Management Plan

Nomination for Inscription on the World Heritage List

Ombilin

Coal Mining Heritage

of Sawahlunto

Ministry of Education and Culture of the Republic of Indonesia
Government of West Sumatra
2017

Introduction

Introduction

a. The Main Aims of the Management Plan

The Operational Guidelines of the UNESCO 1972 World Heritage Convention states that each nominated property should have an appropriate management plan or other documented management system which must specify how the Outstanding Universal Value of a property should be preserved, preferably through participatory means. The purpose of a management system is to ensure the effective protection of the nominated property for present and future generations (Operational Guidelines paragraph 108-109). To this end, this management plan has been prepared by the State Party to provide a framework for the long-term sustainable management of the site, as presented in the World Heritage nomination dossier.

This document outlines the policies, institutional framework, and principal strategies that guide the protection, conservation, development, utilisation and presentation of the Outstanding Universal Value of the nominated property by taking into account the wider social, cultural and ecological setting of the property. It demonstrates a strong commitment among stakeholders at the national, provincial, and regency levels to ensure the conservation and enhancement of the nominated sites.

The vision for this Management Plan is:

The Ombilin Coal Mining Heritage of Sawahlunto (OCMHS) will be protected and preserved as outstanding testimony of a globally-pioneering, systemic linkage of mines, railway and port facilities, which together form a seamless technological ensemble for the extraction and distribution of coal – the key strategic energy resource of the 19th and early 20th centuries. The defining attributes and significant objects of this inventive three-part technological ensemble, underpinned by an equally ingenious system for the organization of labour, will be interpreted and made accessible for present and future generations in order that all may be able to understand the genius of this historically unique achievement in the geographically remote region of West Sumatra and its significance to the development of mining technology world-wide.

The safeguarding of the OCMHS shall underpin the sustainable social and economic development, as well as continuing sense of a cohesive historical identity, of the socially diverse community associated as descendants and inheritors of the OCMHS. This shall be accomplished through conservation of the historic built heritage, development of cultural enterprises associated with OCMHS, and the promotion of educational cultural heritage visitor experience, based on the communication of an authentic and comprehensive understanding of the groundbreaking use of innovative technology for the exploitation of coal at OCHMS.

b. Approach

Following the closure of mining activities, the municipal government of Sawahlunto stipulated local regulation of the city of Sawahlunto, Number 2 Year 2001 concerning the vision and mission of Sawahlunto which set “Sawahlunto as a Cultural Tourism Mining Town in 2020”, a number of consultation and planning meetings were held to explore the potential of the mining town to be nominated as a UNESCO World Heritage site. Initial field works to record and document the nominated sites have been carried out since 2002 by the municipal government of Sawahlunto in collaboration with academics and non-governmental organizations. In 2015, the Sawahlunto Coal Mining Industrial Heritage was proposed by the Government of Indonesia for inclusion in the UNESCO World Heritage Tentative List. Further studies on the property suggested that to support the argument that the property meets the potential criteria of Outstanding Universal Value, an expansion of the area is necessary. Thus, the nominated property was expanded and includes not only Sawahlunto municipality but also Padang Panjang municipality, Padang municipality, Solok municipality, Solok regency, Tanah Datar regency, and Padang Pariaman regency. The 24 character-defining attributes of the nominated property are located in the three areas within these 7 municipalities and regencies which constitute a functionally-integrated technological ensemble, designed for the extraction, processing, and transport of coal, developed through a global interchange of engineering technologies during the period of industrialisation in the late 19th century and early 20th century.

The different ownerships of attributes within the nominated property require multi-sectoral coordination and cross-districts collaboration between diverse stakeholders, involving both central and local government, state-owned enterprises, civil society organizations and local communities. Intensive stakeholders' consultative meetings were held from 2015 to 2017 to discuss various aspects for the management of the proposed Ombilin Coal Mining Heritage of Sawahlunto. The stakeholders include cross-sectoral representatives of government agencies (central, regional, and local), state-owned enterprises, local foundations, non-governmental organizations, academics, and prominent figures of Kerapatan Adat Nagari (head of *nagari* communities). In 2015 a consultative meeting was held in Sawahlunto with the attendance of the Director-General of Culture. Subsequently, a series of consultative meetings were held at the provincial and municipal/regency levels to reach an agreement on the areas to be nominated. The consultative meetings at the local level culminated with the signing of a

Memorandum of Understanding (MoU) on 21 April 2017 which emphasises the commitment of the stakeholders in these regencies and municipalities to protect the Ombilin Coal Mining Heritage of Sawahlunto, to support its nomination for UNESCO World Heritage site, and to contribute in the development and implementation of the management plan. Furthermore, a Memorandum of Understanding between the Director-General of Culture of the Ministry of Education and Culture and the Governor of West Sumatra as well as all heads of regencies and municipalities in West Sumatra on the advancement of culture was signed on 07 November 2017. The signing of this MoU has been followed up by the synchronisation of programmes and activities in each respective government levels to support the preservation of cultural properties and values among which include the preservation of the Ombilin Coal Mining Heritage

c. The Scope and Status of the Management Plan

The legal framework and management plan demonstrate a strong commitment among stakeholders at the national, provincial, and regency levels to ensure the conservation and enhancement of the nominated property.

This management plan outlines the issues and factors affecting the property and the policies, principles, and objectives to manage the site to address those factors. It also identifies an action plan and the stakeholders in-charge as well as the necessary resources for the delivery of the plan over the short, medium and long term. The management plan serves as the framework to guide all relevant parties for a coherent and coordinated management of the property. All effort will be taken to preserve and enhance the potential outstanding universal value of the nominated property in adherence to this management framework. The management plan will be reviewed after five years of its implementation and updated as necessary.

Part I
Location and Description

1.1 Location

a. State, Province or Region

West Sumatra Province:

1. Sawahlunto Municipality
2. Solok Regency
3. Solok Municipality
4. Tanah Datar Regency
5. Padang Panjang Municipality
6. Padang Pariaman Regency
7. Padang Municipality

b. Name of Property

Ombilin Coal Mining Heritage of Sawahlunto

c. Geographical Coordinates to the Nearest Second

The nominated property is a serial nomination. It comprises twelve component parts clustered in three geographically-distinct but functionally-integrated areas.

Name of Component part	Municipality/ Regency	Coordinates of the Central Point (UTM Zone 47S)	Area of Nominated Component of the Property (ha)	Area of the Buffer Zone (ha)*	Map No. (annexed)
A. Sawahlunto Mining Site & Company Town					
A1. Soengai Doerian Mining Site	Sawahlunto Municipality	100° 46' 39.277" E 0° 40' 39.014" S	7.91		Figure 1-2 to 1-6
A2. Mining School	Sawahlunto Municipality	100° 46' 0.060" E 0° 40' 27.378" S	0.34		Figure 1-7
A3. Coal Processing Plant Compound	Sawahlunto Municipality	100° 46' 34.201" E 0° 40' 48.068" S	12.60		Figure 1-8
A4. Ombilin Railway Transportation	Sawahlunto Municipality	100° 46' 37.029" E 0° 41' 1.942" S	10.89	3,451.38	Figure 1-9
A5. Company Town	Sawahlunto Municipality	100° 46' 44.610" E 0° 40' 54.931" S	32.94		Figure 1-10
A6. Salak Power Plant and Rantih Water Pumping Station	Sawahlunto Municipality	100° 46' 8.750" E 0° 38' 6.013" S	18.14		Figure 1-11
B. Railway Facilities & Engineering Structures					
B1. Railway System	Located in four municipalities: 1. Sawahlunto 2. Solok 3. Padang Panjang 4. Padang and three regencies: 1. Solok 2. Tanah Datar 3. Padang Pariaman	100° 44' 16.380" E 0° 45' 59.852" S	173.27	3,591.27	Figure 2-2 to 2-6
B2. Batu Tabal Train Station	Tanah Datar Regency	100° 31' 22.727" E 0° 32' 38.270" S	0.79		Figure 2-7
B3. Padang Pandjang Train Station	Padang Panjang Municipality	100° 23' 42.428" E 0° 27' 49.238" S	3.69		Figure 2-8
B4. Tinggi Bridge	Padang Pariaman Regency	100° 22' 1.167" E 0° 28' 33.151" S	0.15		Figure 2-9
B5. Kayu Tanam Train Station	Padang Pariaman Regency	100° 19' 52.112" E 0° 32' 52.282" S	1.29		Figure 2-10
C. Coal Storage Facilities At Emmahaven Port					
C1. Coal Storage	Padang Municipality	100° 22' 49.553" E 0° 59' 30.117" S	6.13	314.31	Figure 3-1
Total area (in hectares)			**268.14**	**7,356.96**	

Figure.1.1 Geographical Coordinates to the Nearest Second

1.2 Description

The nominated World Heritage property of the Ombilin Coal Mining Heritage of Sawahlunto is a serial nomination. It comprises twelve component parts with a total of twenty-four attributes of potential outstanding universal value. The twelve component parts are clustered in three geographically-distinct but functionally-integrated areas, which together formed an innovative and globally-pioneering technological ensemble for the extraction, processing and transport of coal from the rich but remote Ombilin Coal Fields in central west Sumatra, across mountainous jungle terrain, to port facilities on the Indian Ocean.

Area A. Sawahlunto Mining Site and Company Town**.** This area incorporates six of the twelve components of this serial nomination and contains eighteen of the twenty-four identified attributes of potential outstanding universal value. Area A is the site of the geologically-extensive but geographically-inaccessible Ombilin Coal Fields in central West Sumatra. The nominated property components in Area A include a total of 10 km of underground mining tunnels and their related above ground structures for the purposes of extraction and processing of coal. Area A also includes the company mining town of Sawahlunto, purpose-built adjacent to the mines by the Ombilin Mining Company to house company mining engineers, miners, their families, and support staff.

Area B. Railway Facilities and Engineering Structures**.** Area B comprises the 155-km long mountain railway corridor with its inventive rack-railway linking the Ombilin mines to Emmahaven Port. Five of the twelve component parts of this serial nomination, and five of the twenty-four identified attributes of potential outstanding universal value are located in Area B. In addition to the rail track itself, these attributes include railway bridges, tunnels, and three stations along its route.

Area C. Coal Storage Facilities at Emmahaven Port**.** Area C comprises the historic Emmahaven Port with its facilities for the storage and transshipment of the coal from the Ombilin mines. Located on Sumatra's west Indian Ocean coast. Emmahaven Port area comprises one of the twelve components of this nominated serial property, and contains one of the twenty-four identified attributes of the property's potential outstanding universal value

These twelve components within the three areas together constitute and delimit area of the nominated property. The boundaries of the nominated property correspond to and are congruent with the location and extent of the original historical Ombilin mining concession and the numerous associated facilities constructed in the three area clusters across the island by the Ombilin Mining Company in the late 19th and early 20th centuries for the extraction, processing, and transport of high-grade industrial coal from the Ombilin Coal Fields to Emmahaven Port. Only minor modifications have been made to the original boundaries for the purposes of coherent contemporary protection and management, whilst respecting the holistic coherence of the original, ground-breaking, engineering design as it was originally planned, as a single, integrated technological ensemble for the efficient extraction of coal.

The objects included in the nomination dossier are presented in the following table:

Figure.1.2 List of 24 Attributes

Component Part		ID	Attributes
Area A: Sawahlunto Mining Site & Company Town			
A1	**Soengai Doerian Mining Site**	A1.1	Doerian Mining Pit Compound
		A1.2	Pandjang Mining Pit Compound
		A1.3	Soengai Doerian Mining Pit Compound
		A1.4	Loento Mining Pit Compound
		A1.5	Mining Tunnel
A2	**Mining School**	A2	Mining School
A3	**Coal Processing Plant Compound**	A3	Coal Processing Plant Compound
A4	**Ombilin Railway Transportation**	A4.1	SawahluntoTrain Station
		A4.2	Kubang Sirakuak Power Plant
		A4.3	Kalam Railway Tunnel
		A4.4	Muara Kalaban Train Station
A5	**Company Town**	A5.1	Mining Administrative Compound
		A5.2	Labour Quarters Compound
		A5.3	Health Facilities
		A5.4	Market
		A5.5	Supporting Facilities
A6	**Salak Power Plant & Rantih Water Pumping Station**	A6.1	Salak Power Plant Compound
Area B: Railway Facilities & Engineering Structures			
B1	**Railway System**	B1	Railway System
B2	**Batu Tabal Train Station**	B2	Batu Tabal Train Station
B3	**Padang Pandjang Train Station**	B3	Padang Pandjang Train Station
B4	**Tinggi Bridge**	B4	Tinggi Bridge
B5	**Kayu Tanam Train Station**	B5	Kayu Tanam Train Station
Area C: Coal Storage Facilities At Emmahaven Port			
C1	**Coal Storage**	C1	Coal Storage

2

Part II
Significance and Heritage Values

2.1 Outstanding Universal Values

Ombilin Coal Mining Heritage of Sawahlunto is a representative and outstanding example of a pioneering technological ensemble planned and built by European engineers in their colonies designed to extract strategic coal resources. Not only is the property of outstanding universal value because it demonstrates pioneering technological developments, fusing European engineering knowledge with local environmental wisdom and traditional practices in the organisation of labour, it also exemplifies the profound and lasting impact of the changes in social relations of production imposed by the European colonial powers in their colonies, which provided both the material and labour inputs that underpinned the world-wide industrialisation of the second half of the 19th century and early 20th century.

Built to exploit the exceedingly rich Ombilin coal deposits, located in the inaccessible mountains of west-central-Sumatra, Indonesia, the *Ombilin Coal Mining Heritage of Sawahlunto* is an extensive technological ensemble consisting of twelve component parts in three functionally-related areas, consisting of (a) open pit mines and labyrinthine underground mining tunnels together with on-site coal processing facilities, supported by a full-facility purpose-built mining town nearby at Sawahlunto; (b) an ingeniously-engineered rack mountain railway together with numerous rail bridges and tunnels, linking the mines to the coastal seaport, across 155 kilometres of the rugged mountain terrain; and (c) a dredged and ambitiously enlarged harbour and newly-constructed seaport at *Emmahaven* on Sumatra's Indian Ocean coast from where the coal was transhipped throughout the Netherlands East Indies and to Europe.

2.2 Criteria and Physical Attributes

CRITERION (ii)

Exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.

Ombilin Coal Mining Heritage of Sawahlunto exhibits a significant interchange of mining technology between Europe and its Asian colonies during the period of the 19th and 20th centuries, commonly referred to as the industrialisation. This complex technological ensemble was planned and built as a fully-integrated system designed to enable efficient deep-bore extraction, processing, transport and shipment of industrial-quality coal. Its overall design and staged execution shows a systematic and prolonged transfer of engineering knowledge and mining practices of the global industrialisation intended to develop the mining industry in the Netherlands East Indies--knowledge that was tempered by indigenous wisdom concerning geological formations in a tropical environment and practices that were tested by the need to accommodate local social structures and traditional cultural values. The establishment of the Mijnbouw School of Mining at Sawahlunto, Asia's first and still flourishing technological institute of mining, helped to ensure that the knowledge, experience, and skills acquired through practice at the Ombilin mines were institutionalized and transferred to new generations of local Indonesian mining engineers, thus assuring the long-term sustainability of the Ombilin Coal Mining Heritage of Sawahlunto and elsewhere in the Netherlands East Indies and later in independent Indonesia.

Following the discovery in 1868 of rich coal deposits in a remote and in-accessible location of west-central Sumatra, a decision was taken by the Dutch colonial government to exploit this resource as a cornerstone of its global economic strategic policy. The opening of a series of open pit mines connected to a labyrinth of underground mining tunnels, in unfamiliar geological and environmental conditions, demanded a large number of experimental innovations in deep bore tunnelling, tunnel shoring, de-humidification, regulation of oxygen supply, and control of the emission of methane and other noxious gases. These issues solved, with input of local environmental knowledge and practices, Immediately, there followed, concomitant with the opening of the mines, a rapid, planned development of mining support facilities and an elaborate purpose-built mining town with a full complement of municipal infrastructure to support the burgeoning community of engineers, miners, contract workers, prisoner labours, and support staff. To complement this investment in coal extraction technology and support services, there was concomitantly a noteworthy investment in the

development of an innovation, state-of-the- art railroad transportation system engineered to adapt to the topographical challenges of the mountainous terrain and environmental pressures of the tropical monsoon climate. A complex system of rack rail tracks, long tunnels, and parabolic arc rail bridges are all part of the experimentation of Dutch engineering enhanced by the contribution of the local knowledge of geology and geography. As an exemplary case study of new advances in mining technology, the development of the Ombilin Coal Mining Heritage of Sawahlunto made a significant contribution to the advance of global knowledge in deep mining techniques, particularly the underground mining in the tropical climate, taught at the foremost engineering schools throughout Europe, notably at the Delft University of Technology in the Netherlands.

