



Aboriginal and Historical Cultural Heritage  
Due Diligence Assessment  
4273 Goulburn Road, Crookwell



Report Prepared for Laterals Planning

20 May 2022

## Document Control

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## EXECUTIVE SUMMARY

This report provides Aboriginal and Historical heritage due diligence advice for the proposed residential development of 4273 Goulburn Road (Lot 24 DP1119250), Crookwell for a total of 32ha. This land parcel is currently used as pastoral land, with the project area being located to the south-east of Crookwell. The study area is shown on Figure 1 in a regional context with the project boundary in Figure 2.

Residential development would involve the following impacts:

- ❖ Development of the land for residential purposes
- ❖ Construction of housing foundations involving removal of top and subsoils within Building envelopes
- ❖ Construction of access roads into the development and through housing lots
- ❖ Connection to infrastructure, such as water, communications, sewerage, and electricity
- ❖ Installation of boundary fencing and potential impacts from landscaping

This Due Diligence heritage assessment has been undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a) to provide Laterals Planning with information on heritage constraints to inform the planning and residential development process.

Based on a review of previous reports and an Aboriginal Heritage Information Management Systems (AHIMS) search, there are no heritage sites and no areas of Potential Archaeological Deposit (PAD) recorded within 1km of the project area.

Field survey was undertaken across the project area in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b). The field survey covered the entire project area, with particular focus on areas of previous impacts, access roads and landforms with potential. Ground visibility was low at the time of field survey, due to high grass length, with small areas of exposed soils throughout.

No Aboriginal heritage sites and no areas of PAD were identified as a result of the field survey. No Historical sites were located. No known heritage impacts will result from the proposed rezoning and subsequent development.

As a result of the heritage assessment completed for the project, the following recommendations have been developed:

- ❖ The proposed works can proceed without further assessment as no Aboriginal or historical heritage sites (objects or places) have been identified within the project area. The potential for impacting on unrecorded heritage sites within the project area is assessed as extremely low, based on landform analysis and field survey.

- ❖ All Aboriginal objects are protected under the *NSW National Parks and Wildlife Act 1974*. It is an offence to disturb an Aboriginal site without a consent permit issued by the NSW Heritage). Should any Aboriginal objects be encountered during any future works then works must cease and the find should not be moved until assessed by a qualified archaeologist.
- ❖ In the unlikely event that human remains are discovered during any future construction, all work must cease. NSW Heritage, the local police, and the appropriate Local Aboriginal Land Council (LALC) should be notified. Further assessment would be required to determine if the remains are Aboriginal or non-Aboriginal.
- ❖ Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation.

# 1 INTRODUCTION

This report provides Aboriginal and Historical heritage due diligence advice for the proposed residential development of 4273 Goulburn Road (Lot 24 DP1119250), Crookwell for a total of 32ha. This land parcel is currently used as pastoral land, with the project area being located to the south-east of Crookwell.

The study area is shown on Figure 1 in a regional context with the project boundary in Figure 2.

This Due Diligence heritage assessment has been undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a) to provide Laterals Planning with information on heritage constraints to inform the planning and residential development process.

Future uses for the project area would have a negative impact on any heritage located within the project boundary. Heritage sites may be located on the surface or subsurface in areas of high potential for the preservation of archaeological remains of historical events or past usage by Aboriginal groups. The location of the project area is between the Crookwell River and Parkers Gully and features an ephemeral drainage line running through the block. Its proximity to these waterways suggests a high potential for the presence of Aboriginal sites and the long history of European settlement may also have resulted in archaeological sites.

To assess the potential impacts of the proposed works on heritage this Due Diligence Heritage Assessment has been undertaken.

This report, field survey and associated research has been conducted in accordance to the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010).

## 1.1 PROJECT OBJECTIVES

The due diligence assessment is being undertaken to complete the following objectives:

1. Review of the NSW Heritage, Aboriginal Heritage Information Management System (AHIMS), to identify any recorded heritage sites within the project area.
2. Review of historic registers to identify any historic heritage.
3. Review of previous reports in area to develop predictive model of site location
4. Assess landforms present in project area against predictive model to determine potential for heritage sites and determine level of disturbance
5. Complete site visit to visually inspect impact areas or areas assessed as holding potential based on predictive model and record any identified heritage sites. The site visit will also document levels of disturbance within project area.

