



Hunter Valley Operations South Aboriginal Heritage Management Plan April 2021 Compliance Audit Inspections

Report prepared for
Hunter Valley Operations



May 2021

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 **ARROW**
HERITAGE SOLUTIONS



Introduction

The Hunter Valley Operations Joint Venture (HVOJV) manages the Hunter Valley Operations (HVO) mining complex and associated Biodiversity Areas located in the Hunter Valley. The HVOJV provides management services that include accountability for Aboriginal cultural heritage (ACH) management & community consultation.

The development of HVO mining operations has occurred through a process of expansion and acquisition, and as a result there are two separate development approvals that apply to the operation. The mining & processing activities at HVO are geographically divided by the Hunter River, with movements of coal, overburden, equipment, materials and personnel between two operational areas - HVO North (DA_450-10-2003) and HVO South (PA_06_0261).

Each consent contains a condition requiring the development of an Aboriginal Heritage Management Plan (AHMP). Such plans have been developed (in consultation with the Aboriginal community through the HVO Cultural Heritage Working Group - CHWG) and approved for each operational area. Within the HVO South plan, provision is made to conduct biannual AHMP compliance inspections with members of the Aboriginal community throughout the life of operations. The purpose of the compliance inspections is to afford the Aboriginal stakeholders and the HVOJV:

- the opportunity to visit mine operations and mine areas to inspect the operational compliance with AHMP provisions and Ground Disturbance Permit (GDP) procedures;
- to inspect and monitor the condition and management of various sites; and
- to review the effectiveness and performance of AHMP provisions in the management of ACH at the mine.

Due to the number of ACH sites within the HVO South AHMP area & the time foreseen to inspect all sites, it is not feasible to inspect every site during the same field trip. Therefore, a regular, rolling program of compliance inspections has been implemented that will visit all sites at each location periodically each & every year. A record will be kept of each compliance inspection against each ACH site, so that it can be ensured that each site is inspected regularly.



Proposed Activity and Project Brief

The compliance inspection involved the following elements:

- An AHMP compliance inspection report pro-forma was completed for the nominated inspection areas and ACH sites visited;
- Photographs of the inspected ACH sites were also taken; and
- Notes were compiled on the outcomes of the inspections including evidence of compliance and non-compliance with AHMP provisions, recommendations on modifications and improvements to management provisions, recommendations on corrective actions, and other comments associated with AHMP provisions;

Timing & Personnel

The April 2021 HVO South AHMP compliance inspection program was conducted on 8 April 2021. The personnel involved in these inspections were:

Name	Organisation
Joel Deacon	Arrow Heritage Solutions
Peter Bowman	HVO Environment and Community Officer
Maree Waugh	Wallangan
Christine Paul	Upper Hunter Wonnarua Council
Georgina Berry	Wonnarua Nation

Arrow Heritage Solutions were engaged as independent heritage consultants to conduct the AHMP compliance inspection, and Joel Deacon acted as technical advisor and author of this report. HVO's Environment & Community Officer Peter Bowman arranged the compliance inspection program and escorted the field team.

Results

During the April 2021 HVO South AHMP compliance inspection a total of 37 ACH sites were included for the audit. These sites were located north of the Cheshunt Pit in areas currently used for cattle grazing (see map below). Although not within an active mining area, these sites were selected for inspection as they are located in areas that are actively farmed and subject to a range of land use activities. A previous compliance inspection audit in this area had identified ACH sites at risk of damage due to severe erosion and fluvial activity. These