CRITERION (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.

Ombilin Coal Mining Heritage of Sawahlunto is an outstanding, globally precedent-setting example of a technological ensemble designed for maximum efficiency in the extraction of a key, strategic natural resource – in this case industrial grade coal. It illustrates developments characteristic of the later stage of the global industrialisation in the second half of the 19th century and early 20th century, when discreet engineering technologies only loosely connected heretofore where integrated into complex, seamless, efficient systems of production giving rise to an exponential expansion of society's manufacturing base, and transforming the world from its former agrarian base into the globalized economy of industry and commerce of modern times. The engineering technologies concerned – deep bore vertical tunneling of mine shafts, mechanical ore washing and sorting, steam locomotion and rack railways, inclined and reverse-arc rail bridge construction, rock-blast railroad tunnels, deep-dredge harbours, and coal storage in climate-controlled silos – were complemented, indeed rendered viable, through the integrating agency of company organization, which included the construction of a purpose-built, planned modern mining town of more than 7000 inhabitants complete with all facilities – housing, food service, health, education, spiritual, and recreational – designed to cater to a strictly hierarchical structure of the labour force. This labour force, like the technological ensemble it supported, was characteristic of the colonial organisation of labour with European engineer-administrators at the top, progressing down through a hierarchy composed of white-collar administrators, convict (political prisoners and criminals), contract and free labours.

The success of this technological ensemble, integrating diverse engineering technologies into a single system, and incorporating an equally complex system of human social engineering to provide the manpower for the effective functioning of the system, is evidenced by the fact that the Ombilin mining enterprise (*Ombilinmijnen*) quickly rose to become one of the major coal producers in Asia during a critical period of history leading up to World War I and between World War I and World War II. The sustainability of the Ombilin system is attested to by the fact that the mine remained in operation until the New Year's Eve of 1999 marked by the last delivery of coal from Sawahlunto to Emmahaven Port by train. The three areas of the property–mine, railway, and port--together exemplify an innovative and complex chain of technologies developed during and characteristic of the organisation of industry during the time of global industrialisation, together with a sophisticated, precedent-setting integration of a hierarchical system for the organization of the labour required to ensure the system's efficient functioning, made possible by the socio-economic structures imposed on subject populations by colonial regimes of the period. Ombilin Coal Mining Heritage of Sawahlunto illustrates the stage in human industrial history immediately prior to the World War II in which the rise of modern systems engineering enabled this property to be one of the earliest, most-extensive and longest-lived mining coal enterprises in Asia.

2.3 Statement of Integrity

Ombilin Coal Mining Heritage of Sawahlunto is a serial nomination composed of twelve component parts in three geographically separate but functionally integrated areas containing altogether twenty-four character-defining attributes associated with one another in twelve component parts, conforming to their original planned, design and function. A serial nomination of twenty-four attributes distributed in three areas with a total of 268.14 hectares within a buffer zone of 7,356.96 hectares is necessary to express the entirety of the Outstanding Universal Value of this purpose-designed technological ensemble, with its systemic linkage of mines, a 155-km long mountain railway system, and a seaport. The three areas of the nominated property are linked by a continuous, elongated buffer zone aligned with the original railway easement from mine to port. All attributes necessary to express the outstanding universal value of this coal mining technological ensemble are complete and intact within the boundaries of the property and remain under their original corporate ownership and management control. The twenty-four character-defining attributes in the three areas of this technological ensemble are a functionally-integrated systemic series of attributes which collectively express the property's potential outstanding universal value under Criteria (ii) and (iv) as an innovative and precedent-setting technological ensemble, designed for the extraction, processing, and transport of coal. The system was developed through a global interchange of engineering technologies during the period of industrialisation in the second half of the 19th century and was enabled through the agency of a public-private development enterprise which included the exploitation of mines, formation of company town, and recruitment of heterogeneous mining society.

Being a coherent systematic linkage formed into a single technological ensemble, the individual integrity of the attributes is important, collectively, to the integrity of the nominated property as a whole. The tables below show the integrity of the individual attributes within each Area A, B, and C.

Figure.2.1 Integrity of Attributes in Mining Sites and Company Town

ID	Attributes	Integrity
A1.1	Doerian Mining Pit Compound	Mining sites have high integrity of setting as archaeological remains. Those sites have not been redeveloped since original use. Integrity of mining pits, ventilator pits, air compressor building which are linked by lorry track, represent a sequence of processes from coal extraction to coal processing/filtering plant.
A1.2	Pandjang Mining Pit Compound	
A1.3	Soengai Doerian Mining Pit Compound	
A1.4	Loento Mining Pit Compound	
A1.5	Mining Tunnel	
A2	Mining School	Mining School has a high intactness of materials and design of the building, but lesser intactness of context, with its use changed to office.
A6.1	Salak Power Plant Compound	Integrity of mining sites, water pumping station and power plant which are linked by river, represent a functional link among attributes and a technological ensamble in mining.
A6.2	Rantih Water Pumping Station Compound	
A5.1	Mining Administrative Compound	High integrity of form and design, with varying intactness of materials and use. Head Office of Bukit Asam Company and its residential houses have a high integrity of materials, and their use and propose as office and residence. High intactness of materials and design of the buildings and setting.
A5.2	Labour Quarters Compound	Tangsi Tanah Lapang Labour Quarters and Tangsi Baru Labour Quarters have a high integrity physically and in their use and purpose as settlements area. Soup Kitchen Complex has a high intactness of materials and design of the building, but lesser intactness of context, with its use changed to museum and office.
A5.3	Health Facilities	Sawahlunto Hospital has a high integrity physically and in their use and purpose as health facilities.
A5.4	Market	Market area has a high integrity physically and in their use and purpose as a business/economic area.
A5.5	Supporting Facilities	Ombilin range (soccer field), Assembly Hall, Hotel Ombilin, Santa Lucia Complex have a high integrity physically and in their use and purpose as public facilities for social, religious and education activities. They have high intactness of materials and design of the buildings and its setting.
A4.2	Kubang Sirakuak Power Plant	This first Power Plant has a lesser intactness of context. One of the objects, power plant building, lost of original above ground built form, changed into a new building as a mosque. However, the objects remains (structure of chimney/tower of *Electriche Centrale,* the site of power plant building, and bunker/underground building) demonstrate the wholeness of the Kubang Sirakuak Power Plant.

Figure.2.2 Integrity of Railway Transportation, Facilities and Engineering Structures

ID	Attributes	Integrity
A4.1	Sawahlunto Train Station	Station Buildings and emplacements maintain their integrity as station compound and keep their intact design and material. But, the Sawahlunto Station has lesser intactness in the context, with its function changed into museum. Kalam Railway Tunnel has intactness in the design, material and setting.
A4.3	Kalam Railway Tunnel	
A4.4	Muara Kalaban Train Station	
B1.1	Railway System	Along its 155 km routes from the Sawahlunto Coal Processing Plant to the Emmahaven Port, the railway passes through mountainous terrain and includes three innovative sections of rack-rail, five intermediate stations, tunnels, and high bridges. The entire route of the railway remains intact in all its component parts.
B2.1	Batu Tabal Train Station	Station Buildings and emplacements have integrity as station compound and have intactness of design and material. Very high degree of intactness of form, materials and setting, demonstrated by Tinggi Bridge structure, together with Anai river and valley as its setting.
B3.1	Padang Pandjang Train Station	
B4.1	Tinggi Bridge	
B5.1	Kayu Tanam Train Station	

Figure.2.3 Integrity of Port

ID	Attributes	Integrity
C1	Coal Storage	High degree of intactness and materials showed at Silo Gunung as the end point of railway route. Silo Gunung Coal Storage as the only one object remains, together with port area as its setting, provide the wholeness of port area.

As shown in the tables above, all twenty-four attributes are individually intact and although they vary in their state of conservation, all are readable as to their location, form and function. They are protected by legal provisions at the national, provincial, and/or local levels and their condition is continuously monitored and routinely maintained through conservation frameworks established by the Ministry of Education and Culture and implemented by the state-owned enterprises for the mines, railway, and port which have, since Indonesian independence from Dutch colonial rule, inherited their ownership from the Dutch-run mining company, *Ombilinmijnen*. The three areas that comprise this serial property and which between them contain all twenty-four of the individual attributes necessary to express the nominated property's potential outstanding universal value, are all also completely intact in keeping with their original historic design, and retain their functional linkages with one another.

As with the individual attributes, the land and all other assets of all three areas comprising the property remain under the ownership and management of the relevant legacy state-owned enterprises which have inherited them.

The use-right to some portions of Area A and some of the individual assets contained therein have been consigned to the Sawahlunto local municipal government for social use purposes such as educational resources or other public functions. Furthermore, the buffer zone, which is congruent with the historic railway easement, except where it expands in Area A to conform to the nationally-designated cultural property zone of Sawahlunto Municipality and in Area B where it expands to conform to a nationally-designated forest watershed protected zone, is itself subject to the highest level of national protection designation and professional conservation management.

2.4 Statement of Authenticity

Ombilin Coal Mining Heritage of Sawahlunto, is a technological ensemble consisting of twelve component parts clustered in three geographically linked and functionally integrated areas, which contain altogether twenty-four attributes contributing to the potential outstanding universal value of the property. Each area – mine, railway, and port -- has its own geographic and functional integrity, as described in 3.1.c. Within each area, the component parts of this multi-component technological ensemble, and the attributes contained therein, all have a high degree of authenticity, as they retain their original a) form and design; b) materials and substance; c) management systems; d) location and setting.

Authenticity is also high with regard to two other aspects of the property: e) use and function; f) spirit and feeling

a) Form and Design

From its inception, the Ombilin coal mining enterprise was conceived of as a comprehensively designed technological ensemble integrating the mines, ore-processing facilities, mining town at Sawahlunto, mountain railway, storage and port facilities at Emmahaven into a seamless functioning whole. The form and design of the twelve component parts in all three areas of the nominated property are unchanged and functionally intact as originally planned, design, and built.

In Area A, the mines and Sawahlunto mining town as a whole are exceptionally well-preserved. Although major commercial mining operations have been halted since the 1970s in the mines located within the nominated property, some of the mining tunnels remain open and active as training facilities and are open to visitors for educational purposes, while the town itself continues to be inhabited by the descendants of the original community of engineers and miners. The form and design of the Sawahlunto mining town are distinctive due to the sophistication of its bespoke urban planning for the purposes of the coal mining enterprise, the characteristic late 19th century Dutch-influenced architecture of the individual buildings, and the locally innovative design technology of the ore-processing and related mining support structures. The ambitious – and successfully executed – design of the Ombilin coal mining enterprise, combining state-of-the-art-of-its-time engineering knowledge with technological innovation adaptive to local conditions in the mountains of West Sumatra gave the nominated property an innovative and distinctive character within the region and established the go-to model for other coal mining enterprises throughout the global Dutch colonial empire and back into the Netherlands as well. In the Netherlands, all coal mines have been decommissioned and closed since 1961, and in other areas of the former Dutch colonies, such as South Africa, they were abandoned before World War I, the technological ensemble of the coal mining enterprise remain intact in all its

components and authentic as originally designed. Although some of the industrial buildings and mining structures have been adapted over time to accommodate the evolving technologies of the mining industry and the needs of Ombilin Mining Company, the authenticity of the original form and design of all components is easily decipherable.

The coal mining and associated industrial processing areas are laid out along and between the Lunto and Sumpahan rivers, designed along parallel axes, with Ombilin Administration Office at the geographical centre of the landscape ensemble. This original design form still exists and functions as designed, with the still-operational Ombilin Administrative Office located at the head of the central public square of Sawahlunto town and the focal point of public life in Sawahlunto today.

The worker settlements of company-provided housing in the Tangsi Lapang neighbourhood of Sawahlunto town still maintain their original form as designed with a perpendicular axis as testimony to the social divisions between categories and status of mine workers (married workers, single workers, fixed-term contract labourers, and casual labourers). The building façades were designed to clearly designate visually a rigid hierarchy in the status of the workers who inhabited the housing. This original architectural appearance and design of the workers housing is still readable in the architecture of the building today, although the former system of the strict division of labour and its implied status differentiation no longer applies and the inhabitants of some of the buildings have made minor alterations to facades over time as part of on-going maintenance and replacement of deteriorated elements. Similarly, the appearance of facades and roofs and the conservation condition of company housing for Dutch personnel in the Tangsi Baru neighbourhood are also original are as built and exhibit their original form and design, although over time minor extensions to the buildings have been permitted by the company.

The Ombilin Mining Company also built a number of public buildings for recreation, social occasion, religion, education, health and food service. All have been well preserved and remain intact as built with their original appearance, with only minor interior alteration for repair and maintenance, or upgrades (such as the addition of electricity.) Today these building retain their public functions either as original or adapted into museums for educational purposes.

Most of the industrial structures and facilities for coal processing and storage, although no longer functional for mining purposes since the closure of the Ombilin mines, have a high degree of authenticity, retaining their size and form. Many continue to be accessible for training and educational purposes.

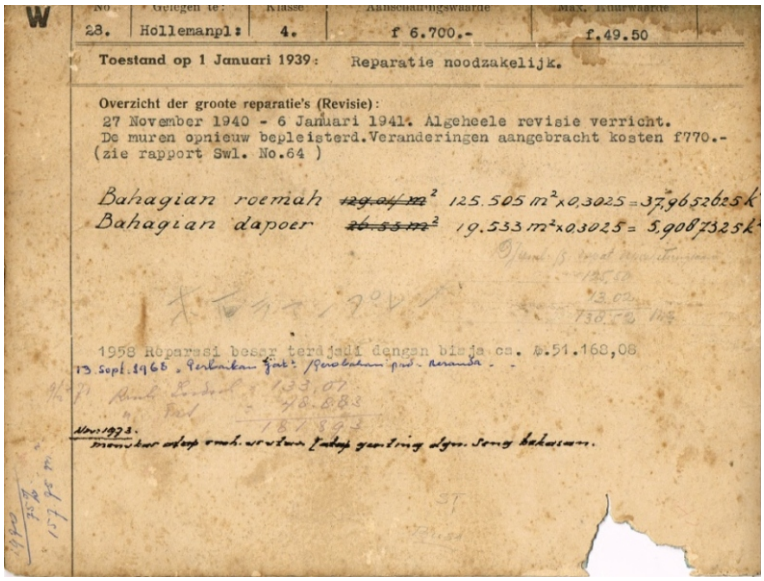
In Area B, the railway tracks, tunnels, bridges and station facilities with their associated functional structures remain unchanged and are functional as designed and built.

In Area C, the *Kolenmagazijn* (the coal storage silo) at Emmahaven Port retains its original form and design, although like the industrial facilities at Sawahlunto it has been decommissioned and no longer functions as a coal storage facility. It is preserved intact for educational purposes. There are plans to develop it as a visitor interpretation centre to anchor educational tourism to the Ombilin Coal Mining Heritage of Sawahlunto.

b) Materials and Substance

The materials and substance of all twenty-four physical attributes contained within the property's twelve components in the three area clusters are original as built by the original owner/builder from the time of their construction. Routine maintenance, in place since the time of their construction, has ensured the continued authenticity of the original structures.

In Area A, the building elements, such as original façades, windows, doors, and roof, have been largely preserved. Regular replacements of the building's fabric is only done when materials are weathered or aged by using similar materials. Workers housing in the Tangsi Tanah Lapang and Tangsi Baru neighbourhood compounds have undergone minor changes to façades, using like materials, while all structural components remain original and unchanged. The public facilities, such as Pek Sin Kek, Ons Belang, and Comedy House have been preserved with high degree of material authenticity by the Ombilin Mining Company. Only minor replacements have made to the decayed organic parts (windows and doors). Houses and public buildings that remain in use have however undergone upgrades to their sanitary facilities and have been fitted with electrical wiring.


W

28. Hollemanpl: 4. f 6.700.- f.49.50

Toestand op 1 Januari 1939: Reparatie noodzakelijk.

Overzicht der groote reparatie's (Revisie):
27 November 1940 - 6 Januari 1941. Algeheele revisie verricht.
De muren opnieuw bepleisterd. Veranderingen aangebracht kosten f770.-
(zie rapport Swl. No.64)

Bahagian roemah ~~129.04 m²~~ 125.505 m² x 0.3025 = 37.96526025 k
Bahagian dapoer ~~26.55 m²~~ 19.533 m² x 0.3025 = 5.908733 25 k

1958 Reparasi besar terjadi dengan biaya ca. f.51.168,08

13 Sept. 1968 . Perbaikan jalan : Perbaikan pad. Rumah .

Nov. 1973.