6. Complete due diligence report with management recommendations to avoid or minimise impacts within the project area.

## 1.2 ABORIGINAL CONSULTATION

No consultation with the local Aboriginal community has been undertaken. Consultation with the Aboriginal community is not a requirement of the Due Diligence Code of assessment, which is undertaken at the preliminary planning stage of the project.

If the assessment finds that impacts to Aboriginal heritage will occur as a result of the development then consultation will be undertaken with the relevant Local Aboriginal Land Council (LALC) and the wider Aboriginal community, in accordance with the consultation guidelines required by NSW Heritage.



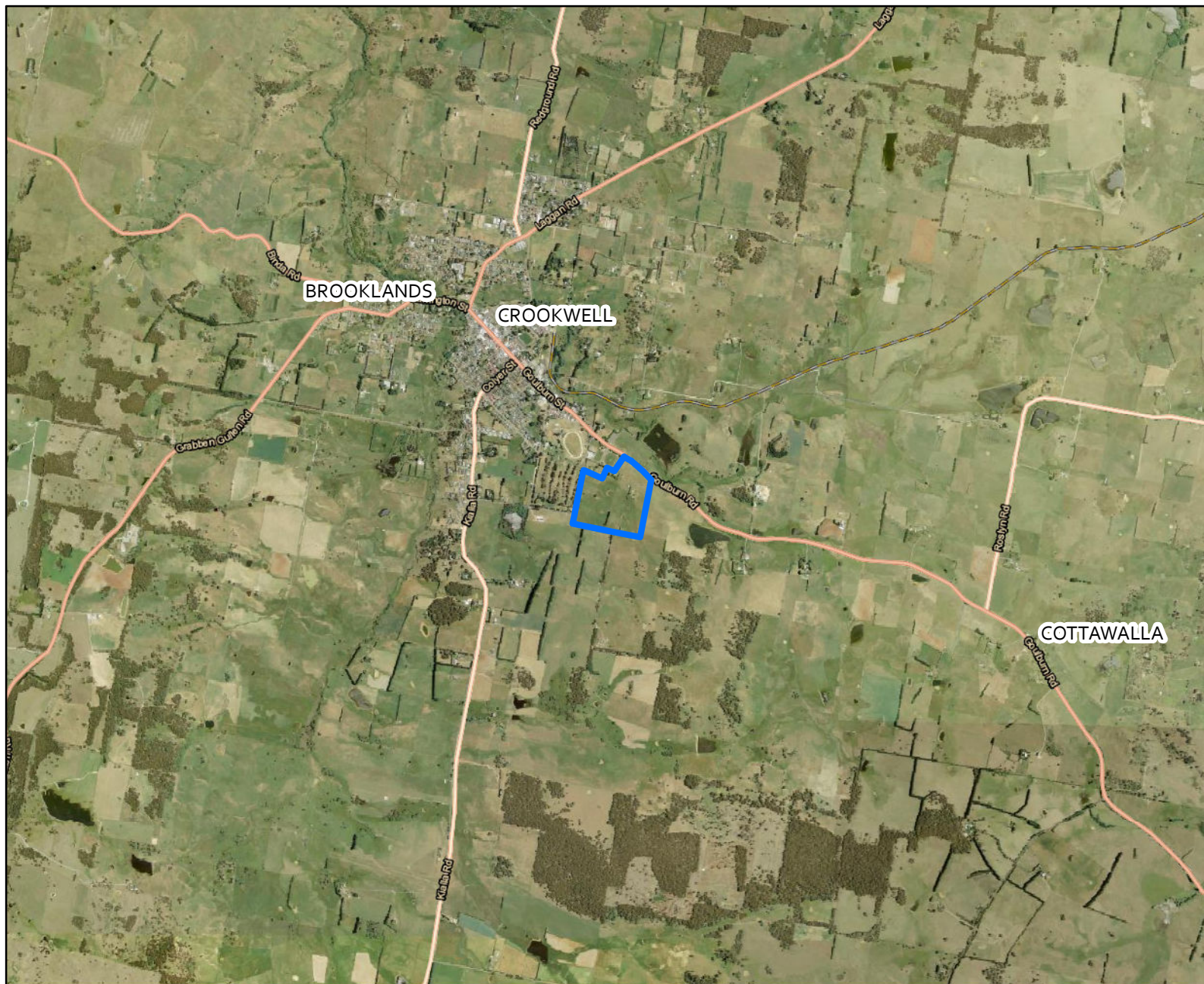
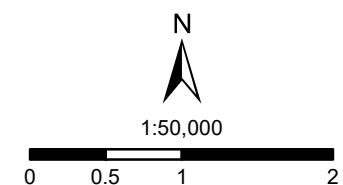


