

Project Number: HN001650-B



STATEMENT OF HERITAGE IMPACT – ROSEHILL RECYCLED WATER SCHEME EXTENSION

FINAL 20 / 05 / 2026

REPORT TO: ELEMENT ENVIRONMENT PTY LTD

REPORT BY HERITAGE NOW PTY LTD

projects@heritagenow.com.au

0460 744 466

www.heritagenow.com.au

Cover Page

Name of the heritage item:	N/A
State Heritage Register / LEP heritage schedule item number and name:	N/A
Address and location:	Kaluna Reserve, Smithfield to Johnston Crescent, Horsley Park
Statement of heritage impact for:	Proposed extension to the Rosehill Recycled Water Scheme, including recycled water supply pipelines, pump stations and reservoirs
Prepared by:	Bernadette McCall, BA (Hons), PhD Senior Specialist (Archaeologist), Heritage Now [REDACTED] Tiffany Jones, MA (Hons) Heritage Consultant, Heritage Now [REDACTED]
Prepared for:	Element Environment Pty Ltd
Date:	20/05/2026
Issue:	Final

Executive Summary

The coNEXA group owns and operates the Rosehill Recycled Water Scheme (also referred to within the group as the AquaNet Recycled Water Scheme), comprising a recycled water plant at Fairfield (owned by AquaNet Sydney Pty Ltd (ACN 131 234 124) (AquaNet)) and a recycled water reticulation network (owned by Rosehill Network Pty Ltd (ACN 131 213 691) (Rosehill)).

The scheme was initially approved as a major project (MP07_0121) under the now-repealed Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act)

The scheme receives treated effluent from Sydney Water and includes a recycled water treatment plant and an extensive pipeline network, producing high-quality non-potable water suitable for industrial use, supplying the Smithfield, Rosehill and Camellia precincts of Western Sydney.

NEXTDC Ltd (NEXTDC) is an established national developer and operator of data centres and is currently developing a network of facilities to achieve more than 3 gigawatts of data storage capacity. As part of its strategy, NEXTDC are currently seeking State significant development (SSD) consent to construct and operate the 'Western Sydney S4 facility' at Horsley Park, which will be capable of delivering up to 300 megawatts of data storage capacity.

While modern data centres implement advanced efficiency measures, they still require substantial cooling, with evaporative towers being the most effective. However, their reliance on large volumes of make-up water risks overdependence on Sydney's potable water supply, which could strain the water network and create vulnerabilities during drought or restrictions.

coNEXA SYD Pty Ltd (coNEXA), in partnership with NEXTDC, are developing an extension to the scheme to provide recycled water supply to cater for the demand of NEXTDC's facility (the 'proposal').

coNEXA has identified the opportunity to extend the scheme to supply the NEXTDC S4 data centre with 16.6 megalitres per day of recycled water. Technical assessments have confirmed the viability of this supply, which will be engineered to meet the data centre sector's stringent reliability requirements, targeting 99.999% supply resilience compared to the 98% standard for traditional potable water systems. The network will incorporate redundancy and adaptive capacity to ensure continuity in the face of climate variability, peak demand, and emergency conditions.

The existing scheme terminates at VISY Recycling (VISY) at 2 Herbert Street, Smithfield. A concept design alignment has been developed for the proposal, extending the network from the existing termination at Smithfield to the NEXTDC S4 facility in Horsley Park and includes:

- A 800mm diameter high-density polyethylene (HDPE) pipeline to transfer treated effluent from the Fairfield recycled water plant from the existing VISY connection at 2 Herbert Place, Smithfield to a proposed booster pump station at 46 Victoria Street, Smithfield.
- A 800mm diameter HDPE pipeline to transfer treated effluent from the pump station to a proposed reservoir site at 156-166 Walworth Road, Horsley Park.
- Dual HDPE pipelines (one 560mm and one 800mm diameter) supplying water from the reservoir to the NEXTDC facility via gravity.

This assessment included a review and analysis of background information undertaken by Bernadette McCall (Heritage Consultant), Heritage Now and a visual inspection undertaken by Tiffany Jones (Heritage Consultant), Heritage Now.

No part of the Project Area is located within the curtilage of a listed heritage item, and there are no areas or specific elements of heritage significance within the Project Area. As the proposed works adjacent to heritage items are limited to the installation of an underground pipeline in the existing road reserves, there are no anticipated historic heritage or historical archaeological impacts. As such, no permits are required under section 60 or section 140 of the *Heritage Act 1977* for the proposed works.

Recommendation 1

Any changes to the design or scope of works as described in this report may require further heritage assessment.

Recommendation 2

A heritage induction is to be provided to all on-site personnel undertaking construction works so that they understand their obligations for protecting heritage under the *Heritage Act 1977*. This includes protection of built heritage and historical archaeological sites and the reporting of any new or suspected heritage site/s. This may be done through an on-site induction or other suitable format.

Recommendation 3

In the unlikely event that archaeological, or suspected archaeological material is uncovered during works, then works in that area are to cease and the area is to be cordoned off. The material is to be inspected by a heritage consultant and works in that area are only to recommence once heritage clearance has been gained and/or mitigation and management measures implemented.

Recommendation 4

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area is to be cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene, then Heritage NSW will be consulted. The ideal conservation outcome is to leave the human remains undisturbed, however, if this is not possible then an appropriate approval is to be sought from Heritage NSW.

Acronyms, Terms and Definitions

Acronym/Term	Definition
DCS	NSW Department of Customer Service
HDPE	High-density polyethylene
LEP	Local Environmental Plan
LGA	Local Government Area
m	Metric metres
mm	Metric millimetres
s170	Under Section 170 of the <i>NSW Heritage Act 1977</i> , government agencies are required to maintain a register of their heritage assets which is known as a s170 heritage register
SHR	State Heritage Register
SoHI	Statement of Heritage Impact
SCP	Spatial Collaboration Portal – Government platform for delivery of NSW spatial datasets provided by DCS Spatial Services.

Version Control

Version	Revision Description	Reviewed by	Date	Approved by	Date Approved
1	Draft	██████████, Heritage Now Principal Heritage Consultant	11/03/2026	██████████, Heritage Now Principal Heritage Consultant	13/03/2026
2	Final	██████████, Heritage Now Principal Heritage Consultant	24/04/2026	██████████, Heritage Now Principal Heritage Consultant	24/04/2026
3	Final (minor proposal revisions)	██████████ Heritage Now Principal Heritage Consultant	20/05/2026	██████████ Heritage Now Principal Heritage Consultant	20/05/2026

Contents

1	The Heritage Items.....	2
1.1	Site Description.....	2
1.1.1	Heritage Items.....	4
1.1.2	Legislative Context and Heritage Listings.....	4
1.2	Historical Context	11
1.2.1	Early European History in the Project Area.....	11
1.2.2	Initial development	13
1.2.3	Settlement Growth in the 19th Century	16
1.2.4	Prospect Reservoir and the Upper Canal	19
1.2.5	Development into the 20th Century	20
1.2.6	Historical aerial imagery.....	24
1.2.7	Chronological Outline.....	30
1.3	Physical Analysis	31
1.3.1	Setting and Views.....	32
2	Significance Assessment	33
2.1	Evaluation Criteria	33
2.2	Existing Statements of Significance	34
2.2.1	State Heritage Items.....	34
2.2.2	S170 Heritage and Conservation Registers	39
2.2.3	Local Heritage Items Fairfield LEP 2013	41
2.3	Significance of the Proposed Work Area.....	41
3	Proposed Works.....	42
3.1	The Project.....	42
3.1.1	Trenching methodology	43
3.1.2	Ancillary compounds.....	44
3.2	Background.....	48
3.2.1	Pre-lodgement Consultation	48
3.2.2	Considerations of Alternatives.....	48
4	Heritage Impact Assessment	50
4.1	Matters for Consideration	50
4.1.1	Fabric and Spatial Arrangements	50
4.1.2	Setting, Views and Vistas	50
4.1.3	Landscape.....	50

4.1.4	Use.....	50
4.1.5	Demolition.....	51
4.1.6	Curtilage	51
4.1.7	Moveable Heritage.....	51
4.1.8	Aboriginal Cultural Heritage.....	51
4.1.9	Historical Archaeology	51
4.1.10	Natural Heritage	51
4.1.11	Conservation Areas	51
4.1.12	Cumulative Impacts	51
4.1.13	The Conservation Management Plan	52
4.1.14	Other Heritage Items in the Vicinity	52
4.1.15	Commonwealth/National Heritage Significance	52
4.1.16	World Heritage Significance	52
5	Summary and Recommendations.....	53
6	References	54
7	Plates.....	56

Tables

Table 1.	Statutory heritage listings adjacent to the Project Area.....	6
Table 2.	Details of SEPP 2021 heritage items in the vicinity of the Project Area.	10
Table 3.	Drawings and documents used for assessment of proposed works.....	45
Table 4.	Detailed description of proposed works.	45

Figures

Figure 1.	The Project Area. (Source: SCP with Heritage Now additions)	4
Figure 2.	Photograph from 1992 heritage study showing enclosed front verandah and corrugated iron skillion, both since removed. (Source: Perumal Murphy Wu 1992, Ref. 051)	9
Figure 3.	Photograph of the brick cottage from 1992 heritage inventory sheet. (Source: Perumal Murphy Wu 1992, Ref. 050).....	10
Figure 4.	Undated, post-1850 plan of parish of St Luke plan showing section of the Project Area. (Source: HLRV, 140662)	12
Figure 5.	Undated plan of the parish of Melville showing western end of Project Area and ‘King’s Gift’, later Horsley Park. (Source: HLRV 140671).....	13
Figure 6.	1841 detail plan of proposed Smithfield Market and town of Prospect, later Smithfield. ...	15
Figure 7.	Detail from 1893 plan of the parish of St Luke showing partial Project Area.....	15
Figure 8.	Bunya pines lining entrance to Horsley Park, c.1900.....	16

Figure 9. 1881 subdivision plan of Wetherill Park estate showing partial Project Area.....	18
Figure 10. Detail from 1888 municipal map of Smithfield and Fairfield showing western end of Project Area.	18
Figure 11. Detail from 1902 Sydney Water Supply map showing the Project Area and Upper Canal sections. (Source: SLNSW, FL9187699).....	20
Figure 12. Section of the route of the Widemere Quarry rail line that includes the Project Area.....	21
Figure 13. View north of the railway cutting for the Widemere Quarry line along the eastern side of Dublin Street, c.1978.	22
Figure 14. Wetherill Park in 1936, in western part of Project Area, view towards Prospect Reservoir.	22
Figure 15. 1967 plan of parish of Melville showing western end of Project Area. (Source: HLRV, mn_phMelville_Sheet 1_Cumberland.jp2).....	23
Figure 16. Detail from WaterNSW showing controlled 'No Entry' area for the Upper Canal near the Project Area. (Source: WaterNSW, 2025).....	23
Figure 17. 1930 aerial view of eastern end of Project Area south of Prospect Creek. (Source: Geosciences Australia, MAP3426_frame675 with Heritage Now additions).....	25
Figure 18. 1947 aerial view of Project Area. (Source: Historical Imagery Viewer with Heritage Now additions).....	26
Figure 19. 1947 aerial view at Walworth Road at western end of Project Area. (Source: Historical Imagery Viewer with Heritage Now additions).....	26
Figure 20. 1965 detail of the Project Area in the vicinity of Upper Canal and Prospect Reservoir. (Source: Historical Imagery Viewer with Heritage Now additions).....	27
Figure 21. 1965 aerial view of eastern end of Project Area south of Prospect Creek. (Source: Historical Imagery Viewer with Heritage Now additions).....	27
Figure 22. 1965 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions).....	28
Figure 23. 1975 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions).....	28
Figure 24. 1991 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions).....	29
Figure 25. 2014 aerial view of the Project Area. (Source: 2014_Jan_01 Google Earth, Image (c) Aerometrex with Heritage Now additions).....	29
Figure 26. Heritage items in the vicinity of the Project Area. (Source: SCP map data with Heritage Now additions).....	34
Figure 27. SHR curtilage of Upper Canal Scheme. (Source: SHR).....	36
Figure 28. SHR curtilage of Prospect Reservoir. (Source: SHR).....	38
Figure 29. Concept design for water pump and reservoirs at 156-166 Walworth Road.....	47
Figure 30. Detail of eastern part of the Project Area (purple) showing proposed trenchless crossing locations (blue).	47
Figure 31. Detail of central part of the Project Area (purple) showing proposed trenchless crossing locations (blue).	48
Figure 32. Detail of central part of the Project Area (purple) showing proposed trenchless crossing locations (blue).	48

Plates

Plate 1. General view of a typical road verge within the Project Area.	56
Plate 2. General view of Kaluna Reserve, facing east.	56
Plate 3. General view of the potential compound located at Delaware Road, facing south.	57
Plate 4. General view of the potential compound, located at The Horsley Drive, facing south-west.	57
Plate 5. General view of the potential compound located at Victoria Street Reserve, facing west. ...	58
Plate 6. General view of the potential compound located at Victoria Street, facing west.	58
Plate 7. General view of the potential compound located at Herbert Place, facing north.	59
Plate 8. General view of the reservoir site located at Walworth Road, facing north.	59
Plate 9. General view of the proposed pump station located at Victoria Street, facing north-east. ...	60
Plate 10. Dirt and gravel track within the western portion of the Project Area, facing east.	60
Plate 11. A speed reduction hump and a landscaped curb extension installed on an asphalt road within the Project Area.	61
Plate 12. Example of a partially grassed and concreted road verge.	61
Plate 13. Example of a dirt road verge.	62
Plate 14. Example of services and a concrete pedestrian footpath within the road verge.	62
Plate 15. Example of signage and accessways within the road verge.	63
Plate 16. A water culvert within the road verge.	63
Plate 17. A portion of asphalted road meeting grass, within the western portion of the Project Area.	64
Plate 18. Cleared parkland within Kaluna Reserve, facing west.	64
Plate 19. Thick vegetation growing along the bank of Prospect Creek within Kaluna Reserve, facing west.	65
Plate 20. Services located within the portion of the Project Area that passes through Kaluna Reserve.	65
Plate 21. Example of the rural residential properties in the western portion of the Project Area, with market gardens in the background.	66
Plate 22. Example of the variety of industrial and warehouse buildings within the central portion of the Project Area.	66
Plate 23. Example of the different types of residential properties surrounding the Project Area.	67
Plate 24. Direct line of sight between the Victorian Georgian Cottage (I87) and the Project Area, facing north.	67
Plate 25. Direct line of sight between the Slab Cottage (I88) and the Project Area, facing south.	68
Plate 26. Direct line of sight between the Project Area and the listed item Spotted Gum Forest (5), which is partially obscured by a fencing and vegetation. View to the west.	68
Plate 27. Direct line of sight between the Project Area and the Group of Hoop Pines (6), facing north.	69
Plate 28. View to the north of the Project Area at Chandos Street, in the direction of Prospect Reservoir, which is obscured by vegetation.	69
Plate 29. Line of sight between the Project Area and the Upper Canal is blocked by vegetation growing on a land bridge, when facing north.	70
Plate 30. Obscured view of the Upper Canal from the Project Area, when facing south.	70

1 The Heritage Items

This document has been prepared in accordance with the Guidelines for Preparing a Statement of Heritage Impact.¹

1.1 Site Description

The coNEXA group owns and operates the Rosehill Recycled Water Scheme (also referred to within the group as the AquaNet Recycled Water Scheme), comprising a recycled water plant at Fairfield (owned by AquaNet Sydney Pty Ltd (ACN 131 234 124) (AquaNet)) and a recycled water reticulation network (owned by Rosehill Network Pty Ltd (ACN 131 213 691) (Rosehill)).

The scheme was initially approved as a major project (MP07_0121) under the now-repealed Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act)

The scheme receives treated effluent from Sydney Water and includes a recycled water treatment plant and an extensive pipeline network, producing high-quality non-potable water suitable for industrial use, supplying the Smithfield, Rosehill and Camellia precincts of Western Sydney.

NEXTDC Ltd (NEXTDC) is an established national developer and operator of data centres and is currently developing a network of facilities to achieve more than 3 gigawatts of data storage capacity. As part of its strategy, NEXTDC are currently seeking State significant development (SSD) consent to construct and operate the 'Western Sydney S4 facility' at Horsley Park, which will be capable of delivering up to 300 megawatts of data storage capacity.

While modern data centres implement advanced efficiency measures, they still require substantial cooling, with evaporative towers being the most effective. However, their reliance on large volumes of make-up water risks overdependence on Sydney's potable water supply, which could strain the water network and create vulnerabilities during drought or restrictions.

coNEXA SYD Pty Ltd (coNEXA), in partnership with NEXTDC, are developing an extension to the scheme to provide recycled water supply to cater for the demand of NEXTDC's facility (the 'proposal').

coNEXA has identified the opportunity to extend the scheme to supply the NEXTDC S4 data centre with 16.6 megalitres per day of recycled water. Technical assessments have confirmed the viability of this supply, which will be engineered to meet the data centre sector's stringent reliability requirements, targeting 99.999% supply resilience compared to the 98% standard for traditional potable water systems. The network will incorporate redundancy and adaptive capacity to ensure continuity in the face of climate variability, peak demand, and emergency conditions.