Image.2.1 Building Conservation Inspection Card is recorded by the Ombilin Mining Company

It is noteworthy to point out that the high degree of material authenticity of the attributes of all components of the nominated property is due in large part to the fact that since the time of their building, the Ombilin Mining Company, since its inception, has maintained a rigorous programme of regular maintenance and conservation of company assets. As shown in the image above a Building Conservation Inspection Card has been and continues to be used to guide regular inspection of all company assets, establish work-orders for maintenance and repairs, and records details of the work undertaken. (The example show above relates to the Engineer Residence W-28 within the Mining Administrative Compound.)

In Area B, the railway network, including track, tunnels, bridge, and stations is rigorously maintained in working order by the Indonesia State Railways following the State Enterprises' nation-wide conservations guidelines. Thus the components of the nominated property located in Area B all retaining a high degree of material authenticity. This includes the three intervals of a unique form of rack railway to allow trains to cross over the high mountain passes of West Sumatra, and the innovative inclined bridge of *Boogbrug Anai Kloof* (the Tinggi Bridge), an engineering landmark with a unique reverse arc in a dramatic setting across the Anai Valley. The on-going reactivation of West Sumatra Railway Line, a part of Trans-Sumatra Railway Project, will ensure the continued maintenance of the railway network within the nominated property.

In Area C, the coal storage Facilities at Emmahaven Port retains the authenticity of its building's original fabric material and substance.

c) Management System

The management system of the nominated property -- including the maintenance, conservation, and operation of mine, railway, and port -- are still under the same company management that originally designed and built them, with the only modification being that after Indonesia independence from Dutch colonial rule in 1945, the *Ombilinmijnen* (Ombilin Mining Company) which had heretofore managed all three parts of the property was divided into two separate state-owned enterprises Bukit Asam Company to manage the mining operation and Indonesia Railway Company to manage the railroad. The work of these state-owned enterprises is supervised and coordinated under the Ministry of State-Owned Enterprises.

While some of the individual assets of Bukit Asam Company have been consigned and/or leased to the Sawahlunto municipal government for social use purposes, their ownership and the responsibility for their maintenance remains the responsibility of Bukit Asam Company.

Most company houses and the original miners' barracks (including Tangsi Tanah Lapang and Tangsi Baru) are still functioning as residences and continue to be occupied by officers, staff, retired worker of the Ombilin Mining Company (now the Bukit Asam Company.) All public facilities continue their original function since their first establishment, such as Ons Belang, Ombilin Ground, Santa Barbara Catholic Church, and Santa Lucia School. The original Ombilin Hotel is still in use as a hotel and as previously as the most-sought-after event venue in Sawahlunto town. The Ombilin Hospital is still in use as a hospital and had been expanded to meet growing medical needs with improvement of its medical and nursing facilities.

Goedang Ransum (the original company kitchen) is now functioning as a museum to showcase the Ombiilan Mining Heritage of Sawahlunto, and a venue for academic conferences and other educational events. The Assembly Hall (*Societeit Gluck Auf*) continues to serve, as designed, as a venue for social events and public gatherings. Sawahlunto main train station serves as a railroad museum with the original rolling stock of steam engines, including the famous Mak Itam Steam Engine which operates on-demand for special occasions along the route from Sawahlunto to Muara Kalaban train station, which is now also repurposed as a railroad museum. The rest of the railway and other train stations along the route from Sawahlunto to Emmahaven Port still retain their original function for the regular local transport of passengers and goods.

The Administration Head Office of the Ombilin Mining Company was established in Sawahlunto in 1916 and continues to operate in the same building in the same location to date, as the Head Office of the re-constituted Bukit Asam Company. The Bukit Asam Company is committed, indeed obligated by national law, to manage and maintain all company assets in their original condition and, insofar as practical, original function. As the great majority (70%) of all twenty-four attributes contributing to the potential outstanding universal value of the nominated property belong to the Bukit Asam Company, while most of the rest belong to the Indonesia Railway Company, this arrangement for the management of the attributes of the nominated property assures they will continue to be maintained in an acceptable state of conservation, as they have been since they time of their construction.

In Area B, the railway network, including tunnel and bridge, is managed by Indonesia Railway Company. As noted above, the railway and other train stations within the nominated property along the route from Sawahlunto to Emmahaven Port in the coastal city of Padang still retain their original function for the regular local transport of passengers and goods.

In Area C, the coal storage Facilities at Emmahaven Port remains under management of the former Ombilin Mining Company, now the Bukit Asam Company, a state-owned enterprise.

d) Location and Setting

All twenty-four attributes of all twelve components in the three areas of the nominated property are all in their original location. In addition, the setting of the property is largely unaltered since the middle of the 19th century, when Dutch engineers discovered coal at Ombilin and determined to establish the technological ensemble that functioned for the next 100 years as one of the most productive coal mining enterprises in Asia, providing a high-grade of industrial coal to the factories of Europe at the height of the period of industrialisation.

Today, Sawahlunto's location in the landscape has not changed from being an isolated location surrounded by hills, since its discovery for mining exploration and exploitation. Coal was extracted using (for the most part) deep pit tunnelling technology, with the relatively few, small, and widely dispersed entrances to the mining pits leaving only very minor impact on landscape.

In Area A, new housing has tended to expand into the hilly regions above the old coal mining town of Sawahlunto, while the new, relatively small mining concessions which have been opened in recent decades are located well outside the nominated property and its buffer zone. Therefore, from Polan and Cemara hilltops, it is still possible to observe and experience the original coal mining town and its associated coal processing areas to the north, as originally designed in the late 19th century, set into the mountainous landscape between the Lunto and Sumpahan rivers.

Area B: The only major alteration of the historic railway between Sawahlunto Town and Emmahaven Port was the rebuilding of Padang Pandjang Station in 1926 after an earthquake destroyed the original building. The rebuilt structure is not precisely on the same the footprint of the original building. Since 1926 there have been no other major alterations along the route of the railway within the boundaries of the nominated property. The current project for the rehabilitation and revitalisation of the railways of the whole of Sumatra, will not change the location or alter the setting of the portion of the historic railway included in the nominated property.

Area C: The coal storage Facilities at Emmahaven Port have not been moved or altered since they were built. While other modern port facilities have grown up laterally along either side of the old coal silo as the port of Teluk Bayur has expanded, the original coal storage silo still maintains it original setting directly on the sea coast frontage with a high cliff behind. This setting, which forms the buffer zone for this component of the nominated property is protected under environmental protection regulations.

e) Use and Function

Although the historic Ombilin mines at Sawahlunto which form one part of this property ceased to function in the 1970s and were finally decommissioned in 1998, the Bukit Asam Company continues to mine coal in other parts of the large concession which extends far beyond the vicinity of the boundaries of the nominated property and its buffer zones. One of the original mines within the nominated property remains in use however, for educational purposes, as part of the Mining School at Sawahlunto and is open for visitation upon appointment.

Many of the other original assets of the *Ombilinmijnen* (Ombilin Mining Company) located in Area A – all of where built as part of this planned, integrated technological ensemble – retain their original function (such as the original headquarters building of the mining company, the company hospital, and the community church). Others (such as the communal kitchen/assembly hall and the Sawahlunto train station) have been adapted for educational purposes for the interpretation of the property's coal mining heritage. These original company assets located in Area A are included among the attributes selected as demonstrating the nominated property's potential outstanding universal value.

With regard to Area B, coal currently mined from the Ombilin coal fields comes from open pit mines located well outside the boundaries of the nominated property and buffer zones. This coal is now transported to port by truck, not by rail. However, all components of the railway continue to be maintained and operated as an educational tourism attraction, complete with the original steam locomotives.

In Area C, Emmahaven Port (now renamed Teluk Bayur) remains in operation as the transhipment point for coal from the still-open mines of the Ombilin concession. However, the Silo Gunung, is no longer operational for coal storage. It is maintained for its iconic place in the harbour's historic setting as a tribute to the role the coal mining industry has played in the economic and social development of the region.

f) Spirit and Feeling

The nominated property, *Ombilin Coal Mining Heritage of Sawahlunto*, today retains and carries the authentic spirit adventure, exploration, entrepreneurship, and technical process characteristic of a former coal mining areas of the late 19th and early 20th century, as manifested in the mountainous tropical jungle environment of Southeast Asia. The original character of this ambitious enterprise can still be felt on site, conveyed by the well-preserved material and immaterial heritage elements. The Ombilin mine fields are still developing, albeit much more slowly than previously, as a centre for instruction, training, and research into coal mining technology and the environmental and social impacts of the coal mining industry. Yet, the historical characteristics of all parts of the original technological ensemble – mine, town, rail, port – are preserved intact and carefully conserved in their materiality, so as to provide the information baseline for the new role of the property as an educational resource. The buildings and structures of the lively small town of Sawahlunto, which served in the past as the hub and administrative centre of the entire Ombilin mining system, continue to function today as testimony to and place where the history of this important era of global mining history can be authentically experienced. The patina, decay/weathering process, and materiality of the buildings contribute to a sensation of the coal mining industrial areas' historic nature. The existing rail track and its ancillary infrastructure of tunnels, high bridges, and historic stations evoke a lucid mental image of the outstanding engineering efforts and tenacious labour inputs required to conquer the mountainous topography of remote West Sumatra to realise in built form the dream of the discovers of the Ombilin coal fields to extract this precious natural mineral resource to power the industrial engine of the Dutch Empire

The original spirit of this industrial coal mining industrial areas is also accentuated by its immaterial value. During its mining heyday, the Dutch East Indies government introduced a strong work ethics amongst the local workers. To boost production, the Dutch government enforced a strict working discipline as can be learnt from the implementation of the ubiquitous work siren. Every morning at 6am and every evening at 5pm, a loud siren could be heard echoing throughout the Ombilin coal mines and reverberating in Sawahlunto town. It was a sign for the workers to leave for work and to finish work. Over the years, the work siren method instilled an implicit sense of discipline amongst the workers also the local people of Sawahlunto. It has taught them about time management and working efficiency. Even after the Dutch left Sawahlunto following Indonesia's independence, the mining activities during the post-colonialism period still retained this work tradition. Today, the same siren can still be heard echoing throughout the coal mining industrial areas at the exact same time every weekday. Although it no longer signals working time, the siren serves to remind the common practice of discipline applied to the mine workers in the old days, and helps to bring the memories of a bustling mining coal mining industrial areas to locals and visitors alike.

Conclusion

Considered together as a technological ensemble, the authenticity of all twenty-four attributes identified as contributing to the potential outstanding universal value of *Ombilin Coal Mining Heritage of Sawahlunto*, located within the twelve components the nominated property in three areas, is extremely high. The property as a whole has a high degree of authenticity as the best surviving example of large-scale coal mining heritage of the late 19th and early 20th centuries, in Southeast Asia and further afield. Consisting of an integrated system linking the mines to the port along a purpose-built mountain railway, the property as a whole demonstrates with highly credible historical authenticity, based on material and documentary evidence, the rapid transformation of a remote and rural area into a coal mining industrial landscape, with elements that demonstrate the application of western engineering technology to adapt to local conditions of terrain, geology, labour, and socio-cultural traditions.

The tables below show the authenticity of various elements of *Ombilin Coal Mining Heritage of Sawahlunto*, divided into several categories as set out in Operational Guidelines for the Implementation of the World Heritage Convention relating to form and design, materials and substance, use and function, location and setting.

2.5 Protection and Management Requirement

Located in three regencies and four municipalities of the West Sumatra Province, the nominated property requires a coordinated legal instruments and management system for its protection. There are two main legal instruments for the protection of the property, i.e., the National Law No.11 of 2010 for the Protection of Cultural Property and National Law Number 26 of 2007 on Spatial Management. The Law No. 11 of 2010 which replaces the Law of Cultural Property No 5 of 1992 stipulates the protection, development and utilisation of cultural property in Indonesia at the national, provincial, and regency and municipal levels. Law No. 26 of 2007 repeals the Law of Spatial Management No. 24 of 1992 and outlines the obligation of central and local government on spatial management and illustrates the procedures for rural and urban spatial management and planning. It also elaborates the arrangement of special plans and spatial plans at national, provincial, regency and municipal levels.

The nominated property will be considered as provincial cultural protected area covering the significant attributes which are located in the seven regencies and municipalities. The determination of provincial status for cultural property and its attributes, sets its spatial definitions (i.e. boundaries of property and its buffer zones) into all level of spatial regulations, and sets its priorities and strategies for the regional cross-sectoral development plan. The provincial government and local government of the seven regencies and municipalities are expected to transform a spatial definition of boundaries of property as well as direct setting and scenery background into the provisions for protected areas and utilisation areas. At least, two types of buffer zone shall be considered, i.e. strict protected area for the direct setting and moderate protected area for outer part of the setting.

Management system of the nominated property is divided into three levels and involves the following parties: 1) at policy level: the Inter-Ministerial Steering Group; Provincial, Municipal, Regency Heads; (2) at planning level: Provincial Level Cultural Authority, Heritage protection authorities, Provincial, Municipal, Regency Authorities and Property Owners; (3) at operational level: Regency/Municipality Cultural Authorities and other stakeholders.

The ministry in charge for cultural affairs facilitates an establishment of a protection system for ensuring the coordinated management for a nominated property with multi-level of stakeholders. The overall coordination for the management of property shall be undertaken by the Board of the Directors for the Protection of the Ombilin Coal Mining Heritage of Sawahlunto which consists of relevant mainline ministries such as culture, public works and housings, and state-owned enterprises and the relevant offices at provincial level. This government board shall govern and regulate the protection of the

significant value of the coal deposit and mining, railway, port as well as rural and urban areas of the nominated property. Whereas, a Site Management Office for the Conservation of the Ombilin Coal Mining Heritage of Sawahlunto shall be established which shall work togerther with the relevant cultural and public work offices at the municipal/regency level as well as Bukit Asam Company-Ombilin Operational Unit (PT.Bukit Asam-UPO) as the authorities which manages the Ombilin mines and its company assets and the Indonesia Railway Company (PT Kereta Api Indonesia) as the authority which manages the stations and railway networks.

2.6 Objectives of the Management Plan

In order to protect the integrity and authenticity of the property's physical attributes from the risks that threaten them, so that the criteria which give the property it's OUV are safeguarded over the long-term, this management plan has been established with the following objectives:

1) To ensure that all industrial heritage assets including mining infrastructure, the town's urban layout, transportation network, and the shipping depot in the *Ombilin Coal Mining Heritage of Sawahlunto* are preserved for future generations through appropriate protection and conservation schemes;

2) To ensure that conservation of the property can be harmoniously integrated in the bigger framework of local development plans whilst supporting the economic and social development objectives of these plans;

3) To enhance public awareness, appreciation, and participation in the conservation of the *Ombilin Coal Mining Heritage of Sawahlunto* through education and improved site presentation;

4) To help bring together interests of diverse stakeholders in the conservation and enhancement of the *Ombilin Coal Mining Heritage of Sawahlunto*;

5) To establish specific management guidelines that can be used by stakeholders for participation in the conservation and enhancement of the significance and outstanding universal values of the *Ombilin Coal Mining Heritage of Sawahlunto*;

6) To identify priorities for the allocation of available resources in order to protect and conserve the cultural and historical values of the *Ombilin Coal Mining Heritage of Sawahlunto*;

7) To ensure that the management of the property is continuously monitored and regularly evaluated; and

8) To provide a basis for future plans so that all changes within the property can be managed

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Part III
Legal Protection

3.1 International Protection Designation

The Indonesian government ratified the UNESCO 1972 Convention concerning the Protection of the World Cultural and Natural Heritage in 1989 and subsequently the Presidential Decree number 26 Year 1989 was stipulated concerning the ratification of the Convention by the Indonesian government. The Ministry of Education and Culture is the mainline ministry in charge of the World Cultural Heritage sites in Indonesia.

3.2 National Protection Designation

a. National Law No.11 of 2010 for the Protection of Cultural Property, a revision from Law No. 5 of 1992.

b. National Law Number 26 of 2007 on Spatial Management, a revision from Law No. 24of 1992 and outlines the obligation of central and local government on spatial management and illustrates the procedures for rural and urban spatial management and planning. It also elaborates the arrangement of special plans and spatial plans at national, provincial, regency and municipal levels.

c. National Law Number 9 of 2015 on Regional Government, a revision from Law No 32 of 2004 and Law No 23 of 2014, outlines that the implementation of spatial management in the province, district and municipality is the duty and responsibility of local government. Local government has a larger role in organising and managing its territory, particularly in the implementation of development, including the preparation, review and implementation of its Spatial Plan for province, regency and municipality, as well as the strategic area planning at national, provincial, regency and municipality level.

d. Government Regulation No. 26 of 2008 on National Spatial Planning outlines the policies and strategies for national spatial planning. This regulation serves as a guideline for national long and medium-term planning and development as well as the spatial use and control at the national level in order to create an integrated national, provincial and municipal/regency spatial planning. It also provides the guideline for the designation of National Strategic Areas.