Figure 1: Regional Context

Legend

 Project Area



Kilometers  
Coordinate System:  
GDA 1994 MGA Zone 55

Imagery: © NSW Spatial Services

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Figure 2. Project Area (Base Map SixMaps NSW)

## 2 DESKTOP ASSESSMENT RESULTS

### 2.1 AHIMS SEARCH

A search of the NSW Heritage Aboriginal Heritage Information Management Systems (AHIMS) database was undertaken on the 31<sup>st</sup> March 2022 covering the Project Area of Lot 24 DP 1119250 with a buffer of 1km. The extensive search revealed no previously recorded heritage sites or areas of Potential Archaeological Deposits (PAD) within the project area or within the wider 1km search area.

The localised Crookwell area has not been thoroughly researched in the past, with most studies being conducted for the surrounding windfarms. Most other investigations surround the nearby town of Goulburn and the wider Southern Tablelands region of NSW. Heritage assessments have been undertaken in increasing frequency due to the level of increased development within the Southern Tablelands region and increased legislative requirements within NSW. As a result, a large number of cultural heritage surface surveys and sub-surface excavations have been conducted throughout the Southern Tablelands region, as well as Goulburn and its surrounds. A review of this body of work allows for the development of regional settlement models; landscape usage; the use of resources; group movements; and site locations for the region.

These previous studies have resulted in a site location model being developed for the region. This model predicts the majority of sites will consist of small artefact sites located on level ground or terrace features in proximity to water sources, with larger sites with subsurface deposits being present in proximity to water features such as a creek confluence or major water sources. This is directly applicable to the project area. This predictive model is discussed in more detail in Section 2.4.2.

### 2.2 HISTORICAL HERITAGE SEARCH

Within NSW Local government is responsible for managing heritage items. This responsibility is mainly fulfilled by listing heritage items in the Local Environmental Plans (LEPs) under the *Environmental Planning & Assessment Act 1979*. Council approval is required to impact any listed item.

Heritage items can also be of 'state significance' in which case they are listed on the NSW Heritage Register by the NSW Heritage Council under the *Heritage Act 1977*. These items are usually substantial and consist of buildings, bridges or other structures that represent events in the local area.

A search of the NSW Heritage Register and the Upper Lachlan LEP 2010 was undertaken for the project. No historical sites are located within the project area, with the 'Wheat Sheaf Inn' ruins located in the adjacent Lot 6 DP 883430. A review of historical parish maps was also undertaken with no known structures or items identified within the project area.

## 2.3 ABORIGINAL GROUPS WITHIN THE PROJECT AREAS

This summary is based on ethnographic and historical sources relating to traditional Aboriginal associations to country for Goulburn and the broader Crookwell region. The Project Area falls into the Lachlan Catchment area, which is predominately Wiradjuri country although shared the land with eight other Aboriginal nations, Dharug, Ngunnawal, Gundungarra, Wongaibon, Barindji, Yitha Yitha, Madi Madi and Nari Nari.