The existing scheme terminates at VISY Recycling (VISY) at 2 Herbert Street, Smithfield. A concept design alignment has been developed for the proposal, extending the network from the existing termination at Smithfield to the NEXTDC S4 facility in Horsley Park and includes:

- A 800mm diameter high-density polyethylene (HDPE) pipeline to transfer treated effluent from the Fairfield recycled water plant from the existing VISY connection at 2 Herbert Place, Smithfield to a proposed booster pump station at 46 Victoria Street, Smithfield.

¹ Department of Planning and Environment, *Guidelines for Preparing a Statement of Heritage Impact* (2023).

- A 800mm diameter HDPE pipeline to transfer treated effluent from the pump station to a proposed reservoir site at 156-166 Walworth Road, Horsley Park.
- Dual HDPE pipelines (one 560mm and one 800mm diameter) supplying water from the reservoir to the NEXTDC facility via gravity.

Heritage Now Pty Ltd (Heritage Now) was engaged by Element Environment Pty Ltd (Element Environment) to prepare a Statement of Heritage Impact (SoHI) report to support the Review of Environmental Factors (REF) for the project.

The Project Area includes proposed recycled water supply pipelines, pump stations, reservoirs and potential compound sites, located between Kaluna Reserve, Smithfield and Johnston Crescent, Horsley Park. The largest section of the Project Area is within the Fairfield Local Government Area (LGA), while the very eastern end (east of Prospect Creek) is within the Cumberland LGA, on the northern side of Prospect Creek. It is within the parishes of St John, St Luke and Melville, County of Cumberland.

At its eastern end, the Project Area is within part Lot 2 DP849480, at the southern edge of the VISY compound at 2 Herbert Place, Smithfield; it then extends through part of Kaluna Reserve and crosses beneath Prospect Creek. From east to west, the Project Area then extends within part of the road reserves of Low Street, Robert Street, Little Street, Victoria Street, O'Connell Street, Chifley Street, Hassall Street, Redfern Street, Walter Street, Frank Street, Elizabeth Street, Victoria Street, Newton Road, Cowpasture Road, Trivet Street, Chandos Road, Ferrers Road, Redmayne Road, Walworth Road and Burley Road, finally extending to the NEXTDCS4 facility, located at 16 Johnston Crescent, Horsley Park (Lot 305 DP 1275011) (Figure 1).

A pump station is proposed near the beginning of the route at 46 Victoria Street, Smithfield (Lot 2 DP230766), and a reservoir site is proposed at 156–166 Walworth Road, Horsley Park (Lot 51 DP1071120) towards the western end of the route. A temporary construction compound will be established at these locations to facilitate the construction of the project.

In addition, potential options for temporary construction compounds outside of the pipeline route have been assessed at the following locations:

- VISY Yard, 2 Herbert Place, Smithfield (part Lot 2 DP849480)
- 1-9 Victoria Street, Smithfield (part Lot 20 DP1183443)
- Victoria Street Reserve, Wetherill Park (part Lot 20 DP261398)
- 248-258 Delaware Road, Horsley Park (part Lot 232A DP17288)
- 54 Redmayne Road, Horsley Park (northern end of 1725 The Horsley Drive, part Lot 7 DP1021711)

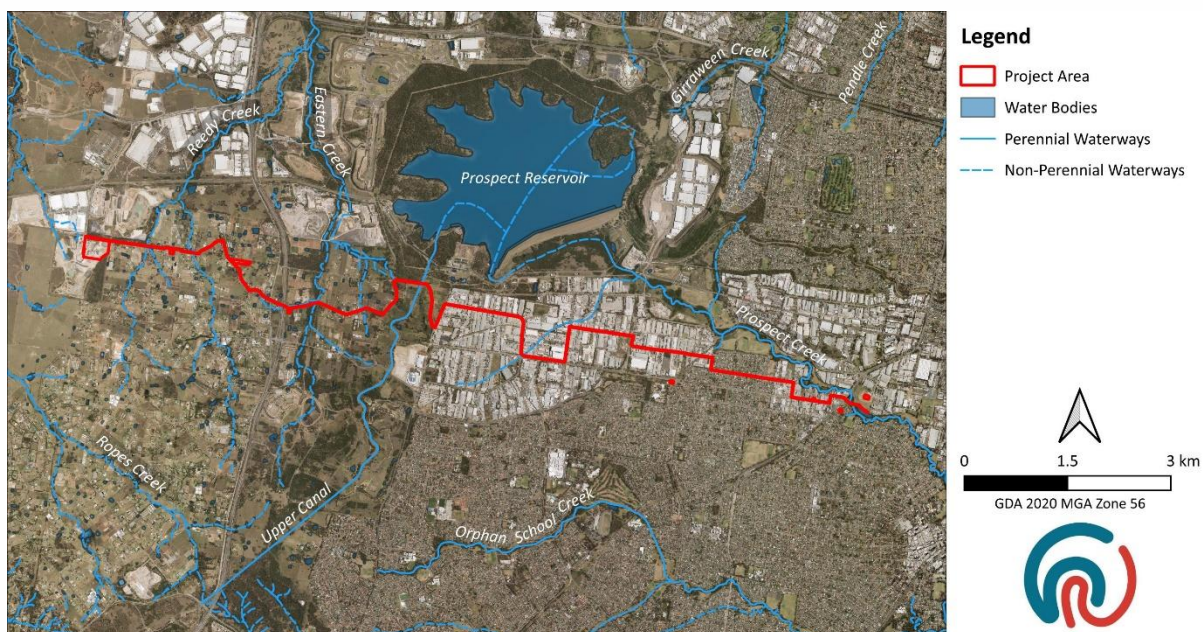


Figure 1. The Project Area. (Source: SCP with Heritage Now additions)

1.1.1 Heritage Items

The Project Area is not located within the curtilage of any heritage items. However, it passes near items of local and State heritage significance (summarised in Table 1; see Section 1.1.2 below).

1.1.2 Legislative Context and Heritage Listings

The *Heritage Act 1977* (Heritage Act) seeks to protect and conserve items of environmental heritage, which are defined as: *those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance.*

Part 3A of the Heritage Act establishes the State Heritage Register (SHR), which is kept by the Heritage Council of New South Wales and provides for the identification and listing of items of State heritage significance. In addition, Part 8, Section 170 of the Act requires government agencies and State-owned corporations to keep a Heritage and Conservation Register (also known as a Section 170 Register) of their heritage assets.

Section 57 (Clauses 1-2) of the *Heritage Act 1977* states that for works within the curtilage of a State Heritage Register item, unless undertaken in accordance with a site-specific or standard exemption, an approval is required to be granted by the approval body under Subdivision 1 of Division 3 (Section 60) before the works can be undertaken.

The Heritage Act also contains provisions relating to archaeological relics. A relic means any deposit, artefact, object or material evidence that:

- (a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- (b) *is of State or local heritage significance.*

According to Section 139 of the Act, a s140 Excavation Permit may be required in certain circumstances:

- (1) A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- (2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*
- (3) This section does not apply to a relic that is subject to an interim heritage order made by the Minister or a listing on the State Heritage Register.*
- (4) The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following—*
 - (a) any relic of a specified kind or description,*
 - (b) any disturbance or excavation of a specified kind or description,*
 - (c) any disturbance or excavation of land in a specified location or having specified features or attributes,*
 - (d) any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.*

An exception from the need for an Excavation Permit may apply under Section 139(4), for the following activities undertaken in accordance with relevant Heritage NSW guidelines:

- minor works involving limited impact to relics of local heritage significance,²
- archaeological monitoring of relics of local heritage significance,³ or
- archaeological test excavation of relics of local heritage significance.⁴

Exceptions do not apply to relics of State significance, to places that are listed on the State Heritage Register or that are subject to an interim heritage order.

If a relic is discovered or located when no permit or approval is in place, Section 146 of the Heritage Act requires the Heritage Council of NSW to be notified.

Heritage items are registered on lists according to their level of significance: national, state, local, and, in rare cases, they may be of world heritage significance.

- The World Heritage List contains items which have international significance, this list is administered by the United Nations Educational, Scientific and Cultural Organisation.
- Items of national significance are listed on the National Heritage List which is administered by the Australian Heritage Council under the *Australian Heritage Council Act 2003* and in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999*.
- The State Heritage Register contains items of state heritage significance and is administered by the NSW Heritage Council under the *NSW Heritage Act 1977* (Heritage Act). The Heritage Act also requires government agencies to maintain a heritage and conservation register of their heritage assets under section 170, also known as a s170 heritage register.

² Heritage NSW, “Relics of Local Heritage Significance: A Guide for Minor Works with Limited Impact.”

³ Heritage NSW, “Relics of Local Heritage Significance: A Guide to Archaeological Monitoring.”

⁴ Heritage NSW, “Relics of Local Heritage Significance: A Guide for Archaeological Test Excavation.”

- Items of local heritage significance are protected under a Local Environmental Plan (LEP), in this instance Fairfield Local Environmental Plan (LEP) 2013 and Cumberland LEP 2021.

A summary of the statutory heritage listings adjacent to the Project Area is provided in Table 1 (see also Figure 26). The items include a mix of built and natural heritage properties, most of which are of local heritage significance. Towards the middle of the Project Area, the route runs adjacent to the State Heritage Register (SHR) curtilage of the Upper Canal System (SHR #01373) along Chandos Road, between Trivet Street and Ferrers Road, Horsley Park; however, the road reserve (where the Project Area is located) is not within the SHR curtilage. The Project Area also runs adjacent to the southern boundary of the SHR curtilage of Prospect Reservoir and surrounding area (SHR #01370). Descriptions of the relevant state and local heritage items are provided below.

Table 1. Statutory heritage listings adjacent to the Project Area.

Listing type	Item name and document details	Listing number	Distance from Project Area
State Heritage Register	Prospect Reservoir and surrounding area Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)	SHR No. 01370 SHR No. 01373	Immediately adjacent
State agency s170 heritage and conservation registers	Prospect Hill Reservoir (Elevated) (WS 0095) Prospect Reservoir (operational land) Sydney Water Heritage and Conservation Register	4575776 4575804	Immediately adjacent
	Upper Nepean Scheme (including Upper Canal and Prospect Reservoir) WaterNSW Heritage and Conservation Register	4580004	Immediately adjacent
Local heritage items	Prospect Reservoir and surrounding area Group of Hoop Pines Upper canal system State Environmental Planning Policy (Precincts—Western Parkland City) 2021	4 6 7	Immediately adjacent
	Slab cottage Victorian Georgian cottage Fairfield Local Environmental Plan 2013	188 187	Immediately adjacent
Local heritage conservation area	Spotted Gum forest State Environmental Planning Policy (Precincts—Western Parkland City) 2021	5	Immediately adjacent

1.1.2.1 State Heritage Register

- **Prospect Reservoir and surrounding area (SHR #01370)**

The following description is summarised from the SHR listing for Prospect Reservoir. The reservoir is located 34 kilometres (km) west of Sydney and is the largest reservoir that supplies water to the greater Sydney region. It stores water piped mainly from Warragamba Dam and the Upper Nepean Dams. It consists of a large earth embankment dam 26m high, and approximately 2.2km in length.

Along with the main dam, the SHR curtilage is bounded by the land owned by Sydney Water, which includes the following elements:⁵

... the reservoir itself; – side spillway and channel at the southern end of the wall; – drainage and monitoring installations at the toe on the downstream face of the wall; – the access road along the toe of the downstream face of the wall; and – the outlet works which connect the stored water to the Lower Canal – consisting of outlet tower, pipelines, valve house and valve, scour lines and valves, and the other metering, screening and control installations.

The listing includes Prospect Reservoir, landscape elements and all associated structures, including pumping stations, to the property boundary. The environs of the reservoir and hence this listing also include a wide range of items, which relate to later amplification of water supply. These include examples of 1920s and 30s pumping stations, a residence, and the 72" (1,800 mm) main, constructed between the Upper Canal and Pipe Head in 1937. Later items associated with the Warragamba Supply Scheme and more modern developments include several more recent pumping stations, screening and boosting plants on the eastern and southern sides of the Reservoir, and the 84 inch (2,100 mm) water main from Prospect, to Pipe Head, completed in 1958.

- **Upper Canal System (SHR #01373)**

The following description is reproduced from the SHR listing:

The Upper Canal forms a major component of the Upper Nepean Scheme. The Upper Nepean Scheme supplies water from the Cataract River at Broughtons Pass to the Crown Street reservoir... The Upper Canal commences by tunnel from Pheasant's Nest Weir on the Nepean River and extends through the Local Government areas of Wollondilly, Liverpool, Holroyd, Fairfield, Campbelltown and Camden.

The system consists of open canals (44km), tunnels (19km) and aqueducts (1km) that carry water by gravity flow to the Prospect Reservoir. Guidelines prepared by WaterNSW for the management of development adjacent to Upper Canal note that the heritage listing applies to the entire length and area of the canal system, including boundary fences, and takes in:⁶

... related water supply components, landscaping features and drainage items such as flumes and culverts.

The report guidelines also note that the Upper Canal Corridor is referred to as the 'WaterNSW Upper Canal'.⁷

⁵ "Prospect Reservoir and Surrounding Area, SHR 01370," accessed November 11, 2025, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045336>.

⁶ WaterNSW, *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines* (2021), 30, <https://www.watnsw.com.au/documents/publications/water-services/development/Guideline-for-development-adjacent-to-the-Upper-Canal-and-Warragamba-Pipelines-2021.pdf>.

⁷ WaterNSW, *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines*, 1.

1.1.2.2 WaterNSW Section 170 Heritage and Conservation Register

Part of the Upper Canal system is also included on the WaterNSW section 170 (s170) Heritage and Conservation Register, listed as 'Upper Nepean Scheme (including Upper Canal and Prospect Reservoir)', #4580004. The complete system measures approximately 64km, as described below:⁸

The Upper Canal is a system of open canals, tunnels and aqueducts that moves water from four dams south of Sydney to Prospect Reservoir where it's treated along with water from Warragamba Dam to supply Greater Sydney's drinking water.

The four dams on the Illawarra Plateau – Cataract, Cordeaux, Avon and Nepean – are part of the Upper Nepean system that supplies up to 20% of Sydney's drinking water. ...

It flows through the suburbs of Kemps Creek, Austral, Leppington, Denham Court, Emerald Hills, Gledswood Hills, Gregory Hills, Currans Hill, Mount Annan, Glen Alpine.

The s170 curtilage for the Upper Nepean scheme managed by WaterNSW relates to the section from Pheasants Nest Dam to Prospect Reservoir and does not include the road reserve that makes up part of the Project Area.⁹ The WaterNSW Upper Canal consists of a controlled area on either side of the canal.¹⁰

1.1.2.3 Sydney Water Section 170 Heritage and Conservation Register

Prospect Reservoir is also included on the Sydney Water s170 Heritage and Conservation Register as two separate items, described below:

- Prospect Reservoir (operational land), #4575804, covering the same elements and curtilage as the SHR listing (occupying Lot 1 DP1031817;¹¹ and
- Prospect Hill Reservoir (Elevated), #4575776, Lot 304 DP1122291. The second item refers to the 1934 elevated concrete reservoir deemed to be of local significance. It consists of the elevated concrete reservoir with Egyptian-style doorways and associated pipework, valves and valve houses to the property boundary.¹²

1.1.2.4 Local Heritage Items Fairfield LEP 2013

Sections of the proposed Project Area are in the vicinity of items of local heritage significance described below.

- **Slab cottage, #I88 (76 Chifley Street, Smithfield)**

⁸ WaterNSW, "Upper Canal," WaterNSW, Unknown LDAP User, 2025, <https://www.watnsw.com.au/education/learning-about-water/upper-canal>.

⁹ WaterNSW, "Upper Nepean Scheme (Including Upper Canal and Prospect Reservoir), S170 Heritage & Conservation Register, #4580004," State Heritage Inventory, 2020, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4580004>.

¹⁰ WaterNSW, *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines*.

¹¹ Sydney Water, "Prospect Reservoir (Operational Land), S170 #4575804," Heritage & Conservation S170 Register, 2016, <https://www.sydneywater.com.au/water-the-environment/what-we-are-doing/heritage-conservation/heritage-search.html>.

¹² Sydney Water, "Prospect Hill Reservoir (Elevated), S170 #4575776," Heritage & Conservation S170 Register, 2014, <https://www.sydneywater.com.au/water-the-environment/what-we-are-doing/heritage-conservation/heritage-search.html>.

The slab cottage is located on the south-east corner of Chifley Street and Shamrock Avenue, set back slightly from the street front with a separate slab shed at the rear. At the time of listing it was described as:

Very early timber cottage. Symmetrical design. High pyramidal corrugated iron roof with close eaves. Small brick chimney in sandstock bricks with lime mortar. Skillion addition weatherboard. Concave hipped verandah roof to opposite facade, enclosed in asbestos cement with windows. Double-hung windows, one with twelve panes. Original door. Screens nailed to windows. Slab shed at rear.¹³

The exact date of construction is not recorded but the cottage is one of the earliest in the area. It was owned by Amos Coleman, a former mayor, and has undergone several modifications from the early 20th century onwards, including enclosing the verandah, a skillion addition, and roof replacement. A photograph from a 1992 heritage study shows the cottage before the enclosed front verandah and skillion were removed (Figure 2). The SHI listing notes that the cottage was purchased by Fairfield Council in 1996 but is used as a private residence.