3.3 Provincial Protection Designation

The Ministry in charge for home affairs in the country governs the relationship of central and local governments as well as managing decentralization affairs. Act No. 22 of 1999 on Regional Autonomy overarches provisions for the decentralisation of authority from the central government to the regions. This Act provides an opportunity for the local governments to manage the area and the potencies that exist in their area. The local government shall register cultural heritage properties in their administrative area and designate them as Provincial Cultural Heritage Property.

The Provincial Government of West sumatra Province issued Provincial Regulation No.13 year 2012 on the Spatial Plan of West Sumatra Province for the period of 2012-2032. The Spatial and Development Plan of West Sumatra establishes protected areas that include nature reserves and conservation of natural and cultural property.

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3.4 Site-Specific Protection Designation

Each area of the nominated property is legally administered by its relevant governing institution. Management of Area A is administered by the Municipal Office of Sawahlunto. Management of Area B is formally coordinated by the regency government of Solok, Padang Pariaman and Tanah Datar as well as Solok and Padang Panjang municipality. Whereas, the management of Area C is administered by the municipal government of Padang. In addition to these government institutions are state-owned enterprises namely PT. Kereta Api Indonesia (Indonesia Railway Company) and PT. Bukit Asam (Coal Mining Company) as the owner of most of the significant objects located in Area A, B and C. These multi-sector stakeholders team operates under direct jurisdiction of the Governor of West sumatra.

By the mandate given through the Law No.11/2010 concerning Cultural Property, the Minister of Education and Culture stipulated the Decree No. 345 / M / 2014 on the Establishment of Geospatial Unit of Old Coal Mining Town of Sawahlunto to designate the old mines, the mining company assets, railway network and urban setting in the selected property as the national cultural property. Thus, most of the attributes in Area A has already been protected through this Decree. Whereas, the protection of the attributes in Area B and Area C is in the process to be designated as provincial Cultural Property. The following is the list of component parts of the property and their applied legal frameworks:

Component Part of the Property			Applied Legal Framework	Designation
Area A: Sawahlunto Mining Site & Company Town				
A1	**Soengai Doerian Mining Site**			
	A1.1	Doerian Mining Pit Compound	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A1.2	Pandjang Mining Pit Compound	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A1.3	Soengai Doerian Mining Pit Compound	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A1.4	Loento Mining Pit Compound	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A1.5	Mining Tunnel	Draft Decree of Sawahlunto Mayor	To be designated as a municipal cultural property
A2	**Mining School**			
	A2	Mining School	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
A3	**Coal Processing Plant Compound**			
	A3	Coal Processing Plant Compound	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
A4	**Ombilin Railway Transportation**			
	A4.1	Sawahlunto Train Station	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
	A4.2	Kubang Sirakuak Power Plant	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A4.3	Kalam Railway Tunnel	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
	A4.4	Muara Kalaban Train Station	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
A5	**Company Town**		Decree of Ministry of Education and Culture No.345/M/2014	National Cultural Property
	A5.1	Mining Administrative Compound	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
	A5.2	Labour Quarters Compound	Decree of Sawahlunto Mayor No.250/2014	Municipal Cultural Property
	A5.3	Health Facilities	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
	A5.4	Market	Decree of Sawahlunto Mayor No.84/2007 Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property
	A5.5	Supporting Facilities	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
A6	**Salak Power Plant & Rantih Water Pumping Station**			
	A6.1	Salak Power Plant Compound	Decree of Sawahlunto Mayor No.84/2007	Municipal Cultural Property
	A6.2	Rantih Water Pumping Station Compound	Decree of Sawahlunto Mayor No.327/2017	Municipal Cultural Property

Component Part of the Property			Applied Legal Framework	Designation
Area B: Railway Facilities & Engineering Structures				
B1	**Railway System**			
	B1	Railway System	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property
B2	**Batu Tabal Train Station**			
	B2	Batu Tabal Train Station	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property
B3	**Padang Pandjang Train Station**			
	B3	Padang Pandjang Train Station	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property
B4	**Tinggi Bridge**			
	B4	Tinggi Bridge	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property
B5	**Kayu Tanam Train Station**			
	B5	Kayu Tanam Train Station	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property
Area C: Coal Storage Facilities at Emmahaven Port				
C1	**Coal Storage**			
	C1	Coal Storage	Draft Decree of West Sumatra Governor	To be designated as a provincial cultural property

Figure.3.1 Protective Designation of Each Component Part

Directives for Management of Assets

Since most of the assets within the nominated properties are owned by two institutions under the Ministry of State-owned Enterprises, the management and use of the assets shall follow the Minister of State-owned Enterprises Regulation No. PER-13/MBU/09/2014 concerning Guideline for the Utilisation of Assets owned by State-owned Enterprises. This regulation sets a guideline to optimise the use of the fixed assets in order to improve the performance and value of the state-owned company. In this ministerial regulation, each Board of Directors of the state-owned company is required to prepare a list of fixed assets that are not optimally utilised together with information on the location, condition, ownership status, initial plan for utilisation of the land and/or buildings by the company, as well as the local Spatial Planning (RUTR) in which the fixed assets are located.

Directives for the Protection of Buffer Zones

Buffer zone is needed to ensure the protection and conservation of the property as well as its setting from various factors which may give adverse impact to the property. The physical objects such as buildings, monuments, etc. and natural environment or landscape which support the functional, historical or visual context of the attributes are considered as the setting of the nominated property.

Protection and management for direct and wider settings in the buffer zone are established through provisons of Provincial Regulation No. 13 Year 2012 on West Sumatra Province Spatial Plan for 2012-2032. In addition, the ministry in charge of environment and forestry manages the protected forest areas in West Sumatra through the Agency of the Conservation for Natural Resources in West Sumatra (BKSDA). The Dutch East Indies government issued a decision to Governor Besluit No. 25 on Stbl 756 dated December 18, 1922, which set a forest area in Lembah Anai Valley as a nature reserve covering an area of 221 hectares. Protected areas in Lembah Anai Valley, located on Nagari Singgalang, District of Sepulu Koto, Regency of Tanah Datar, sustain the protection of railway lines as well as the authenticity and integrity of the Lembah Anai valley setting. The Office for the Conservation of Natural Resources (KSDA Section III) of Tanah Datar is the technical implementation unit for managing this natural protected area.

Area	Component Part of the Nominated Property	Applied Laws and Regulation
A	**Sawahlunto Mining Site & Company Town**	Regional Regulation on Spatial Plan No. 08/2012
B	**Railway Facilities & Engineering Structures**	a) Government Regulation on Operation of Railway Transportation No.06/2017. b) Minister of Forestry Decree on Natural Reserve and Protected Forest No.2382/2015. c) Sawahlunto Municipal Regulation on Spatial Plan No. 08/2012. d) Regulation Number 13/2012 concerning Spatial Plan of Solok Municipality for the period of 2012 -2031 e) Regulation Number 01/2013 concerning Spatial Plan of Solok Regency for the period of 2011-2031 f) Padang Pariaman Regencial Regulation on Spatial Plan No.05/2011. g) Padang Municipal Regulation on Spatial Plan No. 04/2012.
C	**Coal Storage Facilities at Emmahaven Port**	Padang Municipal Regulation on Spatial Plan No. 04/2012.

Figure.3.2 Protective Regulations in the Buffer Zones

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Part IV
Factors Affecting the Property

The *Ombilin Coal Mining Heritage of Sawahlunto* is an extensive technological ensemble that developed as a result of coal exploration activities. It consists of three functionally-related areas which together total 268.14 hectares, within a single elongated buffer zone of 7,356.96 hectares. Despite conservation efforts, some attributes within the 3 areas of the nominated properties still face threats from development, environment, natural disaster, visitation as well as inhabitants.

Each threat is described in more detail in the following:

IV.1 Development Pressures

Factor IV.1.1: Construction of new buildings and houses adjacent to historic structures in the property zone.

In some sites within Area A, community houses and buildings were erected within the compound of the historic sites, for example at the Pandjang mining compound, Soengai Doerian mining pit compound, the coal processing/filtering plant (*zeefhuis*) compound, and the labours quarter compound. The construction of the new buildings and facilities within the historic compounds may harm the integrity of the sites.

Image.4.1 (L) Construction of new structures in the Coal Processing Plant Compound

Image.4.2 (R) Construction of new road near Sawahlunto Train Station

As for the railways and train stations in Area B, some houses were constructed very close to the railway, especially near the Padang Pandjang station. Although there is a regulation which allows building construction of at least 6 (six) meters from the railway, many houses were constructed at less than 3 meters from the railway.

Image.4.3 Construction of houses very near to the railway at Padang Pandjang Train Station

In Area C, given the geomorphology of the site where the Silo is located, the buffer zone outside the nominated property is defined to minimise the risk to spatial and visual setting of the site. In this regard, the construction of buildings and/or houses adjacent to the property zone shall also be regulated.

4

Factor IV.1.2: Adaptation of the original building structure to new modern needs.

In Area A, one of the examples of this adaptation is the *Kubang Sirakuak Power Plant* which has undergone significant changes to become the *Nurul Iman Sawahlunto* mosque. Only the underground bunker and exhaust tower remained from the original structure.

Image.4.4 Major structural changes in Kubang Sirakuak Power Plant (now a Nurul Iman Mosque). Authentic vestiges of this property include the chimney and underground boiler chamber (A4.2)

Unsuitable additions of components, inapt building utilization, and inappropriate replacement of original building materials may harm the integrity of the attributes. Examples of this category are the *Tangsi Baru* workers' settlement, where each house and its rooms are divided into smaller sections to accommodate the growing number of tenants; part of the building within the Coal Processing Plant Compound which now serves as the office of local Tourism Office; and the expansion plan of Sawahlunto Hospital, where it requires new additions of wards and facilities.

Image.4.5 Unsuitable renovation works in *Tangsi Baru* area of new room addition

Image.4.6 Adaptive re-use of part of a building in the Coal Processing Plant Compound which now functions as local Tourism Office

In area B, some rail sleepers from Padang to Sawahlunto were replaced from the steel railway into concrete railway.

In area C, coal storage (Silo Gunung) is not converted into a new building.

Factor IV.1.3: Coordination of national, provincial, and municipality/regency level policies and planning schemes

In Area A, the development plans of Sawahlunto town present potential threats to the future of the heritage structures, especially noting the lack of coordination between the local government work units (*Satuan Kerja Perangkat Daerah/SKPD*) and the development strategy for buildings that form the nominated property. Several threats have been identified that may harm the attributes, both those that may affect the attributes directly and those that may impact the environment surrounding the attributes. For example: Sawahlunto local government's plan to construct a sport centre and a bridge in *Silo* area (around the sieve plant and the main workshop), and the plan to construct a monument and public facilities at the *Lapangan Segitiga* area may harm the integrity of the nearby Bukit Asam company's main office, one of the designated attributes. In addition, the present tourism development plan which is centred in the old town area may threaten the intactness and authenticity of the historical edifices that are part of the nominated property, as well as the original setting of the surrounding area.

Image.4.7 Some parts of the railway emplacement in the Coal Processing Plant Compound were covered and converted into a public space (*Taman Silo*)

In Area B, the optimisation of asset through the reactivation of railway line of the Trans Sumatra Railroad will affect railway infrastructure from Sawahlunto to Padang, such as rail track, rail track structure, signalling and safety, and buildings. Construction of roads and/or transportation facilities that potentially cover the historic railway lines shall be prohibited.

In Area C, other than optimisation of asset of Bukit Asam Company, Port of Teluk Bayur is also a national target for the development of "Tol Laut" or sea highway of 2015-2019 as part of the *Indonesia Poros Maritim Dunia 2045* or *Indonesia as World Maritime Axis*. In

this regard, from 2015, Pelindo II Company (State Owned Enterprise), Teluk Bayur management unit of the state-owned enterprises for sea port, allocated some 161 billion *Rupiah*for 2015-2017 development plan which shall include dredging and port basin, construction of warehouses at the Gudang A and the *Lapangan Penumpukan Lini II* (apparently the defined *transito*), and purchase of equipment (Tank CPO, excavators, forklifts, hopper, chassis, Hydraulic Reels, Head Terminal Tractor). The plan will affect port facilities at area of quay (270 m), warehouse cfs (3,000 m^2), and a yard (7.7 HA). The yard might be the location of the Coal Storage (*Silo Gunung)* when the quay used to have former dock ships for coal transportation, an information that should be confirmed through an archaeological assessment.

The key to effective protection and promotion of the nominated property is to ensure that the policies and planning schemes at different levels are consistent and well-coordinated. The policies at the central level should be in accordance with those at the local government level.

IV.2 Environmental Pressures

Factor IV.2.1: Tropical climatic condition

While there is no extreme natural environmental pressure on the property, both tropical climates of Indonesia and pollution are a threat to Sawahlunto's historic assets. Many of the key attributes within the *Ombilin Coal Mining Heritage of Sawahlunto* require consolidation and repair work to prevent further damaging decay due to climatic condition.

In Area A, some of the negative impacts caused by climatic condition include:

a) Deterioration of structural integrity of heritage buildings as a result of high levels of humidity that trigger the growth of moss and mould. Reactive actions need to be taken quickly to prevent further decay.

b) Degradation of building structural integrity due to uncontrolled growth of wild plants and shrubs on structures and within the surrounding area. One of the nominated attributes, namely the Compressor Building, is now partially covered by a banyan tree whose trunk has penetrated and damaged one side of the walls.

c) Deterioration of mining infrastructure due to corrosion and/or rusting

Image.4.8 Wild plants and shrubs are a threat to the authenticity of the Salak Power Plant Compound

Image.4.9 (L) High humidity accelerates growth of moss and mold

Image.4.10 (R) Most of the old buildings were constructed using zinc material, which rustin a few years. With rainfall, the rusty/decayed roof allows water to drip through small holes and caused discoloration of the wall building

In Area B, many rail bridges and sleepers were decaying due to rotting wood caused by rain, humidity, temperature, water, and micro-organisms. In Area C, Teluk bayur's seascape as setting for port is natural condition that forms local condition affecting the Coal Storage (*Silo Gunung*). The constant sea breeze caused damage to the part of building structure made of iron. In addition, cement deterioration could be seen in all areas in which buildings and mining infrastructures are located.

Image.4.11 Cement deterioration due to climatic tropical condition at Batu Tabal Train Station

Factor IV.2.2: Pollution

Although most of the mines within the nominated property were decommissioned, there are some mining areas within the buffer zone that are still active. Mining activities such as coal tailing and washing give a negative impact to the environment and should be carefully addressed. In addition, the forest burning which sometime occurs in neighbouring provinces of Sumatra as well as Kalimantan during the dry season contributes to heavy smoke in the nominated property and its buffer zone.

