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Kuk Phase 8: Heritage Issues to 2008

John Muke and Tim Denham

Introduction

The subject of this chapter is the nomination of Kuk for World Heritage listing by UNESCO. It deals with the story up to the point of the site's acceptance in July 2008. The nomination was not the first time that consideration had been given to the question of long-term conservation at Kuk in the interests of cultural heritage, as distinct from short-term protection in the interests of archaeological research, as discussed in Chapter 24. Previous cases had relied on the possibility of proclaiming a reserve under existing legislation. There were two unsuccessful attempts in the middle of the 1970s, of which Muke (1998: 72) gives some details based on Golson's files. We discuss a third case of the early 1980s, which is notable because of the circumstances in which it arose and the ways in which it was taken up.

The catalyst for this third nomination seems to have been the 1981 publication by the Papua New Guinea (PNG) National Museum of Pamela Swadling's booklet, *Papua New Guinea's Prehistory*. This had on its front cover a dramatic colour picture of the cross-section of a large drainage channel of early Phase 2 at Kuk, with the figure of Korowa, the Kawelka workman who had helped to dig it out (see Fig. 12.6). In the chapter on the Kuk archaeological heritage and the Kawelka landowners that he wrote for the National Museum's report on Kuk discussed in Chapter 24, Andrew Moutu says (1998: 22) that the picture of Korowa and the huge channel behind him 'sparked a stunning sensation among the Kawelka'. The director of the museum, Geoffrey Mosuwadoga, wrote to Golson on 3 June 1982 to say that Andrew Strathern, at the time director of the Institute of Papua New Guinea Studies in Port Moresby, had sent copies of the booklet on behalf of the museum to the Premier and other members of the Western Highlands Provincial Government. Mosuwadoga reported that the 'information about Kuk generated considerable interest and as we hoped some desire to see these deposits preserved'. Golson received a copy of a letter of 26 May 1982 from the Provincial Secretary, John Pun Elipa, to the Secretary of the Department of Primary Industry to this effect. The department was asked to give its approval for the unused part of the site, namely the eastern half of the Station, to be declared a 'national cultural property' (in accordance with the *National Cultural Property (Preservation) Act 1965* and associated *Regulations*), so that the site could be properly conserved and worked on, including for tourism.

National Museum Director Mosuwadoga's letter of 3 June 1982 asked Golson about areas of Kuk that should be preserved, in order of priority, as well as about drainage restrictions that might have to be imposed to prevent the preserved area from deteriorating. In addition, Golson was invited to make suggestions about a visitors' centre that would give information about the site. In response, Golson over the next year developed a proposal to proclaim a historic site at

Kuk Agricultural Research Station. This involved discussion with the Station's management in the person of Martin Gunther, who, while as sympathetic and flexible as ever, had to bear in mind the long-term implications for the development of the Station within its current boundaries. As reported in Chapter 23, section 'Period 4: 1973–1977/78', only a few years previously, Kuk's agronomic research had ceased to be restricted to tea and its activities had ceased to be confined to the western half of the Station. As a result of this, Golson had talked with the then Officer-in-Charge, Batley Rowson, about mitigating the effects of the new policy on future archaeological work in the eastern half, where all such work had been done. With the new policy now well under way and a new Officer-in-Charge, Golson selected three blocks from the seven that had originally formed the most important category, specifically A8, B8 and a block including parts of A11 and A12 (see Fig. 25.T2.1 for location). In mid-1984, the proposal was sent to the Department of Primary Industry, the Western Highlands Provincial Government and the Officer-In-Charge at Kuk, as well as to the PNG National Museum and the Institute of Papua New Guinea Studies. There, for the time being, the matter ended.

