The East-West Dry Stone Wall at 40 Dwyer Street Kalkallo Heritage

Archival Documentation and Conservation Management Plan

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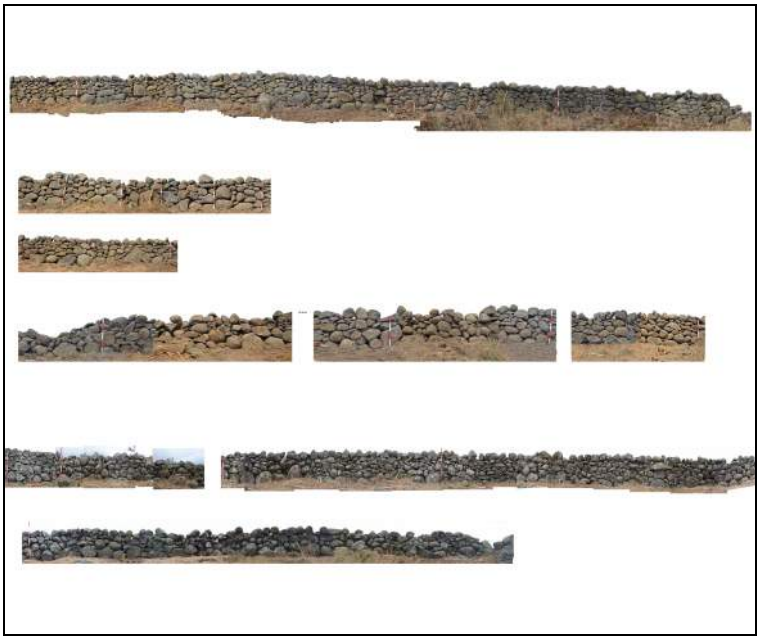

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1.0 Introduction

TerraCulture Pty Ltd was commissioned by National Pacific Properties (Kalkallo) Pty Ltd to undertake a Conservation Management Plan (CMP) for a dry stone wall at 40 Dwyer Street in Kalkallo. The property had been the subject of a previous post contact archaeological assessment reported in Matic 2012, when the dry stone walls across the entire property were mapped and assessed for their association with other historic features (see Map 1). This was followed by Marshall's 2015 report which included more detailed recording of one particular wall, the East-West Wall identified by the COH as being the more significant of the walls at 40 Dwyer Street in Kalkallo. Marshall's 2015 report included sections on legislation, management recommendations and a significance statement. Marshall advised National Pacific that the 2015 report may not meet COH's specific requirements as these were not known at the time the study was conducted. However, the 2015 report contains background history and other information on previous assessments of the East-West wall and should be read in conjunction with the current document (see Appendix 1).

As reported in the 2015 report, at the time of TerraCulture's commission the following was the case:

- National Pacific advised that they had an approved plan of subdivision which did not incorporate the dry stone walls into the design, therefore the dry stone walls were to be destroyed;
- Earth moving machinery had commenced ground works at the eastern end of the subdivision adjacent to a stony rise;
- The eastern end of the east-west dry stone wall had been fenced with temporary fencing to physically separate and protect the wall from on-going works;
- National Pacific were directed by the City of Hume to undertake a further assessment of the east-west wall which, among other things, would provide further description of this wall and address its significance from a heritage perspective.

Sometime during the conduct of the 2015 report (or subsequent to its completion), National Pacific were advised by the COH that they required a Conservation Management Plan which included a photographic component *'in accordance with (the sic) technical note issued by (the) Heritage Council Division of (the) DPCD (now DPTLI)'* and advise on the storage and reuse of the stone from the wall.

<u>Report Contents</u>

The contents of this current report are:

- a summary of the relevant heritage legislation and other potential statutory protection which does or could apply to the stone wall;

- a statement on the methods of recording adopted for this current report as per DPCD's technical note;
- the results of the archival recording of the East West Wall including maps and photographs which document the alignment of the East-West wall and its state of preservation;
- a management plan describing how the stone from the wall could be managed and reused.

The chapter on legislation repeats that in the 2015 report but is has been included

Appendices

There are two main appendices:

1. the 2015 report which should be referred to for background information and ;
2. Gardiner (2007) which is the *Technical note for Photographic Recording for Heritage places and Objects*; Heritage Victoria (Department of Planning and Community Development)

Existing Conditions

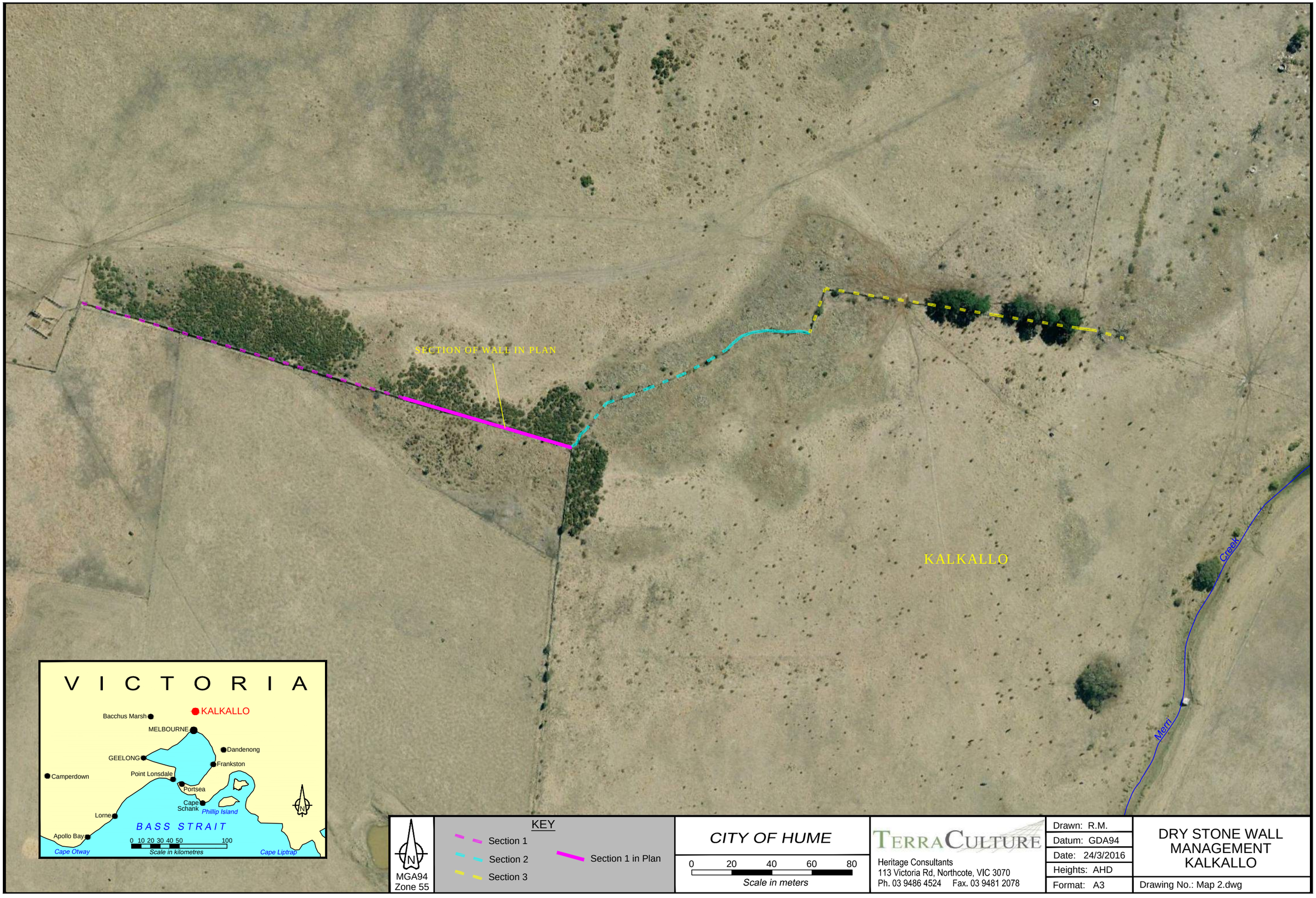
At the commencement of the 2015 investigation earth moving machinery had commenced ground works at the eastern end of the subdivision adjacent to the stony rise. Parts of the rise had been removed and the wall was protected within temporary fencing.

At the commencement of the current investigation the western end of the rise had been removed to allow for the construction of underground services, presumably for the northern parts of the estate. The removal of the stony rise had destroyed the western end of the wall.

The Authors

Helene Athanasiadis is a professional archaeologist with over 10 years of industry experience both as an employee of some of Victoria's largest heritage consultancies and as an individual contractor. Helene started her career as an illustrator with commissions at the NGV and elsewhere. After receiving her honours degree in archaeology from La Trobe University, Helene embarked on her archaeological career and has since directed many historic archaeological excavations in Melbourne's CBD and in regional and rural Victoria. Through her photography, drafting and illustration Helene currently specializes in the archival recording of archaeological places and portable artefacts. She has considerable previous experience with the documentation of dry stone walls and other blue-stone and masonry built structures for the purposes of archival recording.

Brendan Marshall has been an archaeologist for thirty years and has provided heritage advice since graduating with a BA(Hons) in Prehistory from La Trobe University in 1986.


SECTION OF WALL IN PLAN
KALKALLO
Merri
Creek
VICTORIA
KALKALLO
Bacchus Marsh
MELBOURNE
Dandenong
GEELONG
Frankston
Camperdown
Point Lonsdale
Portsea
Cape Schank
Phillip Island
Lorne
BASS STRAIT
Apollo Bay
0 10 20 30 40 50 100
Scale in kilometres
Cape Otway
Cape Liptrap
N
MGA94
Zone 55
KEY
Section 1
Section 2
Section 3
Section 1 in Plan
CITY OF HUME
0 20 40 60 80
Scale in meters
TERRACULTURE
Heritage Consultants
113 Victoria Rd, Northcote, VIC 3070
Ph. 03 9486 4524 Fax. 03 9481 2078
Drawn: R.M.
Datum: GDA94
Date: 24/3/2016
Heights: AHD
Format: A3
DRY STONE WALL
MANAGEMENT
KALKALLO
Drawing No.: Map 2.dwg

2.0 Legislative Background

Heritage Victoria

The *Heritage Act* 1995 'the Act' protects all types of historic cultural heritage relating to the non-indigenous settlement of Victoria, including historic buildings, shipwrecks and archaeological sites. Its main functions are to provide for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects; to establish a Heritage Council; and to establish a Victorian Heritage Register.

The Act defines an archaeological relic as:

- *Any archaeological deposit*
- *Any artefact, remains or material evidence associated with an archaeological deposit which*
- *Relates to the non-Aboriginal settlement or visitation of ... Victoria; and is more than 50 years old.*

Under Section 127 of the Act, it is an offence to disturb or destroy an archaeological site or relic. The Act provides for two categories of listing 1) the Heritage Register (Section 18) and 2) the Heritage Inventory (Section 120).

The Heritage Register

The Heritage Register is a register of all heritage places, relics, buildings, objects or shipwrecks deemed to be of outstanding cultural significance within the State of Victoria. Section 23 of the Act sets out procedures for nomination of a place or object to the Heritage Register. Section 23(4) of the Act states that nominations are required to clearly specify why the place or object must be included in the Heritage Register and are to include an assessment of cultural significance against the criteria published by the Heritage Council. Nominations are assessed by the Executive Director of Heritage Victoria; if accepted, the Executive Director may then recommend to the Heritage Council that the nomination be accepted for inclusion in the Heritage Register. The notice of the recommendation must be published in a newspaper within the area where the place or object is located. Submissions in relation to a recommendation for inclusion in the Heritage Register can be made within 60 days after notification of a decision by the Executive Director. A person with a specific interest in the place or object, such as a property owner or local historical society, may request a hearing by the Heritage Council into a recommendation by the Executive Director for nomination. Archaeological sites or places and relics from any such sites or places can be nominated for the heritage register.

Section 64 of the Heritage Act (1995), states that it is an offence under the Act to disturb or destroy a place or object on the Heritage Register. Under Section 67 of the Act, a person may apply to the Executive Director for a 'Permit to carry out works or activities

in relation to a registered place or a registered object'. Permit applications within the classes of works identified in Section 64 must be referred to the Heritage Council. They must also be publicly advertised and formal notification provided to local government authorities by the Executive Director. The Heritage Council will state, within 30 days of receiving a permit application, whether it objects to the issue of a permit after a period of 30 days. Permit fees apply.

The Heritage Inventory

Section 121 of the Acts states that the Heritage Inventory is a listing of all:

1. Places or objects identified as historic archaeological sites, areas or relics on the register under the *Archaeological and Aboriginal Relics Preservation Act* 1972;
2. All known areas where archaeological relics are located;
3. All known occurrences of archaeological relics; and
4. All persons known to be holding private collections of artefacts or unique specimens that include archaeological relics

Consent from Heritage Victoria is required to disturb or destroy historic archaeological sites, places, buildings or structures listed on the Victorian Heritage Inventory. An application may be made to the Executive Director for a Consent to disturb or destroy an archaeological site or relic listed on the Heritage Inventory under Section 129.

The other relevant sections of the Act include:

- Section 127(1) - A person must not knowingly or negligently deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger a relic except in accordance with a consent issued under Section 129; and
- Section 132(1) - A person who discovers an archaeological relic must as soon as practicable report the discovery to the Executive Director or an inspector unless he or she has reasonable cause to believe that the relic is recorded in the Heritage Register; and
- Section 132(2) - If an archaeological relic is discovered in the course of any construction or excavation on any land, the person in charge of the construction or excavation must as soon as practicable report the discovery to the Executive Director.