Image.4.12 Air pollution as an impact of the forest burning in the neighbouring province of Sumatra Island

IV.3 Natural and Man-induced Disasters and Risk Preparedness

Disaster risks in seven municipalities and regencies of the nominated property were identified by the Regional Disaster Management Agency of West Sumatra in the following table:

Figure.4.1 Mapping of disaster risk in the nominated property

No	Regency/ Municipality	Sub-district	Disaster Risks			
			Landslide	Flood	Tsunami	Earthquake
1	Padang Municipality	- Bungus Teluk Kabung	Medium - High	Medium - High	High	Medium - High
		- Pauh	Medium - High	Medium		
		- Padang Barat	Medium - High	Medium	High	Medium - High
		- Padang Selatan	Medium - High	Medium - High	High	Medium - High
		- Lubuk Begalung	Medium - High	Medium		
		- Lubuk Kilangan	Medium - High	Medium		
		- Kuranji	Medium - High	Medium - High		
		- Koto Tengah	Medium - High	Medium - High	High	Medium - High
		- Padang Timur	Medium	Medium - High		
		- Padang Utara	Medium	Medium - High		
		- Nanggalo	Medium	Medium - High		
2	Solok Regency	- Gunung Talang	Medium - High			Medium
		- Lembang Jaya	Medium			Medium
		- Bukit Sundi	Medium - High			Medium
		- Kubung	Medium			Medium
		- IX Koto Sei Lasi	Medium - High			Medium
		- X Koto Diatas	Medium - High			Medium
		- X Koto Singkarak	Medium - High			Medium
		- Payung Sekaki	Medium - High			Medium
		- Lembah Gumanti	Medium - High			Medium
		- Pantai Cermin	Medium - High			Medium
		- Junjung Sirih	Medium			Medium
		- Danau Kembar	Medium			Medium
		- Hiliran Gumanti	Medium - High			Medium
		- Tigo Lurah	Medium - High			Medium
3	Solok Municipality	- Tanjung Harapan	Medium - High			Medium
		- Lubuk Sikarah	Medium			Medium
		- Tanjung Mutiara	Medium		High	Medium
		- Tanjung Raya	Medium			Medium
		- Tilatang Kamang	Medium			Medium
		- Lubuk Basung		Medium		
		- Baso		Medium		Medium

No	Regency/ Municipality	Sub-district	Disaster Risks			
			Landslide	Flood	Tsunami	Earthquake
4	Padang Pariaman Regency	- Sungai Limau		Medium - High		
		- Sungai Garingging		Medium - High		
		- V Koto Dalam		Medium - High		
		- 2 x 11 Enam Lingkung		Medium - High		Medium
		- Ulakan Tapakis Timur	Medium - High		High	Medium - High
		- Lubuk Alung		Medium - High		Medium
		- VII Koto Sungai Sarik		Medium - High		
		- Batang Anai		Medium - High	High	Medium - High
		- IV Koto Aur Malintang	Medium			
		- 2 x 11 Kayu Tanam		Medium - High		
		- Padang Sago	Medium - High			
		- Patamuan	Medium - High			
		- V Koto Timur		Medium - High		
5	Sawahlunto Municipality	- Talawi	Medium - High			
		- Barangin	Medium - High			
		- Silungkang	Medium			
		- Lembah Segar	Medium - High			
6	Tanah Datar Regency	- Lintau Buo	Medium - High			
		- Pariangan Bag. Utara	Medium - High			Medium
		- Rambatan	Medium			Medium
		- X Koto		Medium - High		Medium
		- Batipuh	Medium - High			Medium
		- Batipuh Selatan		Medium - High		Medium
		- Salimpaung	Medium			Medium
		- Sungayang	Medium			
		- Lintau Buo Utara	Medium			
		- Tanjung Emas	Medium			Medium
		- Lima Kaum	Medium			Medium
		- Padang Ganting	Medium			
		- Sungai Tarab	Medium - High			Medium
		- Tanjung Baru	Medium			Medium
7	Sawahlunto Municipality	- Bukit Padang	Medium - High			Medium
		- Padang Panjang Barat	Medium - High			Medium
		- Padang Panjang Timur	Medium			Medium

(Source: Regional Disaster Management Agency of West Sumatra, 2016)

Factor IV.3.1: Flash Flood

In area A, due to its close location to the Lunto River as well as its geomorphological setting in the valley, Sawahlunto city centre is prone to flash flood. During the Dutch occupation, a few floods disasters were recorded which impacted the Tangsi Baru house settlement and Market. To minimise the risks, several preventive actions are recommended, such as dredging and construction of embankments and protection of the area near the river upstream from uncontrolled land-use. These actions are essential in order to maintain the integrity and decrease loss of heritage properties during the heavy monsoon season.

In Area B, the flash flood event occured in Anai River in 1892. While in Area C, flash flood is not identified as a threat.

Factor IV.3.2: Fires

In Area A, the tight row of houses in Tangsi Baru area as well as of shops around the Market is seen susceptible to fire hazards. Moreover, the houses and shops are mainly constructed using wood and iron sheeting materials, which make them even more vulnerable during a fire. At present, there is no fire prevention system observed within the area, such as fire hydrants or fire extinguishers. At present, there is one fire station in Sawahlunto town which is located approximately 500 meters from the Tangsi Baru.

In Area B, many of the rail bridges and sleepers were made of wood making a fire on the railway a big hazard and should be addressed properly.

In Area C, the Coal Storage is relatively safe from fire hazards since building materials are not vulnerable to fires.

Factor IV.3.3: Landslides

In Area A, Sawahlunto's geological location in a valley surrounded by rocky hills makes the town prone to landslide hazards. The last landslide incident occurred in 2014 at Polan Peak, and it damaged a number of buildings. Following the incident, preventive measures were taken. Polan Peak is now fortified with landslide barriers. Additionally, a landslide alarm system was put in place to warn the authority of a ground shift.

In Area B, the 155-km railway which connects the Sawahlunto town to the coast was built over steep hills which some have an elevation of about 773 meters above sea level in Padang Pandjang area, passing through the mountains as well as deep gorges and river in Anai Valley area before it reaches the port in the east coast. Hence, the railway is prone to landslide should the forest in the nearby areas is not protected.

Image.4.13 Landslide behind W-29 (A5.1.d) in 2016, one of the significant objects within the Mining Administrative Compound

In Area C, the Coal Storage (Silo Gunung) is also affected by landslide as there is a cliff looming over the building. The most recent incident happened in 2017 when there were tons of rock came down onto the site.

Factor IV.3.4: Tsunami

Both Area A and Area B are located in the highland thus not prone to tsunami. While the Coal Storage (Silo Gunung) at Emmahaven Port (Teluk Bayur Harbour) in Area C is located on the west coast of Sumatra facing the Indian Ocean, thus made it prone to tsunami.

Factor IV.3.5: Earthquake

Sumatra Island is located on the ring of fire with many active volcanic mountains. In the last ten years, earthquake incidents with more than 5 Richter scale hit West Sumatra several times with the 2009 earthquake as one of the most devastating earthquake. In 1926, an earthquake had been recorded in West Sumatra and the following picture shows devastation to the emplacement of Padang Pandjang Station (in area B).

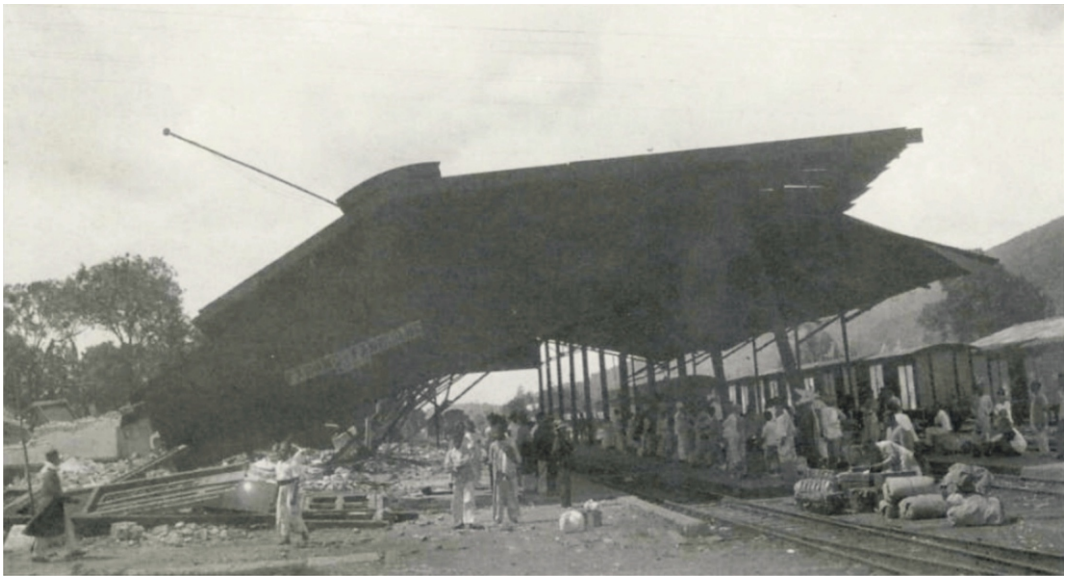


Image.4.14 Damage to the emplacement of Padang Pandjang Station due to earthquake in 1926 (B3.1)

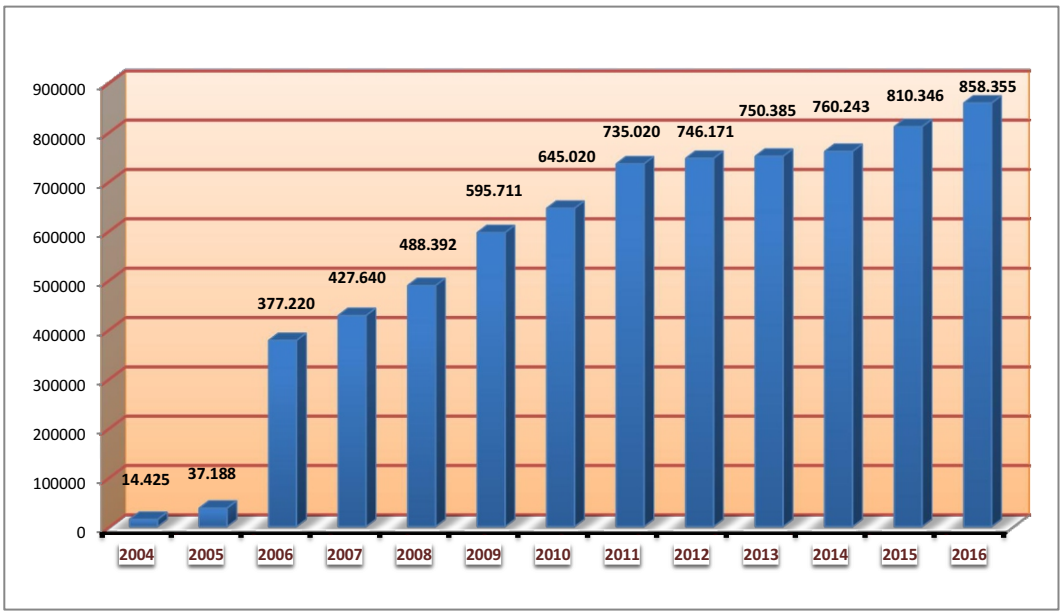
Factor iii.6: Explosions

In area A, the former and abandoned mining pits pose another threat to Sawahlunto town. Coal mining pits are known to contain methane gas, a highly flammable substance. Although these former pits have been properly sealed, some local people currently utilise them to their own advantage using improper excavation methods coupled with minimal safety measures. They are not fully aware of the risks of methane gas contained inside the mine pits which may easily trigger an explosion. Data collected from the local disaster management authority *(Badan Penanggulangan Bencana Daerah / BPBD)* noted that there have been two explosion incidents in the past five years which have caused a high number of casualties. And more explosion hazards are still lurking due to the increasing cases of illegal mine pits excavation, if authorities do not enforce strict regulation and control.

IV.4 Visitation and Tourism at the Nominated Property

Sawahlunto is undergoing a transformation from working coal mining town to a heritage town. It aims to become a heritage-conscious mining town by the year 2020 and a popular tourism destination. In parallel with the reduction of coal mining activities by Bukit Asam Company, the local government is currently preparing tourism as the new economic main stay of Sawahlunto. The number of visitations during the last ten years has shown heartening progress. In 2004, the number of tourists to Sawahlunto was recorded to be 14,425 people, and in 2014, it increased to 760,243 people and 810.000 in 2015. From the economic perspective, it is indeed good news. However, the increasing number of tourists must also be paired with good tourism strategies.

Figure.4.2 Graphic on the increase number of visitors to Sawahlunto Municipality between 2004 and 2016



In order to manage responsible visitation in Area A whilst integrating the historic railroad in Area B and the Silo Gunung in Area C into a World Heritage narrative, the following issues are highlighted:

Factor IV.4.1: Site interpretation

Not all heritage structures within the nominated property are conserved in pristine condition. Some attributes are deteriorating and some are archaeological remains. Thus, there is a need to decide which attributes and significant objects shall be restored to a usable condition. It is likely that only those with the highest potential for interpretation and/or adaptive reuse shall be restored from their devastated condition. Many heritage buildings within the company mining town in Area A were converted into museum (for example Museum Goedang Ransoem, Site Museum of Mbah Suro Mining Pit, the Mining Museum, Sawahlunto Train Station Museum, and houses number W-24, W-29 and W-30 which were recently converted into ethnography museums). The adaptive re-use of historic buildings should contribute to the overall narration of the *Ombilin Coal Mining Heritage of Sawahlunto* as a nominated World Heritage property.

Image.4.15 (L) Former public kitchen of the mining company was converted into a museum. This Museum Goedang Ransoem showcases the tools which were once used in the cooking process and how the food was distributed to the workers (A5.2.c)

Image.4.16 (R) Soegar Mining Pit was also converted into a museum called Museum Mbah Soero Mining Pit

On another note, the potential of the historic railroad along its entire length in Area B and the Coal Storage (Silo Gunung) and the Port in Area C is still underdeveloped. The development of the historic railroad and the Silo Gunung is the key to the integration of the property and the narration of its World Heritage story. The Indonesia Railway Company (PT KAI) has a plan to develop the railway between Padang Municipality and Bukittinggi 2015-2030, thus, a clear plan for the future use of the historic railroad and Coal Storage (Silo Gunung) should be identified so they could serve as a staging point for tourism interpretation of the property.

In addition, a comprehensive interpretation plan and site interpretation tools need to be developed to convey the overall significant value of the *Ombilin Coal Mining Heritage of Sawahlunto* as a coherent technological ensemble of Ombilin's coal production processes. Public outreach activities shall also be implemented to ensure proper interpretation of the site.

Factor IV.4.2: Supporting facilities to cater tourists' needs

Today, the most visited tourist attractions in Sawahlunto mining town are the Lapangan Segitiga, Lubang Mbah Suro, Sawahlunto Train Station, and the Soup Kitchen Complex. The existing facilities in these four sites will need to be improved to accommodate tourists' needs. Toilets, benches, and trash bins should be provided in public places. Many visitors are ignorant to cleanliness by littering in public places and they also vandalise public facilities. A strict monitoring and control shall be enforced to anticipate this matter.

Image.4.17 (L) Increased number of tourists is a huge magnet for street food vendors, however most of them are disorganised and many store their food cart recklessly

Image.4.18 (R) Huge number of tourists increases the chances of vandalism

Eating and parking facilities should also be made available whilst ensuring the heritage value of the properties is protected. Many visitors park their vehicle around the Lapangan Segitiga, making this park and its surrounding historical buildings very crowded during weekend. Bukit Asam Company, as the owner of the buildings and land in this area has suggested that eating and parking facilities shall be made available at the Old Garage which is located some 100 meters from the Bukit Asam Company main office.

Image.4.19 (L) Disorganised street vendors and vehicle parking in front of Bukit Asam Company main office (A5.1.a).

Image.4.20 (R) The current condition of the Old Garage which will be dedicated for parking and food stalls

Factor IV.4.3: Lack of Visitor Management

With the increased number of visitors following the nomination of the site to the World Heritage List, a sustainable tourism strategy document should be developed to provide direction in implementing projects and programmes which promote cultural heritage tourism whilst also benefitting the local communities and the owners of cultural heritage properties.

IV.5 Number of inhabitants within the property and the buffer zone

Today, the town of Sawahlunto is undergoing major development projects, as a result of its growing population. According to data collected from Sawahlunto's Central Bureau of Statistic, the population in Sawahlunto has grown significantly during the past 5 years. In 2009, it was estimated that the number of people living in the old town area was around 55,291 citizens. In 2013 the number has grown to 58,972 citizens. Population density was predicted to be around 21,566 people/km^2.

Figure.4.3 Number of inhabitants within the nominated property and buffer zone

Component Part		Inhabitants in Nominated Property	Inhabitants in Buffer Zone
Area A: Sawahlunto Mining Site & Company Town			
A1	Soengai Doerian Mining Site	85	21,137
A2	Mining School	5	
A3	Coal Processing Plant Compound	0	
A4	Ombilin Railway Transportation	0	
A5	Company Town	2,389	
A6	Salak Power Plant & Rantih Water Pumping	26	
Area B: Railway Facilities & Engineering Structures			
B1	Railway System	0	882
B2	Batu Tabal Train Station	0	
B3	Padang Pandjang Train Station	0	
B4	Tinggi Bridge	0	
B5	Kayu Tanam Train Station	9	
Area C: Coal Storage Facilities at Emmahaven Port			
C	Coal Storage	0	578
Total		2,514	22,597

(Source: Demography and Civil Registration (Dukcapil) of the Ministry of Home Affairs, 2016)

The above quantification is intended for presenting the possible threats from the number of inhabitants and its growth. The following are factors affecting the property due to increased number of inhabitants within the nominated property and its buffer zone:

Factor IV.5.1: Conversion of properties which is not compatible with their intended use

The increased number of inhabitants especially at the labour quarter compound of Tangsi Baru would require more housing facilities. Many houses within this area have been modified and the rooms were divided into smaller sections to accommodate the growing number of tenants.

On another note, many houses were built by the inhabitants near the stations and railways with the distance of less than the minimum 6 metres from railways.

Image.4.21 The present condition of Tangsi Tanah Lapang (A5.2.a) and Tangsi Baru (A5.2.b)

Image.4.22 Additional rooms were constructed to accommodate new tenants at the Tangsi Baru area (A5.2.b)

Factor IV.5.2: Solid waste disposal

Solid waste that comes from the increased number of inhabitants within and near the property as well as from visitors/tourists should carefully be managed. The street vendors who sell their products around the *Lapangan Segitiga* and *Assembly Hall*, in particular, are not maintaining the cleanliness of the area. Additionally, it has been observed that street vendors often store their food carts recklessly as can be seen from the piles of carts behind the Assembly Hall building. This irresponsible behaviour is undoubtedly degrading the quality of historic edifices being nominated as World Heritage site. Thus, relocation of unorganised street vendors is necessary.