National cultural property

Mark Busse, who spent several years in the 1990s as an anthropologist at the PNG National Museum, says that the concept of national cultural property had been introduced in an Ordinance passed by the House of Assembly of the Territory of Papua and New Guinea in 1965 to revise and update the *Antiquities Ordinances* of previous years. In his opinion (Busse 2000: 87–88), the *National Cultural Property (Preservation) Ordinance* marked 'an important turning point' in policy 'by defining national cultural property in terms of cultural heritage' and vesting administrative responsibility for it in the Trustees of the Papua and New Guinea Public Museum and Art Gallery, which had been established in 1954.

On PNG independence in 1975, the Ordinance of 1965 became an Act that defined national cultural property as 'any property, movable or immovable, of particular importance to the heritage of the country' (Busse 2000: 88) and gave wide powers to the Trustees of what was now the National Museum in the administration of the legislation (Busse 2000: 90). Ketan and Muke (2001: 93) believed that the Act dealt almost exclusively with cultural objects, and the description that Busse (2000: 91–92) gives of the implementation and enforcement of the legislation supports this view. Nevertheless, the Act was there to offer some protection to cultural heritage sites. The same was true of another piece of legislation, the *Conservation Areas Act 1978*. Provisions in this Act comprise 'the primary legislation that provides for the protection, preservation and management of sites and areas having particular biological, topographical, geological, historic, scientific or social importance' (cited by Ketan and Muke 2001: 93).

Despite these pieces of legislation, Ketan and Muke (2001: 92) were able to say that '[t]he legislative and administrative frameworks covering the cultural landscapes and heritage sites in PNG are deficient, ineffective, [and] lack administrative, financial and technical support'. Three years earlier, Muke (1998: 65–67) had discussed how rural development schemes in PNG had been financed by grants or loans with no provision for the archaeological impact studies that the good practice promoted by development agencies like the World Bank specifies. Under other circumstances, Kuk might have ended up the same way. As it was, however, the site became one of two PNG cases to be considered for protection under UNESCO auspices.

World Heritage listing

As mentioned in Chapter 24, section ‘The Golson report’, there was a UNESCO meeting planned for July 1997 at the Fiji Museum in Suva at which the Director of the PNG National Museum was to propose Kuk and the Bobongara coral terraces of the Huon Peninsula (the latter pictured in Swadling 1981: 2–3) for World Heritage listing. The occasion was a Global Strategy meeting organised by UNESCO’s World Heritage Centre—the Secretariat of the World Heritage Convention—to identify World Heritage sites in the Pacific.

Such meetings address significant geographical and thematic gaps that exist in the World Heritage List. At the Suva meeting, there were representatives of key Pacific Islands states: Fiji, the Federated States of Micronesia, Palau, Papua New Guinea, the Solomon Islands, Tonga and Vanuatu, as well as of USA, Australia and New Zealand. They found that ‘despite the Pacific’s archaeological, architectural, technical and spiritual treasures, its remarkable modes of occupying and using land and space and its networks for trade and the exchange of ideas, it was significantly underrepresented on the World Heritage List’ (as reported to us, pers. comm. 2006, by Elizabeth Williams, who was the Australian representative at the meeting as a member of the Commonwealth Government’s World Heritage Unit).

At the time, there were only three Pacific islands sites on the World Heritage List, none of them in Pacific Islands states—Hawaii Volcanoes National Park (USA), listed in 1987, Henderson Island (UK), listed in 1988, and Rapa Nui [Easter Island] (Chile), listed in 1995, all three of them for natural World Heritage values. The first listing from an independent Pacific Islands state was the East Rennell natural area, nominated by the Solomon Islands in 1997, the year of the Suva conference, and inscribed on the World Heritage List in 1998.

The underrepresentation of independent Pacific Islands states resulted in part from the requirement that to make a formal nomination for the World Heritage List a country must have signed the Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention). In July 1997, PNG was the 148th State Party to become a signatory, thus entitling it to nominate Kuk and the Huon terraces at the Suva meeting. As the *World Heritage Review* noted (1997: 79):

Papua New Guinea is only the third Pacific island nation to join the World Heritage Convention, after Fiji, which became a State Party in 1990, and the Solomon Islands in 1992.