D Classification

Heritage Victoria has introduced a 'D' classification for places of low historical or scientific significance. Places assigned a 'D' classification are listed on the Heritage Inventory but there is no requirement to obtain a Consent from Heritage Victoria to allow the removal of these sites. Dry stone walls have often been allocated a 'D: classification.

Landscape Assessment Guidelines for Cultural Heritage Significance 2002

Heritage Victoria has defined the range and types of landscapes which are assessable under the *Heritage Act* 1995 and sets out procedures for their assessment. A cultural landscape is defined as:

'...a geographical area that reflects the interaction between humans and the natural environment. While all landscapes show a human-environment interaction, Heritage Victoria assesses only those landscapes which are predominantly culturally significant for registration and/or protection purposes and which are also typically post-European settlement places' (3).

As with other types of heritage the significance of cultural landscapes is assessed through a range of values. Dry stone walls as a type of fencing and property subdivision fall within an 'organically evolved or vernacular landscape' along with windbreaks and hedges. This is defined as a landscape which is '*developed over time often through incremental changes brought about by patterns of use will typically include designed landscape elements'* (4).

The Heritage Act and the Dry Stone Walls at 40 Dwyer Street Kalkallo

The Victorian Heritage Register lists historic places considered to have State Significance and the Victorian Heritage Inventory allows for the registration of historic archaeological sites.

The level of heritage significance of the dry stone walls at 40 Dwyer Street Kalkallo had yet to be formally considered before this assessment but given the threshold levels of the assessment criteria for the VHR, these walls are not significant at the level of the State. The buried component of the walls (if present) would be limited to foundation stones in shallow contexts and while parts of the wall were ruinous, as with other features noted during Matic's survey, were considered inappropriate for nomination to the HV Inventory.

HV have previously registered dry stone walls, and especially when these were physically associated with other historic features to form a complex of built structures and archaeological deposits. The historical features recorded by Matic at 40 Dwyer Street Kalkallo were well dispersed across the landscape and the dry stone walls were not obviously contemporaneous with other features recorded during the survey; although Matic reasonably assumed an association between the dry stone walls and the dug pits near the stony rise identified as possible sources of stone (see below).

As Di Fazio states in a May 2015 letter of advice:

'in 2004-2005 Heritage Victoria redefined the meaning of 'archaeological places' and determined that dry stone walls would no longer be included in this description. As a result of this policy change all dry stone walls have been removed (delisted) from the

Victorian Heritage Inventory, removing the requirement for obtaining a Consent to Disturb in cases where these walls are removed. Heritage Victoria made it clear that management of dry stone walls would be more appropriately dealt with at a local government level.

The Victorian Planning Provisions (VPP)

The Victorian Planning Provisions (VPP) allows for the preservation of dry stone walls through decision guidelines and the requirement for a permit to demolish and remove. The purpose of the VPP Particular Provision 52-37 is to *'conserve post boxes and dry stone walls'*. The provision states:

Permit requirement

- A permit is required to demolish or remove a post box constructed before 1930.
- A permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the schedule to this provision. This does not apply to:
- Dry stone structures other than walls and fences.
- The demolition or removal of a section of a dry stone wall to install a gate.
- The reconstruction of damaged or collapsing walls which are undertaken to the same specifications and using the same materials as the existing walls.

Decision guidelines

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The significance of the post box or dry stone wall.
- Any applicable heritage study, statement of significance and conservation policy.
- Whether the proposal will adversely affect the significance of the post box or dry stone wall.
- Whether the proposal will adversely affect the significance, character or appearance of the area.

This current study adds to the previous Matic's 2012 and Marshall's 2015 assessments of the dry stone walls at 40 Dwyer Street Kalkallo.

3.0 Field Methods

Scope

As with Marshall's 2015 assessment, the archival documentation presented below was restricted to the main wall that runs east to west across the residential subdivision at 40 Dwyer Street Kalkallo.

Plate 1. Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a well preserved part of the wall as the coping and plugging stones are in place. The stony rise is visible as rocks *in situ* in the ground (27/5/15 Photo R.J. Marshall).

As documented in 2015: '*the wall has been built in a straight line across the stony rise ….and runs in an east to west-north-west direction (107 degrees) for 254 metres. It intersects with two other dry stone walls at either end and these are more-or-less north-south in alignment, dividing the area to the south into sizeable paddocks. At the eastern end of this wall there is a former stockyard constructed of timber planks which includes a loading bay.'*

As the eastern end of this wall had been removed since the 2015 report (as noted above), this current assessment was further restricted to what remained of this wall. The western half of the wall identified as Sections 2 and 3 in the 2015 report is a relatively poorly

built and poorly preserved stretch of wall which appears to have been added to the main east-west alignment some time after the formers completion, representing a separate phase of construction, and was not included in the current study. There are remnants of other dry stone walls at 40 Dwyer Street and these were mapped during Matic's original survey for historical archaeology.

The current report documents the remaining section of the east-west wall. This section is approximately 87 metres long and falls between the following GPS points:

Eastern end: 319744/5843615
Western end: 319829/5843590

This wall is extremely well preserved and of all the walls at 40 Dwyer Street, arguably the best example in terms of dry-wall construction.

Removal of Vegetation

Prior to the commencement of the photography, vegetation including gorse and other woody weeds was removed from either side of the wall. This provided 2 metres of clear ground and allowed for the positioning of the camera tripod at an appropriate distance away from the wall to allow for the photography.

Timing

The wall was photographed by one of us (HA) over 4 days in March 2016.

Photographic recording of the east-west wall

Commencing at its western end and on the southern side, the wall was photographed with the following equipment in the following way:

- An SLR Nikon (D7000) large format camera which was mounted on a tripod and set 1.2 metres parallel to the wall;
- The wall was then photographed in 1-2 metre increments;
- Supplementary to the large format photography , the wall was photographed using a fixed (non-zooming) Sigma 20-70 mm lens when there was sufficient vegetation clearance to move further back from the wall;
- Commencing at 0 metres (the very western end of the wall) the frame for each ca 1+ metre length of wall was recorded using a 4 digit identifier. The + was the overlap necessary to allow for a composite and uninterrupted image that documents the full length of the wall.

This procedure was repeated for the northern side of the wall.

Scale

A standard archaeologist's pole scale (in increments of 200 mm) was used for vertical and horizontal scale.

Definitions

The following definitions have been adopted for the current project and are predominantly based on those provided in Black and Miller (eds.) 1995. These definitions were further developed by Marshall, Paynter and Hyett 2003, and have been used for a number of subsequent assessments and management plans. Some of the basic styles of dry stone wall are illustrated in the DWSA Wall Survey guidelines and in Black and Millar 1995.

- Batter: The inward tapper of the wall from the base to the top.
- Building Stone: The facing stone that forms the outside of the wall.
- Chain: A traditional unit of measurement, 22 yards or 20 metres.
- Cope Stones, Coping or Top Stones: The row of stones along the top of the wall which protects the structure beneath.
- Course: A horizontal layer of stones along the top of a wall.
- Doubling: Dry stone wall built with two faces of stone packed with hearting in between.
- Dry Stone Wall: A wall built of stone without mortar.
- Footing: A stone at the base of the wall or the foundation of the wall.
- Foundation: The first layer of stone at the base of the wall.
- Gap: A breach in a dry stone wall due to defect or damage.
- Head: The smooth, vertical end of a wall or section of wall.
- Hearting: The stones used as filling or packing in a double wall.
- Lintel: A stone slab places over an opening to bridge it and support the structure above.
- Lunky: An opening supported by a lintel at the base of a wall built to allow the passage of sheep.
- Pluggings: Small stones wedged into spaces in a wall face.
- Running Joints: Joints between the stones that run further than two courses without being crossed by another stone.
- Singling: The process of constructing a wall with a single row of stones or one face.
- Through stones: Heavy, large stones placed at regular intervals along the wall to tie the two sides together; usually found inside a wall, and can be identified by protrusions on either side of the wall.
- Wallhead: The end of a length of wall.
- Wedge: A small stone placed under or behind a stone to position it securely.

4.0 Field Results

Photographic Log

Table 1 below presents the photographic log.

Photo number	*Date*	Orientation	Camera	Lens	Description / notes
					South side of wall photo recording west to east
DRI 7689	4/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	4.8 metres from beginning of ruin from the west (see Plan 1)
DRI 7690	4/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	9.4 metres from beginning of ruin from the west (see Plan 2)
DRI 7691	4/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	18.5 metres from beginning of ruin from the west (see Plan 3)
DRI 7692	10/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	General shot of 18.5 m point
DRI 7693	10/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	General shot of 18.5 m point
DRI 7695	10/3/2016	Facing north	Nikon D7000	Sigma 20-70mm	23 metres from beginning of ruin from the west
DRI 7696	10/3 /2016	Facing north	Nikon D7000	Sigma 20-70mm	26.5 metres from beginning of ruin from the west
DRI 7697	10/3 /2016	Facing north	Nikon D7000	Sigma 20-70mm	9.4 metres from beginning of ruin from the west
					A pile of boulders stacked up against the beginning of wall on **south side** obscured view of wall photo recording began approx. 4. 8 metres from the start of wall
Kal	10/3/2016	Facing N	Nikon D700	Sigma 20-70mm	Showing boulders at beginning of wall from south side
WAL 7935	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	4.8m - 6 m
WAL 7936	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	6m- 7.6m
WAL 7937	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	7.6m – 8.6 m
WAL 7938	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	8.6m- 9.6 m
WAL 7940	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	Approx 11 m mark
WAL 7941	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	Approx. 11.8 m mark
WAL 7942	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	12.8m - 14 m
WAL 7943	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	14m -15.2 m
WAL 7944	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	15.2m - 15.8m
WAL 7945	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	15.8m - 17.2m
WAL 7946	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	17.2m - 18.3m

WAL 7949	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	18.3m - 19.3 m
WAL 7950	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	19.3m - 20.3m
WAL 7951	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	20.3m - 21.4m
WAL 7955	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	21.4m - 22.9m
WAL 7957	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	22m.- 24.3m
WAL 7958	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	24.3m - 25.2m
WAL 7959	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	25.2m - 26.2m
WAL 7960	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	26.2m - 27.5 m
WAL 7961	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	27.5m - 28.6 m
WAL 7963	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	28.5m - 29.6 m
WAL 7968	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	29.6m – 30.6m
WAL 7970	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	30.6m -31.5 m
WAL 7971	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	31.5m - 32.8m
WAL 7973	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	32.8m - 33.8 m
WAL 7974	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	33.7m - 34.8m
WAL 7978	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	34m - 35.9m
WAL 7979	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	35.2m - 37.2m
WAL 7982	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	37.2m - 38.9m
WAL 7984	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	38.9m - 39.8m
WAL 7985	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	39.8m - 41 m
WAL 7986	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	41m - 42m
WAL 7988	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	42m - 43.4m
WAL 7989	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	43.4m - 44.8m
WAL 7991	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	44.8m - 45.8m
WAL 7992	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	45.8m - 46.8 m
WAL 7993	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	46.8m - 47.4m
WAL 7994	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	47.4m - 48.8m
WAL 7995	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	48.8m - 49.8m
WAL 7996	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	49.8m - 50.8 m
WAL 7997	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	50.8m - 51.8 m

WAL 7998	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	51.8m - 53.4 m
WAL 8000	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	53.4m - 54.8 m
WAL 8001	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	54.8m - 55.8m
WAL 8002	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	55.8m - 58.3m
WAL 8003	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	58m - 59.8 m
WAL 8004	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	59m - 61 m
WAL 8006	10/3 /2016	Facing west	Nikon D7000	Sigma 20-70mm	General shot south side
WAL 8007	10/3 /2016	Facing N	Nikon D7000	Sigma 20-70mm	General shot south side
WAL 8008	10/3 /2016	Facing N	Nikon D7000	Sigma 20-70mm	19 mt mark
WAL 8009		Facing N	Nikon D7000	Sigma 20-70mm	23 mt mark
WAL 8010	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	61m - 62m
WAL 8011	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	62m - 64.8m
WAL 8014	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	64m
WAL 8015	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	66m - 68.8m
WAL 8016	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	68m - 70 m
WAL 8017	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	70m - 73m
WAL 8018	10/3 /2016	Facing north	Nikon D7000	Nikon 50mm	73m - 74m
WAL 8020	10/3 /2016	Facing north	Nikon D7000	Sigma 20-70mm	70m -m75m
WAL 8021	10/3 /2016	Facing north	Nikon D7000	Sigma 20-70mm	75m - 79.8m
WAL 8023	10/3 /2016	Facing north	Nikon D7000	Sigma 20-70mm	77m - 80.8m
WAL 8024		Facing north	Nikon D7000	Sigma 20-70mm	80m - 83.3m
WAL 8025		Facing north		Sigma 20-70mm	End of wall south side approx 80mt mark
WAL 8026		Facing N		Sigma 20-70mm	East corner (end) of south side
WA 8027		Facing n		Sigma 20-70mm	East corner (end) of south side
WA 8028		Facing E		Sigma 20-70mm	East paddock wall
					North side photo recording from west to east
WAL 8032	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	0 - 2m
WAL 8033	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	2m - 4m
WAL 8034	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	4m - 6.6m
WAL 8035	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	Wider view 0 - 4mt