Figure 2. Photograph from 1992 heritage study showing enclosed front verandah and corrugated iron skillion, both since removed. (Source: Perumal Murphy Wu 1992, Ref. 051)

- **Victorian Georgian cottage, #187 (45 Chifley Street, Smithfield)**

The cottage is located at the south-east corner of a large, low density residential block at the north-west corner of Chifley Street and Market Street. It is described as a Georgian-style cottage of the Victorian period, symmetrical in design, made of brick with a hipped corrugated iron roof and verandah (Figure 3). The house is currently derelict after a fire in 2000, although the brick walls remain. A wire mesh fence encloses the lot, with access now from Market Street. The rest of the block is undeveloped apart from a large shed that is set back c.45m from Chifley Street.

¹³ "Slab Cottage, LEP I88," State Heritage Inventory, accessed November 13, 2025, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1570019>.



Figure 3. Photograph of the brick cottage from 1992 heritage inventory sheet. (Source: Perumal Murphy Wu 1992, Ref. 050)

1.1.2.5 State Environmental Planning Policy (Precincts—Western Parkland City) 2021

The Project Area route is also in the vicinity of heritage items listed on Schedule 11 in the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 (SEPP 2021). Individual items listed include the previously described ‘Prospect Reservoir and surrounding area’ (#4), and ‘Upper canal system’ (#7), listed as State significant. Two other items of local heritage significance are included, ‘Spotted Gum Forest’ (#5) and ‘Group of Hoop Pines’ (#6), both of which are located within the curtilage of Prospect Reservoir and surrounding area (Figure 26).

Table 2. Details of SEPP 2021 heritage items in the vicinity of the Project Area.

Item Name	Primary Address	Property description	Significance	Item No.
Prospect Reservoir and surrounding area	Reservoir Road	Part Lot 304 DP1122291; Lots 1 & 2 DP1062094; Lot 1 DP845354; Lots 1, 2 & 4 DP832281; Lot 5 DP 861815; Lot 7 DP 1015294	State	#4
Upper Canal system	Pheasants Nest Weir to Prospect Reservoir	Part Lot 1 DP1062094; Lots 1 & 2 DP596353; Lots 1-3 DP603946; Lot 22 DP596352; Lot 1 DP596355; Lot 1 DP613552; Lot 51 DP811015; Lots 11 & 12 DP1055232; Lots 1 & 2 DP1086645	State	#7
Spotted Gum Forest	Corner of Chandos Road and Ferrers Road, Horsley Park	Part Lot 304 DP1122291; Lots 2 & 4 DP832281; Lot 7 DP 1015294; Lot 5 DP 861815; part Lot 1 DP1062094	Local	#5
Group of Hoop Pines	Corner of Chandos Road and Trivet Street, Wetherill Park	Part Lot 1 DP1062094; part Lot 304 DP1122291	Local	#6

1.2 Historical Context

The following section provides a summary European settlement in the Project Area. The general history includes more specific information on heritage items identified in the immediate vicinity of the Project Area.

1.2.1 Early European History in the Project Area

Early settlement in the Project Area centred around the southern side of Prospect Hill, a weathered volcanic plug of basaltic rock that stood out in a region of mainly gently undulating hills and flat, fertile volcanic soils around a network of creeks. The waterways also made road building through the area difficult, resulting in the slower development of the Smithfield and Fairfield area compared to the nearby towns of Liverpool, to the south, and Parramatta, to the north-east.¹⁴ Early grants were made by Governor Arthur Phillip after exploring the area in April 1788, and although not all were settled successfully, cereal crops had been established by the time it was visited by Governor Macquarie in 1810.¹⁵ Further grants were made by Macquarie during his time as governor, and by 1821, large grants more suited for cereal cultivation and grazing were a feature of the western part of the Fairfield LGA, whereas most grants around Prospect Hill, and the creeks and waterways feeding into the Georges River further south, tended to be smaller but had the benefit of fertile alluvial soils (Figure 4).¹⁶

Much of the Project Area is in the northern part of the parish of St Luke, between Prospect Creek and Orphan School Creek in the south. An initial large grant of 12,300 acres was made by Governor King in 1803, to establish a government orphan school and associated farmland. Part of the Project Area also passes along the southern boundary of a small grant of 100 acres to the north of this, made to Thomas Hassall in 1804.¹⁷ In 1827, parts of the orphan school grant were subdivided, and a parcel of 2,118 acres was bought by James Chisolm, including the area that would later become Smithfield.¹⁸ Chisolm's land was bordered on the east by the Liverpool to Parramatta Road, one of the two main routes through the area, and on the west by another large grant of 1,030 acres, which covered much of the area of Wetherill Park. A road reserve ran through the southern part of the grant from east to west, between Cowpasture Road and the Liverpool to Parramatta road. An annotation on the early parish plan records a transfer from Samuel Marsden to Lawson, however it appears that the land was still part of the Orphan School's holding until it was sold by Marsden to Edward New, a former convict, in 1837.¹⁹ The property was bordered to the north by the parish of Prospect, and by the Cowpasture Road on the west, which continued north to Prospect and Parramatta, the other major route through the region (Figure 4).²⁰ Further west, the Project Area extends into the parish of Melville, running through part of a large grant of 2,000 acres made by

¹⁴ George Vance, *Fairfield, A History of the District*, 2nd ed. (The Council of the City of Fairfield, 1991), 1, <https://heritagecollection.fairfieldcity.nsw.gov.au/nodes/view/389>.

¹⁵ Sydney Water, *Prospect Reservoir Site: Conservation Management Plan* (Sydney Water Corporation, 2005), 10–11.

¹⁶ Terry Kass, *Fairfield City Heritage Study: Volume 1 Historical Context Report* (Liverpool City Council, 1993), 4, <https://heritagensw.intersearch.com.au/heritagenswjspui/handle/1/6933>.

¹⁷ Vance, *Fairfield, A History of the District*, 110.

¹⁸ Vance, *Fairfield, A History of the District*, 13.

¹⁹ Jennifer Stephenson, *A History of Whinstanes Hill Farm*, Unpublished (2021), 3, <https://heritagecollection.fairfieldcity.nsw.gov.au/nodes/view/4355>.

²⁰ Kass, *Thematic History*, 5.

Governor King in 1804 to Colonel George Johnston. Cowpasture Road formed the eastern boundary of Johnston's grant, which became known as King's Gift (Figure 5).²¹ A small section of the Project Area to the east of Smithfield is in the parish of St John. It is recorded as part of a grant owned by a William Sherwin in 1831; however, there are no identified heritage items in the immediate vicinity of this part of the Project Area. The small grant to Hassall has left its mark in the street names for the district, but there are no identified heritage items in the vicinity of this part of the Project Area.

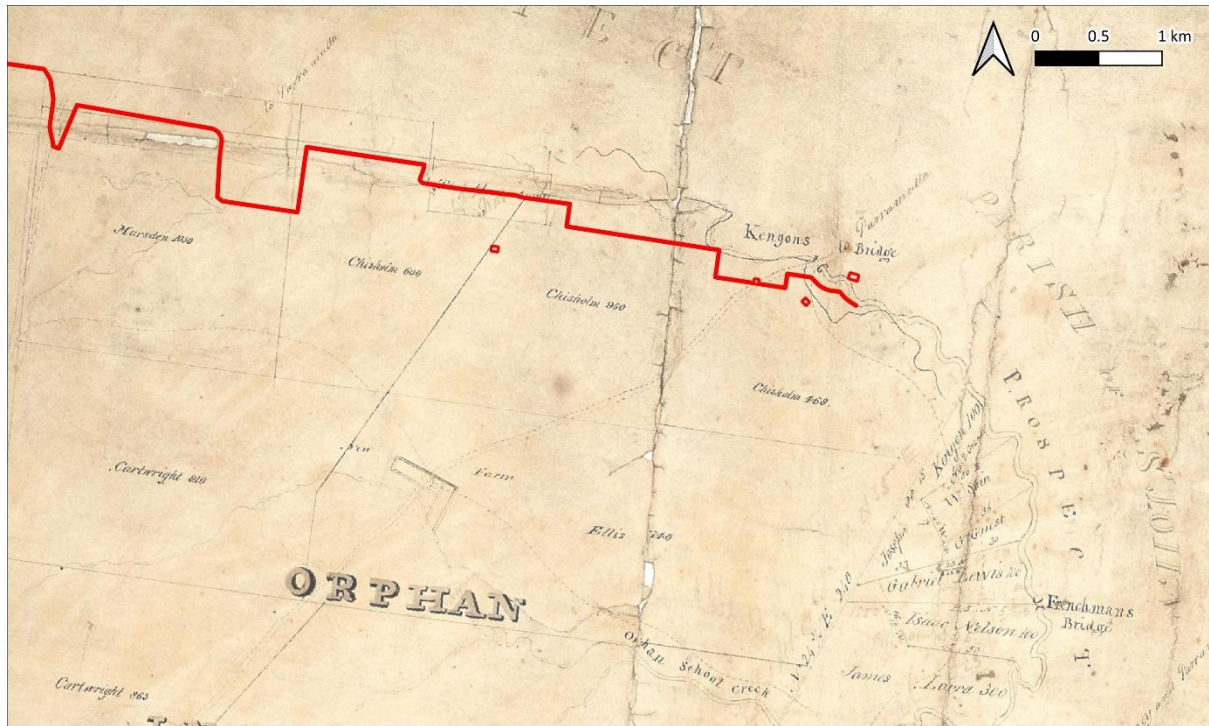


Figure 4. Undated, post-1850 plan of parish of St Luke plan showing section of the Project Area. (Source: HLRV, 140662)

²¹ Vance, *Fairfield, A History of the District*, 103.

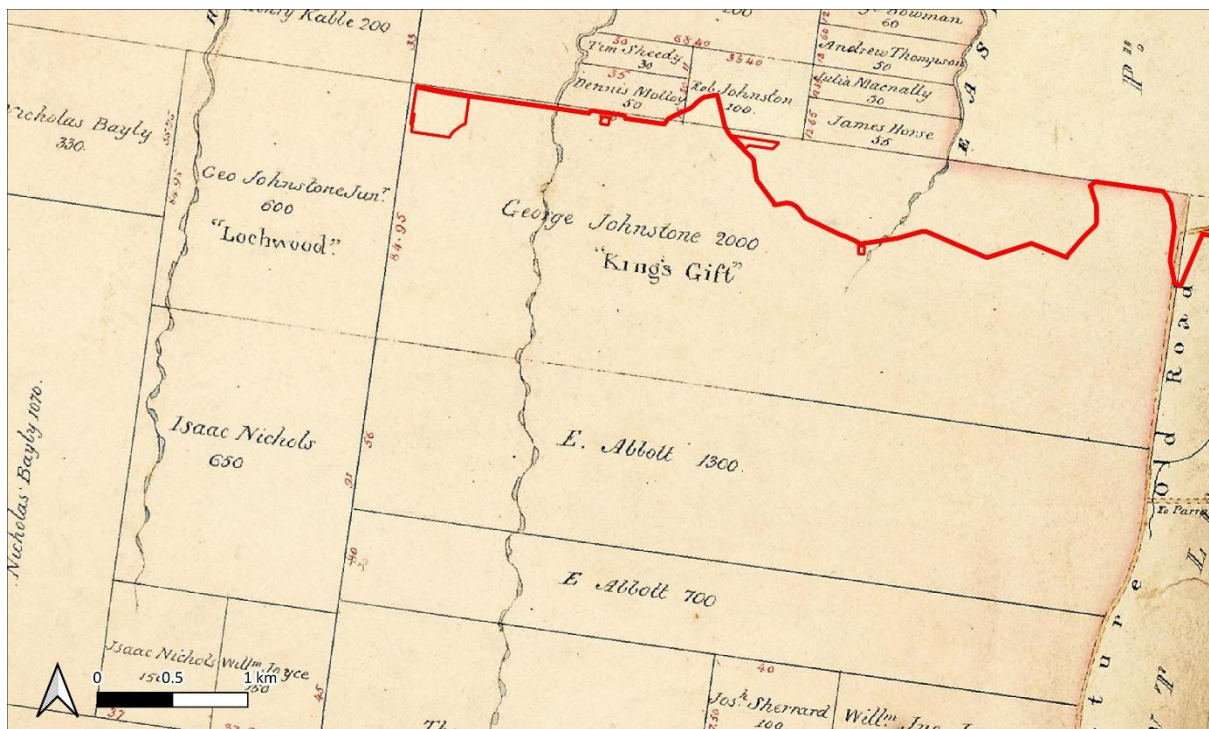


Figure 5. Undated plan of the parish of Melville showing western end of Project Area and 'King's Gift', later Horsley Park. (Source: HLRV 140671)

1.2.2 Initial development

The areas of Smithfield and Wetherill Park, which form most of the Project Area, were developed on the lands formerly owned by Chisolm and New, while settlement of Johnston's grant to the west would lead to the eventual establishment of Horsley Park. The impetus for a settlement at Smithfield came from John Ryan Brennan, who purchased Chisolm's land in 1836. As a trained solicitor, Brennan was able to use his legal skills to gain various legal appointments from the Crown.²² Brennan proposed to establish a private settlement called Donnybrook, surrounded by residential lots and small farming ventures. The central point of the settlement would be Queen's Square, located on Victoria Street, an area of 30 acres that would be used as a large market and fair ground (Figure 6). Brennan intended that the square, which he named the Smithfield Market and Fair Green, would be used for regular livestock and produce sales. The sale of land was advertised in August 1841 and was initially successful. However, sales and interest in the market may have slowed soon after. In September 1841, the advertised name for the town was changed to Prospect, to remove perceived negative associations with the Donnybrook fairs in Ireland, but the name Smithfield would prove to be more enduring.²³ Despite offering various incentives, such as free allotments to certain skilled tradespeople, access to firewood and no fees for the use of paddocks, Brennan's proposed scheme was unsuccessful, and he went on to suffer significant financial losses following the establishment of markets elsewhere.²⁴ Brennan was considered to be a radical for his time, and his ideas for

²² Vance, *Fairfield, A History of the District*, 15–16.

²³ Kass, *Thematic History*, 16–18.

²⁴ Vance, *Fairfield, A History of the District*, 18–21.

governance in the settlement often encouraged negative press, which may have been a contributory factor in its lack of success.²⁵

However unsuccessful the market proved, his plan set the pattern for the early street grid that now makes up much of the suburb, and led to the construction of early cottages, particularly along Victoria and Chifley Streets. Although no houses are indicated adjacent to the Project Area on the early town plan, the allotment containing the slab cottage at 76 Chifley Street (LEP #188; shown as lot 19, Block 31 at the corner of Water Street and Bourke Street), has been shaded and annotated, along with several lots next to it. It is unclear who the owner was, but it suggests that this land was occupied following the early subdivision. No detail was recorded for the lot at the corner of Market Street and Victoria Street (Lot 14, Block 39) where the brick cottage (LEP #187) is located; however, it is recorded as one of the earliest houses dating from this initial settlement period.²⁶

Early settlement to the west of Smithfield took a different form. The western limit of Brennan's town plan was around Wetherill Street, and this area forms the eastern part of Wetherill Park, in combination with part of Edward New's former property further west. By 1840, New had built a house on his farm, known as 'Whinstanes', on a prominent hill, known as Bull's Hill, in the southern part of the grant. The house was south of the Project Area, nearer to The Horsley Drive, as indicated on later parish plans by the location of Bull's Hill (Figure 7). Edward New raised cattle, bred horses, and established a farm with vineyards and fruit trees. In 1849, he sold his farm to William Lawson Jnr, the son of the prominent surveyor.²⁷ Lawson's father already held property to the north of this, at Prospect Hill.²⁸

At the western end of the Project Area, the King's Gift property was inherited by Colonel Johnston's daughter Blanche, after his death in 1823. Blanche married Lieutenant George Weston in 1829, and they established the Horsley Park homestead in 1833-34, which Weston named for his birthplace in Surrey, England.²⁹ An Indian Bungalow-style house was built on the highest point of several hills on the property, influenced by Weston's time in the army of the East India Company. The homestead was designed to be a self-sufficient pastoral property with an orchard, dairy and vineyard. As well as the house, the property included large cellars under the house for storage of various products, and a series of outbuildings designed along a village-style street layout, which extended west from the rear of the house. The entrance drive on the eastern side was lined by an avenue of Queensland Bunya pines (*Araucaria bidwillii*) from the property's entrance gate on Cowpasture Road (Figure 8).³⁰

²⁵ Vance, *Fairfield, A History of the District*, 15–16; Kass, *Thematic History*, 5.

²⁶ "Victorian Georgian Cottage, LEP 187," State Heritage Inventory, 2011, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1570046>.

²⁷ Stephenson, *A History of Whinstanes Hill Farm*, 4–5.

²⁸ "Prospect Reservoir and Surrounding Area, SHR 01370."

²⁹ Vance, *Fairfield, A History of the District*, 106–7; "Family Notices," *Sydney Gazette and New South Wales Advertiser* (New South Wales), May 23, 1829, 2.