The rivers, creeks and wetlands of the catchment were an important resource for the groups in this area, providing vital resources. As such the Aboriginal occupation of the region was concentrated along major river courses, including the Lachlan, Abercrombie, Boorowa, Belubula and Crookwell Rivers. There are also several wetlands that are important cultural places, such as Lake Cowal, Booligal wetlands and the Great Cumbung Swamp. There are many heritage sites along the Lachlan River between Wyangala and Oxley, including scarred trees, campsites, burial sites, carved trees, and quarry sites. The presence of these cultural heritage sites along the catchment increases the importance of managing sensitive natural resources.

Ethnographic observations also suggested campsites were located along rivers and streams, such as a quote cited by Pearson (1981) from 1824 noting Aboriginal movement patterns mostly followed waterways (Pearson 1981:65 – Lesson 1824).

European contact with the local groups began with expeditions into the region in 1817, by explorers Cunningham and Oxley, noting the rich resources in the area. Interaction between the Europeans and local Aboriginal was marked by shyness and fear, but later became hostile, resulting in the declaration of martial law against the local Aboriginal groups (including Wiradjuri) by Governor Brisbane in 1823 at Bathurst (Read 1988:9).

Dispossession of Aboriginals of their traditional land by European settlement resulted in the establishment of the Aborigines Protection Board in the 1880's (Read 1998:xiii). The development of both managed or unmanaged missions, stations and reserves, and a number of unmanaged fringe camps were established near European towns and settlements in the area, as part of the government's strategy to 'manage of the Aboriginal problem'.

The missions became some of the only 'safe' spaces for local Aboriginal people, some families found employment and become an integral part of the pastoral industry, while other were forced into camps near large station homesteads to receive commodity hand-outs and casual employment after losing access to their traditional lands. "Castlesteads" property, south of Boorowa is an example of such properties (Lloyd 1990:5).

By 1836, traditional Aboriginal practices in the region had been seriously unsettled by European pastoralists, squatters and introduced diseases.

### 2.3.1 Recorded Material Culture

Traditional material culture of local Aboriginal groups has been recorded as included stone implements, such as pebble tools, edge-ground axes and backed blades. Flood (1980) claims that none of these tools can be directly linked to the procurement of resources. Wooden implements would have included shields, bowls, spears, throwing sticks, boomerangs, clubs, digging and coolamons. Steel axes also were introduced and utilised by Indigenous groups in the early historic period. Pearson (1981) states that these items made up a 'toolkit' for domestic use, hunting large and small game and for tribal warfare. These artefacts were also commonly decorated with incised lines.

Flood also reported possum skin cloaks and rugs, and kangaroo sinews for thread. Possum skin cloaks usually comprised of up to 20 skins stitched together with sinew and fish bone needles, also decorated with incised lines. These cloaks were later replaced by government-issue blankets. String was also made from bark, possum fur, tendons and grass, to make head and waist bands, nets, carry bags, necklaces and baskets. Reeds and bones were also rendered as nose ornaments (Pearson 1981). Weatherproof huts were built from large sheets of stringy bark for winter and wet weather, with simpler structures in summer (Flood 1990:296-297).

In terms of food resources, Pearson (1981) observed a large portion of animal proteins in their diet, possums and grubs being particularly common as both were more readily available and easier to attain than other resources. Specialised hooked sticks were used for extracting grubs and locating possums in tree hollows. Hafted ground-edged hatchets were also used for hunting possums, harvest wood, and for making bowls, shelters and canoes. Food sources such as river fish, kangaroo, lizards and snakes were much more effort to attain (Pearson 1981:33; White 1986:55). Plant sources included tubers (like kurrajong roots), acacia gum, grasstree pith, berries, bulrush pulp, 'fruit' and macrozamia.

## 2.4 PREVIOUS HERITAGE STUDIES

### 2.4.1 Crookwell Region

The proposed residential development is located in the Crookwell region within the Upper Lachlan Local Government Area. The localised Crookwell area has not been thoroughly researched in the past, with most studies being conducted for the surrounding windfarms. Most other investigations surround the nearby town of Goulburn and the wider Southern Tablelands region of NSW. Regional models of aboriginal landscape and resource use, along with models of intensity of utilization and number of Aboriginal occupants have been developed for the Southern Tablelands region, which provides an understanding of Aboriginal occupation in the wider region (Koettig and Lance 1986, Fuller 1989). Due to the large number of studies completed in the Southern Tablelands area, only the most relevant of these studies are summarised below.