WAL 8036	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	4m - 7.6m
WAL 8041	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	0 - 7.6m
WAL 8042	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	7 mt mark
WAL 8043	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	7mt mark
WAL 8044	11/3/2016	Facing south	Nikon D7000	Sigma 20-70mm	7m - 11mt mark
WAL 8045	11/3/2016	Facing south	Nikon D7000	Nikon 50mm	6mt mark
WAL 8046	11/3/2016	Facing south	Nikon D7000	Nikon 50mm	5.7m - 7m
WAL 8047	11/3/2016	Facing south	Nikon D7000	Nikon 50mm	7m - 11m
WAL 8048	11/3/2016	Facing south	Nikon D7000	Nikon 50mm	7m - 11m
WAL 8049	11/3/2016	Facing south	Nikon D7000	Nikon 50mm	10m - 11.2m
WAL 8050	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	11m - 12
WAL 8052	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	12m - 14m
WAL 8053	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	14m - 15.3m
WAL 8054	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	15.2m - 16.4 m
WAL 8056	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	15.2m - 16.4 m
WAL 8057	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	17.4m - 18.5m
WAL 8060	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	18.5m - 20m
WAL 8061	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	20mt mark
WAL 8062	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	20m - 22m
WAL 8063	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	22m - 24m
WAL 8064	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	24m - 26m
WAL 8065	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	25m - 27m
WAL 8066	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	32m - 34m
WAL 8067	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	34m - 35.5m
WAL 8068	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	35.5m - 37.3m
WAL 8066	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	32m - 34m
WAL 8067	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	34m - 35.5m
WAL 8068	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	35.5m - 37.3m
WAL 8069	11/3/2016	Facing south	Nikon D7000	Sigma 24-70mm	37m - 39.2m
WAL 8070	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	39m - 40.1m

WAL 8071	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	39m - 40.1 m
WAL 8072	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	46m - 49m
WAL 8073	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	48m - 50m
WAL 8074	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	50m - 52m
WAL 8075	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	58m - 60m
WAL 8076	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	60m - 62m
WAL 8078	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	62m - 64m
WAL 8079	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	64m - 66m
WAL 8080	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	64m - 66m
WAL 8081	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	72m - 74m
WAL 8082	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	74m -m76m
WAL 8083	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	74m - 76m
WAL 8084	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	75m - 77m
WAL 8065	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	77m - 78.8m
WAL 8086	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	80.3m - 82.3m
WAL 8087	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	82m - 84m
WAL 8088	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	84m - 86m
WAL 8089	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	General shots of wall
WAL 8091	11/3/2016	Facing S/E	Nikon D7000	Sigma 24 70mm	Facing S/E north side
WAL 8091	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	Facing E north side
WAL 8092	11/3/2016	Facing N/W	Nikon D7000	Sigma 24 70mm	Facing S/E north side
WAL 8093	11/3/2016	Facing N/W	Nikon D7000	Sigma 24 70mm	Facing N/E south side
WAL 8094	11/3/2016	Facing N/W	Nikon D7000	Sigma 24 70mm	Facing N/E south side
WAL 8095	11/3/2016	Facing N/W	Nikon D7000	Sigma 24 70mm	Facing N/W south side
WAL 8096	11/3/2016	Facing S	Nikon D7000	Sigma 24 70mm	Area 27m -28.8m north side
WAL 8097	11/3/2016	Facing south	Nikon D7000	Sigma 24 70mm	28.5m - 30.2m
WAL 8098	11/3/2016	Facing S	Nikon D7000	Sigma 24 70mm	30m - 32m
WAL 8099	11/3/2016	Facing E	Nikon D7000	Sigma 24 70mm	General shot area of north side from 30mt mark facing E
WAL 8102	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	General shot area of north side from 30mt mark facing E
WAL 8104	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	North side of north wall from 60 mt mark facing east

WAL 8105	11/3/2016	Facing West	Nikon D7000	Sigma 24 70mm	From 60 mt mark facing west
WAL 8107	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	From 30 mt mark facing east
WAL 8108	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	Facing east from 30mt mark
WAL 8109	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	Facing east from 30mt mark
WAL 8110	11/3/2016	Facing East	Nikon D7000	Sigma 24 70mm	Facing east from 60mt mark
WAL 8111	11/3/2016	Facing West	Nikon D7000	Sigma 24 70mm	Facing west from 60mt mark

North side of the wall

The following photographs (Plates 2 and 3) record the north side of the wall.

N.B. photo placement sequence beginning from the east

WAL 8089 86-88m

WAL 8088 86-84m

WAL 8087 84-82m

WAL 8086 82.3-80.3m

78-80 no access

WAL 8085 78.8-77m

WAL 8084 77-75m

WAl 8083 74-76m

WAL 8082 76-74m

WAL 8081 74-72m

66-72m no access

WAL 8080 66-64m

WAL 8078 64-62m

WAL 8076 62-60m

WAL 8075 58-60m

52-58 no access

WAL 8074 52-50m

WAL 8073 50.2-48m

WAL 8096 32-27m

WAL 8065 27-25m

WAL 8064 26-24m

WAL 8063 24-22m

WAL 8062 22-20m

WAL 8061 21m-22m

WAL 8060 20-18m

WAL 8057 18-17.4m

WAL 8056 17.6-16.4m

WAL 8054 16-15.2m

15.2-14m

WAL 8052 14-12m

WAL 8050 12-11m

WAL 8049 11.2-10m

WAL 8048 11-7m

WAL 8046 7-5mt

WAL 8045 6m mark

N.B. photo placement sequence beginning from the east

WAL 8044 11-7m

WAL 8043 7m mark

WAL 8041 7.6m - start

WAL 8037 7.6-4m

WAL 8034 6-4m

WAL 8033 4-2m

WAl 8032 2- start m

WAL 8035 4m -start

South side of the wall

The following photographs (Plates 4 and 5) record the south side of the wall.

WAL 7935 4.8m - 6m

WAL 7936 6m -7.6 m

WAL 7937 7.6- 8.6m

WAL 7938 8.6- 9.6m

WAL 7940 11 m mark

WAL 7941 11.8 m mark

WAL 7942 12.8- 14 m

WAl 7943 14.-15.2 m

WAL 7944.15.2-15.8m

WAL 7945 15.8-17.2 m

WAL 7946.17.2-18.3 m

WAL 7949 18.3- 19.3m

WAL 7950 19.2-20.3m

WAL 7951 20.3-21.4 m

WAL 7955 21.4-22.9m

WAL 7957 22.9-24.3m

WAL 7958 24.3-25.2m

WAL 7959 25.2- 26.2 m

WAL 7960 26.2- 27.5 m

WAL 7961 27.5-28.6 m

WAL 7963 28.6- 29.6 m

WAL 7968 29.6-30.6m

WAL 7970 30.6-31.5m

WAL 79371 31.5- 32.8m

WAL 7973 32.8-33.8m

WAL 7974 33.8-34.8m

WAL 7978 34-35.9m

WAL 7979 35.2-37.2m

WAL 7982 37.2-38.9

WAL 7984 38.9-39.8m

WAL 798539.8-41m

WAL 7986 41-42m

WAL 7988 42-43.4

WAL 7989 43.4-44.8m

WAL 7991 44.8-45.8m

WAL 7992 45.8-46.8m

WAL 7993 46.8-47.4m

WAL 7994 47.4-48.8m

WAL 7995 48.8-49.8m

WAL 7996 49.8-50.8m

WAL 7997 50.8-51.8m

WAL 7998 51.8-53.4

WAl 8000 53.4-54.8m

WAL 8001 54.8- 55.8m

WAL 80020 55.8-58m

WAL 8003 58-59.8m

WAL 8004 59-61m

WAL 8010 61-62m

WAL 8011 62-64.8m

WAL 8014 64 m mark

WAL 8015 66.8-68.8

WAL 8016 68-70.8m

WAL 8017 70-73.1m

WAL 8018 73.1-74.5m

WAL 8020 70-75m

WAL 8021 75-79.1m

WAL 8023 77-80.8

WAL 8024 80.8-83.3m

Complete Walls

The following photographs show both sides of the east-west wall as continuous images, the results of joining the separate photographs into composites. The first composite is of the north side of the wall (Plate 6); the second composite is of the southern side (Plate 7). The differences in colour were unavoidable as this is due to changing light conditions during the day as the wall was being photographed.

KALKALLO DRY STONE WALL

NORTH PROFILE

1. Beginning from the west at the beginning of wall
Approx. 27- 0 mt area

0 1 m

2. Approx. 38- 32 mt. area

0 1 m

3. Approx. 52- 46 mt. area

0 1 m

4. Approx 88-86 mt. mark end of wall

0 1 m

5. Approx. 78- 72 mt. area

0 1 m

6. Approx. 62 mt. area

0 1 m

KALKALLO DRY STONE WALL

SOUTH PROFILE

1. Beginning from the west at the beginning of wall
Approx. 4.8 - 33 mt area

0 1 m

2. Approx. 33- 38 mt. area

0 1 m

3. Approx. 41- 61mt. area

0 1 m

4. Approx 66-83 mt. mark end of wall

0 1 m

5.0 Management of the Dry Stone Wall

Significance and Impact Statements

Significance and impact assessments were addressed in the 2016 report (Appendix 1).

In summary, from a heritage perspective, the east-west wall retains local significance but this has been reduced as the wall no longer functions as a rural wall in a rural landscape. As was also discussed, the civil engineering requirements of the subdivision do not allow for the *in situ* retention and conservation of what remains of the east-west wall. The east-west wall has been built along the top of a stony rise and the removal of this rise is necessary for the construction of roads, other infrastructure and housing.

Towards a Management Plan

National Pacific has yet to decide if and how the stone from the east-west dry stone wall will be incorporated into the landscape design of the existing housing subdivision. The following section is based on the relevant contents of Johnson's (2010) guide.

Heritage Significance within an Urban Setting

The heritage significance of the wall is partially retained in its fabric, this being volcanic stone collected from the local paddocks; in the use of this stone for walling which served to divide open land into management paddocks; and in the method of construction, this being dry stone walling techniques. Whilst there is no prospect for *in situ* retention, these values can be retained (albeit in a different form) in a modern urban setting through the proper salvage and reuse of the stone.

Dismantling the Wall

- This must be done in a careful and systematic manner, preferably not during the winter, and in a fashion that does not break, chip or otherwise damage the stone;
- This must be done under the supervision of a suitably qualified heritage professional, preferably an archaeologist;
- Dismantling of the wall provides an opportunity for further assessment and documentation of the wall as recommended in the 2015 report.

Salvage and Storage of Material

- The salvaged stone from the east-west wall must be stored at a suitable location and in a manner that protects the stone from any future works, preferably where earthworks are not planned or where they have been completed.

Options for the salvage and reuse of the stone

As the east-west wall cannot be retained *in situ* it may be possible to:

- Dismantle a representative part of this wall in a systematic fashion and to precisely reconstruct it at an appropriate location elsewhere within the subdivision, fronted by suitable signage which informs the public about its origins and significance;
- Reutilize the stone from the wall in new gabion style walls or partitions or in plantation areas within the subdivision as part of landscaping works;
- To construct decorative walls which reuse select stone salvaged from the wall and sorted (according to shape and size classes). The construction of these decorative walls should replicate the basic construction design of the dry stone wall with base rocks, plugging, face and capping stone and infill rock
- The subdivision design may still provide an opportunity for the retention of sections of stone wall that fall within reserve or open space. The open space may also provide an opportunity for a reconstructed section of dry stone wall with some interpretation in recognition of the importance of the former walls.

National Pacific should consider these options in consultation with the COH.

Landscape Plan

National Pacific should

- produce a landscape plan for the subdivision which shows how and where the stone from the east-west dry stone wall is being utilized;
- develop specifications for contractors to undertake the necessary works

References

Black, J. and A. Miller (eds) 1995
If These Walls Could Talk. Corangamite Arts Council, Terang.
Chamberlain, M. 2004

Di Fazio, B. 2015
Unpublished Letter to Ed Krushka. Re Management of Dry Stone Walls, Cloverton Estate.

Gardiner, R. 2007
Technical note for Photographic Recording for Heritage places and Objects; Heritage Victoria (Department of Planning and Community Development)

Marshall, B. 2015
The east-west dry stone wall at 40 Dwyer Street, Kalkallo. Unpublished report

Marshall B., N. Paynter and J. Hyett 2003
An Archaeological Assessment of Dry Stone Walls at Brentwood Park; 100 O'Herns Road – Epping North. A report prepared on behalf of A.V. Jennings.

Matic, A. 2012
Historical Archaeological Assessment: 40 Dwyer Street, Kalkallo. Unpublished Report.

Appendix 1

The 2015 Dry Stone Wall Report

The east-west dry stone wall at 40 Dwyer Street Kalkallo

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1.0 Introduction

TerraCuture Pty Ltd was commissioned by National Pacific to undertake an assessment of the dry stone walls at 40 Dwyer Street in Kalkallo. The property had been the subject to a previous post contact archaeological assessment and the dry stone walls mapped and assessed for their association with other historic features.