³⁰ Vance, *Fairfield, A History of the District*, 142–43; "Horsley Complex (Homestead, Outbuildings, Garden, Farm), SHR #00030," State Heritage Inventory, 2024, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045518>.



Figure 6. 1841 detail plan of proposed Smithfield Market and town of Prospect, later Smithfield. Overlay shows partial Project Area. (Source: SLNSW FL3701555)

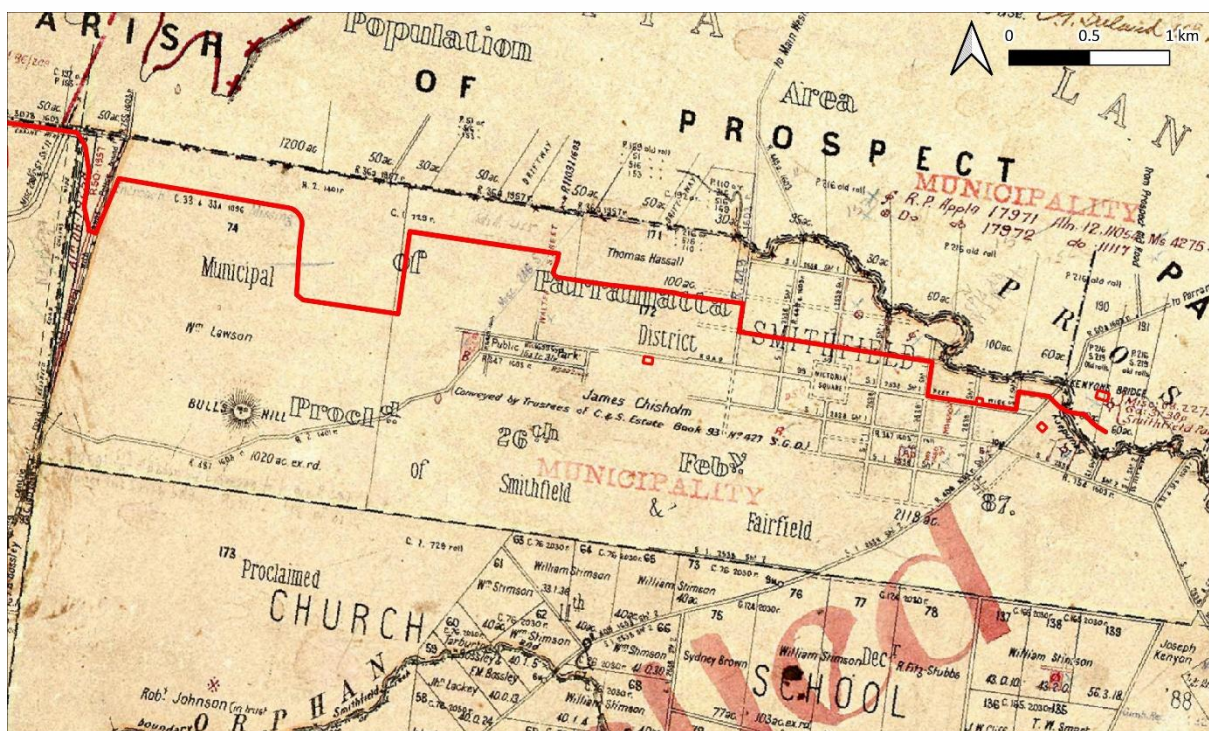


Figure 7. Detail from 1893 plan of the parish of St Luke showing partial Project Area. (Source: HLRV, 14041601.jp2)



Figure 8. Bunya pines lining entrance to Horsley Park, c.1900. (Source: Fairfield City Heritage College, courtesy of NLA, 8151595)

1.2.3 Settlement Growth in the 19th Century

Despite the failure of the Smithfield Market venture in the 1840s, early settlers to the area remained. The town plan had been constrained on the east side by the road between Parramatta and Liverpool; however, the location helped attract settlers to the area; as well as travellers, after several inns were opened in the 1840s.³¹ One early group of settlers were part of a strict Baptist community. Founding members such as John Watts and a local lay preacher, William Webb, built cottages in the area, and later a slab cottage to hold services for a growing community of local Baptists.³² The community also established a Sunday School and raised money to build the first school in Smithfield, which opened in 1843. It remained as the only local school, until a national school was built in 1850. Other early settlers to the wider area established new vineyards, particularly around Prospect Creek. Grapes had been grown for wine production on the Orphan School Estate from the late 1820s, and at the larger Horsley Park and Whinstanes estates, but only became more established following the arrival of many German immigrants to the region. Horticulture was another early local industry, and by the 1860s both had become important for the local economy, along with more established agricultural and grazing properties and timber getting activities.³³

The construction of the nearby railway line between Parramatta and Liverpool in 1856 did little to boost the local population, as it by-passed the main settlement of Smithfield.³⁴ A new station for the

³¹ Kass, *Thematic History*, 5–6.

³² Vance, *Fairfield, A History of the District*, 26–27; “Some Early History of Smithfield,” *The Biz* (Fairfield, New South Wales), July 13, 1950.

³³ Kass, *Thematic History*, 7–8; Vance, *Fairfield, A History of the District*, 29–30.

³⁴ Vance, *Fairfield, A History of the District*, 128.

line opened at Fairfield in the same year, which drew most new settlers further to the south.³⁵ By 1871, the population of Smithfield was recorded as 264 adults. It was during this period that Amos Coleman, who later went on to become Mayor of the renamed Fairfield Municipal Council in 1922, bought the property on Water Street (now 76 Chifley Street), which contains the early slab cottage (LEP #188) that is thought to date to Smithfield's initial settlement period.³⁶ As the community of Smithfield grew in the 1870s-1880s, further churches and other services were established in the town. These included a post office, police station, various stores and hotels that served the surrounding area, making Smithfield the largest employment centre for workers not involved in primary industries.³⁷

Wetherill Park estate to the west, between Smithfield and the Lawson family's Whinstanes estate, was still a largely undivided extension of Smithfield. Smaller lots were listed for sale in 1881 by the owner, a Mr Daniel Wetherill, with a view to developing it into a 'snug little township'.³⁸ A local public school was established there in 1882, changing names several times prior to 1886, when it became Wetherill Park School. A reserved area for the park was noted on the sale plan between Wetherill Street (now Victoria Street) and Park Road; however, this does not include the Victoria Street reserve where one of the temporary construction compounds is proposed (this is located further to the east) (Figure 9). Annotations on the subdivision plan show that several properties had been sold. By this time, the local community consisted of those who lived in the town of Smithfield, and surrounding market gardeners, timber getters, vintners, tanners and farmers.³⁹ Population growth in the western part of the area had been driven also by the increasing number of settlers involved in the construction of a new water supply scheme for Sydney, which was approved in 1877. Significant numbers of workers were drawn to the area, and many stayed on once the Upper Nepean Scheme and construction of Prospect Reservoir were completed in 1888.⁴⁰

During this time, support for and against the incorporation of Smithfield and Fairfield into a municipality ensued, and in 1888, the local area was finally proclaimed as the Municipality of Smithfield and Fairfield.⁴¹ A plan of the new municipality shows that the Project Area included the initial allotments from the early plan of Smithfield, bordered by increasing subdivisions to the east of Smithfield Road, and the larger subdivided lots and sections of Wetherill Park referred to above. The larger properties at the western end of the Project Area owned by the Lawson and Weston families remained largely unchanged on the plan, apart from the construction of the water supply system through Horsley Park for Prospect Reservoir (Figure 10).

³⁵ Kass, *Thematic History*, 7.

³⁶ Vance, *Fairfield, A History of the District*, 324; State Heritage Inventory, "Slab Cottage, LEP 188."

³⁷ Vance, *Fairfield, A History of the District*, 32–33; Kass, *Thematic History*, 12.

³⁸ "Important Sale," *Sydney Punch* (New South Wales), March 5, 1881.

³⁹ Vance, *Fairfield, A History of the District*, 33.

⁴⁰ Kass, *Thematic History*, 9–10; Sydney Water, *Prospect Reservoir Site: Conservation Management Plan*, 21–23.

⁴¹ Vance, *Fairfield, A History of the District*, 166–67.

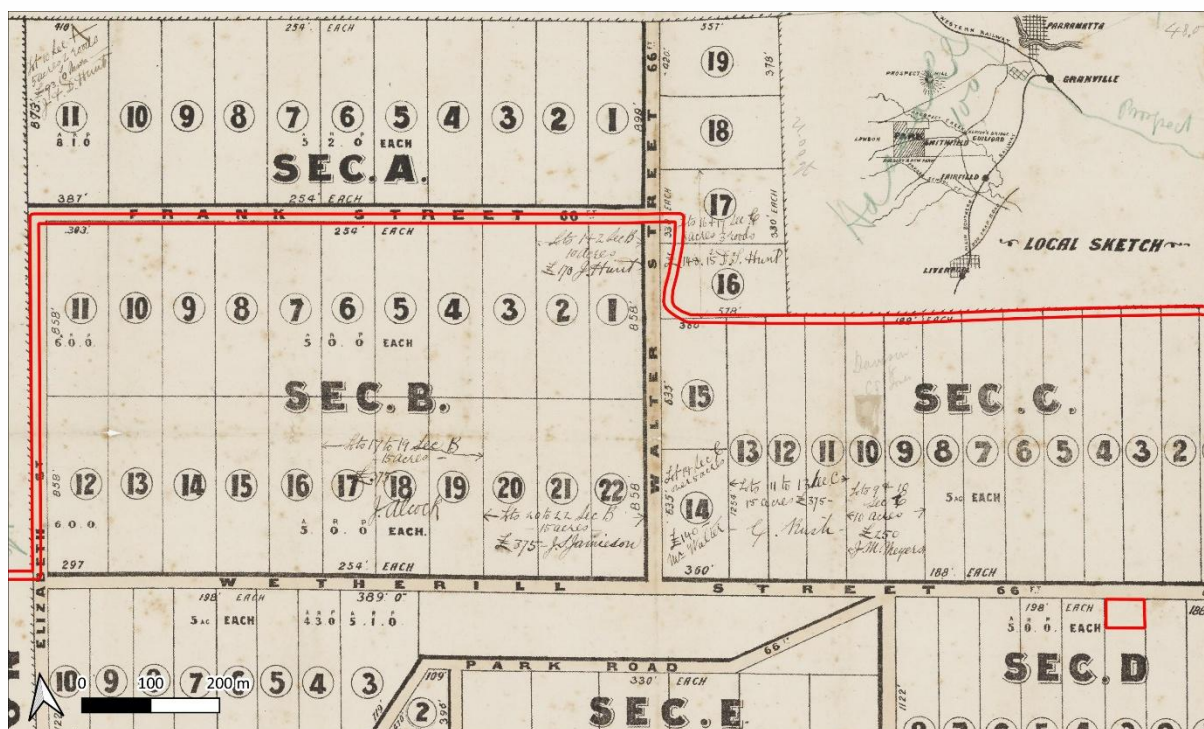


Figure 9. 1881 subdivision plan of Wetherill Park estate showing partial Project Area. Wetherill Street has been renamed Victoria Street and the proposed temporary compound at Victoria Street reserve is outlined in red. (Source: SLNSW, FL9091705)

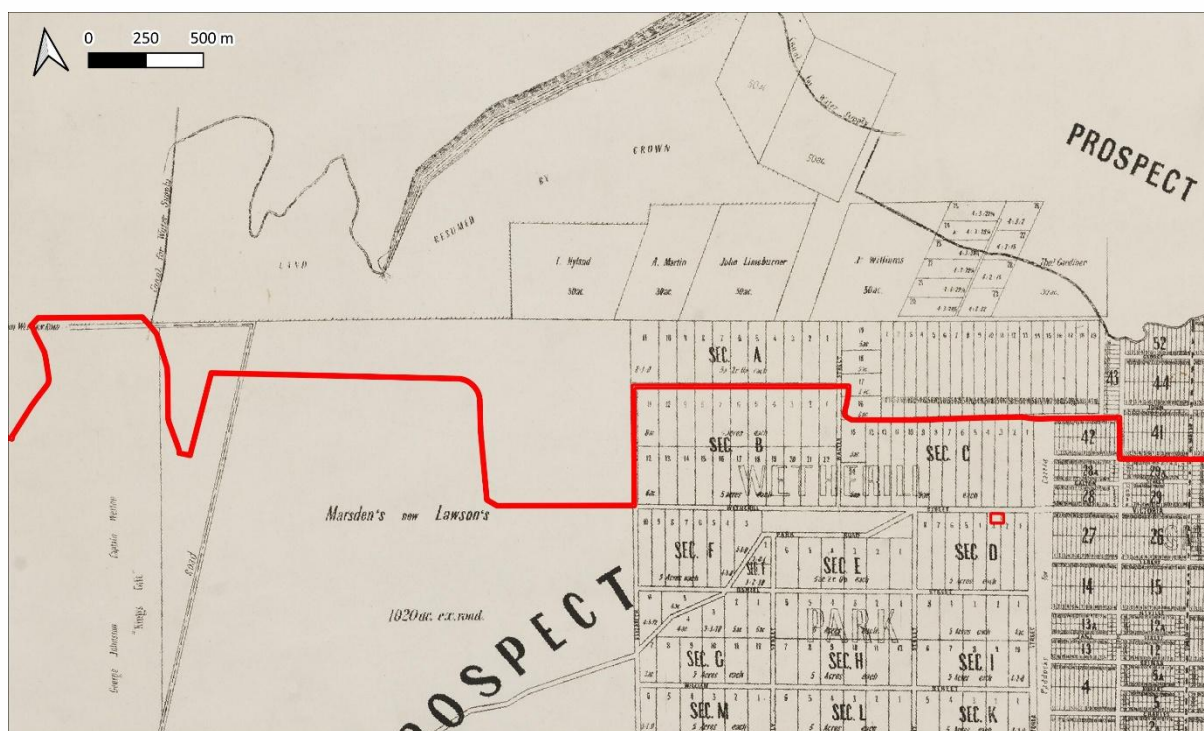


Figure 10. Detail from 1888 municipal map of Smithfield and Fairfield showing western end of Project Area. The proposed temporary compound at Victoria Street reserve is outlined in red. (Source: SLNSW, FL3747204)

1.2.4 Prospect Reservoir and the Upper Canal

As noted above, the western part of the Project Area followed a different settlement and development trajectory. The large family estates remained, restricting the formation of roads through to the west, and they were not subdivided until the early 20th century. However, the need for a new reliable water supply for the growing needs of Sydney was the catalyst for change in the area, with the development of the reservoir at Prospect, along with the dams and canal system feeding into it.⁴² As part of a major engineering project undertaken by the Department of Public Works, land for construction of a reservoir and canal through the western end of the Project Area was appropriated by the Government, and construction of the scheme commenced in 1880.⁴³ The design of the reservoir and canal system is attributed to Edward Orpen Moriarty, who was Engineer in Chief of the Harbours and Rivers Branch of the Public Works Department until 1888.⁴⁴

Several schemes for a new water system were put forward in the late 1860s.⁴⁵ By 1869, a Commission established to assess their merits recommended that a large scale plan based on directing water from the Nepean River and its tributaries commence. A final decision was not made until 1877, when approval was given for the construction of a reservoir at Prospect, north of the Project Area; the proposed series of dams, canals, tunnels and aqueducts would carry the diverted water from the Cataract, Cordeaux, Avon and Nepean dams to the new reservoir, before being taken east via the Lower Canal.⁴⁶

While there was little change in the farming activity around the canal, the canal route cut through the eastern part of the Horsley Park estate as shown in the 1902 map of the water supply system for Sydney (Figure 11). The establishment of a workers' camp west of Smithfield, for those employed on the Prospect Reservoir project, also marked the start of demographic and economic changes that would eventually change the character of local communities into the following century.⁴⁷

Although the role of Prospect Reservoir was changed in 1996, following the construction of Prospect Water Filtration Plant, it remains part of the overall system as an off-line storage service reservoir that can supplement water supplies as needed.⁴⁸ The Upper Nepean Scheme remains in use, and the Upper Canal provides the only means of transferring water from the dams into the Sydney water supply system.⁴⁹

⁴² Sydney Water, *Prospect Reservoir Site: Conservation Management Plan*, 19–20; EMM Consulting Pty Ltd, *Prospect Reservoir: Conservation Management Plan* (2021), 16.

⁴³ Sydney Water, *Prospect Reservoir Site: Conservation Management Plan*, 19–20.

⁴⁴ "Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), SHR 01373," State Heritage Inventory, accessed November 11, 2025, <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5051481>.

⁴⁵ Sydney Water, *Prospect Reservoir Site: Conservation Management Plan*, 19.

⁴⁶ Sydney Water, *Prospect Reservoir Site: Conservation Management Plan*, 20; State Heritage Inventory, "Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), SHR 01373."

⁴⁷ Vance, *Fairfield, A History of the District*, 153; Kass, *Thematic History*, 10.

⁴⁸ "Prospect Reservoir and Surrounding Area, SHR 01370."

⁴⁹ EMM Consulting Pty Ltd, *Prospect Reservoir: Conservation Management Plan*, 38; WaterNSW, *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines*, 2.