Papua New Guinea is likely to offer challenging opportunities for the application of the concept of World Heritage cultural landscapes, linking nature and the centuries-old interactions of local people with the environment.

In preparation for the Suva meeting, the PNG National Museum sent a team of three, Nick Araho, Herman Mandui and Andrew Moutu, together with John Muke of the University of Papua New Guinea (UPNG), to report on the impact on the archaeological site of the repossession of the Kuk Station by its traditional owners (see Strathern and Stewart 1998b). The resulting reports by Moutu (1998) and Mandui (1998) were attached as supporting documents to a draft nomination of Kuk for inclusion in the World Heritage listing, which was drawn up by Jack Golson and Pamela Swadling (1998) and presented by the Director of the PNG National Museum, Soroi Eoe, at the Suva meeting. In addition, the National Museum produced a poster of each of the two nominated sites for the meeting.

After the meeting, these posters became a means of advertising the nominations that had been made, within PNG and elsewhere. At the same time, Pamela Swadling set to work on the organisation of a museum booklet to support the Kuk case for World Heritage listing and to help with the local negotiations that this would involve. The booklet was to follow the lines of her

earlier one on PNG prehistory, which, as already noted, had made such an impression at Kuk some 15 years before (Swadling 1981: 32, 34, 36–39). The new proposal was important in the context of the Operational Guidelines for the Implementation of the World Heritage Convention, which emphasised that participation of the local community in the nomination process was essential, to make them feel a shared responsibility with the State Party in the protection and preservation of the nominated site (Ketan and Muke 2001: 51).

The nomination process: The first phase

Following PNG's accession to the World Heritage Convention, the National Commission for UNESCO in Port Moresby began to replace the PNG National Museum in the promotion of Kuk as a potential World Heritage site (Ketan and Muke 2001: 51). Activity at the national level encouraged the Western Highlands Provincial Government to take a proactive approach.

In early 1999, the Western Highlands Provincial Executive Council met with representatives from the PNG National Museum and UPNG in Port Moresby. This was followed by the establishment of a Kuk Heritage Management Committee at the provincial level under the chairmanship of the Provincial Secretary, Dr Thomas Webster, with a membership representative of local, provincial and national interests (Ketan and Muke 2001: Table 3). Tim Denham and Jack Golson, of the Kuk Archaeological Project of The Australian National University, were also appointed and able to attend the first meeting of the committee in Mount Hagen in July 1999, which coincided with the second season of Denham's fieldwork at Kuk (see the last three paragraphs above 'Acknowledgements' in Chapter 24). At this time, the Provincial Governor, Father Lak, visited the excavations and Dr Webster addressed a public meeting at the site, attended by several hundred Kawelka and others from neighbouring groups, when he endorsed the nomination of Kuk for World Heritage listing. At the community level, two local councillors appointed to the Provincial Heritage Management Committee set up a Local Management Committee (Ketan and Muke 2001: Table 4). The provincial government made material contributions to the nomination process (Ketan and Muke 2001: 52).

Responsibility for the nomination process was delegated to a study team (or 'technical team', Ketan and Muke 2001: 54–55, Table 5), set up by the Kuk Heritage Management Committee at a meeting in Port Moresby. The team leader was John Muke and the deputy Joseph Ketan, both from UPNG. There were two archaeologists from the PNG National Museum, Nick Araho and Herman Mandui, and three consultants from The Australian National University, Denham, Golson and Swadling, who had only recently left the National Museum.

In their interim report on the Kuk nomination project, Ketan and Muke (2001: 55) were critical of the narrow focus of expertise on the team and argued for its widening, as well as for a freer hand for the team leaders within more clearly defined terms of reference. They also complained of under resourcing and poor administration of the funding that was on offer (2001: 54, 97–99). Finally, and perhaps as a result of these problems, divergent and conflicting interests emerged among national institutions sharing responsibility for heritage matters as well as access to funds (cf. Ketan in Ketan and Muke 2001: 146–147). The Western Highlands Provincial Government discontinued its funding at the end of 2001 because of uncertainties over the completion of the nomination process. By mid-2004, despite the fact that a number of drafts of a nomination document had been completed, the National Commission for UNESCO was ready to close the project. However, salvation was at hand.