At the time of TerraCuture's commission the following was the case:

- National Pacific had an approved plan of subdivision which did not incorporate the dry stone walls into the design, therefore the dry stone walls were to be destroyed;
- Earth moving machinery had commenced ground works at the eastern end of the subdivision adjacent to a stony rise where the east-west dry stone wall which is the subject of this report is located;
- The eastern end of the east-west dry stone wall had been fenced with temporary fencing to physically separate and protect the wall from on-going works;
- National Pacific were directed by the City of Hume to undertake a further assessment of the east-west wall which among other things would provide further description of this wall and address its significance from a heritage perspective.

National Pacific were uncertain as to the scope of the additional assessment and therefore its conduct and the content of this report. In order to satisfy the concerns of the Hume City Council, TerraCuture advised National Pacific that they probably needed to present documentation of the east-west dry stone wall equivalent to that in a dry stone wall management plan, where a change in land use was proposed. Given that there are no plans to retain the east-west wall within the approved subdivision, this documentation would be an archive to be lodged with the Hume City Council. However, given the uncertainty of the instruction from the City of Hume to National Pacific this report may not meet their expectations or planning requirements.

The contents of this report are:

- a background section which summarizes the previous assessments at 40 Dwyer street Kalkallo and more general statements on the significance of dry stone walls within the City of Hume, specifically Moloney and Johnson (1998);
- a summary on the relevant heritage legislation and other potential stauatory protection
- the results of the field assessment including a map and photographs which document the alignment of the east-west wall and its state of preservation
- an impact assessment;
- a statement on the significance of the east-west dry stone wall;
- management recommendations.

2.0 Background

Rural properties on the volcanic plains to the north and west of Melbourne often retain dry stone walls which delineate property boundaries, internal paddocks and smaller enclosures that functioned as pens for stock. Dry stone walls have been the subject of heritage studies ranging from property specific assessments where they are recorded in the wake of proposed developments to shire-wide assessments for the purpose of recording, management and protection (see Planning Collaborative 2011, Vines 1015). Other studies have focused on management and preservation in response to specific development proposals where dry stones walls have been retained and preserved as part residential subdivision.

As a result of the above, previous studies of dry stone walls from a heritage perspective has generated an extensive literature. This following review is restricted to specific statements immediately relevant the east-west dry stone wall at 40 Dwyer Street Kalkallo.

A brief account of rural fencing in colonial Victoria is presented in Appendix 3 of this report.

2.1 The City of Hume Heritage Study

Moloney and Johnson (1988) conducted the City of Hume Heritage Study, (Hume City Heritage Study: Former Shire of Bulla District, 1998) which was a shire wide assessment of post-contact heritage in the former shire of Bulla District. The report includes a section on rural fencing in which they state:

The remnant early fences of the study area, in particular the comparatively numerous dry-stone walls are one of the most important parts of the rural heritage and cultural landscape. They tell of the natural history of the volcanic creation of the area, and of the cultural history of its human modification…The stone walls also express eighteenth and nineteenth century European farming traditions, and the modification of these practices in the circumstances of the study area' (Moloney and Johnson 1988: 113-114)

Maloney and Johnson go on to explain how much of the stone wall construction in the former Shire of Bulla District occurred from 1850 to1880. The 1850s makes the commencement of 'more intensive land divisions' within the colony and where stock had to be secured and boundaries marked and the latter date the availability of cheaper fencing materials.

They explain:

Stone was the most popular material within those parts of the study area that had volcanic fieldstone scattered on the land. Stone fencing resolved the needs of clearing the land of rocks, and for fencing materials. (Moloney and Johnson 1988: 114)

With regards to construction they state:

The typical stone fence of the study area reflects the particular geography and history of the locality, and are important for this reason…In most of the study area, the remnant early fences are characteristically a combination of these materials,(timber and stone) *with low stone walls, and split timber and wire above(or, rarely timber rail. Although the wire fencing introduced in the 1850s was cheaper than either stone or post-and-rail fencing, the local availability of stone, and the relatively low cost of labour in the late 1850s and early 1860s, made the more laborious stone construction economically competitive (*Moloney and Johnson 1988: 114).

Ford and Vines (2000) covered those parts of the City of Hume Heritage Study which due to the restructuring of local government areas by the State Government were missed in Moloney and Johnson's (1988) study. These areas included Kalkallo. This extensive report aimed to 'identify document and assess the significance of local heritage places, and to recommend to Hume City Council measures by which this heritage can be preserved and promoted'. The report was completed in several parts including and environmental history which covered 'the European settlement of the plains' in which the early purchase (1840) of land in Kalkallo is discussed (6); the development of industries such as quarries; the establishment of early townships including Donnybrook and Kalkallo (37)and associated infrastructure such as roads and schools and housing..

Kalkallo was identified by Ford and Vines (2000) as a heritage place and individual places were recommended for various levels of statutory protection within the study area; to the HO the VHR, the HI and the RNE. These places included a wide range of historic built, archaeological sites and landscape features. Kalkallo was one of five heritage areas recommended for the HO as was the Kinlochewe landscape which is between Kalkallo and Cragieburn (centered on Merri Creek). Within the Kalkallo heritage area a number of built places and landscape features with particular heritage significance were noted including the dry stone walls associated with the cemetery (south and east thereof). Drystone walls elsewhere in the study areas were also identified and recommended for protection on the HO.

The dry stone walls at 40 Dyer Street in Kalkallo do not appear to be listed by Ford and Vines (2000). Given the wide scope and at times restricted access to private property shire-wide assessments cannot be expected identify all the significant heritage within a local government area.

As discussed below, during Matic's original assessment, there were no HO listings at 40 Dyer Street in Kalkallo.

2.2 Previous Survey for Historical Archaeology at 40 Dwyer Street Kalkallo

A previous survey of the historical archaeology at 40 Dwyer Street Kalkallo was undertaken by Matic in 2012 (Heritage Victoria Project No 4058) Matic's desktop included a history of ownership from the 1840's and a search of the heritage registers,

including the HV Inventory and the HOs of the relevant local councils including the City of Hume. There had been no previous surveys of historical archaeology or registered archaeological sites at 40 Dwyer Street and no places listed on the HOs at the time of the survey. The field assessment recorded several historical features, including dry stone walls, and resulted in a registration with HV of one of these features; the 'Kalkallo Stone Feature' (H7822-2302). Of the historic features noted during the survey, H7822-2302 was considered by Matic to be the only one with archaeological potential and the only feature registered with HV.

Matic's assessment was based on the potential historical archaeology at 40 Dwyer Street Kalkallo with recommendations for the further archaeological investigation of H7822-2302. There was also a recommendation for monitoring of the removal of the other historic features recorded during the survey in the event that significant archaeological deposits are uncovered.

2.3 Matic's Assessment of the Dry Stone Walls at 40 Dwyer Street Kalkallo

As extant built structures with little archaeological potential and limited statutory protection, the dry stone walls were not recorded in any detail by Matic and were not discussed for their significance.

2.4 Fazio's Assessment of the Dry Stone Walls at 40 Dwyer Street Kalkallo

Fazio (2015) provided a statement on the management of the dry stone walls at 40 Dwyer Street Kalkallo (Cloverton Estate) based on a preliminary inspection conducted on May 7th 2015 and states:

The majority of the walls (approximately 60%) are in a degraded state and make only a limited contribution to the overall heritage value of the property, and those sections of wall in better repair are located primarily on one of the many stony rises common to the region, and which needed to be removed in order to facilitate the planned subdivision. In general it is my assessment that the walls in question should not be ascribed high levels of significant, and therefore the removal of these sections of stone wall should be permitted.

Her reasoning includes that; such stone walls are no longer considered by Heritage Victoria to be archaeologically significant; that none of the walls are associated with other extant structures or other archaeological sites or features; that 60 percent of the walls are in a state of disrepair; and comparatively on a regional scale citing Maloney's 2011 report for 220 Epping Road Wollert, the 'representativeness and integrity of the walls are significantly reduced.'

Her management recommendations consider two possible actions: detailed recoding and/or the dismantling and reconstruction of a section of wall elsewhere on the estate.

3.0 Legislative Protection and the status of Dry Stone Walls at 40 Dwyer Street Kalkallo

Heritage Victoria

The *Heritage Act* 1995 'the Act' protects all types of historic cultural heritage relating to the non-indigenous settlement of Victoria, including historic buildings, shipwrecks and archaeological sites. Its main functions are to provide for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects; to establish a Heritage Council; and to establish a Victorian Heritage Register.

The Act defines an archaeological relic as:

- *Any archaeological deposit*
- *Any artefact, remains or material evidence associated with an archaeological deposit which*
- *Relates to the non-Aboriginal settlement or visitation of ... Victoria; and is more than 50 years old.*

Under Section 127 of the Act, it is an offence to disturb or destroy an archaeological site or relic. The Act provides for two categories of listing 1) the Heritage Register (Section 18) and 2) the Heritage Inventory (Section 120).

The Heritage Register

The Heritage Register is a register of all heritage places, relics, buildings, objects or shipwrecks deemed to be of outstanding cultural significance within the State of Victoria. Section 23 of the Act sets out procedures for nomination of a place or object to the Heritage Register. Section 23(4) of the Act states that nominations are required to clearly specify why the place or object must be included in the Heritage Register and are to include an assessment of cultural significance against the criteria published by the Heritage Council. Nominations are assessed by the Executive Director of Heritage Victoria; if accepted, the Executive Director may then recommend to the Heritage Council that the nomination be accepted for inclusion in the Heritage Register. The notice of the recommendation must be published in a newspaper within the area where the place or object is located. Submissions in relation to a recommendation for inclusion in the Heritage Register can be made within 60 days after notification of a decision by the Executive Director. A person with a specific interest in the place or object, such as a property owner or local historical society, may request a hearing by the Heritage Council into a recommendation by the Executive Director for nomination. Archaeological sites or places and relics from any such sites or places can be nominated for the heritage register.

Section 64 of the Heritage Act (1995), states that it is an offence under the Act to disturb or destroy a place or object on the Heritage Register. Under Section 67 of the Act, a person may apply to the Executive Director for a 'Permit to carry out works or activities

in relation to a registered place or a registered object'. Permit applications within the classes of works identified in Section 64 must be referred to the Heritage Council. They must also be publicly advertised and formal notification provided to local government authorities by the Executive Director. The Heritage Council will state, within 30 days of receiving a permit application, whether it objects to the issue of a permit after a period of 30 days. Permit fees apply.

The Heritage Inventory

Section 121 of the Acts states that the Heritage Inventory is a listing of all:

1. Places or objects identified as historic archaeological sites, areas or relics on the register under the *Archaeological and Aboriginal Relics Preservation Act* 1972;
2. All known areas where archaeological relics are located;
3. All known occurrences of archaeological relics; and
4. All persons known to be holding private collections of artefacts or unique specimens that include archaeological relics

Consent from Heritage Victoria is required to disturb or destroy historic archaeological sites, places, buildings or structures listed on the Victorian Heritage Inventory. An application may be made to the Executive Director for a Consent to disturb or destroy an archaeological site or relic listed on the Heritage Inventory under Section 129.

The other relevant sections of the Act include:

- Section 127(1) - A person must not knowingly or negligently deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger a relic except in accordance with a consent issued under Section 129; and
- Section 132(1) - A person who discovers an archaeological relic must as soon as practicable report the discovery to the Executive Director or an inspector unless he or she has reasonable cause to believe that the relic is recorded in the Heritage Register; and
- Section 132(2) - If an archaeological relic is discovered in the course of any construction or excavation on any land, the person in charge of the construction or excavation must as soon as practicable report the discovery to the Executive Director.

D Classification

Heritage Victoria has introduced a 'D' classification for places of low historical or scientific significance. Places assigned a 'D' classification are listed on the Heritage Inventory but there is no requirement to obtain a Consent from Heritage Victoria to allow the removal of these sites. Dry stone walls have often been allocated a 'D: classification.

Landscape Assessment Guidelines for Cultural Heritage Significance 2002

Heritage Victoria has defined the range and types of landscapes which are assessable under the *Heritage Act* 1995 and sets out procedures for their assessment. A cultural landscape is defined as:

'...a geographical area that reflects the interaction between humans and the natural environment. While all landscapes show a human-environment interaction, Heritage Victoria assesses only those landscapes which are predominantly culturally significant for registration and/or protection purposes and which are also typically post-European settlement places' (3).

As with other hypes of heritage the significance of cultural landscapes is assessed a range of values. Dry stone walls as a type of fencing and property subdivision fall within an 'organically evolved or vernacular landscape' along with windbreaks and hedges. This is defined as a landscape which is '*developed over time often through incremental changes brought about by patterns of use will typically include designed landscape elements'* (4).

The Heritage Act and the Dry Stone Walls at 40 Dwyer Street Kalkallo

The Victorian Heritage Register lists historic places considered to have State Significance and the Victorian Heritage Inventory allows for the registration of historic archaeological sites.

The level of heritage significance of the dry stone walls at 40 Dwyer Street Kalkallo had yet to be formally considered before this assessment but given the threshold levels of the assessment criteria for the VHR, these walls not significant at the level of the State. The buried component of the walls (if present) would be limited to foundation stones in shallow contexts and while parts of the wall were ruinous, as with other features noted during Matic's survey, were considered inappropriate for nomination to the HV Inventory.

HV have previously registered dry stone walls, and especially when these were physically associated with other historic features to form a complex of built structures and archaeological depsoits. The historic features recorded by Matic at 40 Dwyer Street Kalkallo were well dispersed across the landscape and the dry stone walls were not obviously contemporaneous with other features recorded during the survey; although Matic reasonably assumed an association between the dry stone walls and the dug pits near on the stony rise identified as possibly sources of stone (see below).