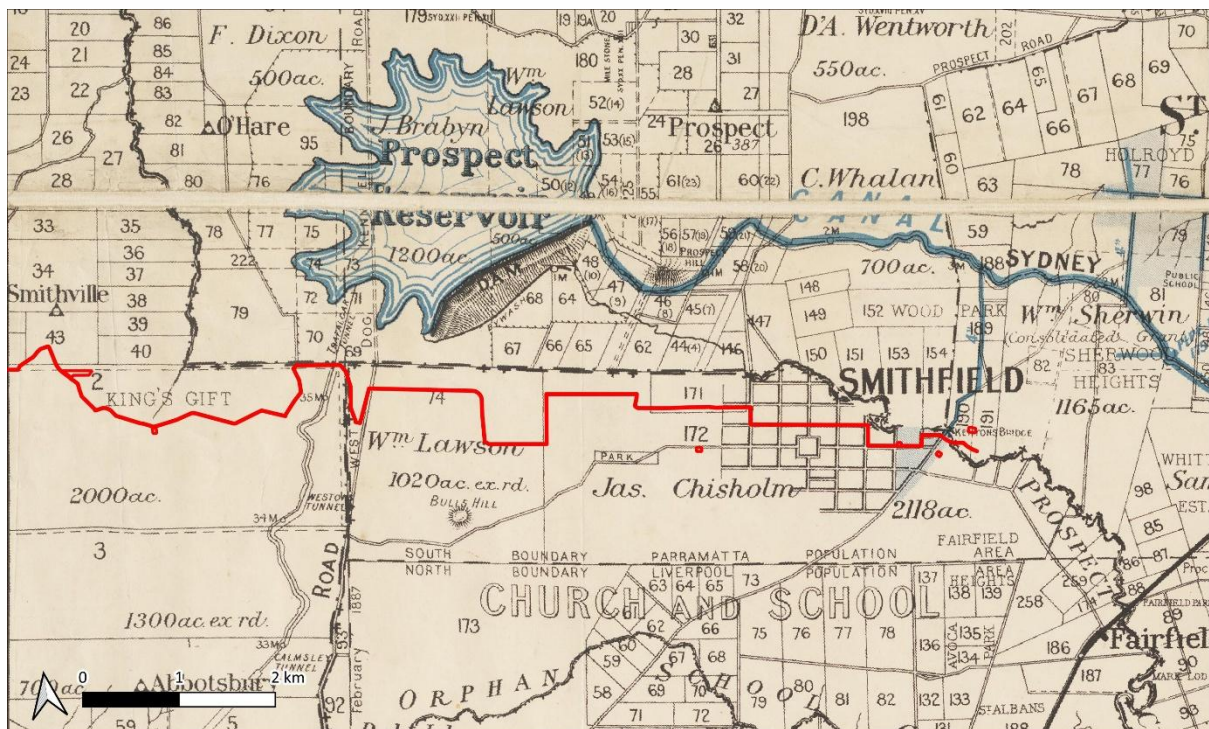


Figure 11. Detail from 1902 Sydney Water Supply map showing the Project Area and Upper Canal sections. (Source: SLNSW, FL9187699)

1.2.5 Development into the 20th Century

In 1901, the first of several blue metal quarry sites was opened at Prospect Hill, north of the Project Area; this was followed in 1924 by the Widemere Quarry on the southern side of Prospect Hill. A rail line was built soon after, to link the quarry with the main railway line at Fairfield. Much of the route followed public streets,⁵⁰ and includes part of the Project Area where the proposed route crosses the former railway line. An excerpt from a street directory map dated c.1944 shows that the railway line turned north from Smithfield Street (now The Horsley Drive) into Dublin Street, and continued north to Chifley Street before turning north-west towards Hassall Street (Figure 12). The railway line was closed in 1945 and the tracks were removed, but remnants of the alignment remained, as did a deep cutting running along Dublin Street (outside of the Project Area) (Figure 13).

Parts of Wetherill Park were still described as ‘thickly timbered’ and scrubby in the early 20th century, likely representing regrowth from earlier 19th-century tree clearing, while other cleared areas remained under agriculture.⁵¹ Further west, the former Whinstanes estate was not subdivided until 1918, after it passed out of the Lawson family.⁵² Subdivision of the Horsley Park property took place six years later, when it was offered for sale as smaller agricultural lots.⁵³ It was around this time that the former Municipality of Smithfield and Fairfield changed its name to the Municipality of Fairfield, emphasising the slower growth in Smithfield and its decline as a regional centre.⁵⁴ By the 1930s, the suburb of Wetherill Park consisted mostly of market gardens and poultry farms, arising

⁵⁰ Vance, *Fairfield, A History of the District*, 134.

⁵¹ Kass, *Thematic History*, 15.

⁵² Stephenson, *A History of Whinstanes Hill Farm*, 10.

⁵³ State Heritage Inventory, “Horsley Complex (Homestead, Outbuildings, Garden, Farm), SHR #00030.”

⁵⁴ “LOCAL GOVERNMENT ACT, 1919,” *Government Gazette of the State of New South Wales* (Sydney, New South Wales), October 29, 1920, 6301.

from population growth by settlers after World War One, when small farms were established. Properties were separated by stands of trees along the property boundaries, and the few roads through the area that had been constrained by the larger properties, as well as the canal system (Figure 14).⁵⁵

Much of Smithfield, Wetherill Park and Horsley Park remained untouched by the post-World War Two suburban expansion in nearby Fairfield, as it was part of a planned 'Green Belt' within the County of Cumberland that was set aside for non-urban uses in 1951.⁵⁶ By-passed by the post-war settlement that was drawn to Fairfield, the previous thriving township of Smithfield declined further in comparison during the 1950s.⁵⁷ Similarly, settlement in Wetherill Park was slow. Increasing growth between 1955 and 1965 was focused mainly along The Horsley Drive, while larger subdivisions in the north were rezoned for industrial purposes in 1971 (Figure 15).⁵⁸ Land around the canal system feeding water into Prospect Reservoir was declared a controlled zone in June 2000, prohibiting entry into a corridor on either side that is fenced off.⁵⁹ In the western part of the Project Area, the controlled area stops at the road reserve for Chandos Road, where the open sections of canal continue underground (Figure 16).

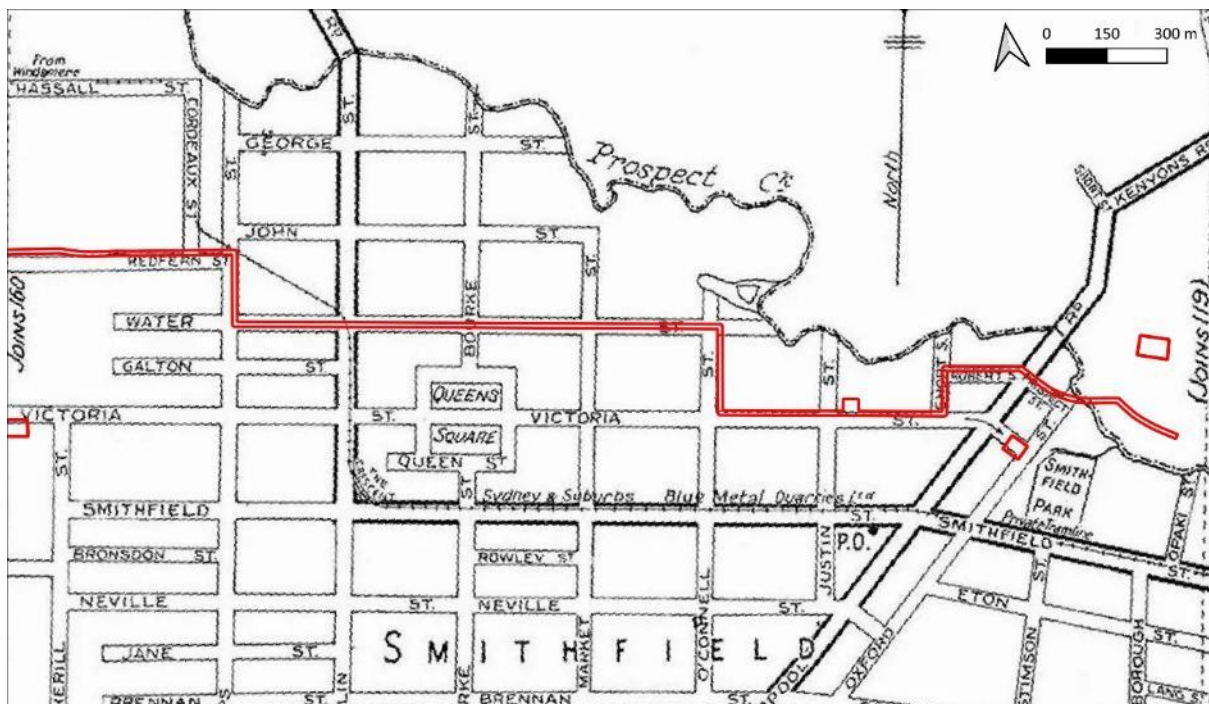


Figure 12. Section of the route of the Widemere Quarry rail line that includes the Project Area. Water Street has since been renamed Chifley Street. (Source: Premier Street Directory of Sydney and Environs c.1944 (Robinsons) 7th edition, courtesy Gould Genealogy & History)

⁵⁵ Vance, *Fairfield, A History of the District*, 111.

⁵⁶ Kass, *Thematic History*, 26; Vance, *Fairfield, A History of the District*, 209.

⁵⁷ Vance, *Fairfield, A History of the District*, 190.

⁵⁸ Vance, *Fairfield, A History of the District*, 111.

⁵⁹ WaterNSW, *Upper Canal, Pheasants Nest to Prospect Reservoir Conservation Management Plan*, no. 13054 (Public Works, Government Architect's Office, 2016), 25.



Figure 13. View north of the railway cutting for the Widemere Quarry line along the eastern side of Dublin Street, c.1978. (Source: Fairfield City Council Heritage Collection, HPC000133p)



Figure 14. Wetherill Park in 1936, in western part of Project Area, view towards Prospect Reservoir. Small farms are interspersed with stands of trees and the few roads through the area. (Source: Vance 1991:111)

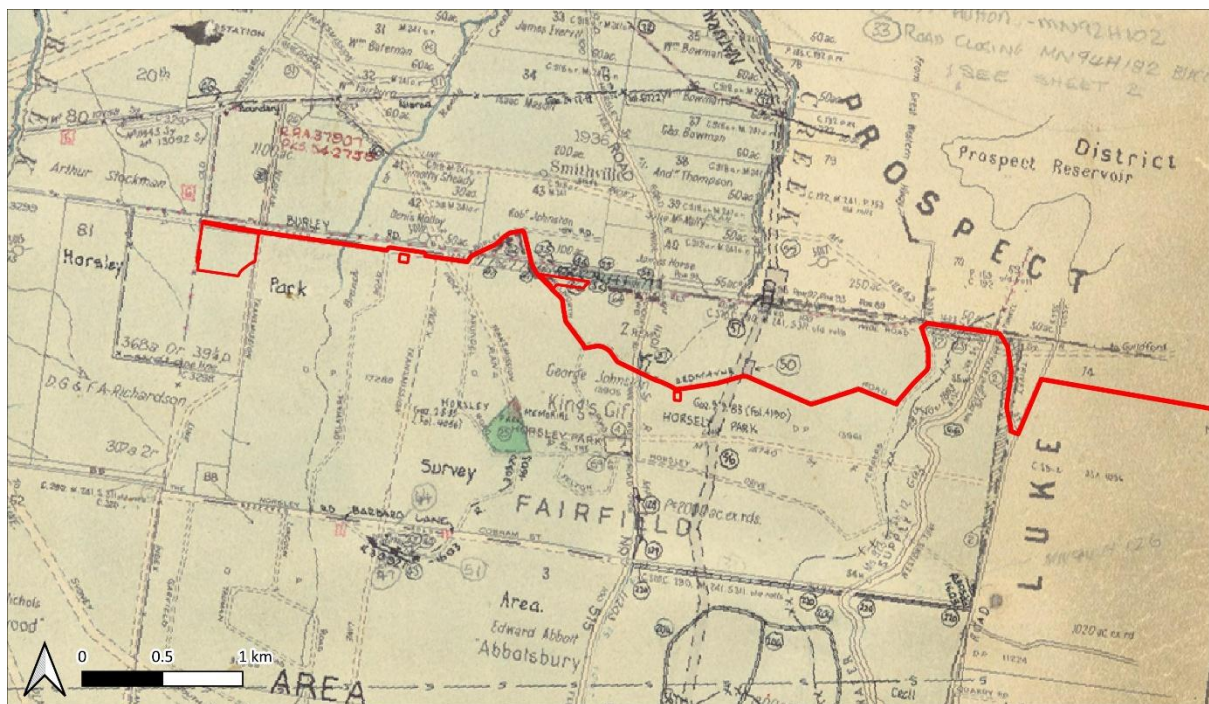


Figure 15. 1967 plan of parish of Melville showing western end of Project Area. (Source: HLRV, mn_phMelville_Sheet 1_Cumberland.jp2)

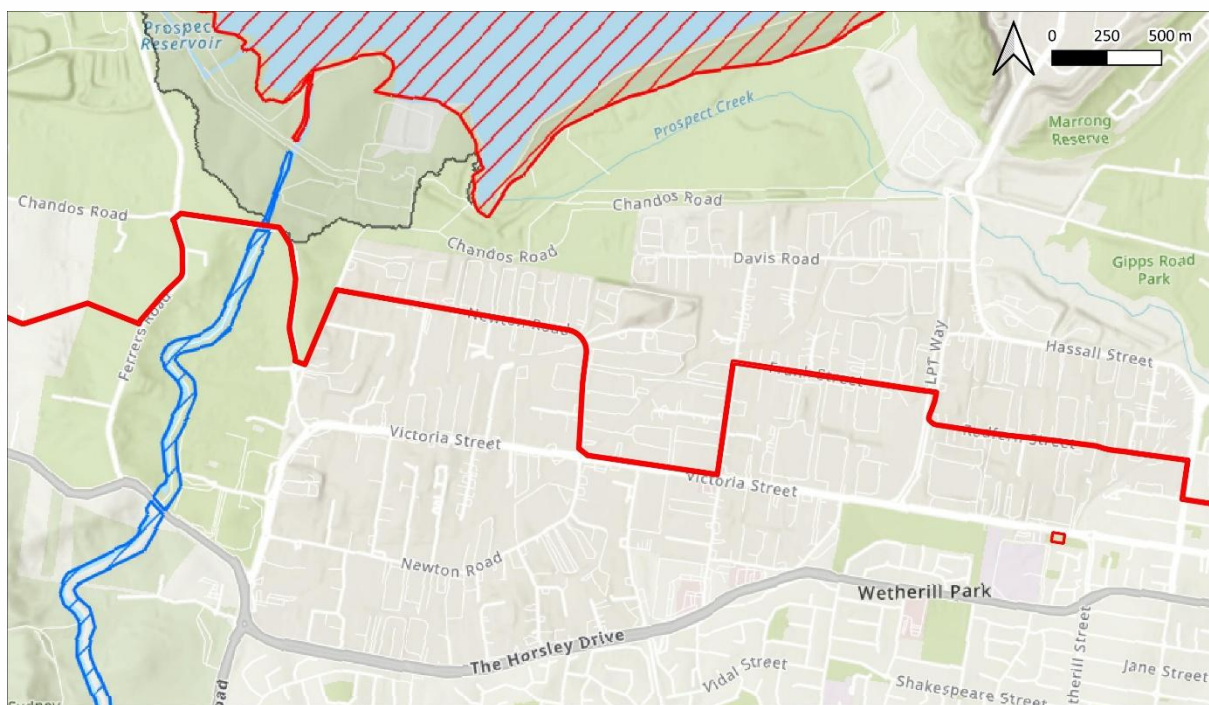


Figure 16. Detail from WaterNSW showing controlled 'No Entry' area for the Upper Canal near the Project Area. (Source: WaterNSW, 2025)⁶⁰

⁶⁰ WaterNSW, "Sydney Drinking Water Catchment & Special Controlled Areas," accessed December 9, 2025, <https://nula.watnsw.com.au/portal/apps/experiencebuilder/experience/?id=209dcb0ddf81449e97896a804d2077b1>.

1.2.6 Historical aerial imagery

Historical aerial imagery can provide additional information for understanding changes in land use and development. The earliest aerial coverage for the Project Area dates from 1947, although some earlier data from 1930 and 1943 is available for the eastern part of the Project Area.⁶¹ This analysis focuses on observable changes in the vicinity of the heritage items and along the proposed routes of the wider Project Area.

In 1930, the eastern end of the Project Area in the vicinity of Prospect Creek appears to have been under cultivation, likely as market gardens (Figure 17). Imagery from 1947 shows Robert Street and Little Street to the west of Smithfield Road as still little more than tracks (Figure 18). However, the grid pattern of roads that can be seen within Smithfield generally follows the 1840s plan. In 1947, the eastern end of the Project Area and the main east-west streets remain the same. Lots were larger and more semi-rural in character than the intended town subdivision, and some streets were not yet formed. Houses were located mainly on the larger blocks, including the two heritage-listed cottages on Chifley Street, or along The Horsley Drive, while some parts of Smithfield were covered by bushland and scrub. Chifley Street, Victoria Street and O'Connell Street appear to have been unsealed. The lot at 46 Victoria Street (proposed for the pumping station) was partially cleared of vegetation and there were no structures.