The nomination process: The second phase

Until 2003, many of the principal participants in the Kuk nomination process were unaware of the existence of a decision in 1994 (NG 45/94) by the National Executive Council, an advisory body to government, which identified the Department of Environment and Conservation (DEC) as the focal point for World Heritage matters in PNG, charged with responsibility for the implementation of the World Heritage Convention in PNG, its protocols, directives and guidelines. However, the 1994 decision did not come into effect until after PNG became a State Party to the World Heritage Convention in 1997—and by this time, matters were proceeding under different auspices. In 2003, the Secretary of DEC held a meeting with the main agencies involved in heritage matters to brief them that the 1994 decision was yet to be implemented.

In 2004, when it became known that the National Commission for UNESCO was seeking to abort the Kuk nomination process because of dissatisfaction with the performance of the study team, an informal working committee was set up on the initiative of Vagi Genorupa, Assistant Secretary of the Protected Areas Branch of DEC. Relying on a team of committed individuals, Genorupa prepared the way for the implementation of the 1994 decision. In 2005, all the key PNG institutions—the National Commission for UNESCO, the National Museum, the National Cultural Commission and the Tourist Promotion Authority—were in agreement and supported DEC as the agency to implement the necessary directives, including the establishment of a National Heritage Secretariat. The increasing national significance of Kuk was reflected in two exhibitions on Kuk at the J.K. McCarthy Museum in Goroka in 2004 and 2005 (see Textbox 25.1).

Textbox 25.1 The Kuk Exhibitions, 2004 and 2005, at the J.K. McCarthy Museum, Goroka

Martha Tokuyawa and Vincent Pou

The J.K. McCarthy Museum is an ethnographic museum based in Goroka, the capital of Eastern Highlands Province. It is named for John Keith McCarthy, a distinguished pioneer administrator in the Territories of Papua and New Guinea before independence, who began as a patrol officer in the late 1920s and became Director of District Administration and an official member of the first elected House of Assembly in the mid-1960s. The museum was established in 1964 through the initiative of the Goroka Rotary Club, with support from the Goroka Show Society, the Goroka Local Level Government and the National Museum authorities. Today, the J.K. McCarthy Museum is a department of the PNG National Museum and Art Gallery in Port Moresby.

In 2004 and 2005, exhibitions on Kuk were initiated and hosted at the J.K. McCarthy Museum in conjunction with the Cultural Studies program at the University of Goroka. Each exhibition ran from August to October. The objectives of these exhibitions were to encourage student teachers and equip them with information and materials for them to go out to their respective schools to teach children in PNG about the importance of Kuk and other archaeological, cultural and historical sites of significance.

The 2004 exhibition was based around the theme 'The illusion, the reality and the beauty of Kuk'. The theme arose from discussions among staff members at the museum during which the authors heard someone say 'Everybody hears and reads about Kuk and they are amazed by the scientific findings, but if you go up to the site and ask where exactly are the ancient drains, all you see are stretches of bush and the drains lie below murky mud'. The message of the exhibition was simple: Kuk is an important site for us all and here is the scientific evidence.

Visitors were asked to assess the importance of the Kuk site and to wonder at its age and at the things made by people using only simple tools. But there is also a sadness that comes with an awareness of Kuk, which is where teachers can make a difference. Teachers can educate people to learn about Kuk and to promote other sites of significance that could become equally as important for educational and heritage purposes.