Image.4.23 Many street vendors store their cart recklessly behind the Assembly Hall (A5.5.b)

Factor IV.5.3: Vandalism and theft

Similar to any historic urban heritage sites, vandalism, theft are some the factors affecting the vulnerability of the cultural heritage site. Some of the historic sites within the nominated property - such as Kalam Railway Tunnel and Coal Storage (*Silo Gunung*) - are unguarded and accessible to public, thus making them vulnerable to these factors.

Image.4.24 Vandalism may harm the authenticity of the heritage site

5

Part V
Management Objectives, Principles, and Policies

V.1 Policies for Managing Development Factors

Development Factor V.1.1: Construction of new buildings and houses adjacent to historic structures.

V.1.1.1: Management objectives

The objectives of managing the construction of building and houses adjacent to the historic structures are:

a. to protect the integrity and authenticity of the cultural heritage sites by limiting and/or prohibiting new construction within the heritage compounds.

b. to control changes of historic built properties within the protected zones and their boundaries.

V.1.1.2: Management principles

The management principle is to ensure the protection of the property both at short and long-term period. To this end:

a. Clear definition of the zones to be protected and their boundaries delimitated.

b. Laws for the protection of cultural heritage properties are enforced implemented.

c. Cultural heritage assets are adequately protected and appropriately preserved by their rightful owner.

V.1.1.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Any construction within the nominated property must be in accordance with the building codes to assure that the design of the building respects the identity of the locality and the historical context of the area.

b. Heritage impact assessment by a certified individual/institution must be carried out prior to any construction which may damage the significant value of the cultural heritage sites

c. Any construction within and near the protected zones and their boundaries must be controlled and received prior legal permission from the authorities and the national cultural property expert team.

V.1.1.4. Actions:

a. Conduct survey and assessment on the physical and functional condition of the historic structures as well as open public spaces within the property.

b. Conduct regular inspection to monitor the condition of the property.

c. Draft building codes to preserve the historic significance and natural features of the area by defining building use, height and position, material use and colour

d. Identify appropriate land-use and building-use within the property and define the delineation of the protected areas.

e. Develop spatial land-use planning or revise existing plans to accommodate the protection of cultural heritage sites within the nominated property and its buffer zones.

Development Factor V.1.2: Adaptation of the original building structureto new modern needs.

V.1.2.1: Management objectives

The objectives of managing the adaptive re-use of the historic structures are:

a. to ensure that the maintenance, repair and restoration by the owners and users of the historic structures are carried out to high conservation standard with respect the historic character of the buildings

b. to ensure a comprehensive and integrated landscape approach which includes the broader historic urban context and its geographical setting is taken into consideration for identifying, conserving and managing historic structures

c. to ensure that new function of historic properties for public services and tourism contributes to the well-being of the communities and to the conservation of historic urban area whilst ensuring economic sustainability and social inclusivity.

V.1.2.2: Management principles

The management principle is to prioritize the heritage conservation of property, maintained at sustainable levels. To this end:

a. Alteration of historical buildings that are potentially harmful to the authenticity and integrity of the attributes are strictly prohibited.

b. Appropriate use of the historic sites for the benefit of local communities as well as tourism and development is studied and evaluated prior to any modification and/or adaptation

V.1.2.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Any modification of historical buildings within the nominated property must be in accordance with the building codes arrangement to assure that the design and adaptive re-use of the building respects the identity of the locality and the historical context of the area.

b. Heritage impact assessment is conducted prior to any modification and/or adaptive re-use of historical structures

c. Any modification of historical buildings within and near the protected zones and their boundaries must be controlled and received prior legal permission from the authorities and the national cultural property expert team.

V.1.2.4. Actions:

a. Identify appropriate land-use and building-use within the property and its surrounding following the system of building codes and other forms of regulation

b. Carry out heritage impact assessment and establish short and medium-term maintenance and rehabilitation plan and programs for selected historical structures within the property. The plan and programs shall take into consideration the urban broader context and geographical setting as well as the well-being of the communities.

c. Implement and/or supervise the implementation of the maintenance and rehabilitation plan and programs for selected historical structures

d. Provide technical advisory to restore historical structures so that any restoration shall be in line with international standard for cultural property restoration

e. Review the existing guidelines for the rehabilitation of cultural property sites in order to comply with ICOMOS guideline for World Heritage properties.

f. Produce guidelines for the rehabilitation of cultural heritage sites in other land uses or in private ownership

g. Impose temporary moratorium for any restoration/rehabilitation activities which are not in line with good conservation practice

Development Factor V.1.3: Coordination of national, provincial, and municipality/ regency level policies and planning schemes

V.1.3.1: Management objectives

The objectives of managing the national, provincial, and municipality/regency level policies and planning schemes are:

a. To ensure that the existing policies and planning framework are kept up to date for the well-being of the site and that the policies and planning schemes for protection are followed through in management terms

b. To ensure that local government development plans include effective policies for the protection and promotion of the site as a World Heritage property

V.1.3.2: Management principles

The management principle is to prioritize sustainable development of the property whilst maintaining its significant value. To this end:

a. Policies and planning schemes for the protection, enhancement and sustainable development of the Ombilin Coal Mining Heritage of Sawahlunto are integrated within national, provincial, and regency/municipality level development plans so that developments which potentially damaging the nominated property are located away from the property.

b. Laws and regulations are stipulated and/or revised to provide adequate protection for the Ombilin Coal Mining Heritage of Sawahlunto and its buffer zones as a World Heritage property.

V.1.3.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Comprehensive and integrated landscape approach to include the broader historic urban context and its geographical setting must be taken into consideration in setting up the policies and planning schemes for conservation and management of historic sites

V.1.3.4. Actions:

a. Study and harmonise the existing policies and planning framework so that the development plan and programs shall take into consideration the urban broader context and geographical setting as well as the well-being of the communities.

b. Integrate appropriate planning and policy instruments into the urban planning documents, such as the spatial land-use planning (*Rencana Tata Ruang dan Wilayah*/RTRW)

c. Pursue the designation of the Ombilin Coal Mining Heritage of Sawahlunto as National Strategic Area.

d. Organise quarterly planning coordination meetings among stakeholders to ensure the effective implementation of laws and policies at local level.

V.2 Policies for Managing Environmental Factors

Environmental Factor V.2.1: Tropical climatic condition

V.2.1.1: Management objectives

The objectives of managing the tropical climatic condition are:

a. To stabilize and/or reduce the impact of tropical climatic condition onto building fabrics and structure

b. To encourage the owners and users of the historic structures to ensure continuous care and maintenance of the historic built fabric and prevent further deterioration due to tropical climatic condition

V.2.1.2: Management principles

The management principle is to develop proper management and conservation regime, adhered to for long term conservation. To this end:

a. Maintenance and repair of historic building using high conservation standard is encouraged and promoted.

b. Guidelines for maintenance and repair of historic building are developed in line with international standards.

c. Public awareness is raised on the issues of climate change in the context of the conservation of World Heritage properties

V.2.1.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Cost-effective measures to prevent degradation of historic structures due to environmental factor must be promoted.

b. Systematic plan must be prepared for regular building maintenance and repair.

V.2.1.4: Actions:

a. Monitor the condition of cultural feature and natural settings and the impact of climatic condition to the sites.

b. Carry out on-going and regular maintenance of historic buildings

c. Produce guidelines for the maintenance and rehabilitation of cultural heritage sites in private ownership

Environmental Factor V.2.2: Pollution

V.2.2.1: Management objectives

The objectives of managing the pollution are:

a. To reduce the impact of pollution onto human, building fabrics and structures

V.2.2.2: Management principles

The management principle is to develop proper management and conservation regime, adhered to for long term conservation. To this end:

a. Sustainable approach for an integrated waste management and pollution control.

b. Public awareness is raised on the issues of addressing pollution in the context of the conservation of World Heritage properties

V.2.2.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Cost-effective measures to prevent degradation of historic structures due to environmental factor must be promoted.

V.2.2.4. Actions:

a. Monitor the condition of cultural feature and natural settings and the impact of pollution to the sites.
b. Carry out on-going and regular maintenance of historic buildings

V.3 Policies for Managing Natural Disaster Factors

The following objectives, principles, policies and actions shall address all identified natural disaster factors affecting the property.

V.3.1: Management objectives

The objectives of managing the risk of flood, fire, landslide, tsunami, earthquake and explosions at the historic compounds are:

a. To assess the potential hazards and vulnerability of the attributes of the nominated World Heritage property

b. To strengthen disaster mitigation, preparedness, response and recovery before, during and after disaster situations at the nominated property.

c. To ensure the participation of local communities in disaster risk prevention initiatives

V.3.2: Management principles

a. Risk identification and assessment is conducted with the objective to reduce disasters and mitigate their impact as well as prioritise actions in the aftermath of any disaster.

b. Respective roles and capacities of participating institutions and stakeholder in managing the disaster prevention and response are identified

c. Disaster risk management and mitigation plan is developed and implemented at the nominated property.

V.3.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. The disaster risk management and mitigation plan of the nominated property is integrated in the local government disaster plan as well as management plan of the nominated property

V.3.4. Actions:

a. Identify and assess underlying risk factors at the nominated property

b. Establish a coordinated approach with multi-stakeholders to develop disaster risk management and mitigation plan whilst highlighting the role of local government and communities

c. Organise training for managers and management authorities to raise awareness on disaster risk reduction at cultural heritage site

d. Develop a Disaster Risk Preparedness and Response Strategy Plan in close consultation with all relevant stakeholders

V.4 Policies for Managing Visitation and Tourism factors at the Nominated Property

Tourism Factor V.4.1: Site interpretation

V.4.1.1: Management objectives

The objectives of managing the site interpretation of the site are:

a. To develop greater public understanding of the significant value and importance of the nominated World Heritage property

b. To develop key stakeholders' capacity in specific areas of interpretation, in keeping with the property's outstanding universal value(s)

c. To enhance visitor facilities and interpretation resources at the key historical buildings within the nominated World Heritage property

V.4.1.2: Management principles

The management principle is to prioritize educational and cultural visitation of the property, maintained at sustainable level. To this end:

a. Support and positive intervention of the local communities are engaged

b. Educational and outreach programmes are integrated in the development of the site

c. Immersive visitor experiences shall be developed and promoted, so that all aspects of the Ombilan Coal Mining Heritage of Sawahlunto are understood as part of an integrated, innovative, and historically-pioneering system

V.4.1.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Promotion and presentation of the property must ensure increased public understanding of its significant value.

b. The communities within and outside the property boundaries should be engaged in the management, presentation, enjoyment, and benefits of the nominated property.

c. The active engagement of the State-owned Enterprises (Bukit Asam Company and Indonesia Railway Company) which are implicated as owners of significant assets of the property is encouraged, promoted, and facilitated.

V.4.1.4. Actions:

a. Identify attributes and significant objects in Area A, B and C which shall be restored to a usable condition in order to support the interpretation of the site and the World Heritage narrative story

b. Produce appropriate educational and interpretative materials as well as publications about the site

c. Develop facilities and resources at the key historical buildings including effective use of digital technology to increase visitors' understanding about the sites

d. Improve the signage to and within the site, increase linkages among each of the key attractions or historical buildings, and develop guided tour packages to build greater visitors' understanding about the property

e. Establish a new or improve the existing visitor information centre as a gateway to the Ombilin Coal Mining Heritage of Sawahlunto

f. Develop training materials and train guides to provide quality site interpretation

Tourism Factor V.4.2: Supporting facilities to cater tourists' needs.

V.4.2.1: Management objectives

The objectives of managing the supporting facilities and infrastructures for the visitors are:

a. To maximise the educational, cultural, and aesthetic experience of visitors at the property

b. To identify and ensure the appropriate provision of tourism infrastructures and facilities which are environmentally friendly and harmoniously integrated without damaging the significant value of the property.

c. To increase visitors' length of stay at the nominated property and encourage return visits to the property

V.4.2.2: Management principles

The management principle is to provide authentic and educational experience to the visitors. To this end:

a. Visitor access, facilities and infrastructures are developed and improved to the highest standard without compromising the significant value of the site

b. Activities by visitors which are potentially harmful to the cultural heritage properties are strictly prohibited.

V.4.2.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Any development of tourism infrastructures and facilities must be carefully studied, planned, and received clearance from the authorities and the Provincial Cultural Property Expert Team

b. Development and improvement of tourism facilities shall follow good practices from other cultural World Heritage sites of the same nature as the *Ombilin Coal Mining Heritage of Sawahlunto*

V.4.2.4. Actions:

a. Establish a coordinated approach with multi stakeholders to develop and improve tourism infrastructures and facilities

b. Monitor visitor numbers and behaviour as well as visitor's impact on the site

c. Develop private sector partnership initiative to improve visitor accommodation and eating facilities and services to high quality standards

d. Provide trainings for operator of tourism service industry, such as homestays and food service to build their capacity.

e. Conduct local cultural and creative industries mapping to identify the local potentials, especially coal art, as a signature product of Ombilin, for possible development

Tourism Factor V.4.3:
Lack of Visitor and Tourism Management

V.4.3.1: Management objectives

The objectives of managing the visitors and tourism are:

a. To minimise negative impacts from the visitation and enhance visitors' authentic experience

b. To ensure the engagement of local communities in the development of Tourism Management Plan

V.4.3.2: Management principles

a. A comprehensive tourism management plan is developed which contributes to economic benefit of the local communities and environmental sustainability.

V.4.3.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Development of tourism and visitor management plan shall promote the bottom up approach to allow increased participation of the local communities in the planning process.

V.4.3.4: Actions:

a. Establish a coordinated approach with multi stakeholders to identify priorities and actions for visitor and tourism management

b. Formulate visitor and tourism management plan which accommodates cultural, educational and aesthetic experience of visitors whilst protecting and promoting the significant value of the sites and benefitting the local communities

V.5 Policies for Managing Inhabitants and Local Users' Factors within the Property and the Buffer Zone

Residents of the village, where the attributes are located, are considered as inhabitants within property and, in this regard, peoples who lives in districts of those villages counted as inhabitants of the buffer zone.

Inhabitants Factor V.5.1: Conversion of properties by owners, local inhabitants, and users which is not compatible with their intended use or the authenticity of their physical elements

V.5.1.1: Management objectives

The objectives of managing the conversion of properties by owners, local inhabitants and users are:

a. To raise awareness, understanding and appreciation of the owners, local inhabitants, and users in property and buffer zones with regard to the property's Outstanding Universal Values and World Heritage status

b. To involve the owners, local users, and inhabitants in the conservation, management, presentation, and promotion of the nominated property.

c. To use the nominated property for sustainable economic development of the local communities

V.5.1.2: Management principles

a. Owners, local inhabitants, and users are integrated in the participative management for the protection and promotion of the cultural heritage sites

V.5.1.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. The historical character of residential and business area must be assured and any restoration and adaptation to the function of the historical structures by local users must receive permission from the authorities.

b. Local participation must be encouraged in planning and implementing any revitalization programs

V.5.1.4: Actions:

a. Encourage community business that are compatible and enhance the property's Outstanding Universal Value (OUV) and discourage businesses that are incompatible with the property's OUV.

b. Identity and provide new jobs opportunities especially for young inhabitants with regard to management of heritage which shall include monitoring, heritage impact assessment, preventive conservation and maintenance

c. Conduct survey and assessment on the physical and functional condition of the historic structures as well as open public spaces within the property.

d. Conduct regular inspection to monitor the condition of the property.

Inhabitants Factor V.5.2: Solid waste disposal

V.5.2.1: Management objectives

The objectives of managing the solid waste and pollution are:

a. To minimise negative impacts from solid waste and pollution at the nominated property and its buffer zone

b. To enhance the capacity of the local inhabitants and users to manage solid waste.

V.5.2.2: Management principles

a. Active involvement and education of local inhabitants and users as well as stakeholders and visitors through comprehensive and participatory approach to influence behaviour change

b. Sustainable approach for an integrated solid waste management and pollution control.

V.5.2.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. The daily practice of the local inhabitants should be modified to reduce the amounts of waste generated from daily activities.

b. The reuse and recycling of used materials must be increased to minimise the

environmental impacts due to solid waste and terrestrial and water resources pollution.

V.5.2.4: Actions

a. Promote the 3R (Reduce, Reuse, and Recycle) initiative to influence local inhabitants' behaviour change in managing the solid waste.

b. Ensure that dumpsites are located far from the nominated property and managed properly to reduce negative impact to public health and environmental hazards.

c. Develop an action plan for improving the waste collection service

d. Establish an integrated solid waste management and pollution control with the participation of multi stakeholders

Inhabitants Factor IV.5.3: Vandalism and theft

V.5.3.1: Management objectives

The objectives of managing the risk of vandalism, theft, and homeless are:

a. To raise awareness, understanding and appreciation of the local users and inhabitants in property and buffer zone with regard to the property's Outstanding Universal Values and World Heritage status

b. To involve the local users and inhabitants in the protection, conservation, and presentation of the nominated property.