The eastern end of the Project Area and the main east-west streets remain the same in 1947 (Figure 18). Traces of the cutting and rails for the recently closed Widemere Quarry rail line can be seen curving from The Horsley Drive to halfway up Dublin Street, before continuing north to cross both Victoria Street and Chifley Street. To the west, town blocks start to increase slightly in size (visible by the road grid) and become more interspersed with vegetation, undeveloped lots and fewer streets in the section between Hassall Street and Elizabeth Street. The area from Newton Road to Cowpasture Road is still largely covered by bushland.

To the south, the still unsealed Victoria Street extended west to Cowpasture Road through the former Lawson property, which consisted of cleared farmland and smaller areas of bushland, and there were a few smaller farms along Elizabeth Street. Roads in the remaining section of the Project Area generally follow the modern alignment, but are unsealed. The open section of the Upper Canal reverted to a tunnel on either side of Chandos Road, and there was a small farm with several buildings on the northern side of the road. Also, by 1947 a small farm had been established at the proposed temporary compound location along Redmayne Road, and at Walworth Road immediately south of the proposed reservoir/tanks (Figure 19). In 1965, a more substantial house and outbuildings had been built, occupying much the same footprint as before near the reservoir site, but apart from a few subsidiary buildings, these are outside the Project Area. The house at 156-166 Walworth Road and the large shed to the east of it (currently within the Project Area) do not appear on aerial imagery until 1998. The roads continued west through mixed bushland, scrub and larger farms as far as Burley Road and Arundel Road, after which there is little more than a dirt track.

The open section of Upper Canal and the buildings north of Chandos Road are more clearly visible on the later 1965 image (Figure 20). By 1965, the eastern end of the Project Area (south of Prospect Creek) had been subdivided for residential housing (Figure 21), along with much of Smithfield, and poles and wire for services were installed along the streets (Figure 22).

⁶¹ Imagery from 1943 extends only as far west as Shamrock Avenue, Smithfield

Throughout the Project Area there is little change until 1975, when signs of the 1971 industrial rezoning in the Wetherill Park and Horsley Park areas become more apparent to the north of Victoria Street (Figure 23). In Smithfield, Market Street and Shamrock Street have been formed. The cottage at 45 Chifley Street was by then on a formed corner lot, surrounded by market gardens. The slab cottage at 76 Chifley Street was still on a larger lot at the intersection with Shamrock Street. It remained so until the 1990s, when another house was built on the adjoining lot immediately east. By 1978, most of the main roads through the area had been sealed; the farm and buildings on the northern side of Chandos Road near the Upper Canal have gone.

Colour imagery from 1986 shows that part of Victoria Street had been widened and formed into a divided carriageway, with a central landscaped road divider as far west as Hassall Street (Figure 24). In 1998, Victoria Street had been widened along its length, and sections converted into a dual carriageway with a central grassed nature strip as far west as Elizabeth Street. By this time, almost all of the former Lawson estate had been transformed into an industrial area. The western end of the Project Area beyond Cowpasture Road remained semi-rural, as can be seen in a 2014 image showing the full extent of the Project Area (Figure 25).



Figure 17. 1930 aerial view of eastern end of Project Area south of Prospect Creek. (Source: Geosciences Australia, MAP3426_frame675 with Heritage Now additions)



Figure 18. 1947 aerial view of Project Area. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 19. 1947 aerial view at Walworth Road at western end of Project Area. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 20. 1965 detail of the Project Area in the vicinity of Upper Canal and Prospect Reservoir. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 21. 1965 aerial view of eastern end of Project Area south of Prospect Creek. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 22. 1965 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 23. 1975 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions)



Figure 24. 1991 aerial view of the Project Area. (Source: Historical Imagery Viewer with Heritage Now additions)

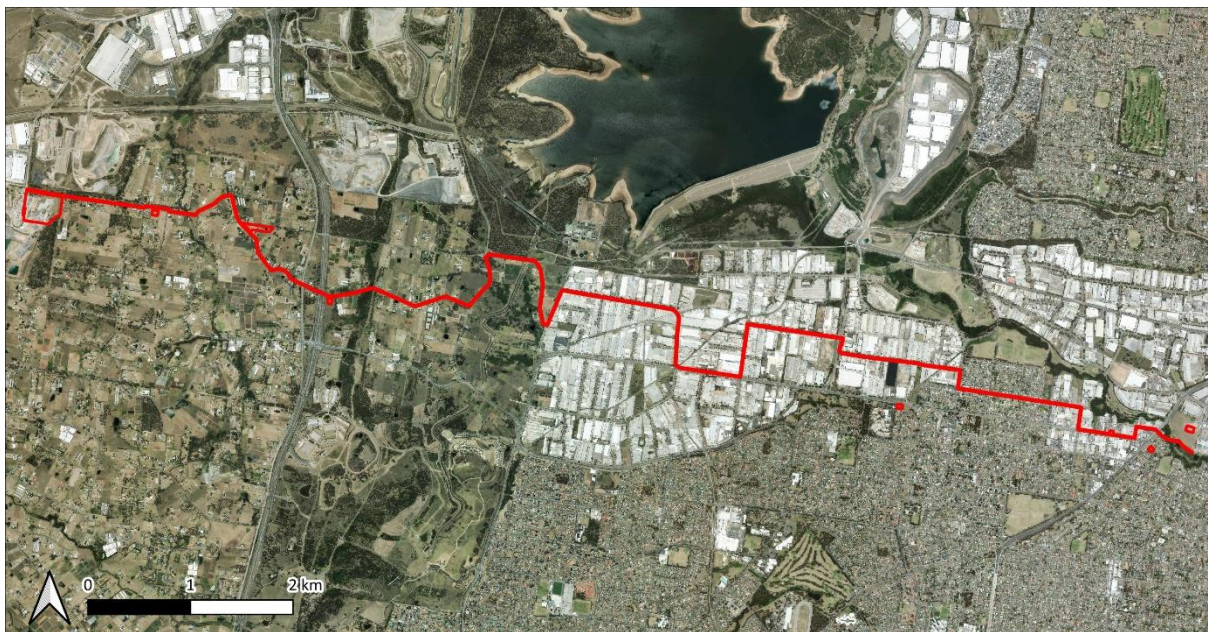


Figure 25. 2014 aerial view of the Project Area. (Source: 2014_Jan_01 Google Earth, Image (c) Aerometrex with Heritage Now additions)

1.2.7 Chronological Outline

The following timeline provides a summary of the key dates and events relating to the historical phases of occupation and development of the Project Area.

1788 – First land grants in area given by Governor Arthur Phillip after exploration of Prospect Hill in April.

1803 – Governor King grants 12,300 acres south of Prospect Creek to establish orphan school and farm.

1804 – Large grant of 2,000 acres containing western part of Project Area made to Colonel George Johnston, known as ‘King’s Gift’; smaller grant of 100 acres made to Thomas Hassall.

1810 – Governor Macquarie visits area and additional grants made; area west of Fairfield developed for cereal cultivation and grazing by 1820s.

1827 – Orphan School grant subdivided; 2,118 acres containing most of Project Area bought by James Chisolm; eastern part of Project Area near Prospect Creek contained in grant dating from 1831.

1829 – King’s Gift inherited by Colonel Johnston’s daughter Blanche; Blanche marries Lieutenant George Weston.

1833-1834 – Horsley Park homestead and farm established by the Westons on former King’s Gift.

1836 – John Ryan Brenan purchases Chisolm’s land.

1837 – Edward New acquires 1,030 acres of Orphan School grant west of Chisolm’s land; and by 1840 has built a house and farm known as ‘Whinstanes’.

1841 – Brenan subdivides land to establish a market and town in area that will become known as Smithfield; first lots sold and settlement established.

1840s – Sunday school and Baptist church established in Smithfield as community grows; viticulture and horticulture established alongside agricultural ventures.

1849 – Edward New sells ‘Whinstanes’ to William Lawson jnr.

1856 – Construction of main southern railway line from Parramatta to Liverpool; station established at Fairfield, by-passing Smithfield.

1860s/1870s – calls to establish a new water supply scheme for greater Sydney area; several plans were proposed 1870s – Smithfield grows slowly; local population centred around Fairfield. Chifley Street property with slab cottage changes hands into Coleman family; establishment of local services such as police station, post office and churches.

1877 – Approval given for construction of new water supply scheme for Sydney at Prospect.

1881 – Daniel Wetherill subdivides his Wetherill Park estate and offers town lots for sale.

1880s – Increased local population from workforce for construction of Upper Nepean Scheme and Prospect Reservoir; land acquired from Horsley Park for section of canal through Project Area.

1888 – New water supply scheme completed; incorporation of Smithfield and Fairfield into local municipality.

1901 – Opening of blue metal quarry at Prospect Hill.

1918 – Lawson family property (former ‘Whinstanes’ estate) subdivided for sale.

1920 – Municipality of Smithfield and Fairfield changes name to Municipality of Fairfield.

1924 – Horsley Park property subdivided for sale into smaller agricultural lots; construction of private railway line along several Smithfield streets in Project Area for Widemere Quarry Railway.

1930s – Wetherill Park mainly market gardens and poultry farms.

1945 – Widemere Quarry railway tracks removed after line ceases operation.

1950s – Much of Project Area becomes part of ‘Green Belt’ set aside for non-urban use.

1971 – Northern parts of Project Area in Wetherill Park rezoned for industrial use.

1970s – Main roads throughout Project Area sealed.

1996 – Prospect Reservoir changes to off-line water reservoir; Upper Nepean Scheme and associated infrastructure remain in use.

1.3 Physical Analysis

A pedestrian and vehicular inspection of the Project Area was undertaken on 17-18 November 2025 and 9 March 2026 by Tiffany Jones (Heritage Consultant, Heritage Now).

The Project Area mainly comprises portions of the roads and reserves of Burley, Walworth, Redmayne, Ferrers, Chandos, Cowpasture and Newton Roads, and Trivet, Victoria, Elizabeth, Frank, Redfern, Hassall, Chifley, O’Connell, Little, Robert and Low Streets (Plate 1). The eastern end of the Project Area also extends into Kaluna Reserve (Plate 2). There are several potential compound sites, identified along Delaware Road, Redmayne Road at The Horsley Drive, Victoria Street and Herbert Place; a proposed reservoir site at 156-166 Walworth Road; and a proposed pump house at 46 Victoria Street (Plate 3-Plate 9).

All roads within the Project Area are asphalted; except in the very western portion, which was a dirt and gravel track (Plate 10). In several places, traffic calming devices such as speed reduction humps and landscaped curb extensions have been installed (Plate 11). The Project Area includes the road verges, which are either dirt, gravel, grassed or concreted (Plate 12, Plate 13), and contain signage and services, concrete pedestrian footpaths and accessways to properties, water culverts, and occasionally safety railing (Plate 14-Plate 16). Sections of road verge in the western portion of the Project Area were heavily vegetated with bushland species.

The majority of the roads within the Project Area have formal guttering and stormwater infrastructure. Other areas, particularly in the western portion of the Project Area, do not have guttering and typically comprise asphalt, which meets grass, gravel or soils (Plate 17).

The portion of the Project Area that passes through Kaluna Reserve comprises mostly cleared parkland, which has a concreted walking path that winds around the Reserve and Prospect Creek

(Plate 18). Thick vegetation grows along the bank of the creek (Plate 19). This area also contained services, particularly electrical power poles and a high-pressure gas pipeline (Plate 20).

1.3.1 Setting and Views

The region around the Project Area comprises rural residential properties with large paddocks for livestock and market gardens in the west; industrial buildings, warehouses and residential properties in the central portion; and natural parkland in the east (Plate 21-Plate 23). The residences are not characterised by one particular style, but reflect different housing designs from occasional mid-19th century to present day designs. The industrial buildings are also not characterised by a particular style, but range in design from the 1980s to present day. No potential historic heritage was identified within or adjacent to the Project Area, other than the already listed items.

There are two listed items in the eastern portion of the Project Area, along Chifley Street. There is a direct line of sight between the Victorian Georgian Cottage (I87) and the Project Area; however, the sightline is partially obscured by a modern boundary fencing that surrounds the property's boundary (Plate 24). The Slab Cottage (I88) also has a direct line of sight between the property and the Project Area, which is partially obscured by a picket boundary fence and trees (Plate 25).

Within the central portion, several listed items abut the portion of the Project Area that runs parallel to Chandos Street. These items are: Upper Canal (SHR 1373), Prospect Reservoir and surrounding area (SHR #01370), Spotted Gum Forest (SEPP #5), and Group of Hoop Pines (SEPP #6). Of these items, there is a direct line of sight for the Spotted Gum Forest (Plate 26) and the Group of Hoop Pines (Plate 27), as well as the curtilage of Prospect Reservoir and surrounding area and the Upper Canal, although this is partially obscured by vegetation and a modern boundary fence. However, the Reservoir itself is set back a considerable distance from the Project Area; it is not visible from the Project Area as it is obscured by vegetation (Plate 28). Additionally, the Upper Canal is low lying, and in this section the Canal flows underneath a wide vegetated land bridge, which blocks the view when facing north; thus, the Canal is only visible, although partially obscured by modern fencing, when facing south (Plate 29, Plate 30).

2 Significance Assessment

2.1 Evaluation Criteria

Cultural significance or heritage significance is defined in *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013* (the Burra Charter) as meaning ‘aesthetic, historic, scientific, social or spiritual value for past, present or future generations’.⁶² These values are expressed as specific criteria adopted by the NSW Heritage Council, and are used to establish whether an item may be considered of State or local significance in New South Wales. The criteria are as follows:

Criterion (a) Historic significance - An item is important in the course, or pattern, of NSW’s cultural or natural history (or the cultural or natural history of the local area).

Criterion (b) Historical association - An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history (or the cultural or natural history of the local area);

Criterion (c) Aesthetic/creative/technical achievement - An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

Criterion (d) Social, cultural, and spiritual - An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

Criterion (e) Research potential - An item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history (or the cultural or natural history of the local area).

Criterion (f) Rare - An item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history (or the cultural or natural history of the local area).

Criterion (g) Representative - An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places; or cultural or natural environments, or a class of the local area’s cultural or natural places; or cultural or natural environments.⁶³

⁶² Australia ICOMOS, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (2013), 2.

⁶³ Department of Planning and Environment, *Assessing Heritage Significance: Guidelines for Assessing Places and Objects against the Heritage Council of NSW Criteria* (2023), 21.

2.2 Existing Statements of Significance

The Project Area is in the vicinity of items of local and state heritage significance (Figure 26). Although the Project Area is not within the curtilage of any of these items, the relevant statements of significance for the items are provided below.

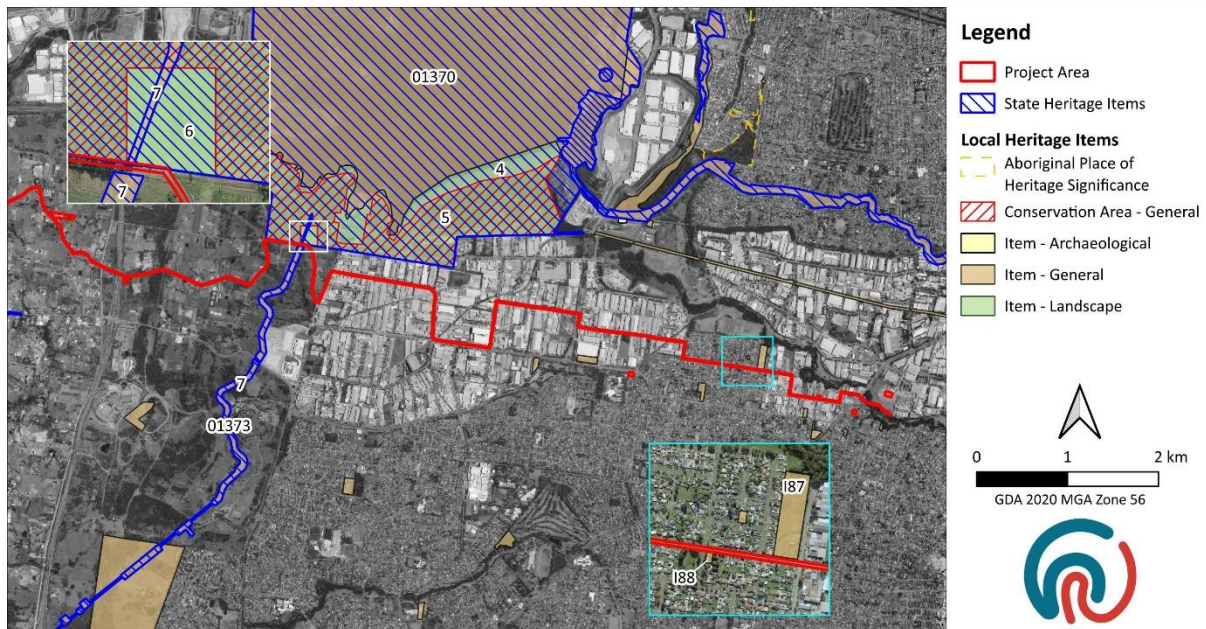


Figure 26. Heritage items in the vicinity of the Project Area. (Source: SCP map data with Heritage Now additions)

2.2.1 State Heritage Items

- Upper Canal System (SHR #01373)

The following statements of significance are reproduced from the SHR listing, citing two separate reports from 2006 and 2000. The significance refers to the entire area covered by the SHR curtilage (Figure 27):⁶⁴

The Upper Canal System is significant as a major component of the Upper Nepean Scheme. As an element of this Scheme, the Canal has functioned as part of Sydney's main water supply system since 1888. Apart from maintenance and other improvements, the Upper Canal has changed little.