The 2004 exhibition contained information compiled from the scientific evidence, which was based on the research at Kuk by Professor Golson and colleagues. Information about the site was supplemented by visual material, including maps and plans of the archaeological features, illustrations of the ditches, paintings, a clay model of the site and photographs. The exhibition included three paintings by Mr Taguba Gambu, a self-taught artist, comprising the stone pillar at Kuk, also known as the 'Kuk stone' (see Fig. 22.2), and two of researchers at work on the prehistoric ditches. The floor exhibit consisted of stone axes and wooden spades similar to those found at Kuk.

The late Regina Kati, former head of the UNESCO National Commission, opened the exhibition on 19 August 2004. During the launch, Ms Kati expressed her concerns about the future of the site and supported the proposed nomination of Kuk to the UNESCO World Heritage List because of its contribution to the story of humankind.

The 2005 exhibition was based around the theme 'Ten thousand years of gardening' and drew upon the renewed investigations at Kuk by Dr Tim Denham and colleagues in the late 1990s. The exhibition broadened its perspective to incorporate the story of the Kawelka, the traditional landowners of Kuk, as well as the impressions of the pioneer gold miners and missionaries who first entered the Mt Hagen area in the 1930s. These first European explorers noted how the intensive agricultural activities in the Kuk vicinity were different from other parts of the country.

The overall objective of the 2005 exhibition was the same as in the previous year. Most of the same materials as in the previous exhibition were used and supplemented by new paintings by Mr Taguba Gambu of early gardening activities and a Kawelka leader going to a *moka* festival. This time, more effort was put into getting schools to visit the exhibition, although there was no press release and no publicity, as had occurred in 2004. A lot of schoolteachers were invited and they were encouraged to bring their students.

The highlight of the exhibition was the arrival of Mr Ru Kundil (Fig. 25.T1.1), one of the principal Kawelka landowners at Kuk and a leading advocate for the preservation of the site. By chance, he visited the museum at the same time as three history classes and he had an audience with the students. He had come to see the Chief Curator of the museum, Mr Pou, in order to discuss with him the possibility of preserving his portion of the land at Kuk where significant archaeological remains were preserved.

One of the student teachers stated that Kuk was important for the development of the human resources of PNG through the training of teachers and eventually their students. The student teacher added that if the government was serious, it would make efforts to preserve such significant sites. The visitors thanked and encouraged Mr Ru for his initiative in attempting to preserve his portion of the land. As in previous years, teachers wanted more information to be available on Kuk.

In conclusion, the Kuk exhibitions were highly successful. In 2004, approximately 2400 people came to view the exhibition, including organised tours for students from Goroka Secondary School, Goroka International School and the University of Goroka. In 2005, despite the lack of publicity at its launch, students of a wide range of ages and abilities came in large numbers. They included three classes of grades six, seven and eight from Faniufa Primary School; three classes of grades 11 and 12 students from Goroka Secondary School; students from Sunrise Elementary School; history and social science students from the University of Goroka; and other classes of agriculture and geography students.

The exhibitions on Kuk at the J.K. McCarthy Museum fulfilled the original aims and objectives, namely to highlight the significance of the site, and cultural heritage management more generally, for student teachers in PNG. Furthermore, the exhibition attracted much interest from others across a wide age range, showing the innate interest of many Papua New Guineans in their history, including Kuk and other sites. Up until these exhibitions there had been limited material available for people to see and read about Kuk and its global significance.



Figure 25.T1.1 Ru Kundil, Kawelka Kurupmbo, is one of the 'fathers' (or champions) of the World Heritage nomination process at the community level.

Source: Photograph by Jo Mangi 2006 (Muke, Denham and Genorupa 2007: Plate 3), reproduced with permission.

From 20–23 March 2006, with UNESCO support, DEC conducted a successful National World Heritage Action Planning Workshop in Port Moresby. This developed a Tentative List of intended World Heritage sites for PNG and clarified institutional arrangements for the nomination and management of World Heritage sites in the country. Following the workshop, a National World Heritage Secretariat was established within the Protected Areas Branch of DEC. The secretary of the department chairs the National World Heritage Committee, an advisory body comprising representatives from various government agencies, non-government organisations, provinces and communities with nominated sites, together with other interested parties.