As Fazio states in her May 2015 letter of advice:

'in 2004-2005 Heritage Victoria redefined the meaning of 'archaeological places' and determined that dry stone walls would no longer be included in this description. As a result of this policy change all dry stone walls have been removed (delisted) from the Victorian Heritage Inventory, removing the requirement for obtaining a Consent to Disturb in cases where these walls are removed. Heritage Victoria made it clear that

management of dry stone walls would be more appropriately dealt with at a local government level (:

The Victorian Planning Provisions (VPP)

The Victorian Planning Provisions (VPP) allows for the preservation of dry stone walls through the requirement of a permit to demolish and remove and decision guidelines. The purpose of the VPP Particular Provision 52-37 is to 'conserve post boxes and dry stone walls'. The provision states:

Permit requirement

- A permit is required to demolish or remove a post box constructed before 1930.
- A permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the schedule to this provision. This does not apply to:
- Dry stone structures other than walls and fences.
- The demolition or removal of a section of a dry stone wall to install a gate.
- The reconstruction of damaged or collapsing walls which are undertaken to the same specifications and using the same materials as the existing walls.

Decision guidelines

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The significance of the post box or dry stone wall.
- Any applicable heritage study, statement of significance and conservation policy.
- Whether the proposal will adversely affect the significance of the post box or dry stone wall.
- Whether the proposal will adversely affect the significance, character or appearance of the area.

This current study adds to the previous assessments of the dry stone wall at 40 Dwyer Street Kalkallo and provides a statement of significance.

4.0 The Field Assessment

As noted in the introduction this assessment focused on the main wall that runs east to west across the residential subdivision at 40 Dwyer Street Kalkallo. There are remnants of other dry stone walls at this address and these were mapped during Matic's original survey for historical archaeology.

Definitions

The following definitions have been adopted for the current project and are predominantly based on those provided in Black and Miller (eds.) 1995. These definitions were further developed by Marshall, Paynter and Hyett 2003, and have been used for a number of subsequent assessments and management plans. Some of the basic styles of dry stone wall are illustrated in the DWSA Wall Survey guidelines and in Black and Millar 1995.

- Batter: The inward tapper of the wall from the base to the top.
- Building Stone: The facing stone that forms the outside of the wall.
- Chain: A traditional unit of measurement, 22 yards or 20 metres.
- Cope Stones, Coping or Top Stones: The row of stones along the top of the wall which protects the structure beneath.
- Course: A horizontal layer of stones along the top of a wall.
- Doubling: Dry stone wall built with two faces of stone packed with hearting in between.
- Dry Stone Wall: A wall built of stone without mortar.
- Footing: A stone at the base of the wall or the foundation of the wall.
- Foundation: The first layer of stone at the base of the wall.
- Gap: A breach in a dry stone wall due to defect or damage.
- Head: The smooth, vertical end of a wall or section of wall.
- Hearting: The stones used as filling or packing in a double wall.
- Lintel: A stone slab places over an opening to bridge it and support the structure above.
- Lunky: An opening supported by a lintel at the base of a wall built to allow the passage of sheep.
- Pluggings: Small stones wedged into spaces in a wall face.
- Running Joints: Joints between the stones that run further than two courses without being crossed by another stone.
- Singling: The process of constructing a wall with a single row of stones or one face.
- Through stones: Heavy, large stones placed at regular intervals along the wall to tie the two sides together; usually found inside a wall, and can be identified by protrusions on either side of the wall.
- Wallhead: The end of a length of wall.
- Wedge: A small stone placed under or behind a stone to position it securely.

Survey of the east-west wall

The field assessment commenced as a survey of the east-west wall, recording the start and end points and any directional changes. The full length of the wall was surveyed and viewed by not closely examined as access was hampered by Hawthorn or Boxthorn, Briar, Gorse and other weeds. Weeds were removed along some sections of wall to allow for recording and photography.

Wall Sections

The survey demonstrated that the east west wall at 40 Dwyer Street Kalkallo varies along its alignment in terms of construction and straightness and can be divided into three separate walls which for the remaindered of the report will be referred to as Walls 1 2 or 3. These are connected and form a continuous wall in the sense that there are no obvious breaks or openings but are different enough in preservation and construction to be considered separately.

The survey also demonstrated that the east-west wall was homogeneous in terms of fabric and that it was not necessary to document the entire stone wall or sections thereof in detail. Due to its relative low height it is possible that the eastern end of the wall may have been a composite type, comparable to other walls on the property but lacked the additions of timber posts or the modern equivalent that would confirm this observation.

For the purpose of more detailed recording the wall was selectively sampled according variability in height (and related to this degree of preservation) and changes in stone size and shape. Some sections of wall are in very poor condition with the lower stones only in place, bordered by tumbled rocks. Other sections are complete and retain the coping stones. Degree of preservation was one of the obvious differences between and along any section of wall, and was the obvious variable to record.

Recording of Extent

The beginning and end point of each of the three walls as well as any changes in direction were recorded with a hand held GPS and confirmed on the aerial photography. The form and condition of each sampled section was recorded on a recording sheet and photographed. The section of wall that was recorded in detail varied between the north and south sides, depending on access and exposure.

Degree of preservation

Measuring how well a dry stone wall is preserved has been considered in number of assessments and can be based on classes or a description of condition from ‘excellent’ to ‘derelict’ and whether the wall is stockproof or not. For the east-west wall at 40 Dwyer

Street Kalkallo preservation was measured according to completeness and was divided into three categories;

1. Poor- most of the wall collapsed or represented by foundation stones or tumbles of stone only;
2. Good-some stone missing but upright *in situ* sections where some capping may still be in place;
3. Excellent-complete sections that are stockproof with stone insitu including capping.

<u>Metrical and Non-metrical Attributes (Figure 1 below)</u>

For each 1m sample section of wall the following details were recorded:

- The location of the wall and the location of the sampled section;
- Construction techniques according to:
    - double or single faced,
    - the presence of coping stones,
    - the presence of hearting,
    - the presence of plugging,
    - non-stone additions such as post, wire, pickets, and their frequency;
- Dimensions according to
    - height,
    - width,
    - width of collapse if present;
- Function of stones according to location or position on the wall and size;
- Size of stones according to:
    - Average side in the upper and lower halves of the wall;
- Stage of preservation

Photographs of each section of wall were taken with a scale demonstrating the width, height and thickness of each of the sampled sections. In addition, notes were taken on the general appearance and condition of each wall section.

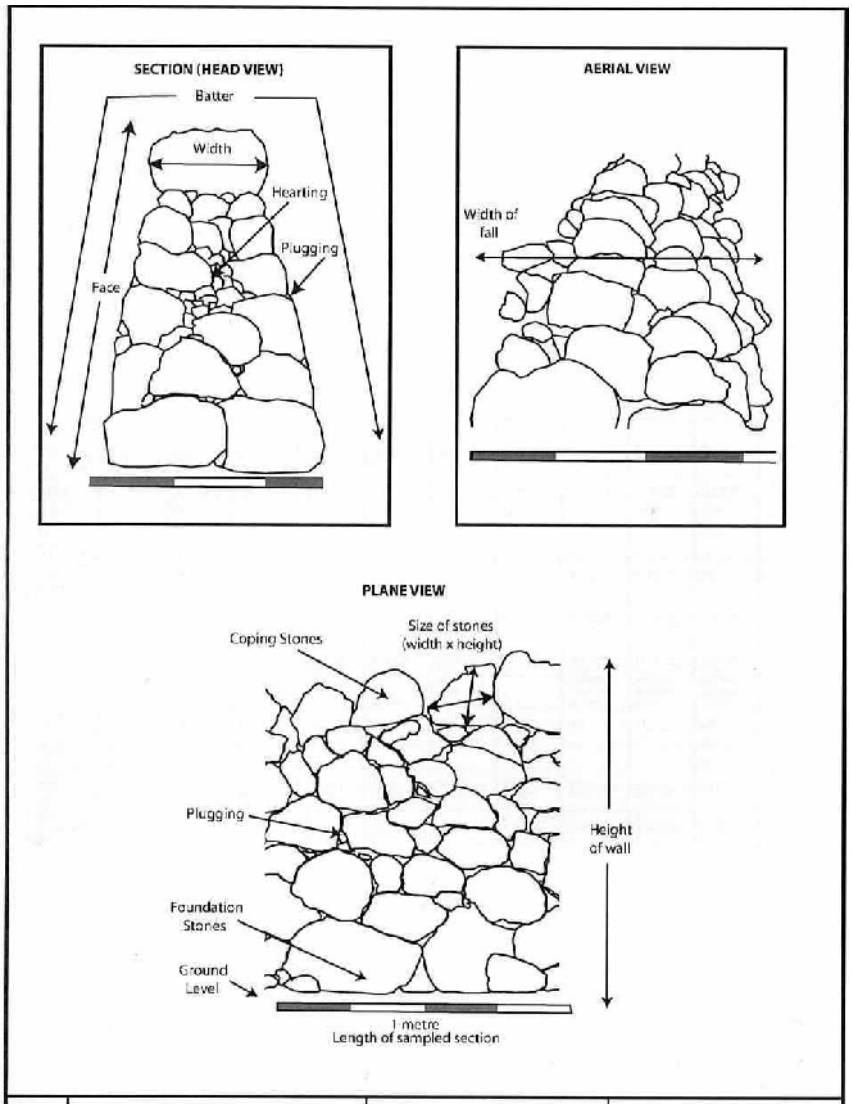

Figure 1. Some features and measurements of dry stone walls used in this report (after Marshall, Paynter and Hyett 2003).

5.0 Field Results

Wall 1 (Plate 1)

The first wall has been built in a straight line across the stony rise; along the front and on the back of the rise. This wall runs in an east to west-north-west direction (107 degrees) for 254 metres. It intersects with two other dry stone walls at either end and these are more-or-less north-south in alignment, dividing the area to the south into sizeable paddocks. At the eastern end of this wall there is a former stockyard constructed of timber planks which includes a loading bay. There is no obvious gate or other access points along this wall to this stockyard.

Wall 2 (Plate 2 and 3)

This commences at the western end of Wall 1 where it intersects with the above mentioned north south wall. In marked contrast to Wall 1 this wall is wavy in its alignment and heads in an east north-east direction towards the north eastern end of the stony rise and a former farm track. In a straight line from end to end it traverses about 172m across the stony rise. This wall appears to the lower in height and is poorly constructed with fewer plugging stones and a less angled batter (although this may be due to its lesser height). It certainly is in poorer state of preservation when compared with Wall 1.

Wall 3 (Plate 4)

Wall 2 meets a short straight return section of the next wall, Wall 3 which runs north-south 23 metres at which point it heads in an easterly direction for 175 metres across the above mentioned farm track towards the Merri Creek floodplain. This wall is and possibly always was a low composite style wall that used increasing less stone with further distance from the stony rise-(those sections west of the farm tack on the stone rise proper seem to be higher than those to the east away from the rise). There are examples of remnant timber posts. It is not possible to know if these were addeded at a later time is post the construction of the stone base.

Plate 1. Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a well preserved part of the wall as the coping and plugging stones are in place. The stony rise is visible as rocks *in situ* in the ground (27/5/15 Photo R.J. Marshall).

Plate 2. Intersection of wall Sections 1 and 2 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. At this intersection the east-west wall heads north. The wall on the RHS of the frame is the northern end of a north-south dry stone wall which is a composite wall. A remnant timber post is visible in the middle frame (27/5/15 Photo R.J. Marshall).

Plate 3. Wall 2 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This photo is looking in a southwesterly direction along the wall which has been protected from the nearby construction with some temporary fencing. Note the tumble of rocks in the foreground and the star picket and barb wire fence along its northern side indicating that whilst still a rural property the wall was no longer stockproof (27/5/15 Photo R.J. Marshall).

Plate 4. A section of Wall 3 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a poorly preserved part of the wall close to the Merri Creek floodplain and is a combination of aligned and tumbled rocks (27/5/15 Photo R.J. Marshall).

Number of sampled sections.

A total of 8 one metre wide sections were documented during the field recording following the measurements and attributes listed above. These sections were chosen according to access (which as noted was hampered because of the weeds growing either side of the wall) and representativeness, particularly in regard to preservation. The results are recorded in Tables 1 and 2 below.

Wall Number and Recorded Section	**GPS Location**	**Height**	**Width at top**	**Width at Base**	**Average size of upper stones**	**Average size of lower stones**
1a	319603/5843655	1200	500	700	30 x 30	40 x 40
1b	319712/5843623	1400	350	600	35 x 35	40 x 30
1c	319796/5843605	1300	300	800	30 x 30	40 x 40
1d	319795/5843600	1200	400	600	35 x 35	40 x 40
2b	351984/5843612	1100	500	600	45 x 35	Not taken
3/2a	319953/5843669	1300	400	800	35 x 35	40 x 40
3b	319908/5843639	1150	400	400	40 x 40	40 x 40
3a	320081/5843651	450	900 (tumble)	900 (tumble)	None	30 x 30

Table 1. Metrical (size) data for 8 one metre wide sections of the east-west dry stone wall. Note that all measurements have been recorded with a hand held tape and are approximate. Stone sizes are indicative of the maximum dimensions of randomly chosen rocks within each 1 metre section.