As part of this System, the Canal is associated with Edward Moriarty, Head of the Harbours and Rivers Branch of the NSW Public Works Department.

The Canal is aesthetically significant, running in a serpentine route through a rural bushland setting as an impressive landscape element with sandstone and concrete-lined edges; The Canal is significant as it demonstrates the techniques of canal building, and evidence of engineering practice. The Canal as a whole is an

⁶⁴ State Heritage Inventory, "Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), SHR 01373."

excellent example of 19th century hydraulic engineering, including the use of gravity to feed water along the canal.⁶⁵

The earlier statement of significance from 2000 refers to the Upper Nepean Scheme, noting that it is significant because:

** In its scope and execution, it is a unique and excellent example of the ingenuity of late 19th century hydraulic engineering in Australia, in particular for its design as a gravity-fed water supply system.*

** It has functioned as a unique part of the main water supply system for Sydney for over 100 years, and has changed little in its basic principles since the day it was completed.*

** It represented the major engineering advance from depending on local water sources to harvesting water in upland catchment areas, storing it in major dams and transporting it the city by means of major canals and pipelines.*

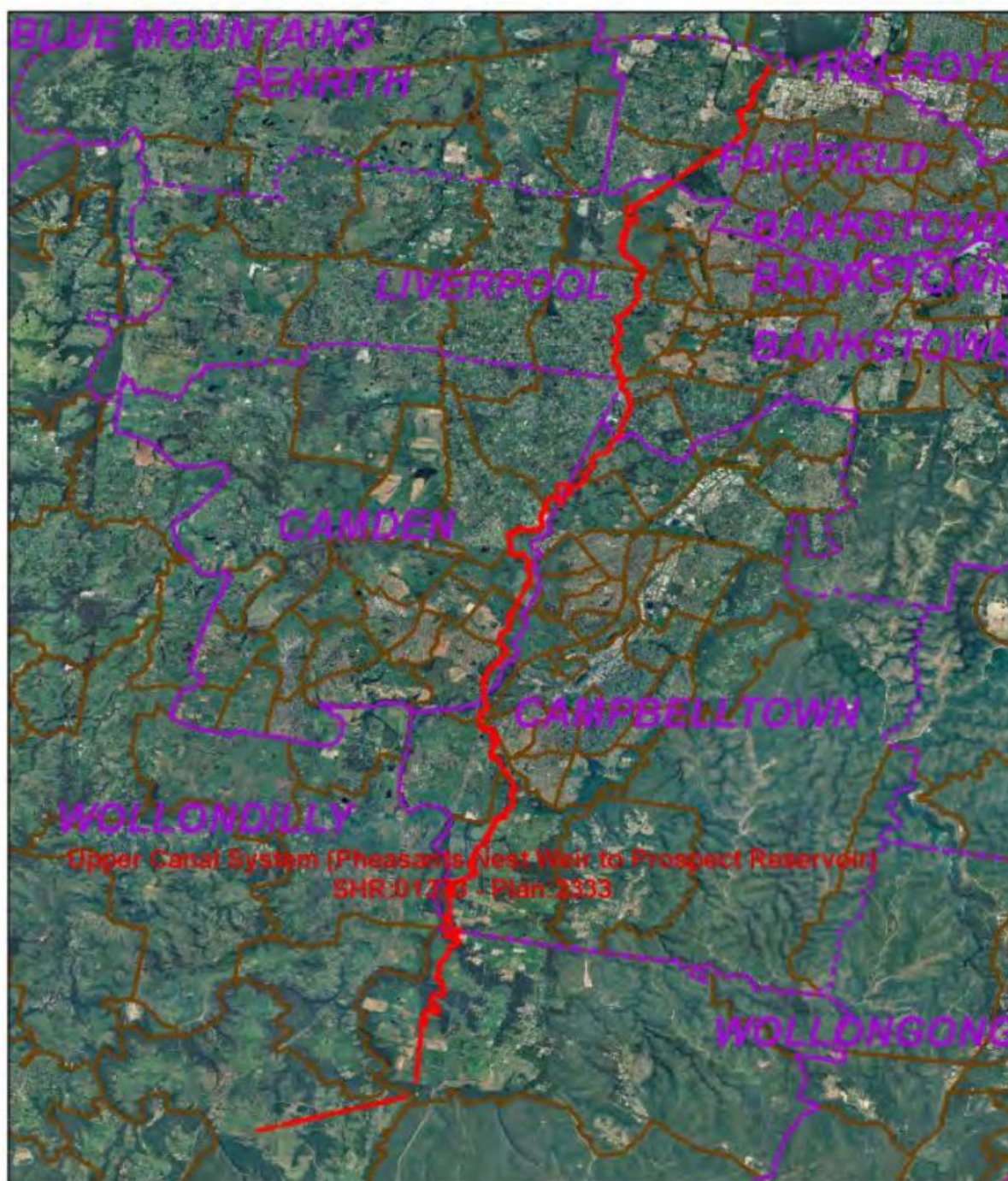
** It provides detailed and varied evidence of the engineering construction techniques prior to the revolution inspired by reinforced concrete construction, of the evolution of these techniques (such as the replacement of timber flumes with wrought iron and then concrete flumes), and of the early use of concrete for many engineering purposes in the system.*

** The scheme possesses many elements of infrastructure which are of world and national renown in technological and engineering terms.*

** Many of the structural elements are unique to the Upper Nepean Scheme.⁶⁶*

⁶⁵ Citing BCubed Sustainability, 2006, *Upper Canal Aqueduct Scour Valves Upgrade Heritage Impact Statement*, June 2006.

⁶⁶ Citing Edward Higginbotham & Associates, 2000, *SCA Heritage and Conservation Register*, 18 December 2000.



State Heritage Register

Gazettal Date: 18 November 1999

0 1 2 4 6 8
Kilometres

Scale: 1:225,000

Produced by: Naomi Nelson

Legend

-  Proposed Curtilage
-  LGAs
-  Suburbs

Figure 27. SHR curtilage of Upper Canal Scheme. (Source: SHR)

- Prospect Reservoir and surrounding area (SHR #01370)

The following statement of significance is reproduced from the SHR listing and covers the entire curtilage for the listing (Figure 28).⁶⁷

Prospect Reservoir is historically significant at the state level as it is a central element of the Sydney water supply system. As a part of the Upper Nepean Scheme, the Reservoir has continued to supply water to Sydney for over 120 years, and generally still operates in the same way as it was originally constructed. That it has continued to be used since its construction reflects the inventive and progressive way in which the reservoir was designed and built, and this contributes to its significance greatly.

The Reservoir reflects three significant changes in municipal life during the late 19th century; the development of water and general public utility services; the importance of ensuring an adequate and dependable centralised water supply; and the collective bureaucratic response to the delivery of capital works of this nature.

Built between 1882 and 1888, it was an outstanding achievement in civil engineering technology at the time, using innovative design and construction methods. It has a high level of historical engineering significance.

Prospect Reservoir is strongly associated with the Harbours and Rivers Branch of the NSW Public Works Department, particularly Edward Orpen Moriarty, Head of the branch at the time of the Reservoir's construction, and later with the Board of Water Supply and Sewerage (later the Metropolitan Water and Sewerage Board) and most recently, with the Sydney Catchment Authority.

The Reservoir area is aesthetically significant, as a picturesque site with a large expanse of water, parklands, landscaping and bush. The place is valuable for its recreational amenity for passive recreation, punctuating the monotony of the surrounding urban landscape. It has been used for recreation by the community for generations.

It continues to regulate the release of water from Prospect Reservoir to the Lower Canal and the Sydney Distribution system.

The place also contains examples of functional colonial architecture. (Sydney Water Corporation) (amended by BCubed Sustainability, 2006)

The listing includes Prospect Reservoir, landscape elements and all associated structures, including pumping stations, to the property boundary. The environs of the reservoir and hence this listing also include a wide range of items, which relate to later amplification of water supply. These include examples of 1920s and 30s pumping stations, a residence, and the 72" (1,800 mm) main, constructed between the Upper Canal and Pipe Head in 1937. Later items associated with the

⁶⁷ "Prospect Reservoir and Surrounding Area, SHR 01370." See listing for cited sources in the statement of significance.

Warragamba Supply Scheme and more modern developments include several more recent pumping stations, screening and boosting plants on the eastern and southern sides of the Reservoir, and the 84 inch (2,100 mm) water main from Prospect, to Pipe Head, completed in 1958.

Heritage Council of New South Wales



State Heritage Register - SHR 01370, Plan 2144 Prospect Reservoir and surrounding area

Gazetted Date: 18 November 1999

Amended on 10 March 2006

0 500 1,000 1,500 2,000 Metres

Scale: 1:30,000

Datum/Projection: GCS GDA 1994



Legend

- SHR Curtilage
- Land Parcels
- Railways
- Fences
- LGAs
- Suburbs

Figure 28. SHR curtilage of Prospect Reservoir. (Source: SHR)

2.2.2 S170 Heritage and Conservation Registers

Two government agencies are responsible for the management of heritage-listed items in the immediate vicinity of the Project Area, Sydney Water and WaterNSW. The statements of significance for the items are reproduced below from information provided in their s170 heritage and conservation registers.

2.2.2.1 WaterNSW Heritage and Conservation Register

- 'Upper Nepean Scheme (including Upper Canal and Prospect Reservoir)', #4580004

The statement of significance for the Upper Nepean Scheme relates to the entire system as described in section 1.1.2.2 of this report. The curtilage for the item is the same as for the SHR listing (Figure 27). The statement of significance for the Upper Nepean Scheme is reproduced from the s170 listing on the State Heritage Inventory, which was updated in 2020.⁶⁸

- 1. It has functioned as a unique part of the main water supply system for Sydney for over 130 years, and apart from development in supply and improvements has changed little in its basic principles since the day it was completed, except for the decommissioning of the Lower Canal in the 1990s.*
- 2. It provides detailed and varied evidence of engineering construction techniques prior to the revolution inspired by reinforced concrete construction. Although concrete was later used to improve the durability of the System, much of the earlier technology is still evident along the Canal.*
- 3. It also provides extensive evidence of the evolution of engineering practice, such as the replacement of timber flumes by wrought iron flumes to be followed by concrete flumes. The early utilisation of concrete for many engineering purposes in the system, also demonstrates the growing emergence of an engineering technology based upon man-made materials.*
- 4. The Upper Nepean Scheme made the big advance from depending on local water sources to harvesting water in upland catchment areas, storing it in major dams and transporting it to the city by means of major canals and pipelines.*
- 5. In its scope and execution it is a unique and excellent example of the ingenuity of late nineteenth century hydraulic engineering in Australia, illustrating the techniques of canal building (often at extremely small grades), the progressive improvements in both pipe manufacture and pipeline construction, and the construction, even by present day standards, of a large earth fill and rock dam. Of particular note is the way in which it was designed to supply a large area of Sydney by gravity.*
- 6. Of the way in which the initial Scheme completed in 1888 lent itself to progressive development over a period of over 130 years to meet Sydney's increasing water supply needs.*

⁶⁸ WaterNSW, "Upper Nepean Scheme (Including Upper Canal and Prospect Reservoir), S170 Heritage & Conservation Register, #4580004."

7. Some of the original control installations such as the stop logs, penstocks and gate valves, are still in service and continue to illustrate the technology of the time. Some have been replaced as they have stopped functioning or have become unsafe.

8. The scheme possesses many elements of infrastructure which are of world and national renown in technological and engineering terms.

2.2.2.2 Sydney Water Heritage and Conservation Register

The s170 heritage register maintained by Sydney Water lists two items relating to Prospect Reservoir. The curtilage for both covers the same area as the SHR curtilage, however the listing for Prospect Hill Reservoir (Elevated) notes that the item has endorsed local significance (Figure 28)⁶⁹

- Prospect Reservoir (operational land), #4575804

The following statement of significance is reproduced from the s170 listing:⁷⁰

Prospect Reservoir is historically significant at the State level as it is a central element of the Upper Nepean Scheme, Sydney's fourth water supply system. It evidences three significant changes in municipal life during the late 19th century; the development of public utility services; the importance of ensuring an adequate and dependable centralised water supply; and the collective bureaucratic response to the delivery of capital works of this nature. The valve houses are representative of Board owned buildings designed in Free Classical style. The site contains numerous areas of potential for further understanding of the Aboriginal history of the Sydney area and NSW. The archaeological remains are associated with the explorer and statesman William Lawson and potentially provide insights into settlement in the area and the 19th century pastoralism, due to their intactness. The site contains artefacts from past uses and installations that, by their contextual association, contribute to the understanding of the site's development. These artefacts include the currently disused remnant segments of water supply mains from the late nineteenth and first half of the twentieth century within the site and associated elements. Prospect Hill Reservoir (Elevated WS0095) and Prospect-Thornleigh Pumping Station are identified as being of local heritage significance.

- Prospect Hill Reservoir (Elevated WS 0095), #4575776 (Lot 304, DP1122291)

The following statement of significance is reproduced from the s170 listing:⁷¹

...One of a small group of concrete elevated reservoir, with "Egyptian" style doorways, serving the needs of suburban communities. The listing includes the reservoir and all associated pipework, valves and valve houses to the property boundary.

⁶⁹ Sydney Water, "Prospect Reservoir (Operational Land), S170 #4575804."

⁷⁰ Sydney Water, "Prospect Reservoir (Operational Land), S170 #4575804."

⁷¹ Sydney Water, "Prospect Hill Reservoir (Elevated), S170 #4575776."

2.2.3 Local Heritage Items Fairfield LEP 2013

The statements of significance below for items of local heritage significance are reproduced from the listing information supplied in the State Heritage Inventory.

- Slab cottage, #I88

One of the oldest surviving buildings in the city, and one of few old buildings to survive from the settlement at Smithfield. Example of timber slab construction, now rare in the Sydney region. Modifications provide a useful record of changes in building technology in the district. Set on prominent corner site.⁷²

- Victorian Georgian cottage, #I87

Excellent example of Victorian Georgian style cottage. One of then [sic] oldest and best houses in the city. A rare early brick home and one of few old cottages to survive from the original settlement at Smithfield, rare local example of arched window panes, indicative of early construction. Attractive original ogee roof to verandah also of note. Essentially intact. Local significance.⁷³

2.3 Significance of the Proposed Work Area

No part of the Project Area is located within the curtilage of a listed heritage item, and there are no areas or specific elements of heritage significance within the Project Area.

⁷² State Heritage Inventory, "Slab Cottage, LEP I88."

⁷³ State Heritage Inventory, "Victorian Georgian Cottage, LEP I87."

3 Proposed Works

3.1 The Project

An underground water pipeline (recycled water main) and associated infrastructure is proposed to be installed within the suburbs of Smithfield, Wetherill Park and Horsley Park.⁷⁴ The project will extend the existing Rosehill recycled water scheme operated by Aquanet and Rosehill Network to supply up to 16.6 megalitres per day (MLD) of recycled water to meet the needs of the NEXTDC S4 data centre at Horsley Park. The current scheme finishes at VISY Recycling (VISY) at 2 Herbert Place, Smithfield, and the project is to extend the system from there to Horsley Park for an approximate distance of 15.7km. The proposed works network consists of three main components:

- A pipeline to transfer treated effluent from the Fairfield recycled water plant from the existing VISY connection at 2 Herbert Place, Smithfield to a proposed booster pump station at 46 Victoria Street, Smithfield.
- A pipeline to transfer treated effluent from the pump station to a proposed reservoir site at 156-166 Walworth Road, Horsley Park.
- Dual gravity-fed pipelines to supply recycled water from the reservoir site to the NEXTDC facility at Horsley Park.

The proposed route is predominantly located within public road reserves. At 46 Victoria Street, Smithfield (Lot 2 DP230766), the proposal is to utilise the existing building to house the pumps and associated infrastructure, rather than demolishing and building a new structure. For the water pump station and reservoir site at 156-166 Walworth Road, Horsley Park (Lot 51 DP1071120), the proposal is to demolish the existing house and install the three reservoir tanks at the frontage to the property, with the water pump at the rear of the lot.

An overview of the construction phasing for the network separates these components into two main sections of pipeline along with associated infrastructure that form the extended network as follows:

- **Section 1: Pumping main from Smithfield to Horsley Park Reservoirs**

This part of the proposed network is approximately 12.85km long. Starting at the existing VISY connection at 2 Herbert Place, Smithfield, the proposal is to install a 800mm diameter polyethylene (PE) pipeline to transfer treated effluent (from the Fairfield recycled water plant) from VISY to a proposed booster pumping station at 46 Victoria Street, Smithfield. A section of 800mm PE pipeline will then be installed from the pump station to the reservoir site at 156-166 Walworth Road, Horsley Park. The pipeline is to be installed mainly by open trenching with horizontal directional drilling (HDD) and micro-tunnel crossings at Prospect Creek, Cumberland Highway, M7 Motorway and Wallgrove Road. Additional trenchless installation will be undertaken at stormwater culverts, Sydney Water assets, the Ferrers Road roundabout and at crossings of Jemena high-pressure gas pipelines at Eastern Creek. The proposed booster pump station at 46 Victoria Street, Smithfield is to be built within an existing industrial warehouse building and office space.

