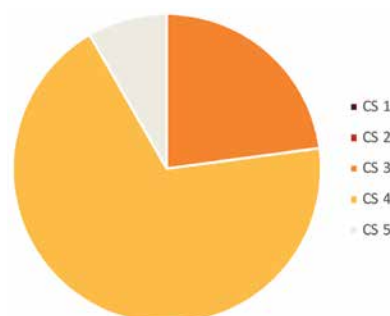
Table 5.48. Enderby Area 7: size of the recorded assemblage.

Around a third of the assemblage (34%) is in contrast state 3, followed by CS2 (23.6%). Significantly more of the engraved motifs fall within the earliest phases of contrast (CS1) than the last (Table 5.49). A fair proportion (23%) has mixed patination, with variable

weathering conditions. This may be due to the basalt geology, and the higher proportion of techniques which do not penetrate the patina, plus the inclusion of grinding patches in these totals.

CONTRAST STATE	COUNT	%
CS1	56	10.4
CS2	129	23.9
CS3	184	34.1
CS4	42	7.8
CS5	3	0.6
NA	126	23.9
<i>Total</i>	<i>540</i>	<i>100.0</i>

Table 5.49. Enderby Area 7: contrast state in the recorded assemblage.



Sample Area 8

Area 8 includes the coastal strip on the extreme north-western point of Enderby Island and a single grinding patch on the beach encountered while reaching the site during fieldwork (Figure 5.1, Figure 5.29). This location was systematically recorded to provide additional context for an area which had been previously investigated for its historical archaeological sites in

the Dampier Archipelago National Heritage Listed area (Paterson 2006; Paterson and Souter 2004; Souter et al. 2006). In 2004 the site was observed to include a series of coral and stone structures that were interpreted as being related to whaling activities. This recording exercise documented the rock art, while one of the stone structures was excavated (see Chapter 6).