Section of Wall	**GPS Location**	**Style**	**Coping Stones**	**Hearting**	**Plugging**	**Non Stone Additions**	**Comments**
1a	319603/5843655	Single	Incomplete	Yes	Yes	Modern Fence wire	Section heading coming off the stony rise Collapsing from the top
1b	319712/5843623	Single	Complete	Yes	Yes	No	Wall section complete excellent preservation

1c	319796/5843605	Single	Complete	Yes	Yes	No	Wall section complete excellent preservation
1d	319795/5843600	Single	Complete	Yes	Yes	No	Wall section complete excellent preservation
2							Good
3/2a corner	319953/5843669	Single	Possible	Yes	Yes	Yes modern wire fence on northern side of stone wall (see description in text).	Good
3b	319908/5843639	Single Composite ?	None (see description in text)	None	None	Yes modern wire fence on northern side of stone wall (see description in text).	Poor. Large lower stones probably insitu, smaller stones
3a	320081/5843651	Single Composite ?	None (see description in text)	None	None	Yes modern wire fence on northern side of stone wall (see description in text).	Poor.

Table 2. Non-metrical attributes for 8 one metre wide sections of the east-west dry stone wall. Note that for non-stone additions a distinction will be made between composite style walls and modern fencing (see text).

Location and Alignment

For most of its alignment the east-west dry stone wall at 40 Dwyer Street Kalkallo has been built on a prominent stony rise which extends in an east west direction across the former rural property. The height of the stony rise varies along its length and lies markedly above the surrounding volcanic plain, especially along its southern margin. Heading west towards Merri Creek, the stony rise drops in elevation as is gets closer to the Merri Creek floodplain.

The east-west stone wall has been built in three sections (Walls 1 to 3) and these probably represent different phases of construction. It appears that this wall was the property dividing wall for at least two large paddocks to the south.

Stone Source

The walls have been mostly constructed from unmodified fieldstones, presumably stones sourced from the stony rise itself and perhaps the adjacent paddocks. Whilst the previous survey found no evidence of quarrying, Matic recorded a feature consistent with 'stone extraction' along the margins of the stony rise to the north of the wall, where he believes loose stone may have been collected and used for walling.

There was variability in the shape and size of the stone which suggests more than one local source. Although unmeasured, some sections of wall displayed a higher consistency in the shape and size of stone than other sections where the walling had combined stones of greater variation in size and shape. Without knowing the condition of the stony rise prior to the actual walling, or other local sources of stone, it is not possible to be unequivocal about the origin of the stone. Certainly, all of the stone examined during the field recording was basalt and was consistent in its colour and patina with that visible on the surface of the stony rise proper, which supports a local origin.

As discussed, dry stone walling is often equated with paddock clearance. Whilst this may have been an outcome of the walling, it does not necessarily explain the intent (it would be possible to clear a paddock of its stone without building a wall); nor does paddock clearance necessarily account for all the stone used in a wall.

In this instance surface stone as well as stones uncovered from shallow deposits quarried off the top or sides of the rise could have been used for the walling.

Function

It is unknown at this stage if the east-west stone wall always marked internal boundaries or a property division and if its function change over time. The early property divisions as discussed by Matic easily encompassed the east-west wall indicating that during the 19th Century is may have functioned as an internal boundary between paddocks. Certainly the wall was a sufficient height to have enclosed paddocks with stock.

Given its overall length, distance from Donnybrook Road and that there are three distinct sections which, as discussed, appear to have been constructed at different times, suggests that wall was only ever an internal property boundary.

Form and Construction

In section, the wall is triangular (isosceles type) and complete sections are typically capped by a row of single stones. The size of the stones generally decreases with height i.e. with the largest at the base, but when present, the copping stones are generally larger than those immediately underneath them. In fact, intact sections of wall have large boulders at or near the middle section of wall and the courses of stone are a combination of running and crossing. These stones do not necessarily extend across the width of a wall or across the width of the wall at a common level that might define a clear second rise as would be the case with throughstones. There is no obvious double siding that would indicate an infill (but see below) and the evenness of the sides varies with the changing sizes of individual stones.

Due to access difficulties it was not possible to view the full lengths of the Ist and 2nd walls. From what was visible the batter appeared is more-or less consistent but probably varied between the three sections.

Coping Stones

These are present along the best preserved parts of Wall 1.

Shaping

The relatively thin and rounded shape of some of the plugging stones is consistent with a flake taken from the end or side of a larger stone; and they also display other features such as a platform and bulb of percussion. Other pieces are thin and concave in shape and are suggestive of spalling either naturally or as a result of some type of percussion.

Trenching or Constructed Foundation

The collapse sections indicate that there is no evidence that the walls have been built within a dug trench or other constructed foundation. It was not possible to inspect the built sections of wall for a foundation especially along Wall 1. As noted the foundation stone of one part of Wall 1 incorporates *in situ* stone from the rise itself indicating that at least for this section there was little trenching or other preparation of the ground. It is unknown if this is the case for other parts of the wall.

Style

The wall is best described as a single type but exposed sections indicate that smaller stones have been used as hearting between larger stones which is often a feature associated with doubling.

Construction Technique

On the basis of the field observations it is likely that the wall has been constructed through the manual placement of stones beside and on top of each other to a predefined width and height and differences in level or larger gaps between stone has been infilled with smaller pieces of the appropriate natural shape. It was difficult to distinguish separate courses due to the variability in the size of the stone but for some sections of Wall 1 which is the best preserved of the three there appears to be between 4 and 6 before the row of copping stones. Wall I appears to be more formal in its design and construction.

Sections of wall 2 are very poorly built where stone appears to have simply been piled to achieve a predetermined height but with little or no selection according to size or shape.

Wall 3 is a composite wall consisting of a row courses of stone and timber posts of which there are a few remnant examples.

Plugging

This is best represented in Wall1.

Infilling

Collapsed sections of Wall 1 show that there has been infilling between the larger stones.

Additional Fencing

Some sections of wall were backed by barbed wire or single stand wire fencing with metal posts and this additional fencing had usually been constructed on the north side of the wall. The additional wire fencing appears to have added along sections of collapsed wall suggesting that at some time after they fell into disrepair and were no longer stockproof, a decision was made not to repair the walls. In support of this, the best preserved sections of wall which are obviously still stockproof (middle sections of Wall 1) have no additional fencing which also suggests that these sections are in their original condition.

Preservation

Of the three walls Wall 1 is the best preserved and along this wall it's the middle sections of Wall 1 are clearly the most intact. This difference in preservation among the three walls may be the result of differences in construction with more care taken during the construction of Wall 1. This care is also apparent in its straightness. It may also reflect differences in the foundations among the three walls with Wall 1 traversing the rise and perhaps less reactional soils or more stable substrate than Walls 2 and 3. Certainly as noted Wall I incorporates *in situ* floaters on the rise into its foundations stones.

Preservations varies along Wall 2 (from good to poor)-where most of the stone is represented to low ruinous sections.

Much of Wall 3 is ruinous and has been reduced to tumbles only.

Date and chronology of construction

This is unknown by can reasonably be assumed to have occurred during the 1800s. As noted above, Moloney states that 1850-1880 was the main period for dry stone wall construction in the former shire of Bulla.

The differences between the three main sections in alignment (Walls 1 to 3)suggest that are not contemporaneous but were built at different times, as noted.

6.0 Significance Assessment

Significance assessments of cultural heritage of which the dry stone walls at 40 Dwyer Street Kalkallo are a type, are often considered with reference to the principals of the Burra Charter.

The *Burra Charter*

The *Burra Charter* is the Australian ICOMOS charter for places of cultural significance. The charter *'provides guidance for the conservation and management of places of cultural significance (cultural heritage place) and is based on the knowledge and experience of Australia ICOMOS members'* (The Burra Charter 2013: 1). The charter '*sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance'* (The Burra Charter 2013: 2). The Burra Charter defines cultural significance as *'aesthetic, historic, scientific, social or spiritual value for past present or future generations'*. It goes on to say that *'cultural significance is embodies in the place itself, its fabric, setting, use, associations, meanings records, related places and related objects'* (The Burra Charter 2013: 2).

The following section will discuss the significance of the dry stone walls at 40 Dwyer Street Kalkallo under the terms of the Burra Charter definition.

Historic Values and Dry Stone Walls

Although the assessment of dry stone walls is often based on degree of preservation and representativeness, their significance can reside in historical information relating to date of construction, patterns of land use and land-ownership (cf Mayfield Dry Stone Wall, O Herns Road Epping 2010 Decision of the Heritage Council).

A place may have historic value because it has influenced, or has been influenced by, a historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event remains in situ, or where the settings are substantially intact, or where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment (Burra Charter).

The east-west dry stone wall at 40 Dwyer Street Kalkallo is typical of the methods used to construct rural boundaries in a basalt landscape during the mid 1800s, (presumably) where field stones were common and required little or no modification to be utilized in wall construction.

The makers of the walls at Dwyer Street are unknown and there are only scant details on the owners of the land between 1860 and when Donald McKay brought the property in the 1920s (see Matic 2012). Exactly when the east-west wall was constructed is also unknown. Notwithstanding Matic's history of land ownership, further historical information would be required to expand the significance of the dry stone wall at 40 Dwyer Street and on current evidence this is unlikely to exist.

General Historical Themes

In the absence of specific historical information, the significance of the dry stone walls at 40 Dwyer Street Kalkallo can be considered in relation to more general history themes including:

1. That the walls represent a type of fencing, which is common to many parts of the world, but which in Australia is often associated with Europe (including Great Britain), and therefore provides for 'historical cultural links' between early migrants and their countries of origin.

2. Related to this, the walls represent the acculturation of the landscape by pioneer farmers, many of whom migrated to Victoria to pursue opportunities not available in their home countries.

3. That the walls are a consequence of the broader changes in land use during the latter half of the 19th Century, which saw the end of the squattocracy and the beginnings of a new class of farmer.

4. That the walls are a product of changes in farming practices that allowed for a more intensive use of the land and for the existence of a greater density of people on the rural landscape.

5. That the walls are a product of a utilitarian approach of farmers and their local communities during historical times, which saw the use and adaptation of common local resources in building construction.

6. That the walls relate to a historical period of rural land use that has decreasing numbers of examples in Melbourne's urban-rural fringe.

These themes are applicable to dry stone walls in Melbourne's northern suburbs generally- they are also themes which could apply to other types of historic places relating to the19th Century rural landscape, such as the planning and development of early roads and townships like Kalkallo itself.

On current evidence, neither the address nor the east-west wall at 40 Dwyer Street Kalkallo represents or is at the location of a significant historic event or a historically important figure. The east-west dry stone wall is *in situ* but as discussed, there is no evidence of association with other built historic features. This is in contrast to nearby Epping where farms and the walls thereon can be assigned to particular families and where these themes are more relevant (see Marshall *et al*. 2003).

Aesthetic Significance and Dry Stone Walls

The *Burra Charter* states that aesthetic value *'... includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric, smells and sounds associated with the place and its use'.*

This definition is unclear according to Pearson and Sullivan (1995), who go on to discuss the concepts of the 'romance of ruins' and the 'aesthetic ideal'. In this discussion they note:

> 'The concept and symbolism of old things, and the evidence of the accretions of time, have a strong effect on many Australians. Many heritage places, not of particular significance otherwise, may have these qualities, and may have acquired them through accretion over time...
>
> 'A place may also have aesthetic value because it expresses an aesthetic ideal, such as a place that epitomises the design principles of an architectural style or landscape concept... Landscapes in particular tend by their nature to have strong aesthetic elements...
>
> The cultural landscapes of nineteenth century pastoralism can have a different, but equally strong effect. Here, it is often the pleasing juxtaposition of order and wilderness or European culture and Australian Environment that is effective.' (1995:135,136).

<u>Linear Scale</u>

Generally, the continuous nature of dry stone walls, particularly where they follow changes in the local topography, demonstrates their functionality for the bounding of open rural space. The continuous line of intact walls is also part of their aesthetic appeal, as the walls accentuate changes in local elevation (adding depth) and provide for a point of focus into the broader rural landscape.

<u>Fabric and Scale</u>

Dry stone walls are built from a natural material and at a scale that observers can easily associate with; they do not usually present high, impenetrable barriers that obscure the local views. They are often associated with rises or outcrops of local rocks and stones that have remained in the paddocks. As they age, the walls tend to become more textured and more natural in appearance, which is the result of two processes:

1. the collapse of sections with the tumbled rocks lying on or close to the ground;
2. the patination of the surfaces of rocks caused by weathering and the growth of mosses, lichens and other vegetation (it is well known that the stone walls act as a reconstituted habitat for a range of animals including snakes)

This process of degradation and the reincorporating of rocks into the landscape may detract from the functionality of the walls as fences, but these processes can add to their aesthetic appeal.

In its current setting the dry stone walls at 40 Dwyer Street Kalkallo has considerable aesthetic qualities. The wall is mostly built on a prominent stony rise which accentuates this rise in relation to the relatively flat paddocks to the south and north and to the Merri Creek floodplain.

Parts of the wall have collapsed and surfaces of most of the stones are heavily patinated and with the growth of lichen heavily textured giving the stones an appearance of age.

Scientific Values and Dry Stone Walls

The scientific or research value of a place will depend upon the importance of the data involved or its rarity, quality or representativeness and on the degree to which the place may contribute further substantial information (*Burra Charter*: 73).