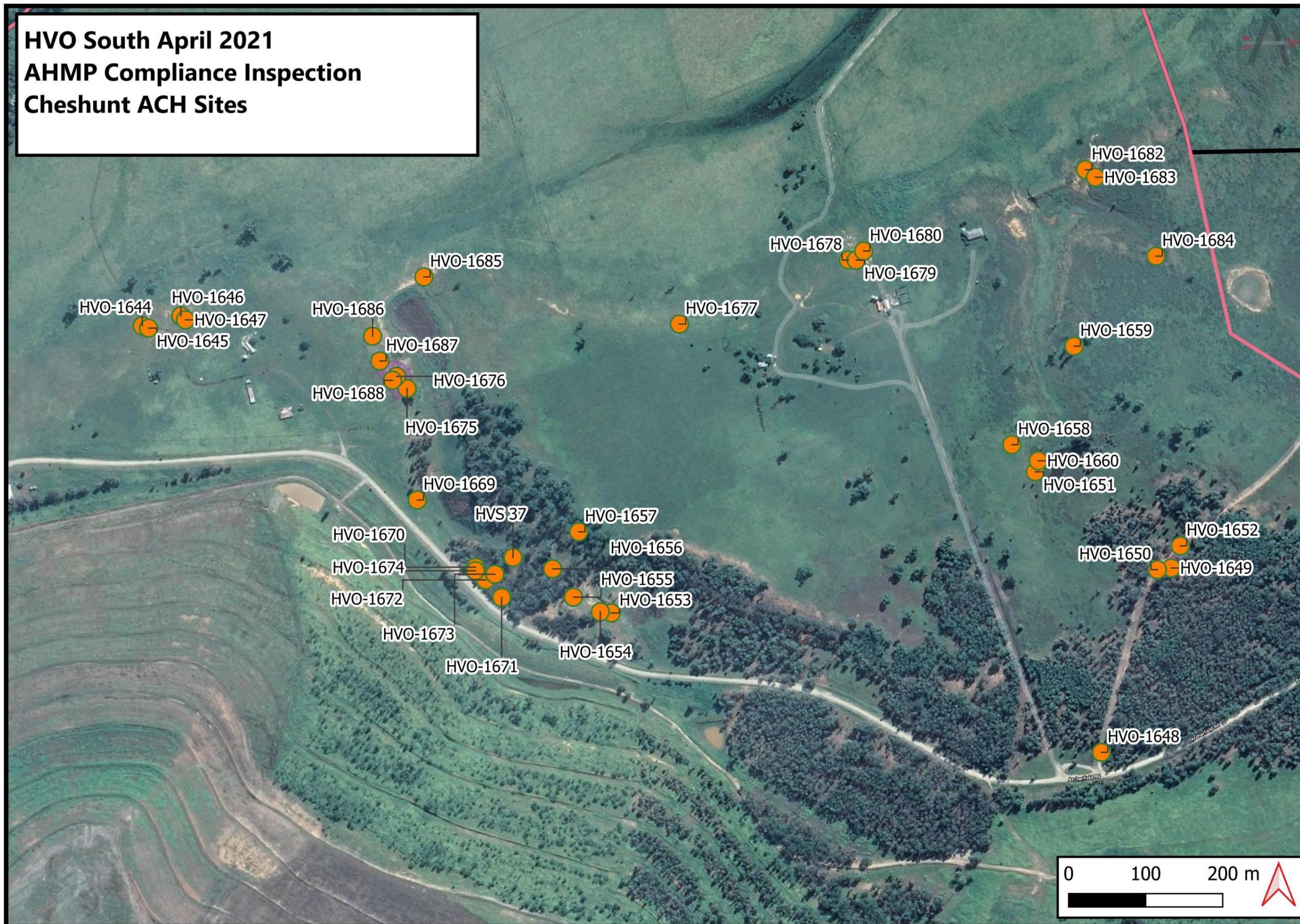


sites were recommended for salvage by the inspection team at the time. This recommendation was endorsed by the CHWG and the sites subsequently salvaged in 2014.

The table below summarises the results of the April 2021 HVO South compliance inspection and summarises the information recorded on the individual pro-forma inspection sheets. Using a mobile mapper pre-loaded with the GIS co-ordinates for each ACH site, the field team travelled to each location and attempted to re-identify each site. Sometimes this was not possible due to poor ground surface visibility (GSV), a result which in itself was not overly significant as long as it was determined that the vicinity had not been inadvertently disturbed. The presence and condition of barricading or fencing was noted, as well as the presence and nature of various potential site disturbing factors (e.g erosion, animal, human). General observations of each site were made if necessary, and, based on information provided for all of the above factors, management recommendations were discussed and agreed by the field team for each site.