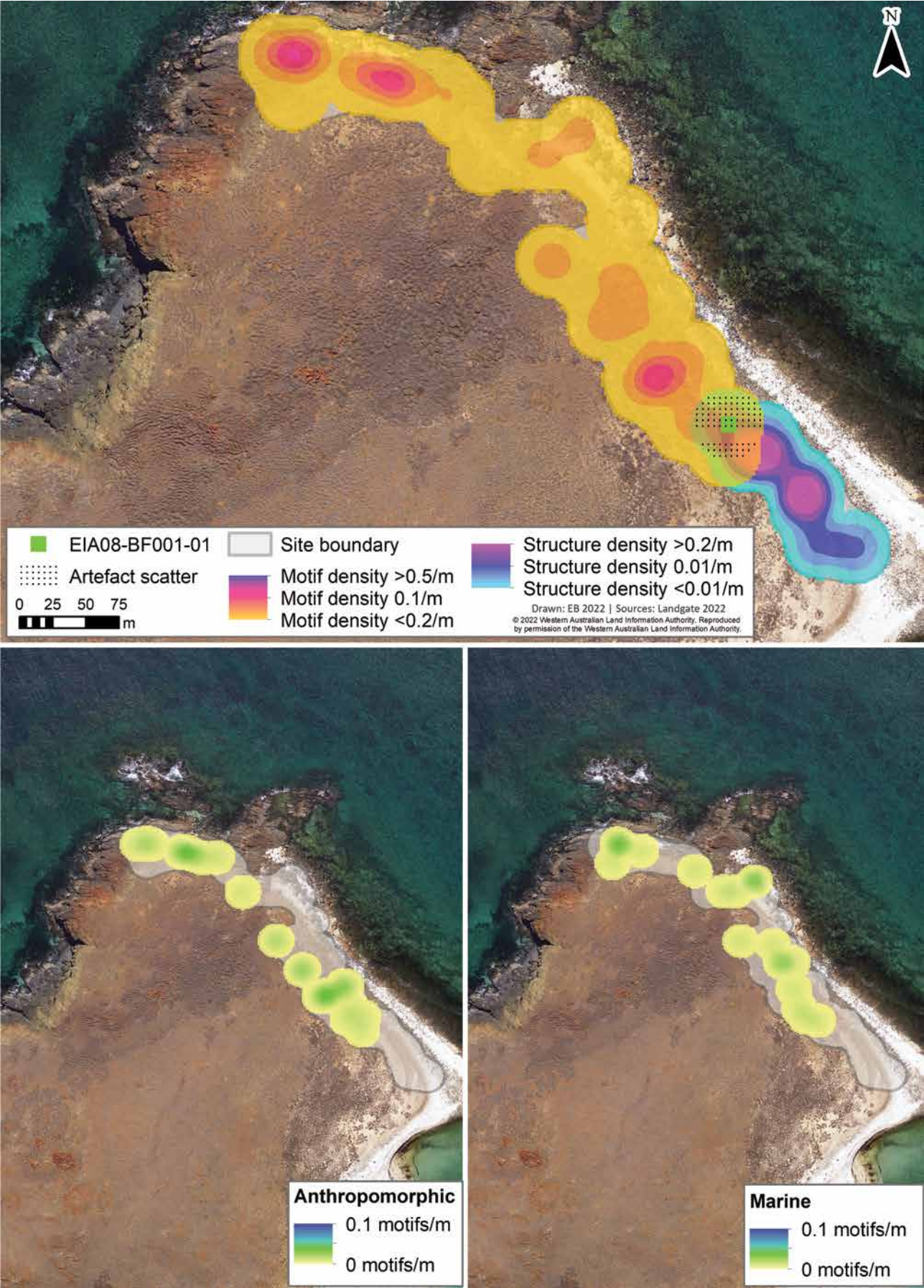


Figure 5.29. Site MLP-EI008, showing the distribution of recorded rock art and the stone structures.



Figure 5.30. Enderby Area 8 landscape: (top) looking east along the coral terrace towards the stone structures during excavation and recording; and (bottom) the rocky headland at the western promontory where art was recorded on larger vertical surfaces.

A total of 170 marking productions were recorded on 76 panels as well as the 14 stone structures. The survey did not proceed far beyond the coastal strip as we focused primarily on recording the stone structures and associated rock art. Our recording exercise did not include midden and stone artefacts which are also observed here. The distribution of engraved panels and other features was

continuous across the area recorded, and this site complex is now identified as MLP-EI008 (Figure 5.29).

Only a relatively small proportion ($n = 15$) of this assemblage was classed as 'other', and this included only two grinding patches. Geometrics account for almost 43% of the depictive assemblage, followed by anthropomorphs, zoomorphs and tracks (Table 5.50).

CLASS	TOTAL	%	DEPICTIVE	%
Anthropomorphic	39	22.9	39	25.2
Geometric	66	38.8	66	42.6
Other	15	8.8		
Tracks	16	9.4	16	10.3
Zoomorphic	34	20.0	34	21.9
<i>Total</i>	<i>170</i>	<i>100.0</i>	<i>155</i>	<i>100.0</i>

Table 5.50. Enderby Area 8: class proportions (depictive motifs minus 'other' class).

Ovals and linear motifs are the most common geometrics here (Table 5.51). Fish dominate the zoomorphic class along with a variety of marine themes (turtles, a stingray and marine tails). There are no terrestrial species depicted. There are five bird motifs, all depicted with two legs. One of these is in the spread-eagled position. Bird tracks are again dominant, with a few human tracks and only one macropod track. There are no turtle tracks. Most of the human figures are linear,

SUBJECT	NO.	%	SUBJECT	NO.	%
<i>Anthropomorphic</i>			<i>Tracks</i>		
Linear figure	26	16.8	Bird track	13	8.4
Solid figure	13	8.4	Human foot	2	1.3
<i>Geometric</i>			Macropod track	1	0.6
Angular	2	1.3	<i>Zoomorphic</i>		
Arc	5	3.2	Bird	5	3.2
Circular	1	0.6	Fish	15	9.7
Dot	2	1.3	Marine other	2	1.3
Linear	24	15.5	Stingray	1	0.6
Material culture	4	2.6	Turtle	8	5.2
Oval	25	16.1	Animal part	3	1.9
Rayed	3	1.9	<i>Total</i>	<i>155</i>	<i>100.0</i>

Table 5.51. Enderby Area 8: subject proportions.

but there are several solid figures in a distinct style with bent elbows and knees, similar to others found on the quarry site in Area 1 (cf. Figure 5.8 and Figure 5.31).

Linear forms (46%) are mostly produced in this Area, followed by solid forms (24%: Table 5.52), no doubt due to the prevalence of abrading and scratching as techniques. There is a limited amount of variation in the forms created here, but a relatively high proportion of patterned infill (6%).

Abrasion is the dominant technique in this Area (47%), followed by scratching (29%) and pecking (17%) (Table 5.53). Combination forms account for c. 7% of the identifiable motifs.

FORM	NO.	%	FORM	NO.	%
Linear	78	45.9	Outline	7	4.1
Linear; outline	7	4.1	Outline; pattern	4	2.4
Linear; outline; pattern	2	1.2	Outline; pattern; solid	2	1.2
Linear; outline; solid	1	0.6	Outline; solid	15	8.8
Linear; pattern; solid	1	0.6	Solid	41	24.1
Linear; solid	8	4.7	Scattered marks	4	2.4
		<i>Total</i>		<i>170</i>	<i>100.0</i>

Table 5.52. Enderby Area 8: form in the recorded assemblage.