Koettig and Lance in 1986 undertook the Aboriginal Resources Planning Study for the City of Goulburn. Based on all available data they developed an Aboriginal site location model for Goulburn.

Four landscape zones based on topography (major watercourse, undulating hills and plains, hills and residential areas) were assigned archaeological sensitivity ratings. A review of previously identified sites within the Goulburn region found the majority of these sites are located on basal slopes close to major waterways, with most sites consisting of small artefact scatters.

Fuller in 1989 was engaged by Goulburn City Council to test Lance and Koettig's 1986 model by undertaking sub surface testing at areas designated high sensitivity by the model. The results of this large excavation program, although supporting the overall model, concluded that all areas apart from major watercourses were of low potential and that further subdivisions were necessary in the undulating hills category if it was to be useful for predicting site locations.

In 1997, McDonald and Garling conducted the sub-surface testing of the proposed Crookwell 1 Wind Farm. This test pitting involved three pits at each turbine site with all pits recording an average of three artefacts with the exception of CWF1 that recovered 32 artefacts. Continued excavations of CWF1 were conducted in 1998, resulting in a total of 2,154 stone artefacts. These artefacts consisted of silcrete, chalcedony and quartz materials, with a variety of manufacturing techniques evident.

Biosis (2004) conducted a survey of the proposed Crookwell 2 Wind Farm recording 25 newly identified Aboriginal heritage sites, including two culturally modified trees. In 2005, Biosis returned for subsurface testing, resulting in 28 new heritage sites situated on broad, flat ridges situated in proximity to watercourses. This report concludes that landforms consisting of eroded tertiary basalt hold moderate to high archaeological potential for deposits.

In 2010 Biosis completed salvage excavations for several proposed turbine locations for Crookwell 2 Wind Farm. From this, two new sites were recorded, as well as additional artefacts uncovered during the subsurface testing.

Bowen Heritage Management (2017) was commissioned to prepare an Aboriginal Cultural Heritage Assessment Report for Crookwell Development. This report assessed modifications to the approved Crookwell 2 Wind Farm development where the size and location of 20 of the 46 turbine locations and associated access roads. The results showed that 20 of the 55 previously recorded sites were to be impacted by the modification, as well as identifying nine new heritage sites. An extensive salvage collection of surface artefacts, and monitoring of construction at turbine sites and access road was then undertaken (Past Traces 2017).

ERM (2021) was commissioned by Crookwell 3 Development to undertake an Aboriginal Cultural Heritage Assessment for the proposed Crookwell 3 Windfarm. This report was commissioned to supplement previous assessments and was required for additional areas not included in the original assessments due to project design changes. As a result of this investigation, seven new Aboriginal heritage sites and one area of PAD. These sites were considered to have high cultural significance and moderate scientific significance.



## 2.4.2 Predictive Model

Predictive modelling has been undertaken to broadly predict the type and location of Aboriginal cultural heritage sites within the boundaries of the project area. The model is based primarily on Fuller's (1989) prediction models, the landforms present within the project area and the degree of disturbance which has occurred historically.

Based on this information, a predictive model has been developed for the project area (Table 3). The definition of each site type is described firstly, followed by the predicted likelihood of this site type occurring within the Project Area.