**HVO South April 2021
AHMP Compliance Inspection
Cheshunt ACH Sites**





Site Name	AHIMS ID	Site re-identified	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
HVO-1644	37-6-3035	No	Yes	No	-	Yes	No	On old track	No	No	Poor GSV	Nil
HVO-1645	37-6-3034	Yes	Yes	No	-	No	No	On old track	No	No	Poor GSV	Nil
HVO-1646	37-6-3033	Yes	Yes	No	-	Severe off terrace	No	No	No	No		Nil
HVO-1647	37-6-3032	No	Yes	No	-	Severe off terrace	No	No	No	No		Nil
HVO-1648	37-6-3031	No	Yes	Yes	Yes	No	No	No	No	No		Nil
HVO-1649	37-6-3030	Yes	Yes	No	-	No	No	No	No	No		Nil
HVO-1650	37-6-3029	Yes	Yes	No	-	No	No	On track edge	No	No		Nil
HVO-1651	37-6-3028	Yes	Yes	No	-	No	No	No	No	No		Nil
HVO-1652	37-6-3027	No	Yes	No	-	No	No	On track edge	No	No		Nil
HVO-1653	37-6-3026	Yes	No	No	-	Severe	No	No	No	No	Site disturbed by erosion around damaged dam that needs repair	Salvage
HVO-1654	37-6-2991	Yes	Yes	No	-	Some wash	No	No	No	No	Site disturbed by erosion around damaged dam that needs repair	Salvage
HVO-1655	37-6-3025	Yes	Yes	No	-	Some wash	No	No	No	No	Site disturbed by erosion around damaged dam that needs repair	Salvage
HVO-1656	37-6-3024	Yes	Yes	No	-	No	No	No	No	Termite damage		Nil
HVO-1657	37-6-3023	No	Yes	No	-	Slight wash	No	No	No	No		Nil
HVO-1658	37-6-3022	Yes	Yes	No	-	No	No	No	No	No		Nil
HVO-1659	37-6-3021	Yes	Yes	No	-	No	No	No	No	No	Poor GSV	Nil
HVO-1660	37-6-3020	Yes	Yes	No	-	No	No	On disused track	No	No		Nil



Site Name	AHIMS ID	Site re-identified	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
HVO-1669	37-6-3011	Yes	Yes	No	-	Slight	Slight	Dam contouring	No	No		Nil
HVO-1670	37-6-3010	Yes	Yes	No	-	No	No	On disused track	No	No		Nil
HVO-1671	37-6-3009	Yes	Yes	No	-	Yes	No	On old eroding track	No	No		Nil
HVO-1672	37-6-3008	Yes	Yes	No	-	No	No	On old track	No	No		Nil
HVO-1673	37-6-3007	Yes	Yes	No	-	Yes	No	No	No	No		Nil
HVO-1674	37-6-3006	Yes	Yes	No	-	No	No	On old track	No	No		Nil
HVO-1675	37-6-3005	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Install sediment fencing on downslope boundary to prevent artefact loss
HVO-1676	37-6-3004	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Also install sediment fencing on downslope boundary to prevent artefact loss
HVO-1677	37-6-3003	No	Yes	No	-	Yes	Some	No	No	No		Nil
HVO-1678	37-6-3002	No	Yes	No	-	Yes	No	No	No	No		Nil
HVO-1679	37-6-3001	Yes	Yes	No	-	Yes	No	No	No	No		Nil
HVO-1680	37-6-3000	No	Yes	No	-	Yes	No	No	No	No		Nil
HVO-1682	37-6-2998	Yes	No	No	-	Severe	No	Dam construction	No	No	Severe erosion, fencing impractical	Salvage
HVO-1683	37-6-2997	Yes	No	No	-	Severe	No	Dam construction	No	No	Severe erosion, fencing impractical	Salvage
HVO-1684	37-6-2996	Yes	Yes	No	-	Wash	No	No	No	No	Poor GSV	Nil