TECHNIQUE	COUNT	%
Abraded	79	46.5
Abraded; pecked	2	1.2
Abraded; scratched	8	4.7
NA	2	1.2
Pecked	29	17.1
Pecked; scratched	1	0.6
Scratched	49	28.8
<i>Total</i>	<i>170</i>	<i>100.0</i>

Table 5.53. Enderby Area 8: techniques used in the recorded assemblage.

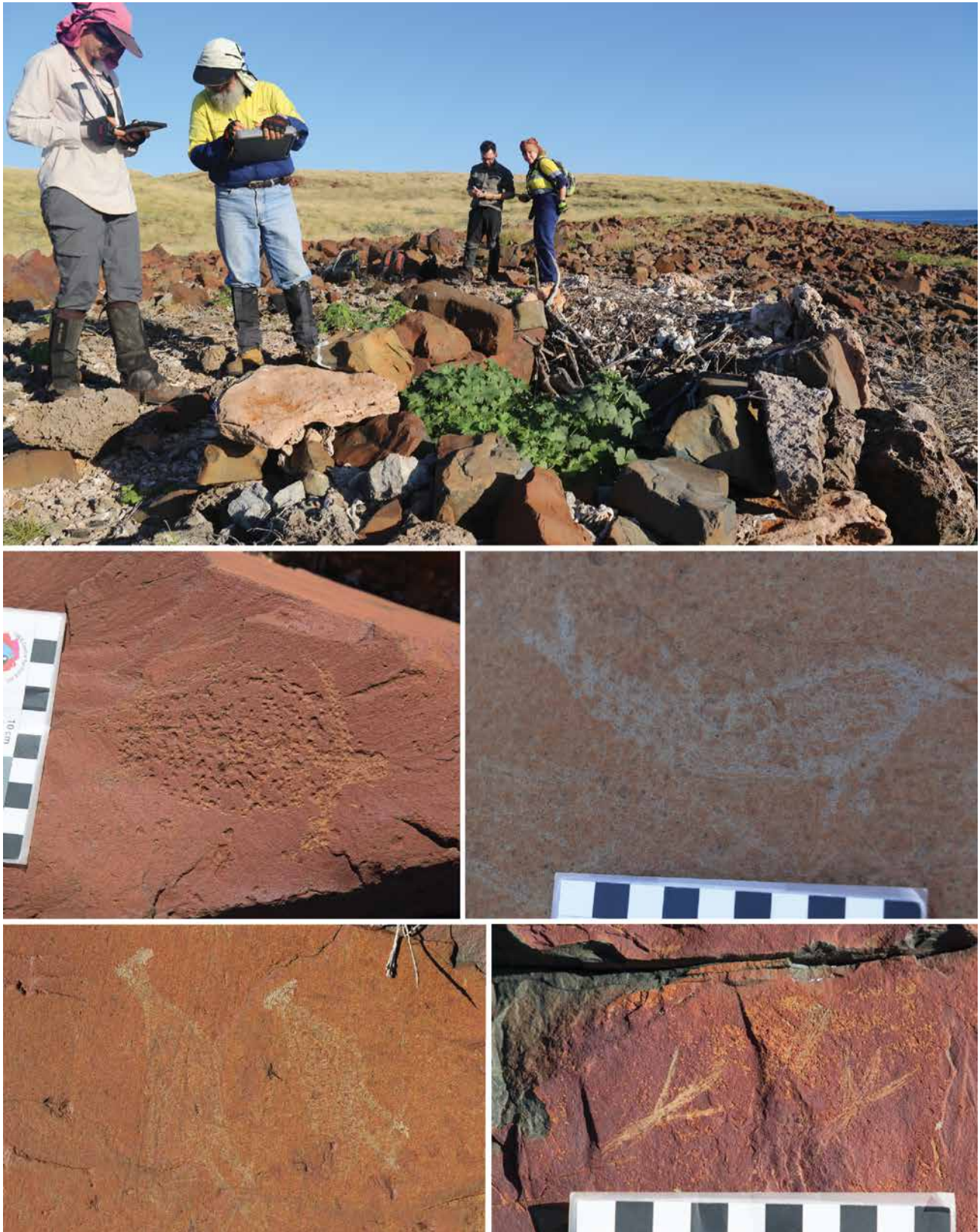


Figure 5.31. Some of the very small motifs produced on portable rocks on the coral terrace and immediate surrounds of Enderby Area 8: (top) fieldwork; (middle) marine motifs; and (bottom) birds and (left) bird tracks.