V.5.3.2: Management principles

a. Active involvement and education of local inhabitants and users through comprehensive and participatory approach to support the protection, conservation, and presentation of the nominated property

b. Local users and inhabitants are integrated in the participative management for the protection and promotion of the nominated property and its settings

V.5.3.3: Management policies

To implement the above-stated Management Objectives and Principles, the following policies are adopted:

a. Vandalism and theft incidents must be minimised with the active participation of the local inhabitants and users.

b. Any vandalism in the nominated property which may impact the presentation of the site should be cleaned immediately

V.5.3.4: Actions:

a. Identify specific areas of cooperation between the local government and local law enforcement and the role and responsibilities of each institution to monitor vandalism and theft prone areas regularly.

b. Develop community or neighbourhood watch programme to prevent any incidents and report to the police should any incidents occur.

Part VI
Monitoring

In order to monitor the factors affecting the property as described above, the following factor-specific monitoring indicators are identified.

Factor Affecting Properties	Theme	How it affect	Sub-Factor Affecting the Properties	Monitoring Indicators	Periodicity	Location of Records/ Monitoring Body
Development	Protecting of geological and historic environment setting	Land use change cause pressures on cohesion of historic and environmental setting as well as long term deterioration quality of elements material and people's life	Deforestation	Percentage of forested area	Annual	Regency/ Municipality where components are located, related local government office, private company and local communities
			Adaptation to modern needs	Protected landscape area as a % of the core and buffer zone	Annual	Same as above
				Nature reserves as a % of the core and buffer zone	Annual	Same as above
				Number of protected cultural assets in the government and community planning	Annual	Same as above
				Type of land use and its area (Ha) in core zone and buffer zone	Annual	Same as above
				Number of significant object in active use	Annual	Same as above
				Degree of original design, structure and material to new modern needs	Annual	Same as above
				Number of key sight lines with visibility of the nominated property	Annual	Same as above
	Infrastructure and facility development	Inappropriate developments within the property and buffer zone	Construction of new structures	Number of development and scale of impact within component part	Annual	Same as above
				Number of development and scale impact within the Buffer	Annual	Same as above
				Zone encroaching or overshadowing the component part	Annual	Same as above
				Number/percentage of major changes to the historic layout	Annual	Same as above
			Institutional coordination	Suitability of regional planning with management plan	Annual	Same as above
		Dense human population and lack of proper investments in building and public works likely propagate slum area	Overpopulation	Number and distribution population/inhabitant in the World Heritage Area and Buffer Zone	Annual	Same as above
			Inadequate financial investment	Investments in buildings and public works	Annual	Same as above

Factor Affecting Properties	Theme	How it affect	Sub-Factor Affecting the Properties	Monitoring Indicators	Periodicity	Location of Records/ Monitoring Body
Environmental	Climate fluctuation	Fluctuation change of climate (humidity; rain intensity, duration, and rainfall; sun exposure, etc.) affect rate of material deterioration.	Tropical climates	Climate variable records (humidity, temperature, rainfall, etc.)	Annual	Same as above
				Occurrence of evidence that component parts have been impacted by increased salt erosion (particularly in Teluk Bayur Area)		
	Pollution	Air, sound and water pollution due to various activities or natural cause can affect quality of nominated area livelihood and nominated property material conservation (mining, wildfire, etc.)	Pollutions	Record of air, sound and water quality in nominated area and buffer zone	Annual	Same as above
Natural Disaster	Disaster occurrence	Natural disaster can disintegrate and degrade building, structure and site conservation; disrupt livelihood and ecological system	Natural disaster and human induced disaster	Number and type of natural and/or human-induced disaster occurrences (fire, haze, landslide, river erosion, and flood) in the core and buffer zone	Annual	Same as above
				Period of time taken to repair natural and/or human-induced disaster	Annual	Same as above
Visitation and Tourism	Visitation and tourism facility	Lack of site interpretation, material, accessibilities, and infrastructure impeding appreciation and interpretative capabilities of visitors	Lack of site interpretation	Number of tour guide training per annual	Annual	Same as above
				Number of tour guide certification and its level certification	Annual	Same as above
				Number of participants in educational activities	Annual	Same as above
				Availability and quality of interpretive materials	Annual	Same as above
				Number of scientific and educational publications	Annual	Same as above
				Number of tourist visit to each component part	Annual	Same as above
			Inadequate tourism facilities & infrastructure	Number of tourism facilities, accessibilities and infrastructure	Annual	Same as above
	Increase of visitor with risk of damage	Inappropriate visitor behaviour likely destruct property	Vandalism	Number of observed physical impact of visitors on the property	Annual	Same as above
	Income generation	Tourism activities should generate jobs opportunities and income	Income generation and job opportunities	Ratio of residents, jobs and tourism per community	Annual	Same as above
				Number of employments	Annual	Same as above
				Revenue of tourism activities	Annual	Same as above

Factor Affecting Properties	Theme	How it affect	Sub-Factor Affecting the Properties	Monitoring Indicators	Periodicity	Location of Records/ Monitoring Body
Inhabitant	Conservation of material culture	Deterioration of integrity and authenticity (material and structure) due to chemical, biological and human actions	Material degradation	Number of elements of the component part state of conservation status	Annual	Same as above
			Conservation measures	Number of elements requiring major repairs	Annual	Same as above
			Conservation budget allocation	Type and cost of protective measure to ensure safety and state of conservation in good shape of the World Heritage	Annual	Same as above
		Human resource expertise, capacities and training to reduce and prevent material and structure deterioration	Human resource	Number of local and national conservation specialist and researcher	Annual	Same as above
				Number of local and national conservation specialist and researcher trained and conducted research	Annual	Same as above
				Number of local community inhabit World Heritage area involve in consultative meeting and workshop to preserve historic and environment features	Annual	Same as above
	Adaptive monitoring and evaluation system	Routine monitoring on regular basis provide insight of current and future possibilities for conservation actions	Monitoring activities	Number of regular inspections and an ongoing maintenance program	Annual	Same as above
				Number of report correspond to monitoring activities items based on management plan	Annual	Same as above
		Appropriate monitoring instruments provide accurate and unbiased data for decision making process	Monitoring instrument	Number and type of monitoring instrument use in ongoing monitoring	Annual	Same as above
				Modernity type of monitoring instrument use in ongoing	Annual	Same as above
				Number of monitoring evaluation meeting	Annual	Same as above
		Human resource development through training to improve capacities to delivering monitoring data and interpretation	Monitoring capacity building	Number of training monitoring staff every year	Annual	Same as above
		Appropriate action to respond monitoring report to minimise and prevent any harmful action and effect to the property	Conservation intervention	Actions to respond monitoring report	Annual	Same as above

Figure.6.1 Factor-specific Monitoring Indicators

Part VII
Implementation

VII.1 Coordination Structure

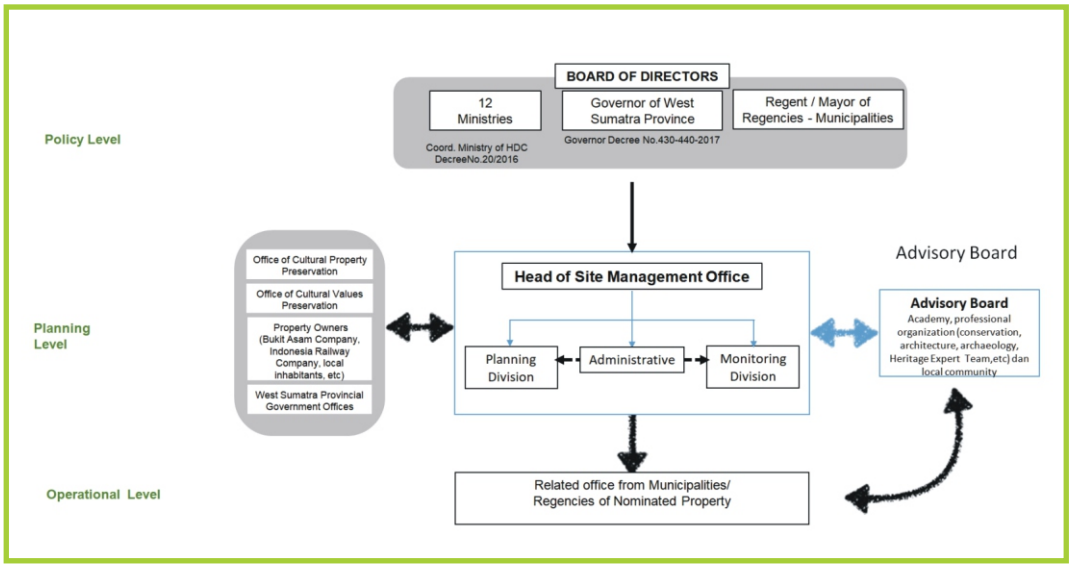


Figure.7.1 Governance and consultation framework of the Ombilin Coal Mining Heritage of Sawahlunto

Board of Directors (of responsible authorities /owners): POLICY LEVEL

At the national level, the Board of Directors consist of 12 main line ministries as stipulated in the Decree Number 20 Year 2016 of the Coordinating Minister for Human and Cultural Development concerning Coordinating Team for the conservation and management of cultural and natural heritage properties in Indonesia. They are:

1. Ministry of Education and Culture
2. Ministry of Public Works and Housing
3. Ministry of National Planning and Development
4. Ministry of Foreign Affairs
5. Ministry of Home Affairs
6. Ministry of Marine Affairs and Fisheries
7. Ministry of Social Affairs
8. Ministry of Tourism
9. Coordinating Ministry for Human and Culture Development
10. Ministry of Communication and Information
11. Ministry of Environment and Forestry
12. Ministry of Agriculture

These respective mainline ministries are in charge for the conservation and management of cultural heritage properties, natural heritage properties, historic cities, historic agriculture and food systems, as well as the promotion, communication, publication and monitoring and evaluation of these properties. The following are the members of the coordinating task force team for the conservation and management of cultural heritage properties as outlined in this Ministerial Decree:

Chairman:	Director of Heritage and Cultural Diplomacy, Ministry of Education and Culture
Vice Chairman:	Director of Religious Affairs, Culture, Youth and Sports, Ministry of National Development Planning (BAPPENAS)
Secretary:	Head of Sub-directorate of the World Cultural Heritage, Ministry of Education and Culture
Members:	- Director of Socio-cultural Affairs and International Organization of Developing Countries, Ministry of Foreign Affairs
	- Director of Economic and Socio-cultural Resilience, Ministry of Home Affairs
	- Director of Marine Services, Ministry of Marine Affairs and Fisheries
	- Director of Disadvantaged Customary Community Empowerment, Ministry of Social Affairs

At the local level, Law No 23 Year 2014 concerning Local Government and Law No. 32 on Governance Administration set the duties of the head of the local government which shall include but not limited to prepare and submit the draft law of RPJPD (Regional Long-term Development Plan) and law of RPJMD (Regional Medium-term Development Plan) to the Parliament to be discussed as well as the draft of law on the budget, the draft law on changes to the budget and the draft law on the accountability of the budget (Law 23 Year 2014 Article 65). To ensure coherent policies in the management of the property as well as smooth coordination among local government heads, the member of the Board of Directors shall also consist of the Governor of West Sumatra Province (at the provincial level) and the Regent and Mayor of the seven respective regencies and municipalities within the nominated property (at the municipal or regency level). This Board of Directors shall meet at least once a year and in the event when the Minister(s) or Head(s) of local government are unable to present, their roles shall be delegated to the relevant government officials.

The Board of Directors is responsible to:

a) Set policies for works interventions on the property
b) Appoint a Head of Site Management Office
c) Approve work plan proposed by Head of Site Management Office
d) Provide budget for planning and implementation of the programmes

Head of Site Management Office:
PLANNING, MONITORING AND EVALUATION LEVEL

For effective implementation of the management plan, the establishment of the Site Management Office after the nominated property is inscribed on the UNESCO World Heritage List is the utmost important. Law of the Republic of Indonesia No 11 Year 2010 concerning Cultural Property stipulates that the management of designated cultural heritage property shall be carried out by the Management Board be established either by the central government, local government, and/or customary people. This management board may consist of representatives from the government and/or local government, private entities and communities (Article 97).

The Site Management Office shall consist of three divisions:

1. Planning Division
2. Monitoring and Evaluation Division
3. Administrative and Finance Division

The Head of Site Management Office is in charge in ensuring smooth coordination with all relevant stakeholders. In fulfilling its function, the Head of Site Management Office shall work closely with: 1. the Local Working Unit under the Ministry of Education and Culture i.e. the Office of Cultural Properties Preservation and the Office of Cultural Values Preservation; 2. the owner of the assets within the nominated property such as Bukit Asam Company, Indonesia Railway Company, and local inhabitants; 3. The relevant West Sumatra Provincial Government offices. The Head of Site Management Office shall also seek expertise from the Advisory Board in delivering its roles. The Head of Site Management Office shall organise quarterly coordination meeting to monitor and evaluate the implementation of conservation works.

The Head of Site Management Office is responsible for:

a) Constitute an operational team
b) Receive and evaluate proposals for interventions
c) Propose work plan to Board of Directors
d) Decide works implementation strategy
e) Supervise Operational Team's implementation of works
f) Evaluate impact implementation of works
g) Report to Board of Directors on utilisation of budget and its impact

Operational Team, working under Head of Site Management Office: OPERATIONAL LEVEL

The day-to-day responsibility for the care and use of the physical assets within the nominated property rests with the owners of the assets such as Bukit Asam Company, Indonesia Railway Company, and other local property owners. In order to monitor the state of conservation of the property with multiple ownerships, it is proposed that the operational team shall be constituted under the coordination of the Site Management Office. The operational team shall consist of representatives from the relevant government offices at the municipality and regency level.

The Operational Team in each respective municipalities and regencies is responsible for:

a) Monitoring state of conservation of the nominated property

b) Conduct heritage impact assessments in close collaboration with the Cultural Heritage Expert Team at the local or national level

c) Identify needs for intervention

d) Design of Programs

e) Interventions and modalities (project development)

f) Oversee project implementation
   - Direct implementation *and/or*
   - Contact outsourced expertise *and/or*
   - Provide technical assistance

g) Monitor completion of works

VII.2 Enforcement Mechanism

a. Formal institutional arrangements for enforcement

Establishment of Site Management Office

According to Law No 11 Year 2010 Article 97, a designated cultural heritage property shall be managed by a management body established either by the national government, local government, or customary communities. Thus, as a follow up to the designation of the nominated property as UNESCO World Heritage site, a Site Management Office shall be established by the Indonesian Ministry of Education and Culture as the mainline ministry in charge of the World Cultural Heritage sites in Indonesia.

It is important that the establishment and roles of the above mentioned Site Management Office should be more formally recognised and the work relation among different stakeholders be clearly understood. The nature of the duties of each stakeholder shall remain the same, with each stakeholder retains their roles and responsibilities through existing administrative and financial powers.

In the event of Site Management Office is yet to be established, the responsibility for carrying out the function of Site Management Office may fall to the office of Historical Property and Museums in Sawahlunto. This stems from the fact that most of the component parts are located in Sawahlunto municipality. In addition, the office of Historical Property and Museums in Sawahlunto has been initiating the ground work necessary to perform the function of Site Management Office.

Management Agreements

The Ombilin Coal Mining Heritage of Sawahlunto spans in the area of 260.18 in seven municipalities and regencies with multiple ownerships and stakeholders. The management arrangements between owners and main stakeholders could be regulated through a Decree of West Sumatra Governor and/or Memorandum of Understanding among different stakeholders. The implementation of such Decree and/or Memorandum of Understanding will be ensured through periodic coordination meetings among the concerned stakeholders.

b. Non-government participation

The above **Figure.7.1** on Governance and consultation framework of the Ombilin Coal Mining Heritage of Sawahlunto represents the way core management structure relates to other organisations and institutions in a broader network. The list of actions and programmes set out in Part V shall be carried out over the next five years and beyond. In carrying out these activities for the protection, conservation, development, and utilisation of the property, the core management structure shall work in close consultation with non-government organisations and institutions as well as local communities. The Cultural Heritage Expert Teams at the national, provincial, and municipal/regency level shall be the expert advisory partner and shall consist of representatives from the universities, as well as government and non-government organisations who have the expertise and certification in conservation.

In addition, non-government organisation initiatives for the development and utilisation of any object(s) within the property which are in line with conservation principles and empower the local communities and youth shall be encouraged. These initiatives shall contribute to the welfare of local community members.

c. Incentive mechanism

According to Law No 11 Year 2010 Article 22, incentive in term of land and building tax reduction and/or income tax reduction shall be given by the national and local government authorities to any individuals and parties who has fulfilled their responsibilities in the protection and conservation of Cultural Heritage Property in line with the provisions of the law. This incentive mechanism shall encourage the participation of local community owners in conserving and utilising their properties following the conservation ethics and regulations.