Table 3 Site Prediction Model

Probability	Site Type	Definition	Landform
Low	Isolated finds and surface scatters of stone artefacts	Stone artefacts ranging from single artefact to high numbers	Creek lines and spur crests - ephemeral creek line runs through block
Low	Potential Archaeological Deposits (PADS)	Area considered on landform to hold higher potential for unidentified subsurface deposits	Varies, but most frequent on elevated terraces along creek lines and spur lines - ephemeral creek line runs through block
Low	Culturally Modified Trees (CMTs)	Trees which have been modified by scarring, marking or branch twining	May be present on remaining old-growth trees - Most old trees have been cleared
Nil	Rock Engravings	Images engraved on flat rock surfaces	Escarpments, rock platforms or rock shelters - not present
Nil	Stone arrangements	Arrangements of stones by human intention, including circles lines or patterns.	Crest lines or large ceremonial areas on creek-flats, - not present
Nil	Stone quarries/Ochre sources	Quarry sites where resources have been mined.	Any landform that has not been disturbed – not present
Nil	Axe grinding grooves	Grooves in stone caused by the grinding of stone axes	Usually in creek lines, as water is used as abrasive with sand - not present
Nil	Burials	Burials of Aboriginal persons	Usually requiring deep sandy soils on eastern facing slopes – not present
Nil	Aboriginal places	A place that holds spiritual, traditional, or historical significance to Aboriginal people	Any landform, identified through consultation with RAPs and historical sources

## 2.5 LANDFORM AND DISTURBANCE LEVEL ASSESSMENT

The landforms within the project area consist of gently undulating hillslopes. Water sources are present in the form of ephemeral drainage lines at the base of slopes that feed into constructed dams. Within the project area no permanent water source is present. As a result all of these areas are considered to hold low potential.

The project area has been impacted by European settlement from the mid nineteenth century. The project area has been under continual grazing and pastoral regimes over a lengthy period of time. These past use impacts are typical for the Crookwell and Southern Tablelands region and consist of the following:

- ❖ Vegetation and tree clearance
- ❖ Stock impacts
- ❖ Fencing
- ❖ Vehicle tracks – some consisting of minor roads, others of impact trails
- ❖ Extensive impacts in areas of housing including landscaping
- ❖ Construction of dams, sheds, outbuildings and yards
- ❖ Ploughing of topsoils for pasture improvement or light cropping.

All of these landscape and soil impacts reduce the potential for archaeological or heritage sites to remain intact within the landscape. Confined areas of disturbance are present at gates and along fence lines. Exposed ground is present in areas of stock impact, vehicle tracks, fence lines, under trees and large areas of erosion.

Review of previous reports and Aboriginal sites located in the vicinity indicate a site location model based on level areas in proximity to water resources such as creek lines with smaller sites located on hilltop ridgelines. The study area consists of undulating hill slopes classified as holding a low overall potential for heritage sites.

As a result of the landform assessment the study area contains low potential to contain any unrecorded heritage sites or areas of PAD and has suffered a high to moderate degree of previous impact.

### 3 FIELD SURVEY RESULTS

The field survey of the project area was undertaken on the 22<sup>nd</sup> April 2022 to verify the findings of the desktop review of landforms and disturbance. The aim of the investigation was to identify heritage objects or places of potential archaeological Deposit (PAD). The project area was divided into six survey areas based on fence lines, building areas, drainage lines and dams. The entire project area was surveyed by foot to visibly inspect area.

All surveyed areas and items of interest were recorded on a topographic map of the study area (using a GPS and GDA94 MGA55 coordinates), along with levels of visibility, erosion, soil conditions, and evidence of land disturbance.

Ground surface visibility (GSV) is the percentage of ground surface that is visible during the field inspection. GSV increases in areas of exposures such as stock impact trails, roads, gates and along areas of erosion such as creek banks and dam walls. As a result, surveys undertaken in areas with high exposure rates result in a more effective survey coverage.

The site visit resulted in the following findings.

#### 3.1.1 Ground Surface Visibility

GSV over most of the study area varied but was generally low due to extensive vegetation coverage across the area, with tall grasses present. Bare earth was visible in large exposures and across the project area, with the average GSV estimated at 20%. Due to the prevailing vegetation, large areas of exposed ground were present under trees, along fence lines, stock trails, dam walls, current access roads, around farming buildings and gate entrances.

Exposures occurred at low to moderate frequency across the project areas with areas of bare soils with natural gravels, shales and quartz visibly present.

The conditions at the time of the field survey are shown in plates 1 to 6.

#### 3.1.2 Disturbance

The degree of disturbance across the study area was moderate, with several areas being impacted by mechanically ripped soils, native vegetation replanting, dam construction, and the installation of powerlines and subsurface cabling. These areas have suffered a high level of impact.