Site Name	AHIMS ID	Site re-identified	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
HVO-1685	37-6-2995	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Also install sediment fencing on downslope boundary to prevent artefact loss
HVO-1686	37-6-2994	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Also install sediment fencing on downslope boundary to prevent artefact loss
HVO-1687	37-6-2993	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Also install sediment fencing on downslope boundary to prevent artefact loss
HVO-1688	37-6-2992	Yes	Yes	No	-	Severe	Yes	Dam construction	No	No	Severe erosion washing into dam	Erect fencing around erosion and sites to exclude stock and allow ground cover to regenerate. Also install sediment fencing on downslope boundary to prevent artefact loss
HVS 37	37-5-0261	No	Yes	No	-	Wash	No	No	No	No	Old site probably superseded by newer recordings	Nil



Aboriginal Site Management Recommendations

Management recommendations were provided for several of the ACH sites visited, the nature of which are described below.

Install hard fencing and sediment control

Sites: HVO-1675; 1676; 1685; 1686; 1687; 1688

There are several ACH sites located around a dam where artefacts are at risk of being lost to erosion processes. Deep erosion on the slopes surrounding the dam is depositing sediment across the sites and posing the risk of washing artefacts into the dam. Rather than salvage the sites, the CHWG attendees agreed that the eroding areas containing these sites should be fenced off to exclude livestock. The fenced areas should then be seeded to promote the regeneration of stabilising ground cover. As a precaution, to prevent possible wash of artefacts into the dam sediment fencing should be installed on the downslope boundary.

It should be noted that the new and upgraded ACH site fencing specification being trialled and installed at several ACH sites across HVO has been received positively by CHWG members and is considered the favoured option when site protection is warranted. In this instance, two fences should be installed – one around HVO-1685 and a more extensive fence surrounding the remaining sites.



Severe erosion in the vicinity of ACH sites HVO-1675, 76, 86, 87, 88



Erosion in the vicinity of ACH site HVO-1685



Example of new HVO ACH site fencing technique



Suggest salvage next program

Sites: HVO-1653; 1654; 1655; 1682; 1683

These five ACH sites are located in two discreet areas, both of which have been affected by severe fluvial action caused by dam wall or spillway failures. The damage to the dam in the vicinity of sites HVO-1653, 1654 and 1655 (all single isolated artefacts) is repairable, however, any repairs would not be possible without further disturbance to the artefacts present. Sites HVO-1682 and 1683 (both single isolated artefacts) are located on a severely eroded spillway where fencing is impractical and the risk of loss of artefacts in the deep erosion rills high.

Due to the risk of further disturbance to these sites it was recommended by the CHWG representatives that they be salvaged. An AHIP is not required to implement this measure, as the salvage of these sites, with Aboriginal community participation, is authorised under the HVO South AHMP.



Damaged spillway in the vicinity of ACH sites HVO-1653, 1654 and 1655



Severe erosion in the vicinity of ACH sites HVO-1682 and 1683

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For all other ACH sites visited during the audit inspection no further recommendations were forthcoming from the CHWG attendees. These sites were found to be in generally good repair, with the only issue encountered being poor GSV at some sites which prevented the relocation of any artefacts. These sites should be re-inspected when ground conditions are more favourable.



Recommendations from April 2021 HVO South AHMP Compliance Audit Inspection

The following ACH management recommendations were agreed during the August 2020 HVO South AHMP Compliance Audit, and should be presented to the CHWG for consideration.

- 1. Install hard fencing, including sediment fencing at ACH sites HVO-1675, 1676, 1685, 1686, 1687 and 1688; and**
- 2. ACH sites HVO-1653, 1654, 1655, 1682 and 1683 should be salvaged to prevent further inadvertent damage.**