The present assessment has not involved a direct comparison between the east-west wall at 40 Dwyer Street with any other local walls such those further along Donnybrook Road (of which there are many) or these reported by Ford and Vines (2000) around the Kalkallo cemetery for example. Regionally and according to the documentation in the reports, the walls are comparable in form and fabric to those in Epping and Wollert (see O'Connor 2010, Walker and Hyett 2011, Tucker 2012, see Wackett and Webb 2015).

As noted by others, walls located along road reserves can be in a poorer state of preservation than those occurring as internal divisions. This can make it difficult to accurately determine the original state of construction, as in many cases, the original form and height is no longer present. This is particularly pertinent in terms of the presence or absence of coping stones and this in turn makes the process of comparison for the purposes of assessing significance problematic.

The east west wall appears to be a case in point as it was an internal property division and although parts of the wall (Wall No 1) are extremely well preserved it has no significant attributes that would set it apart from other walls throughout the area.

The better parts of the east-west wall do present opportunities for further scientific research and this is presented in the recommendations.

Significance Assessment Summary

The dry stone wall at 40 Dwyer Street Kalkallo is part of the historic built environment and a remnant of the history of rural settlement in part of the Kalkallo area. Following Moloney and Johnson (1998), much of the heritage significance of dry stone walls in the City of Hume, relates to the history of rural settlement of the district and of an understanding of the walls within a rural landscape. The wall at 40 Dwyer Street Kalkallo is no different in this regard and therefore it retains some local importance.

This being the case, the decision of the City of Hume to grant a permit for the residential subdivision at 40 Dwyer Street Kalkallo effectively removes the east-west wall from its rural context and with that any significance which relates to setting or landscape, function or intended use. As is further discussed below when built heritage becomes ruinous and no longer continues to function as intended removal is an inevitable outcome of competing land use.

This loss of significance relating to context is difficult to mitigate for the east-west wall at 40 Dwyer Street Kalkallo given that the design of the subdivision requires the removal of the stony rise on which the wall has been built to allow for the construction of housing and associated infrastructure.

As documented, there are no other significant features of the east-west wall, with regards to its form, fabric or construction that would necessitate any change in the subdivision

design to allow for *in situ* preservation. Parts of the east-west wall (Wall 1) are excellently preserved and as noted above these have the potential for further research which should be considered in light of the impact of the new subdivision.

Summary of the heritage significance of the east-west wall at 40 Dwyer Street Kalkallo

East-West Dry Stone Wall	**Archaeological Significance**	**Historic Values**	**Preservation**	**Representativeness**	**Research Potential**
Section 1	Low	Local	Poor-Excellent	Common	Low, but intact sections have potential to provide further information on dry stone walling as a construction technique.
Section 2	Low	Local	Mostly Poor Small sections Good	Common	Low
Section 3	Low	Local	Poor	Common	Low

The east-west dry stone wall at 40 Dwyer Street Kalkallo has low heritage significance for the following reasons:

- it is a common type of dry stone wall according to its fabric and form;
- it is common type of dry stone wall according to its construction and lonag sections of the wall are very poorly built;
- all parts of the wall have low archaeological potential;
- some parts of the wall are ruinous;
- it no longer functions as a dry stone wall;
- at least one section of the wall has been altered trough the addition of modern fencing material;
- it is not associated with any other extant historic structures or ruins;
- although the wall may address particular historical themes, it does not appear to be directly associated with any historically significant event or individual.

7.0 Impact Assessment

The civil engineering requirements for the subdivision of land at 40 Dwyer Street Kalkallo require the removal of the stony rise on which most of the east-west wall is located. The removal of the stony rise will necessitate the destruction of the dry stone wall.

The destruction of the dry stone wall will see the removal of part of Kalkallo's historic landscape that cannot be easily replaced or replicated.

Other parts of the subdivision retain open space and may present an opportunity for the preservation of a portion (albeit less well preserved) of the east-west wall, such as that adjacent to the Merri Creek floodplain, or part of the north-south composite wall which is not part of the current assessment (see Recommendations).

8.0 The east-west dry stone wall as a heritage ruin and its preservation by record.

The east west dry stone wall at 40 Dwyer Street Kalkallo no longer functions as a rural wall and much of the wall is poorly preserved. The Australian Heritage Council (2013) has recently published a guide to the conservation and management of ruins.

The guide defines a ruin as *'a place that currently, through abandonment, redundancy or condition, is disused and incomplete, is usually no longer maintained and appears unlikely to regain its original or a substantive use, function or purpose other than interpretation* (2013: 4).

The east west dry stone wall at 40 Dwyer Street Kalkallo matches this definition. The guide outlines five approaches to the management of ruins: Coming alive again; Returning it to its former state; Simply maintain; Letting nature take its course; When removal is inevitable. In this case, of these approaches, the fifth is considered to be appropriate:

- *When the complete loss of the place is inevitable because letting nature take its course presents too many hazards*
- *When the sacrifice of part of a place will aid the preservation of more significant fabric*
- *When the place is creating an unacceptable risk to public safety or an environmental hazard*
- *When pressure for alternative use of the site is deemed to outweigh the heritage significance of the place* (2013: 22).

On this latter point the guide states:

Almost regardless of the significance of a place, there will inevitably be instances when a competing land-use requires the removal of a heritage place and this is more likely to be the case for ruins and archaeological sites which lack a function. Where a heritage place is to be removed, the preservation by record approach should be used.

The guide suggests the following actions:

1. undertake a heritage impact assessment, identifying the elements of the place, and the associated values, that will be lost through the proposed removal
2. undertake appropriate recording of the elements to be removed and decide how the removed elements are to be treated (for example, relocate, reuse, display) and interpreted
3. if only part of a place is to be removed, take appropriate measures to prevent this impacting on the surviving elements
4. prepare an interpretation plan prior to any elements being removed as it may influence the decision on what is to be removed or retained and conserved in situ
5. document the management decisions made and make them public

6. update any heritage listings to recognise the decisions taken place
7. the documentation of the pre-removal recording and investigations and any recovered materials in appropriate repositories.

As noted above, the east-west wall at 40 Dwyer Street Kalkallo is no longer functional and with the development of the subdivision (the competing land use) the removal of the east-west wall is appropriate as long as there is a sufficient record of its form and fabric.

The current report goes some way to meeting the Ist and 2nd of these actions. It is possible that part of the east-west wall (where it falls into proposed open space) or other parts of other walls at 40 Dwyer Street, can be retained which will preserve an *in situ* example of dry stone walling; the lodgment of this report and any future reports on the dry stone wall with the City of Hume as an archive for future reference meets the 5th and 7th of these actions; and action No 6 is not relevant as there is no requirement to register the dry stone wall with Heritage Victoria or other statutory organization.

9.0. Management Recommendations

1. The east-west wall at 40 Dwyer Street Kalkallo is not significant enough from a heritage perspective to warrant retention and *in situ* preservation.

2. An intact section of the east-west wall at 40 Dwyer Street Kalkallo should be documented in further detail. Towards this, a mimimum3m long section of wall should be manually dismantled in a systematic fashion. Prior to it being dismantled the section should be drawn and photographed in detail. With its dismantling, the stone should be counted, measured and recorded according to basic type. A measured drawing should be made in plain, longitudinal and cross section views, according to an arbitrary level (a string line) and following the conventions of archaeological illustration. Once dismantled, the foundations of the wall should be hand-excavated to investigate any trenching or other preparation of the ground to accommodate the foundation stones. The resultant report should be attached to this current document and lodged with the City of Hume as an archive for future reference.

3. The subdivision design may still provide an opportunity for the retention of sections of stone wall that fall within reserve or open space. The open space may also provide an opportunity for a reconstructed section of dry stone wall with some interpretation in recognition of the importance of the former walls. National Pacific should consider these options in consultation with the City of Hume.

References

Australia ICOMOS 1999
The Burra Charter. The Australia ICOMOS Charter for Places of Cultural Significance.

Australia ICOMOS 2013
The Burra Charter The Australia ICOMOS Charter for Places of Cultural Significance

Australian Heritage Council 2013 Ruins a Guide to Conservation and Management. Commonwealth of Australia 2013.

Black, J. and A. Miller (eds) 1995
If These Walls Could Talk. Corangamite Arts Council, Terang.
Chamberlain, M. 2004

Di Fazio, B. 2015
Unpublished Letter to Ed Krushka. Re Management of Dry Stone Walls, Cloverton Estate.

Dr Stone Wall Association of Great Britain. Wall Survey. http://www.dswa.org.uk.

Ford, O. and G. Vines 2000 Hume City Heritage Study: former Broadmeadows and Environs 2000 Volume 1 Parts 1-4 Environmental History and heritage Conservation Plan. Unpublished Report.

Heritage Council. Mayfield Dry Stone Walls, O'Herns Road Epping, Decision of the Heritage Council 27th October 2010. Unpublished document.

Heritage Victoria 2010
Victoria's Framework of Historical Themes. An unpublished report.

Heritage Victoria 2012 Guidelines for investigating Historical Archaeological Artefacts and Sites. Published 2012 at www.heritage.vic.gov.au

Marshall B., N. Paynter and J. Hyett 2004
An archaeological survey of 215 Harvest Home Road, Epping.

Marshall B., N. Paynter and J. Hyett 2003
An Archaeological Assessment of Dry Stone Walls at Brentwood Park; 100 O'Herns Road – Epping North. A report prepared on behalf of A.V. Jennings.

Matic, A. 2012
Historical Archaeological Assessment: 40 Dwyer Street, Kalkallo. Unpublished Report.

Moloney, D. and V. Johnson 1988
City of Hume Heritage Study: Former Shire of Bulla District, 1988. Unpublished Report.

Moloney, D. and V. Johnson 1988
City of Hume Heritage Study: Former Shire of Bulla District, 1988. Vol 1. Heritage Conservation Program and Environmental History. Unpublished Report.

O'Connor, A, 2010
Dry Stone Wall Management Plan Eucalypt Project, 290 Epping Road and 50 Lehmanns Road, Wollert. A report to Stockland.

Patterson, L. and Paynter, N. 2005
Archaeological Subsurface Testing Historic Sites H7922-0313 & H7922-0300 and Drystone Walls Management Plan: Bridgewater Property Wollert North/Wollert. Unpublished Report.

Paynter, N. 2002
Good Fences make Good Neighbours. Unpublished BA (Hons) thesis, LaTrobe University.

Pearson, M. and S. Sullivan 1995
Looking after Heritage Places. The basics of heritage planning for managers, landowners and administrators. Melbourne University Press, Melbourne.

Planning Collaborative (Vic) Pty Ltd 2011
Melton Dry Stone Walls Study. Unpublished Report Shire of Melton and Department of Sustainability and Environment.

Tucker, C. 2012
Dry Stone Wall Management Plan Epping Road, Wollert. Report for Spiire.

Vines, G. 1990
Built to Last. An Historical and archaeological survey of dry stone walls in Melbourne's Western Region. Melbourne's Living Museum of the West.

Vines, G. 2015
Wyndham Dry Stone Walls Study . Unpublished Report.

Wackett, L and C. Webb 2015.
90D Harvest Home Road, Wollert Dry Stone Wall Management Plan. Unpublished Report.

Walker J. & Hyett J. 2011
Dry Stone Wall Management Plan Eucalypt Project, 30 Harvest Home Road, Wollert. Report to Stockland.

Victorian Planning Provisions

Appendix 1 Heritage Victoria Notification

Appendix 2 Photographic Inventory

Wall 1

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is an intact section of the wall on its southern side (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a detail showing the coping stones and plugging (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo looking eastwards. from the southern side of the wall (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo showing the contact between the foundation stones and the underlying stony rise (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a lower section of this wall (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo showing detail of the coursing on the southern side (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo showing detail of the coursing. Note the larger size coping stones over courses of smaller stone (27/5/15 Photo R.J. Marshall).

Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo showing detail of stones (middle frame) that have been altered, possibly faced (27/5/15 Photo R.J. Marshall).

Eatsern end of Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo on the northern side of the wall looking west (27/5/15 Photo R.J. Marshall).

Collapse section of Section 1 of the east-west dry stone wall at 40 Dwyer Street Kalkallo showing infilling (27/5/15 Photo R.J. Marshall).

Wall No 2 looking along its alignment in a south-westerly direction at 40 Dwyer Street Kalkallo (27/5/15 Photo R.J. Marshall).

Wall No 2 at 40 Dwyer Street Kalkallo looking along its alignment in a south-westerly direction. The *in situ* floaters of the stony rise are visible in the foreground (27/5/15 Photo R.J. Marshall).

Midsection of Wall No 2 at 40 Dwyer Street Kalkallo looking south. There is a notable size variation in the stone along this section (27/5/15 Photo R.J. Marshall)

Midsection of Wall No 2 at 40 Dwyer Street Kalkallo which is pertly collapsed looking south (27/5/15 Photo R.J. Marshall)

The intersection of Walls No 2 and 3 at 40 Dwyer Street Kalkallo looking east. The wall on the RHS is a low composite type that heads south and was not part of this current assessment. (27/5/15 Photo R.J. Marshall).

Wall No 3

Wall 3 at 40 Dwyer Street Kalkallo its western end where it heads south to join wall No 2. Note the rough construction and the addition of the wire and star pickets (27/5/15 Photo R.J. Marshall).

The eastern sections of Wall No 3 at 40 Dwyer Street Kalkallo looking west. This is a low composite wall and a remnant timber is visible mid frame (27/5/15 Photo R.J. Marshall)

Wall No 3 at 40 Dwyer Street Kalkallo near its eastern end of the east-west dry stone wall at 40 Dwyer Street Kalkallo. (27/5/15 Photo R.J. Marshall).