The project area has been impacted by European settlement from the mid nineteenth century. These landscape and soil impacts reduce the potential for archaeological or heritage sites to remain intact within the landscape. Confined areas of disturbance are present at gates, along fence lines and around farming buildings. Exposed ground is present in areas of animal impact, vehicle tracks, fence lines, under trees and large areas of erosion. However, GSV remained low due to thick vegetation and tall grasses.



Plate 1: Crested area of eastern section of front paddock parallel to Goulburn Road with view of shearing shed and house area.



Plate 2: Central section of the study area, consisting of areas of creek flats and marshy drainage line, facing north.



Plate 3: Example of GSV in central area facing south, between two small spurlines.



Plate 4: Midslope overlooking central drainage line and creek flats, facing north.



Plate 5: View of stock yard paddock, highly disturbed area by farming practices.



Plate 6: View from midslope of eastern slopes to the south, with two pine windbreaks.

### **3.1.3 Results - Aboriginal Heritage Sites**

The field survey identified no Aboriginal heritage sites or areas of PAD across all surveyed areas.

### **3.1.4 Results – Historical Heritage**

No areas or items of historical heritage were identified within the project area as a result of the background review or field survey.

### **3.1.5 Summary**

As a result of the field survey of impact areas and background research, it is considered that the project has low potential to impact on unrecorded Aboriginal or Historical heritage sites. No areas of high or moderate sensitivity are present in the development area based on previous research and modelling.

No known heritage impacts will result from the development.



## 4 IMPACT ASSESSMENT

The rezoning and development of 4273 Goulburn Road, Crookwell for a total of 32ha have the potential to impact Aboriginal heritage sites located within the project area. These areas have been assessed and a field survey undertaken.

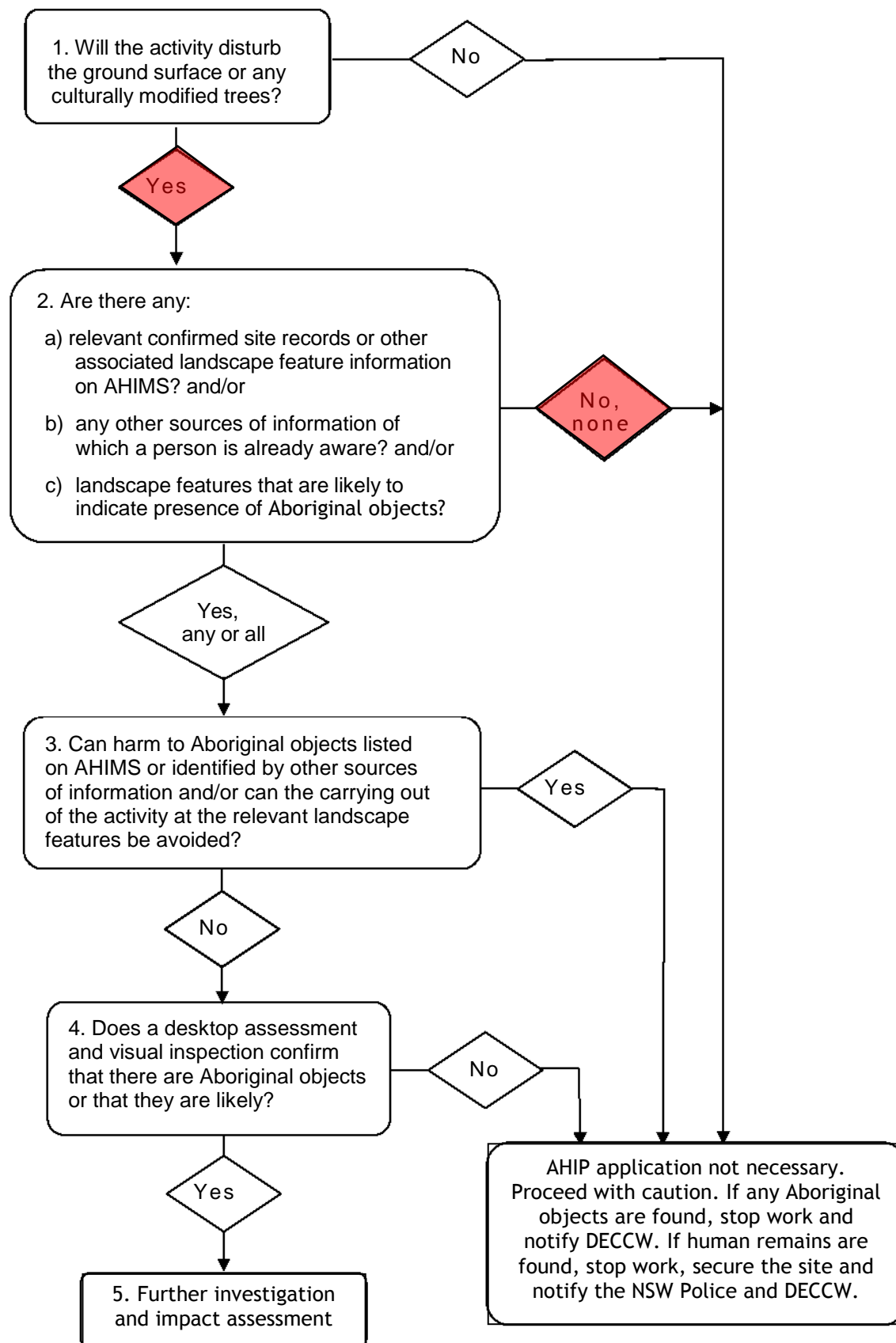
The project area has a high degree of disturbance particularly surrounding farming and residential buildings. Due to the lack of topsoils, this area is considered to hold low potential for unrecorded sites or subsurface deposits. The marshy creek flats around the drainage lines of the area are considered to hold low potential for unrecorded heritage sites or subsurface deposits. The undulating lower slopes of the remainder of the project area are assessed as holding low potential for unrecorded heritage sites.