The majority (88%) of the assemblage is smaller than 30 cm in size (Table 5.54). There is only one motif larger than 1 m in length (a turtle, which is 1.25 metres long, on one of the larger vertical blocks). The small size of many motifs is due to a large proportion of this assemblage being found amongst the boulder field adjacent to the coast. Some art closer to the point is located on larger vertical and horizontal platforms, but there is a definite focus on mostly creating this assemblage on small portable blocks of smooth material.

SIZE (CM)	NO.	%	SIZE (CM)	NO.	%
1–10	39	25.4	41–50	8	5.2
11–20	69	44.5	51–60	1	0.6
21–30	27	17.4	121–130	1	0.6
31–40	8	5.2	NA	2	1.3
<i>Total</i>			<i>170</i>		<i>100.0</i>

Table 5.54. Enderby Area 8: size increments.

There is no art here from the earliest contrast states (CS1 and 2). Most of the assemblage (70%) is contrast state 4. The remainder of the art falls evenly between CS3 and CS5 (13% and 10% respectively; Table 5.55). A small amount (8%) of the assemblage has mixed patination (NA).

The 14 stone structures were all located on the

CONTRAST STATE	COUNT	%
CS1	0	
CS2	0	
CS3	22	12.9
CS4	118	69.4
CS5	17	10.0
NA	13	7.6
<i>Total</i>	<i>170</i>	<i>100.0</i>

Table 5.55. Enderby Area 8: contrast state.

While canvas size is a constraint, this Area's large vertical bedrock surfaces also have several anthropomorphic scenes involving many small human figures. These have not been reproduced here because of cultural sensitivities.

eastern side of the beach rock and coral platform, distributed roughly equidistant from the shore. All were constructed by the removal (clearing) of stone or coral from a central area and subsequent stacking around the sides to create a clearing/enclosure 1–2 m across (Table 5.56). There were no surface artefacts associated with these features other than flotsam.

STRUCTURE ID	SHAPE	LENGTH (CM)	WIDTH (CM)	HEIGHT (CM)	DESCRIPTION
BF001-01	Rectangular	330	76		Possible whaler's grave with unidentified stone, bone and shell. Excavated
BF001-03	Rectangular	400	150	60	Similar in size and shape to BF001-01
BF001-04	Amorphous	250	150	30	Amorphous enclosed shape made from coral with lots of old shell
BF001-05	Circular	120	100	20	Coral construction
BF001-06	Arc	120	120	20	Coral construction
BF001-07	Circular	200	120	20	Depression in coral and beach rock
BF001-09	Circular	200	180	20	Depression in coral and beach rock
BF001-10	Circular	160	120	20	Depression in coral and beach rock
BF001-11	Circular	160	160	20	Coral in construction – part of a small cluster
BF001-12	Arc	120	100	15	Coral in construction – part of a small cluster
BF001-13	Circular	120	120	30	Possible opening on the south-east side – part of a small cluster
BF001-14	Circular	180	180	30	Coral construction
BF001-15	Curvilinear	350	100	30	Coral construction
BF001-16	Rectangular	230	120	40	Coral construction

Table 5.56. EIA08 stone structures, which are all classed as clearings/enclosures. All are identified with EIA08-2017- in the CRAR+M database.

There is a clear clustering of structures at the eastern end of the coral and rock platform while the rock art overlaps at the western end of the small 'village' but then continues along the storm beach and adjacent blocky landscape to the headland (with adjacent rock pools), where there are larger rock outcrops, which have also been decorated. This could indicate distinct activity nodes occurring across this platform, although

the absence of art at the eastern end is also likely due to a diminishing of the available engravable blocks.

Most of these structures (64.3%) formed circular or arc shapes; however, three of them (21.4% of the assemblage) were rectangular (Figure 5.32). This is an unusual shape for cleared enclosure structures across Murujuga, with the only others being the dressed historical structures found on West Lewis and in Black Hawk Bay (see chapters 11 and 13).



Figure 5.32. EIA08 stone structures: (top) EIA08-2017-BF001-01; (middle) EIA08-2017-BF001-03 and EIA08-2017-BF001-06 (right); and (bottom) EIA08-2017-BF001-13 and EIA08-2017-BF001-15 (right).

One of these rectangular structures, EIA08-2017-BF001-01, was the reported 'whalers grave' (Paterson and Souter 2004), which was assessed as having potential for archaeological excavation. Excavation of this structure was inconclusive (see

Chapter 6), with excavation finding both historical and stone artefacts in the deposit, no human remains, and the remains of a sea-eagle nest mixed with terrestrial and marine faunal remains.

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