Partially collapsed section of Wall No 3 at 40 Dwyer Street Kalkallo near its eastern end looking along the alignment (27/5/15 Photo R.J. Marshall).

Wall 3 of the east-west dry stone wall at 40 Dwyer Street Kalkallo. This is a collapse section of a former composite wall. Note the corner timber post and recent wire and star picket additions. (27/5/15 Photo R.J. Marshall).

Appendix 3 Rural Fencing in Colonial Victoria

The squatters who settled large tracts of land for the purpose of grazing livestock typify the early European settlement of rural areas in Victoria. Spreadborough and Anderson (1983) discuss the term 'squatting expansion' between 1834 and 1860, noting that '…it was the early squatters who were permitted to become 'free' selectors, choosing and learning about their land with a fair degree of independence from official control' (Spreadborough & Anderson 1983: ix). The first decade of this expansion indicates early occupation occurred on the plains to the north of Melbourne, with a strong western component running from Geelong' (Spreadborough & Anderson 1983: Figure 1, x).

Because of the large size of these tracts of land and the nature of the 'farming', most of the claimed land was poorly defined; boundaries often followed natural features such as creeks and lakes or were simply marked by plough lines or blazed trees. As noted by McLellan (1989):

> *Boundaries between early runs were usually vague and were often the subject of disputes. Boundaries were sometimes marked by furrows and in the late 1840's by wooden hurdle type fencing.*

By the mid 1850s the colonial government employed surveyors to mark out the boundaries of squatting runs. Although no freehold rights were in place at this stage, squatting runs were purchased and semi-permanent buildings were erected. However, the squatter's constructions seldom included fences. After a pastoral run had been occupied for a minimum of five years, a Pre-Emptive Right was granted, giving squatters 320 acres on which a residence was usually constructed (Kiddle 1967: 165). Often these were the first areas to be fenced.

Figure 1: Example of the use of dry stone walling in Victoria. This photo dates to between 1860 and 1869 and shows orchard farming and cattle grazing paddock separated by a dry stone wall (State Library of Victoria picture collection: image number mp018759).

Land Acts

In the 1860s various Land Acts were imposed, aiming to 'unlock the lands' and to allow selectors to begin small-scale farming. During this time built structures became more permanent as purchases from the Crown became more common. This practice naturally intensified the necessity of fencing and a variety of fencing types were used, often dependent on the local availability of suitable natural materials such as timber and stone.

One of these Land Acts was *The Duffy Act* 1862, which allowed for blocks of land between 40 and 640 acres to be purchased at £1 per acre. A condition of purchase was that within one year there had to be evidence of land improvement by means of cultivation, the establishment of a residence or fencing. The turnover of land among different owners was often high, as although subsequent purchasers were charged twice that originally paid they were not required to make the needed improvements. *The Grant Act* 1865 attempted to rectify some of the previous problems by selecting allotments before survey and offering deferred payment. This Act required a selector to live on his land for a minimum of three years and spend £1 per acre on improvements within two years before being granted the land (Kiddle 1967: 246).

The most prevalent methods of fencing in Victoria from the 1850s were dry stone walls, post and rail, hedges, ditches, or combinations of the above. In later years the use of wire became more widespread, as it was more economical and thought to be more aesthetic. In

some farms no one method of fencing prevailed, as varying types suited the differing quality and function of the land.

Specifications and Additions

In Victoria, a standard dry stone 'field' fence was known as a 'five-quarter', standing 3 feet and 9 inches to the top of the wall. Upon the wall, coping stones which capped the top of the wall were often laid. These stones were usually large in size and were laid horizontally, overhanging either side of the wall for protection against rabbits, or vertically to give extra height to the wall. In some cases there was a mixture of both horizontal and vertical stones, a coping technique known as 'cock and hen'.

In 1874, *The Fences Statute* was introduced and included specifications for the construction of dry stone walls. According to the Statute, the size of the coping stones should only extend another 12 inches in height from the top of the wall. Thus, the total height vertically should be 4 feet and 9 inches, and horizontally 2 feet wide at the base and 15 inches under the coping stones (Fences Statute 1874: 217).

In some cases, instead of coping stones, post and wire, or post and rails were added to the wall to give extra height. This may have been done when stones were less abundant in the area and additional height was required for the fence to be functional. It may also indicate increased availability and affordability of wire for fencing. In other cases, crops may have once been farmed in a paddock, and in later years, sheep or cattle may have been introduced, resulting in the requirement for greater fence height. Posts and wire netting were also added to fences in later years in an attempt to make them more efficient, especially against rabbits. In some areas, trenches were dug into the ground and the wall begun below surface depth to hinder rabbits' burrowing.

Figure 2. Example of a dry stone wall enclosure including later additions such as wooden posts, wire fence and gate (Dry Stone Walling Association of Australia, photo gallery 2010).

Other Features

A 'double wall' has two faces – thus separate rocks are visible on each side of the wall. The area in between these two faces is packed tight with smaller rocks and is known as 'hearting'. A 'single wall' is where the one rock is visible on both sides of the wall. In other words, the wall has the width of a single rock. There is no hearting in these walls and they often have gaps. In some cases, but more predominantly with double walls, 'plugging' is visible. This is where the tiny gaps in the face of the wall are filled in with small chips or tiny stones to create a neat and aesthetic face.

In his ICOMOS summary on Western District stone walls, McLellan (1989) presents a description of walling:

> *The craftsmen or 'cowans' as they were sometimes known, would lay two rows of stone about three feet apart, filling in the centre with smaller stones and rubble. Courses were added, the two single walls tapering inwards towards the top where the width*

> *would be one foot to eighteen inches. Large stones were laid across the top of the wall to bind the two sides together and to provide weight to settle the stones. Top stones laid flat were called capping stones or coping stones. Each stone was handled once only, 'there being a place for every stone'. Breaking or chipping stones to make them fit was seriously frowned upon, although each stone is given a judicious tap with a small hammer to make it settle. The rate of progress varied between half-a-chain to a chain a day, depending on the style of the wall and whether ground trenching was required by the owner.*

Wall construction was a valued trade in the nineteenth century. McLellan (1989) notes how wallers worked in teams or by themselves and discusses the role of apprentices in collecting the stone. He states that the skill of walling developed throughout Great Britain and reached its peak during the Enclosure Movement of the eighteenth and nineteenth centuries.

The construction of basalt dry stone walls has been commonplace on the volcanic plains of Victoria since the 1860s, when extensive boundary fencing became the rule (Kerr 1984: 14). The use of basalt to construct fences and walls became common throughout the state, especially in the Epping region where the walls are extensive. These areas were the focus of the early pastoral expansion and where farming occupation intensified through the sale and acquisition of land.

Dry stone walls display the following characteristics:

- Constructed through the careful placement of rocks without using any cement or other binding substances
- Built from local sources of stone, either quarried or unquarried
- Basalt floaters in adjacent paddocks were often the source of unquarried stone
- Walls generally taper in shape from a wide base
- Walls vary in terms of style, structure and technique of construction

Walls can include a combination of other materials or additions either contemporaneous to the time of construction or added at later date.

References for Appendix 3

Fences Statute 1874
The Fences Statute 1874, No. 479, Victoria.

Kiddle, M. 1967
Men of yesterday: A social history of the Western District of Victoria. Melbourne University Press, Melbourne.

McLellan, R. 1989
The dry stone walls of Victoria's Western District. Australia ICOMOS Historic Environment Vol. vii2.

Spreadborough, R. and H. Anderson. 1983
Victorian Squatters. Red Rooster Press, Ascot Vale.

Also see Chappell, K. L. 1966
Surveying for Land Settlement in Victoria 1836-1960. Office of Surveyor General, Melbourne.

Appendix 2

Technical note for Photographic Recording for Heritage places and Objects

TECHNICAL NOTE

Photographic Recording for Heritage Places and Objects

Photography is an important documentary tool in cultural heritage management. It is often a requirement that heritage places - including archaeological sites, buildings and structures, gardens and objects - be photographically recorded prior to alteration or destruction. This Technical Note provides guidance for those commissioning or undertaking photographic recording of heritage places and objects.

1. Photographic Equipment

Single lens reflex (SLR) 35mm cameras with high quality lenses are suitable for most photographic recording of heritage places and objects. Fixed lenses produce sharp, high quality images. The standard lens kit should include a wide-angle 20mm – 35mm lens, a standard 50mm lens and a telephoto or zoom lens ranging from 100mm – 300mm.

Digital SLR cameras may also be used for photographic recording. However, please note that a film record may also be required by Heritage Victoria due the changing nature of digital technologies. Digital cameras should have 8 or more megapixels.

Compact 35mm and digital cameras are not suitable for photographic recording as they produce poorer quality images than SLR cameras.

Medium format and large format cameras may be required for high quality fine detail images. Different backs can be applied to some medium format cameras to allow for different film types.

Other equipment may be necessary, for instance a tripod for use in low light situations, or a circular polarizing filter to help cut down reflections on glass. Depending on the nature of the project, scale indicators and record boards may also be required.

Tripods are necessary for interior shots to allow for long-exposures without movement of the camera. As well as contextual shots such as this, detail images of key features should be recorded.

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2. Recording media

Digital

Images should be recorded at the highest resolution, 300dpi or higher, for the production of high quality images.

Digital images will need to be recorded in RAW format, which is a digital version of photographic negatives. JPEG is not an acceptable archival format as it produces compressed images with less detail. Both a RAW and TIFF copy of all images should be submitted to Heritage Victoria.

Film

Slow film speeds of 50, 100 or 125 ISO are preferable as they produce smoother images compared to grainier high-speed films. A faster film such as 200 or 400 ISO can be used in low light situations, for interiors or extremely overcast conditions.

Black and White

Black and white film is the most stable photographic medium, has excellent detail control and is preferential for heritage place or object recording. Ilford and Kodak produce a range of black and white film including, Kodak TRI-X 100 or 400 ISO or PLUS-X 125 ISO. Professional black and white film should be used and processed by a commercial laboratory. C41 processing of black and white film is not suitable. Black and white images should be printed on fibre-based paper (not resin coated).

Exterior shots should be taken face-on, centrally positioned and with no distraction in the frame.

Colour Transparency

Colour transparency film or slide film is a great medium for photographic recording due to its accurate colour and detail representation and is more stable than colour negative film. Fujichrome and Kodachrome are two widely available films and come in a range of speeds. Colour transparency film should be E6 processed and mounted at a professional commercial laboratory.

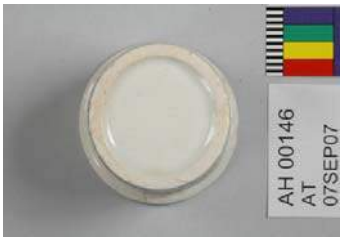
Colour Negative

Colour negative film is not an appropriate medium for heritage photographic recording. The longevity of both the negatives and prints is poor and they fade easily.

Black and white negatives and colour transparencies can be digitised at high resolution with specialist scanners or at a professional commercial laboratory or imaging store often at the time of processing.

3. Method

In order to inform photographic technique, the photographer should understand the heritage significance and physical characteristics/layout of a place or object before they commence recording. Several different shots should be taken, including contextual images from different view points, to orient the heritage place or object to its natural and cultural surrounds. All elevations of a building and all faces of an object should be captured. The image should be recorded face-on and centrally, at a 90˚ angle to the building elevation or façade. Detail images of significant features should also be obtained.



This object is photographed with a scale bar, object catalogue number and date. Objects should be photographed against a plain, neutral background, and all faces of the object captured.

Photo Log

Images should be catalogued using a set sequence and naming convention specific to the project. The photo log should by typed and include the following: name and address of place, building or object; Victorian Heritage Register, Victorian Heritage Inventory or Heritage Overlay number; date, photographer, camera, lens and film details; file/image name; and in what direction the image was taken. This should be provided as an electronic file in MS Word or Excel. The metadata for all digital images should be retained.

Photographic Plan

Photos must be mapped on to a plan of the place showing north and indicating in what direction the images were taken. The naming convention used in the plan should be consistent with the photo log and the labelled images.

4. Report

The report should comprise the following:

- title page including the project name, heritage place or object name and address, VHR, VHI or HO number, date, photographer's details;
- an introduction explaining the project and its purpose including any limitations and recommendations for future recording;
- identification of the equipment, method and technical matters including processing and printing;
- photo log sheets;
- photographic plans and other relevant site plans;
- contact sheets of images including file/image name printed on archival paper;
- enlargements of images. The minimum size of prints is 10cm x 15cm up to a maximum of A4 printed on archival paper;
- colour transparency slides;
- black and white negatives; and
- 2x high quality CD-R (such as TDK, JVC or Sony) copies of any digital images.

Reports should be submitted in archive quality photographic ring-binder folders with archival quality (polypropylene and not PVC) plastic inserts for prints, negatives, transparencies and digital media. Enclosed binder folders help to protect the record from dust and other damage. A silica gel sachet should be placed in the folder to absorb moisture.

Where required by Heritage Victoria two sets of reports are to be submitted. One copy is retained by Heritage Victoria and the second is lodged with the State Library of Victoria Picture Collection once the report has final approval.

For advice on professional commercial laboratories contact Heritage Victoria.

Resources

NSW Heritage Office, 2006, *Heritage information series: Photographic recording of heritage items using film or digital capture*, NSW Heritage Office.

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