Based on the assessment the impacts from the project are as follows:

- ❖ No known Aboriginal objects or places are present in the project area
- ❖ No known Historical sites or places are present in the project area.
- ❖ No areas of high potential to contain unrecorded Aboriginal or historical objects or places are present in the project area.

The Aboriginal Due Diligence Code provides a flowchart of six questions to identify the presence of and potential harm to Aboriginal heritage. These questions and their applicability to the project are shown in Figure 3. The responses to these questions determine if further heritage investigations are required.

Figure 3 Due Diligence Flow Diagram (OEH 2010:10 – Due Diligence Code of Practice)



## 4.1 RECOMMENDATIONS

Based on this due diligence assessment the following actions are recommended for the project:

Recommendation 1: Works to proceed without further heritage assessment with caution.

The proposed works can proceed without further assessment as no Aboriginal or historical heritage sites (objects or places) have been identified within the project area. The potential for impacting on unrecorded heritage sites within the project area is assessed as extremely low, based on landform analysis and field survey.

Recommendation 2: Discovery of Unidentified Aboriginal cultural material during works.

Under the *NPW Act 1977* all Aboriginal places and objects are protected from harm, even if they have not been previously identified during the assessment process. If Aboriginal material is discovered during works then the steps as outlined below should be followed:

- ❖ All work must cease in the vicinity of the find and project manager notified immediately.
- ❖ A buffer zone of 10m should be fenced in all direction of the find and construction personnel made aware of the 'no go' zone.
- ❖ NSW Heritage must be notified of the find and advice sought on the proper steps to be undertaken.
- ❖ After confirmation with NSW Heritage a heritage consultation should be engaged to undertake assessment of the find and provide appropriate management recommendations to the proponent.

Recommendation 3: Discovery of Human Remains

In the highly unlikely event that human remains are discovered during any construction work, than all activity in the vicinity of the find must cease. As a first step the local police must be notified, followed by NSW Heritage and advice sought on appropriate next actions. No work can continue on the site until cleared with police and NSW Heritage.

Recommendation 4: Alteration of impact footprint

Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation.

Implementation of the above management recommendations will result in low potential for the project to impact on heritage values or result in damage to heritage sites.

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