As regards Kuk itself, discussion of how best to complete the nomination process took place at the Planning Workshop in March 2006. At the workshop, Tim Denham and John Muke were asked by the department to coordinate the remaining tasks and submit a revised nomination document. Muke and Jo Mangi, both of the Social Research Institute, a Port Moresby consultancy, completed the field component, comprising community meetings and mapping of landuse on the nominated site, over a total period of about a month in mid-2006. Denham, then at Monash University, was largely responsible for coordination, designing, writing and production of the final nomination document.

The nomination was submitted at the end of January 2007 (PNG Government 2007). The Kuk Early Agricultural Site was formally accepted onto the World Heritage List at the 32nd Session of the World Heritage Committee in Quebec during early July 2008. Denham was present at the Quebec meeting and served as the PNG representative for Kuk Swamp. Regina Kati, the Secretary-General of the PNG National Commission for UNESCO over the years that the Kuk nomination was developed, died between the submission and its acceptance.

Proposed management at Kuk

The Kuk Early Agricultural Site was nominated to the World Heritage list as an organically evolved cultural landscape (Muke, Denham and Genorupa 2007; Denham 2012, 2013b; see Textbox 25.2 here). The organically evolved landscape at Kuk comprises two components: relict (i.e. associated with past activities) and continuing (i.e. past activities continuing into the present). The proposed management plan for Kuk as a World Heritage site is community-based and incorporates several elements of traditional land management practices, primarily to recognise the nature of community/land relations in PNG and to reduce the extent of external intervention and cost.

The foremost consideration has been the need to formalise existing landholding and landuse arrangements for the site (Muke and Mangi 2006). Kuk is currently alienated land, under a negotiated purchase by the Australian administration in 1968 for the establishment of a Tea Research Station (see Chapter 23, section 'The resettlement of Kuk'). However, since the abandonment of the Station by government agencies, the Kawelka and other groups have increasingly reoccupied the site, so that today the entire area has been allocated to individuals for their use. The bulk of the land is currently occupied and under cultivation, primarily subsistence agriculture with some cash-cropping of coffee and bananas.

The management plan formalises existing arrangements in that the Kawelka acknowledge the government's legal title over the land and, simultaneously, the government acknowledges the Kawelka as its traditional owners (see Textbox 25.3) and grants them usufruct rights over it. Kawelka use of the land constitutes site management under traditional, essentially continuing, land management practices. In terms of the relationship between the provincial administration and the Kawelka, the Western Highlands Provincial Government had indicated they would provide services, including road grading, piped water and an aid post, in return for the effective management of the site by the local community.

Textbox 25.2 The Kuk Early Agricultural Site: Nomination specifics

Tim Denham

Criteria for nomination

Kuk has been accepted for inclusion on the World Heritage List as a cultural landscape. The criteria for nomination are all cultural (UNESCO 2005: 52) and are indicated in italics below. A site must:

(iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.

The archaeology of Kuk bears an exceptional testimony to the origins and development of New Guinean and Pacific agriculture. The site preserves the remains of traditional New Guinean plant exploitation and cultivation, including the changing nature of practices and human-environment interactions through time. New Guinean agriculture, based on the vegetative propagation of plants—especially starch-rich staples, e.g. root crops and bananas—was fundamental to the development of Pacific agriculture as documented in the recent past and as it continues today.

(iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

Kuk is an outstanding example of an ancient and continuing agricultural site and is representative of one of the most significant developments in the history of humanity, namely the development of agriculture. The site preserves:

- the oldest remains of plant exploitation and agriculture in the Pacific region;
- successive phases of drainage, manipulation and cultivation from 10,000 years ago to the present; and,
- sequential technological developments and innovations, including mounding, ditched drainage and *Casuarina* tree-fallowing.

The organically evolved landscape at Kuk contains relict (i.e. archaeological remains of past plant exploitation and cultivation) and continuing (i.e. ongoing cultivation) components.