Conclusion: Summary Action Matrix

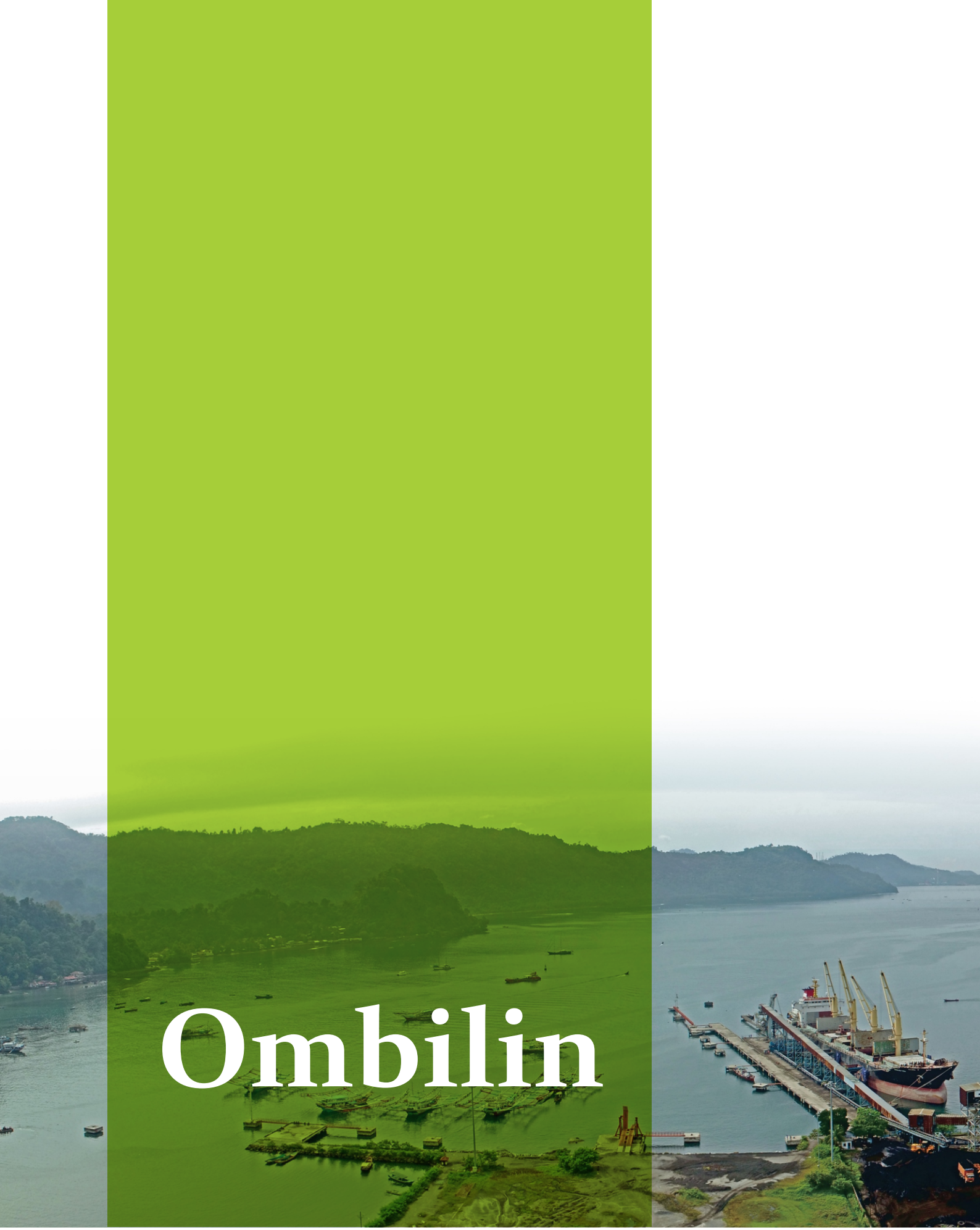
The tables below indicate how the strategic actions relate to the policies, and identify the lead agencies required to implement them.

Factor Affecting the Property	Applicable Management Policy	Action	Monitoring Indicator	Responsible Actor	Timeframe
1. Development Factor					
1.1. Construction of buildings and houses adjacent to historic structures in the property zone.	a. Any construction within the nominated property must be in accordance with the building codes to assure that the design of the building respects the identity of the locality and the historical context of the area. b. Heritage impact assessment by a certified individual/ institution must be carried out prior to any construction which may damage the significant value of the cultural heritage sites c. Any construction within and near the protected zones and their boundaries must be controlled and received prior legal permission from the authorities and the national cultural property expert team.	a. Conduct survey and assessment on the physical and functional condition of the historic structures as well as open public spaces within the property. b. Conduct regular inspection to monitor the condition of the property. c. Draft building codes to preserve the historic significance and natural features of the area by defining building use, height and position, material use and colour d. Identify appropriate land-use and building-use within the property and define the delineation of the protected areas. e. Develop spatial land-use planning or revise existing plans to accommodate the protection of cultural heritage sites within the nominated property and its buffer zones.	• Percentage of forested area • Protected landscape area as a % of the core and buffer zone • Nature reserves as a % of the core and buffer zone • Number of protected cultural assets in the government and community planning • Type of land use and its area (Ha) in core zone and buffer zone • Number of key sight lines with visibility of the World Heritage Site • Number of development and scale of impact within component part • Number of development and scale impact within the buffer zone encroaching or overshadowing the component part	• Ministry of Public Works and Housing • Local agency for public works and housing • Local planning and development office • Bukit Asam Company • Indonesia Railway Company • Indonesia Port Corporation (PT Pelindo) • Integrated one stop service office • Local culture and tourism offices	Short term (5 year) Medium term (10 year)
1.2. Adaptation of the original building structure to new modern needs	a. Any modification of historical buildings within the nominated property must be in accordance with the building codes arrangement to assure that the design and adaptive re-use of the building respects the identity of the locality and the historical context of the area. b. Heritage impact assessment is conducted prior to any modification and/or adaptive re-use of historical structures c. Any modification of historical buildings within and near the protected zones and their boundaries must be controlled and received prior legal permission from the authorities and the national cultural property expert team.	a. Identify appropriate land-use and building-use within the property and its surrounding following the system of building codes and other forms of regulation b. Carry out heritage impact assessment and establish short and medium-term maintenance and rehabilitation plan and programs for selected historical structures within the property. The plan and programs shall take into consideration the urban broader context and geographical setting as well as the well-being of the communities. c. Implement and/or supervise the implementation of the maintenance and rehabilitation plan and programs for selected historical structures d. Provide technical advisory to restore historical structures so that any restoration shall be in line with international standard for cultural property restoration e. Review the existing guidelines for the rehabilitation of cultural property sites in order to comply with ICOMOS guideline for World Heritage properties. f. Produce guidelines for the rehabilitation of cultural heritage sites in other land uses or in private ownership g. Impose temporary moratorium for any restoration/rehabilitation activities which are not in line with good conservation practice	• Number/percentage of major changes to the historic layout • Number of significant object in active use • Degree of original design, structure and material to new modern needs • Number of regular inspections and an ongoing maintenance program • Number of elements requiring major repairs	• Ministry of Education and Culture • Ministry of Public Works and Housing • Local agency for public works and housing • Local planning and development office • Bukit Asam Company • Indonesia Railway Company • Local Cultural Heritage Experts Team • Integrated one stop service office	Short term (5 year) Medium term (10 year)

Factor Affecting the Property	Applicable Management Policy	Action	Monitoring Indicator	Responsible Actor	Timeframe
1.3. Coordination of national, provincial, and municipality/ regency level policies and planning schemes	a. Comprehensive and integrated landscape approach to include the urban broader context and its geographical setting must be taken into consideration in setting up the policies and planning schemes for conservation and management of historic sites	a. Study and harmonise the existing policies and planning framework so that the development plan and programs shall take into consideration the broader historic urban context and geographical setting as well as the well-being of the communities. b. Integrate appropriate planning and policy instruments into the urban planning documents, such as the spatial land-use planning (Rencana Tata Ruang dan Wilayah/RTRW) c. Pursue the designation of the Ombilin Coal Mining Heritage of Sawahlunto as National Strategic Area. d. Organise quarterly planning coordination meetings among stakeholders to ensure the effective implementation of laws and policies at local level.	Suitability of regional planning with management plan	• Ministry of Education and Culture • Ministry of Public Works • Local agency for public works and housing • Local planning and development office • Bukit Asam Company • Indonesia Railway Company • Local Cultural Heritage Experts Team	Short term (5 year) Medium term (10 year)
2. Environmental Factors					
2.1. Tropical climatic condition	a. Cost-effective measures to prevent degradation of historic structures due to environmental factor must be promoted. b. Systematic plan must be prepared for regular building maintenance and repair.	a. Assess and monitor the condition of cultural feature and natural settings and the impact of climatic condition to the sites. b. Carry out on-going and regular maintenance of historic buildings c. Produce guidelines for the maintenance and rehabilitation of cultural heritage sites in private ownership	• Climate variable records (humidity, temperature, rainfall, etc.) • Record of air, sound and water quality in nominated area and buffer zone		Short term (5 year) Medium term (10 year)
2.2. Pollution	Cost-effective measures to prevent degradation of historic structures due to environmental factor must be promoted.	a. Monitor the condition of cultural feature and natural settings and the impact of pollution to the sites. b. Carry out on-going and regular maintenance of historic buildings	Occurrence of evidence that component parts have been impacted by pollution		Medium term (10 year) Long term (20 year)
3. Environmental Factors					
Flood, fire, landslide, tsunami, earthquake and explosions at the historic compounds	a. The disaster risk management and mitigation plan of the nominated property is integrated in the local government disaster plan as well as management plan of the nominated property	a. Identify and assess underlying risk factors at the nominated property b. Establish a coordinated approach with multi-stakeholders to develop disaster risk management and mitigation plan whilst highlighting the role of local government and communities c. Organise training for managers and management authorities to raise awareness on disaster risk reduction at cultural heritage site d. Develop a Disaster Risk Preparedness and Response Strategy Plan in close consultation with all relevant stakeholders	• Number and type of natural and/or human-induced disaster occurrences (fire, haze, landslide, river erosion, and flood) in the core and buffer zone • Period of time taken to repair natural and/or human-induced disaster	• Regional Disaster Management Agency • Local Cultural Offices in the regencies and municipalities • Local agency for public works and housing	Medium term (10 year)

Factor Affecting the Property	Applicable Management Policy	Action	Monitoring Indicator	Responsible Actor	Timeframe
4. Visitation and Tourism					
4.1. Site interpretation	a. Promotion and presentation of the property must ensure increased public understanding of its significant value. b. The communities within and outside the property boundaries should be engaged in the management, presentation, enjoyment, and benefits of the nominated property. c. The active engagement of the State-owned Enterprises (Bukit Asam Company and Indonesia Railway Company) which are implicated as owners of significant assets of the property is encouraged, promoted, and facilitated.	a. Identify attributes and significant objects in Area A, B and C which shall be restored to a usable condition in order to support the interpretation of the site and the World Heritage narrative story b. Produce appropriate educational and interpretative materials as well as publications about the site c. Develop facilities and resources at the key historical buildings including effective use of digital technology to increase visitors' understanding about the sites d. Improve the signage to and within the site, increase linkages among each of the key attractions or historical buildings, and develop guided tour packages to build greater visitors' understanding about the property e. Establish a new or improve the existing visitor information centre as a gateway to the Ombilin Coal Mining Heritage of Sawahlunto f. Develop training materials and train guides to provide quality site interpretation	• Number of tour guide training per annum • Number of tour guide certification and its level certification • Number of participants in educational activities • Availability and quality of interpretive materials • Number of scientific and educational publications	• Ministry of Education and Culture • Ministry of Tourism • Local cultural and tourism offices • Bukit Asam Company • Indonesia Railway Company • Local Cultural Heritage Experts Team	Short term (5 year) Medium term (10 year)
4.2. Supporting facilities to cater tourists' needs	a. Any development of tourism infrastructures and facilities must be carefully studied, planned, and received clearance from the authorities and the Provincial Cultural Property Expert Team b. Development and improvement of tourism facilities shall follow good practices from other cultural World Heritage sites of the same nature as the Ombilin Coal Mining Heritage of Sawahlunto	a. Establish a coordinated approach with multi stakeholders to develop and improve tourism infrastructures and facilities b. Monitor visitor numbers and behaviour as well as visitor's impact on the site c. Develop private sector partnership initiative to improve visitor accommodation and eating facilities and services to high quality standards d. Provide trainings for operator of tourism service industry, such as homestays and food service to build their capacity. e. Conduct local cultural and creative industries mapping to identify the local potentials, especially coal art, as a signature product of Ombilin, for possible development	• Number of tourist visit to each component part • Number of tourism facilities, accessibilities and infrastructure • Number of observed physical impact of visitors on the property • Ratio of residents, jobs and tourism per community • Number of employments • Revenue of tourism activities	• Ministry of Education and Culture • Ministry of Tourism • Local cultural and tourism offices • Bukit Asam Company • Indonesia Railway Company • Local Cultural Heritage Experts Team	Short term (5 year) Medium term (10 year)
4.3. Lack of Visitor and Tourism Management	a. Development of tourism and visitor management plan shall promote the bottom up approach to allow increased participation of the local communities in the planning process.	a. Establish a coordinated approach with multi stakeholders to identify priorities and actions for visitor and tourism management b. Formulate visitor and tourism management plan which accommodates cultural, educational and aesthetic experience of visitors whilst protecting and promoting the significant value of the sites and benefitting the local communities	• Suitability of regional planning with management plan • Availability of visitor and tourism management	• Ministry of Education and Culture • Ministry of Tourism • Local cultural and tourism offices • Bukit Asam Company • Indonesia Railway Company • Local community representatives	Short term (5 year) Medium term (10 year)

Factor Affecting the Property	Applicable Management Policy	Action	Monitoring Indicator	Responsible Actor	Timeframe
5. Inhabitants and Other Local Users					
5.1. Conversion of properties by local inhabitants and users which is not compatible with their intended use	a. The historical character of residential and business area must be assured and any restoration and adaptation to the function of the historical structures by local users must receive permission from the authorities. b. Local participation must be encouraged in planning and implementing any revitalization programs	a. Encourage community business that are compatible and enhance the property's Outstanding Universal Value (OUV) and discourage businesses that are incompatible with the property's OUV. b. Identity and provide new jobs opportunities especially for young inhabitants with regard to management of heritage which shall include monitoring, heritage impact assessment, preventive conservation and maintenance c. Conduct survey and assessment on the physical and functional condition of the historic structures as well as open public spaces within the property. d. Conduct regular inspection to monitor the condition of the property.	Number and distribution population/inhabitants in the nominated property and buffer zone	• Ministry of Public Works and Housing • Ministry of Education and Culture • Local agency for public works and housing • Local cultural offices • Local Cooperative and SME offices • Bukit Asam Company • Indonesia Railway Company • Local Cultural Heritage Experts Team	Short term (5 year) Medium term (10 year)
5.2. Solid waste disposal and pollution	a. The daily practice of the local inhabitants should be modified to reduce the amounts of waste generated from daily activities. b. The reuse and recycling of used materials must be increased to minimise the environmental impacts due to solid waste and terrestrial and water resources pollution.	a. Promote the 3R (Reduce, Reuse, and Recycle) initiative to influence local inhabitants' behaviour change in managing the solid waste. b. Ensure that dumpsites are located far from the nominated property and managed properly to reduce negative impact to public health and environmental hazards. c. Develop an action plan for improving the waste collection service d. Establish an integrated solid waste management and pollution control with the participation of multi stakeholders	Occurrence of evidence that component parts have been impacted by solid waste disposal and pollution	• Local agency of environment and sanitation • Local agency for planning and development • Local agency for public works and housing	Medium term (10 year)
5.3. Vandalism and theft	a. Vandalism and theft incidents must be minimised with the active participation of the local inhabitants and users. b. Any vandalism in the nominated property which may impact the presentation of the site should be cleaned immediately	a. Identify specific areas of cooperation between the local government and local law enforcement and the role and responsibilities of each institution to monitor vandalism and theft prone areas regularly. b. Develop community or neighbourhood watch programme to prevent any incidents and report to the police should any incidents occur.	• Type and cost of protective measure to ensure safety and adequate state of conservation of the property	• Bukit Asam Company • Indonesia Railway Company • PT Pelindo (Indonesia Port Corporation) • Local police offices	Short term (5 year) Medium term (10 year)



Ombilin

Ministry of Education and Culture of the Republic of Indonesia
Government of West Sumatra
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