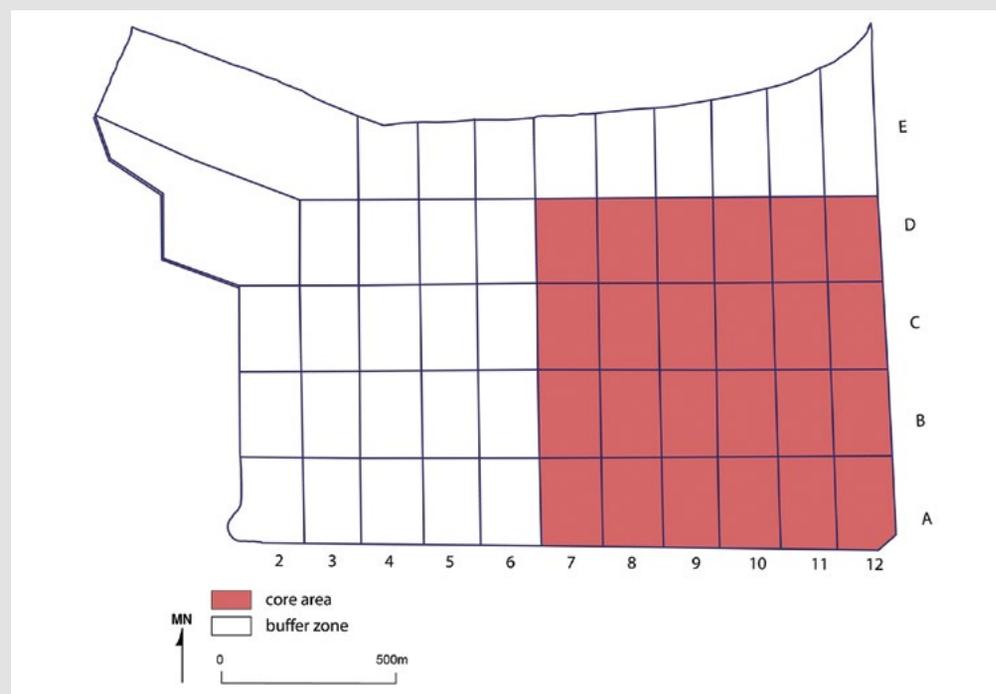


Figure 25.T2.1 Map showing the core area and buffer zone of the Kuk Early Agricultural Site.

Source: Drawing by Kara Rasmanis.

Core area and buffer zone

The site nominated for management includes a core area and a buffer zone, both of which have been defined based on the Station layout. The core area comprises 116 hectares in the eastern and southeastern portion of the Station. The core area includes the areas of greatest archaeological, geomorphological and palaeoenvironmental significance with respect to the evidence of early plant exploitation and agriculture at Kuk. The core area requires the most active management to ensure the preservation of buried archaeological materials, features and associated deposits.

The buffer zone comprises the remaining 195 hectares of the Station and includes areas of considerable heritage significance. Activities within the buffer zone have the potential to adversely affect the core area, principally in terms of drainage and hydrology. Consequently, the buffer zone requires active, albeit limited, management.

Textbox 25.3 *Mae Pukl Wua*: The Traditional Owners of Kuk

John Muke

The acknowledged traditional owners of Kuk are the Kawelka, a Melpa-speaking group. The Kawelka are recognised as the *mae pukl wua*, or 'ground root man', and the *mae ombil amborom*, or the one who 'holds onto the ground bone' (Strathern and Stewart 1998b: 87–88). In Melpa societies, *mae pukl wua* have overriding authority in 'matters to do with custodial rights over clan land, in granting gardening rights to group members, and in the protection of clan land' (Ketan and Muke 2001: 125). Although other groups reside at Kuk, they all recognise the Kawelka as the traditional owners.

The use of 'root' is a form of social evidence that demonstrates a direct link to land and corresponds to its botanical and, primarily, agricultural meaning (detailed in Muke and Mangi 2006: 42–62). Just as a physical root anchors a plant into the ground, so too the concept anchors people to their land. Further analogies with plants and vegetative propagation are used in Wahgi societies to refer to social reproduction. Terms such as 'shoot', 'stem', 'stock' and 'vine' refer to various levels of lineage-based social structure that effectively rise from the primary root and are fixed within corresponding territories. For instance, root may signify a clan or tribe; shoot, stem or stock represent clan sections within that clan or tribe; and vines indicate subclans. Terms such as 'cutting' and 'transplant' refer to social transplanting of people through marriage from one exogamous group to another; they effectively infer movement between territorial, putatively lineage-based groups. These social processes have a spatiality, in the ways that people are fixed in and distributed across space, and a temporality, in the ways that interactions are remembered and understood through time.

The social relationships embodied in the root ideology provide insights into the Kawelka's relation with the PNG Government. From a traditional standpoint, the Kawelka are the root people, namely, primary landholders with a deep and permanent association to the land, whereas the State is a transplant, namely, a secondary tenant with a shallow and transient association. From a traditional standpoint on all transplants, and despite a legally binding purchase agreement, the State is in perpetual debt to the ground root man for its use of Kuk while the Station was in operation.

The recognition of the Kawelka's deep and long association as *mae pukl wua* and the continuation of traditional landuse practices within the framework of a community-based management plan were essential to the successful nomination of Kuk as a World Heritage site and will be for its successful management. Without them, management would be perceived as something imposed from the outside; it would be unsustainable because of the constant burden of expectation placed upon a transplant.

Traditional land management as proposed in the nomination of Kuk incorporates ongoing settlement and cultivation practices. Prohibited activities are limited to deep drainage of the wetland, deep digging and the planting of deep-rooting trees. Ongoing practices are considered to contribute to, and augment, the cultural values of the site; they represent the latest phase, Phase 8, of drainage, manipulation and cultivation practices that have occurred intermittently for 10,000 years. In this light, current land usage at Kuk exhibits continuity with the past; modern cultivation techniques and crops are merely the latest innovations and introductions to be adopted by people living in this area.

The Kawelka have already signed a Consent Agreement that inscribes their voluntary acknowledgement of and adherence to the site management plan. The Consent Agreement and management plan are, further, to be incorporated in an Organic Law to be proposed by the Kawelka at Kuk. The *Organic Law on Provincial and Local Level Government (1995/1997)* enables local communities to generate laws regarding the management of their natural and cultural resources. Once generated and validated at the local, provincial and national levels, Organic Laws are legally binding and enforceable. Thus, not only is site management based on ongoing landuse practices but the management plan will be enshrined in legislation proposed by the local community at Kuk. These management initiatives are essential in a country where land is usually an inalienable right of every community and where provincial and national governments have only limited influence over local community affairs. These initiatives also ensure that site management does not require large inputs of time and resources.

The principal managers at Kuk should be three local heritage officers to be drawn from the three main Kawelka clans: Membo, Mandembo and Kundmbo (see Strathern 1972: 35, Fig. 2). They will ensure the daily monitoring of land usage and site preservation, most of which will be undertaken incidentally during their own daily activities at Kuk. Periodic and more systematic monitoring will also occur, either by the local heritage officers alone or in conjunction with visits by provincial and national representatives or contracted teams. Consequently, the management of Kuk will be community-based in terms of management practices founded on traditional landuses, an Organic Law proposed by the local community and monitoring conducted largely by local heritage officers drawn from the community. National and provincial agencies will oversee and regulate these local-level activities in accordance with their own requirements and responsibilities.

This text is taken from *Ten Thousand Years of Cultivation at Kuk Swamp in the Highlands of Papua New Guinea*, edited by Jack Golson, Tim Denham, Philip Hughes, Pamela Swadling and John Muke, published 2017 by ANU Press, The Australian National University, Canberra, Australia.