⁷⁴ Summary of proposed works derived from information supplied in *Aquanet Network Extension: Review of Environmental Factors*, January 2026 prepared by Element Environment for coNEXA Infrastructure Partners Pty Ltd and concept design drawings issued for information listed in Table 3.

- **Section 2: Gravity main from Horsley Park Reservoirs to NEXTDC S4 facility (dual pipeline)**

This part of the proposed network consists of the reservoir site at 156–166 Walworth Road, Horsley Park and newly constructed dual 560mm and 800mm diameter polyethylene (PE) rising mains totalling 2.85km, to supply treated water from the reservoir to the NEXTDC facility via gravity. The alignment of the dual pipe configuration is to follow Walworth Road and Burley Road, parallel to the existing Ausgrid easement to mitigate conflict with the future Southern Link Road corridor.

Reservoir establishment

The reservoir site will be located at 156-166 Walworth Road, Horsley Park.

The facility will provide triple reservoir storage with a combined working capacity of 30ML, at an elevation of approximately 103m AHD Australian Height Datum (AHD). The site has been strategically selected to enable a gravity-fed recycled water supply to the NEXTDC facility.

The primary inlet pipeline will deliver up to 16.6MLD of recycled water from the booster station directly into the reservoirs. A secondary inlet connection will allow for future connection to a supplementary alternate water supply. Each reservoir will be connected to dual gravity-fed outlet pipelines that discharge to the downstream distribution network. The outlets are fitted with isolation valves to allow independent reservoir operation, balancing, and maintenance.

The tanks will be fusion-bonded epoxy (FBE) bolted steel tanks, fitted with access hatches, roof vents, and level instrumentation to support safe operation, structural protection, and ongoing monitoring. Overflow and drain connections will be provided to manage extreme inflow events and facilitate periodic tank cleaning.

Each tank will hold 10ML, with a diameter of approximately 36m and a tank wall height of 11.2m and a peak roof height of 15m.

A 1m wide concrete footpath will surround the perimeter of each of the tanks, and a 1.5m retaining wall will be constructed along the northern boundary adjacent to Reservoirs 1 and 2, as well another 1.5m retaining wall on the southern side of the tanks. Between the tanks will be blue metal pavement with a grassed embankment west of Reservoir 1.

Two new concrete pavement access points from Walworth Road will be installed, connecting to a 5m wide asphalt access road to allow for 12.5m heavy vehicles to access the site. Between the access points will be a chemical unloading area surrounded by a bund.

Adjacent to the chemical delivery bund will be the reservoir building, containing the chemical storage tank, sampling pump station, switchroom, laboratory and storeroom. The chemical storage tank, which will form part of the chemical dosing system for the reservoir tanks. The reservoir building will be constructed of concrete besser blocks and will be 4m high.

3.1.1 Trenching methodology

The pipeline will be installed using a combination of different methods consisting of open trench excavation or trenchless methodologies, including HDD and micro-tunnelling that have been chosen for specific areas (Figure 30).⁷⁵ Typical open excavation trenches are proposed to be 1-3m deep

⁷⁵ A draft 'Pipeline Route Overview' plan prepared in January 2026 shows the proposed general locations for different trenching methods: WSCE, Next DC Recycled Water Supply Plan, Drawing 7873021_SK-0015 (Issue 0)

depending on the location, and 1.5-6m wide. Excavation can include machine trenching (using excavators, a small compactor, and rock breakers if required). Hand trenching may be used in environmentally or heritage sensitive areas.⁷⁶

Trenchless pipelines are proposed to minimise impacts to the environment or critical infrastructure, and will be installed using a bore slightly wider in diameter to contain the pipes. HDD is proposed for creek crossings, stormwater culverts and major utility interfaces. It involves establishing a launch site and reception site, and a works area for pipes and equipment of approximately 20m x 20m. A hole will be drilled from the launch site and a steel casing pipe inserted. Drill cuttings are to be contained, and bore shafts, entry and exit pits backfilled to restore these areas.

Micro-tunnelling uses a remote-controlled micro-tunnelling boring machine (MTBM) for excavation, with reinforced concrete pipes installed behind the machine as it progresses. This will typically require an approximately 20m long x 15m wide works area at each location, establishment of launch and reception shafts (and intermediate pits for longer tunnel lengths), installation of framework to support the process, and installation of the MTBM within the launch pit. Slurry or cuttings generated from boring are generally removed using vacuum extraction or a recirculating slurry disposal system.

For trenchless methods, the pipeline construction footprint may extend from 10-20m at its widest, in areas where deeper trenching is required to allow for access, excavation, machine operation and materials where there are no archaeological or environmental constraints. In these areas of sensitivity, the width of temporary construction corridors will be limited to a maximum of 10m where possible. After construction has finished, the land outside the operational easement (6-10m wide) will typically be reinstated and rehabilitated by regrading and revegetating. Notes included with initial concept design plans prepared in August 2025 also require that all disturbed road surfaces, traffic features and other surfaces to be restored to pre-existing condition.⁷⁷

3.1.2 Ancillary compounds

Ancillary construction compounds for pipe segments/stringing, equipment laydown, construction vehicles and temporary facilities (e.g., site offices, ablutions and storage containers) will be established at the pump station site at 46 Victoria Street, Smithfield and the reservoir storage site at 156-166 Walworth Road, Horsley Park. Several other potential locations for temporary storage compounds have been identified at the following sites and have been assessed for the purposes of this assessment:

- VISY compound at 2 Herbert Place, Smithfield, approximately 3465.85 m² in area
- 1–9 Victoria Street, Smithfield (part Lot 20, DP1183443), 1871.55 m²
- Victoria Street Reserve, Wetherill Park (part Lot 20, DP261398), 2131.96 m² in area
- 54 Redmayne Road, Horsley Park (northern part Lot 7, DP1021711, 1725 The Horsley Road), 2514.40 m² in area
- 248-258 Delaware Road, Horsley Park (part Lot 232A, DP17288), 2526.05 m² in area

A list of documents and drawings that the information for the assessment is based on is included in Table 3. A more detailed description of the proposed works and methodologies for each section of

⁷⁶ *Aquanet Network Extension*, sec. 1.6.2.

⁷⁷ NextDC Recycled Water Supply Plan, Concept Design, General Notes, Drawing number CS-DR-0002, Issue 1, issued for information August 2025).

the proposed route, and the construction of the pumping station and reservoir site, is found in Table 4, reproduced from the 2026 REF.⁷⁸

Table 3. Drawings and documents used for assessment of proposed works.

Source	Details	Job/Drawing No.	Issue
Element Environment	<i>Rosehill Recycled Water Scheme Expansion REF</i>		
WSCE	Next DC Recycled Water Supply Plan,	7873021_SK-0015	0
WSCE	Next DC Recycled Water Supply Plan, General Notes	7873008_CS-DR-0001	01

Table 4. Detailed description of proposed works.

Component	Description of Location and Proposed Works
Transfer pipeline – Section 1	LOCATION Pipeline begins at existing network connection for VISY, Smithfield at 2 Herbert Place and follows Kaluna Reserve, before crossing Prospect Creek via HDD. Then crosses under the Cumberland Highway using micro-tunnelling. The alignment then continues along Robert Street, Little Street, then turns onto Victoria Street to the pump station. The pipeline follows Victoria Street west, turns north onto O’Connell Street, then west via the following streets: Chifley Street, Hassall Street, Redfern Street, Walter Street, Frank Street and Newton Road until Cowpasture Road. Several trenchless crossings are proposed along this stretch of the pipeline to navigate state road intersections and existing stormwater infrastructure. The pipeline turns south onto Cowpasture Road and Trivet Street, then follows Chandos Road. It crosses the Ferrers Road–Chandos Road roundabout via HDD. The rising main then runs along the verge of Ferrers Road before turning onto Redmayne Road, continuing along the verge for approximately 2.1km and crossing two major roads. The alignment crosses under the M7 Motorway via micro-tunnelling, followed shortly by another micro-tunnel crossing under Wallgrove Road. The final section of the rising main follows Walworth Road, terminating at the proposed recycled water storage tank site at 156-166 Walworth Road. DETAILS Recycled water will be conveyed from the termination point of the existing network (2 Herbert Place, Smithfield) to the Smithfield booster pump station and then transferred to the Horsley Park reservoirs via a newly constructed DN800 PE rising main.
Smithfield booster pump station	LOCATION 46 Victoria Street, Smithfield DETAILS A new booster pump station will transfer recycled water from the existing Rosehill recycled water scheme at Smithfield to the proposed reservoir at Horsley Park. The pumping system will operate in a duty/duty/standby configuration and be engineered to manage variable flow rates and seasonal demand fluctuations. This design will ensure reliable delivery of recycled water to the NextDC S4 facility while maintaining supply to existing AquaNet customers.
Reservoir storage	LOCATION 156-166 Walworth Road, Horsley Park DETAILS Three new reservoirs with a combined storage capacity of 30ML will be constructed to meet network resiliency requirements, ensuring a continuous recycled water supply during planned

⁷⁸ *Aquanet Network Extension*, tbl. 1.1.

Component	Description of Location and Proposed Works
	maintenance or unplanned outages. The inlet pipeline will deliver up to 16.6MLD of recycled water from the booster pump station into the reservoirs. Provision has been made for a secondary inlet connection to accommodate a future supplementary water source. Each reservoir will be connected to dual outlet pipelines that discharge via gravity into the distribution network. Isolation valves on each outlet will enable independent reservoir operation, flow balancing, and maintenance flexibility. To support safe and efficient operation, the reservoirs will be equipped with access hatches, roof vents and level instrumentation for structural protection and ongoing monitoring. Overflow and drain connections will manage high inflow events and facilitate routine cleaning.
Dual pipeline – Section 2	LOCATION The pipeline alignment follows Walworth Road and then Burley Road, running parallel to an Ausgrid easement to avoid conflict with the future Southern Link Road corridor. DETAILS A dual DN560 and DN800 PE gravity main system, totalling 2.85km in length, will be constructed to deliver recycled water from the Horsley Park reservoirs to the NEXTDC S4 facility. The dual-pipe configuration is designed to ensure high reliability and built-in redundancy, meeting the stringent system resilience requirements necessary to maintain supply during both planned maintenance and unplanned outages.
Electrical connections	LOCATION Reservoir site (the existing network has the capacity to support the development without the need for upgrades). DETAILS The proposed site architecture will include a new main switchboard/MCC fed via an overhead to underground connection from the existing private pole.
	LOCATION Booster pump station site DETAILS A new 500 kilovolt-ampere (kVA) distribution substation will be installed within the property boundary to enable a ring connection to the existing Endeavour Energy 11 kilovolt (kV) network, and new main switchboard/MCC .
	<i>Both sites will be provided with provisions for generator backup and automation hardware</i>

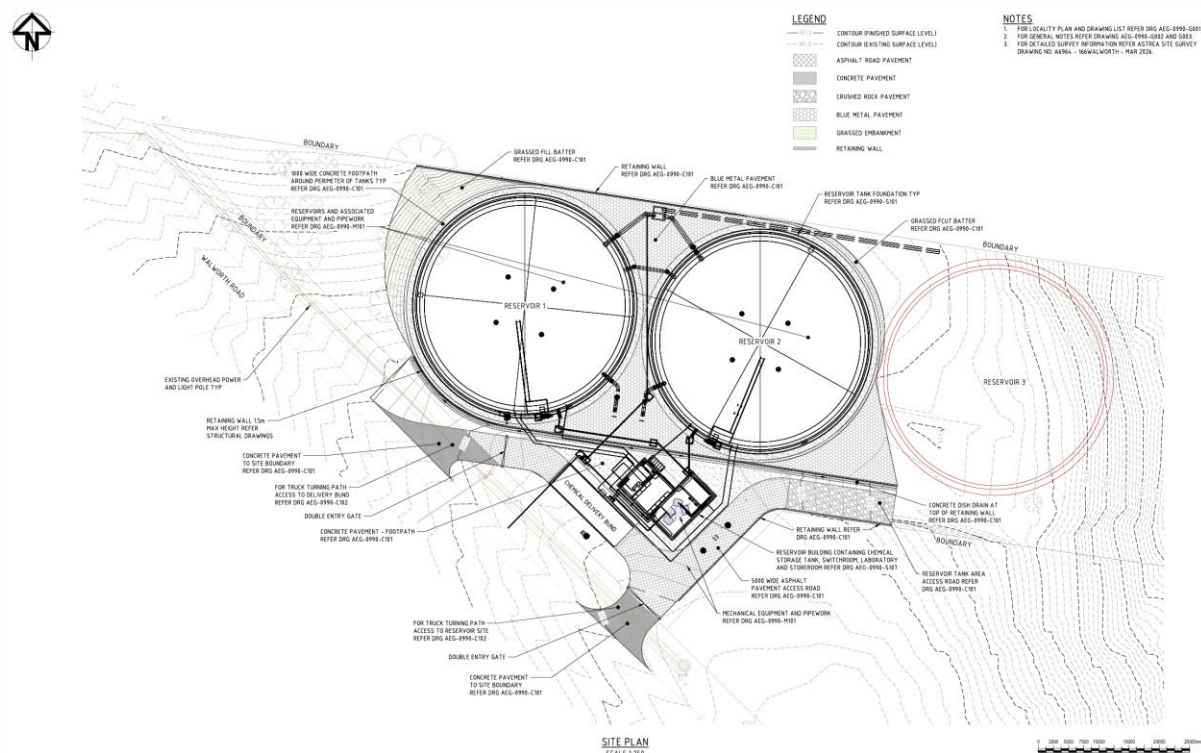


Figure 29. Concept design for water pump and reservoirs at 156-166 Walworth Road. (Source: Atlas Engineering Group, AEG-0990, C101)

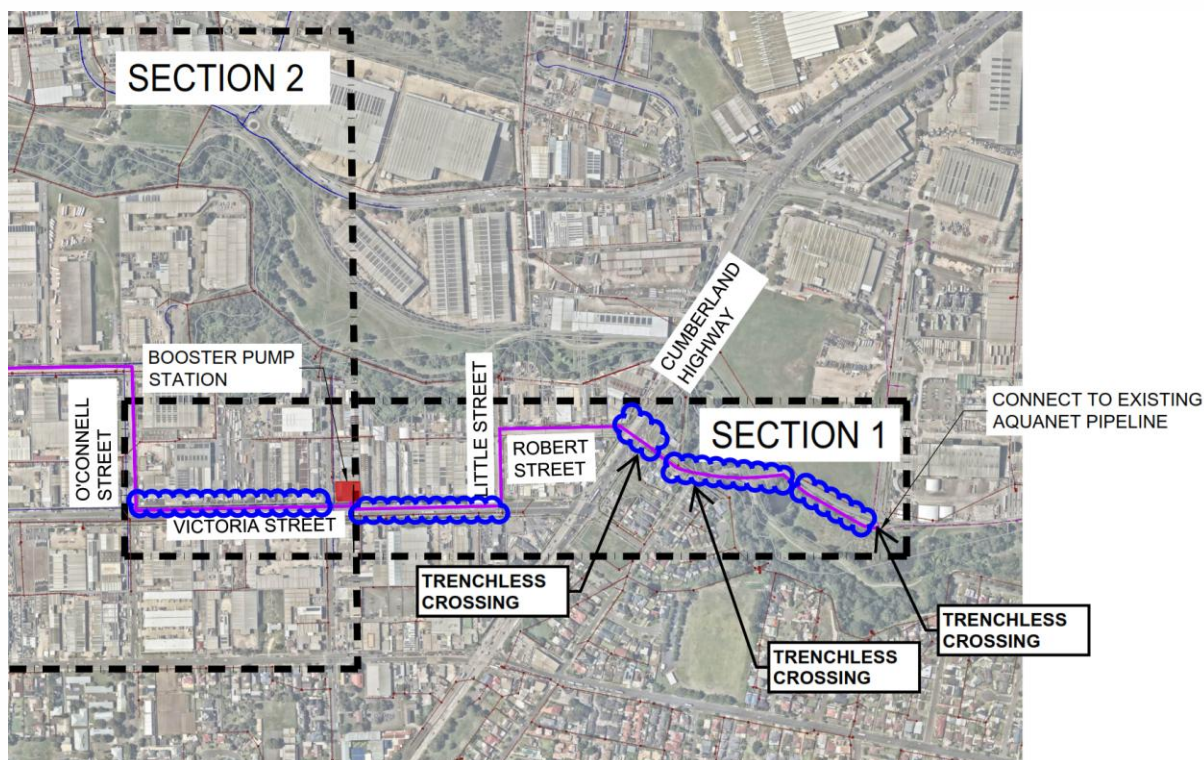


Figure 30. Detail of eastern part of the Project Area (purple) showing proposed trenchless crossing locations (blue). (Source: Provided by client)



Figure 31. Detail of central part of the Project Area (purple) showing proposed trenchless crossing locations (blue). (Source: Provided by client)

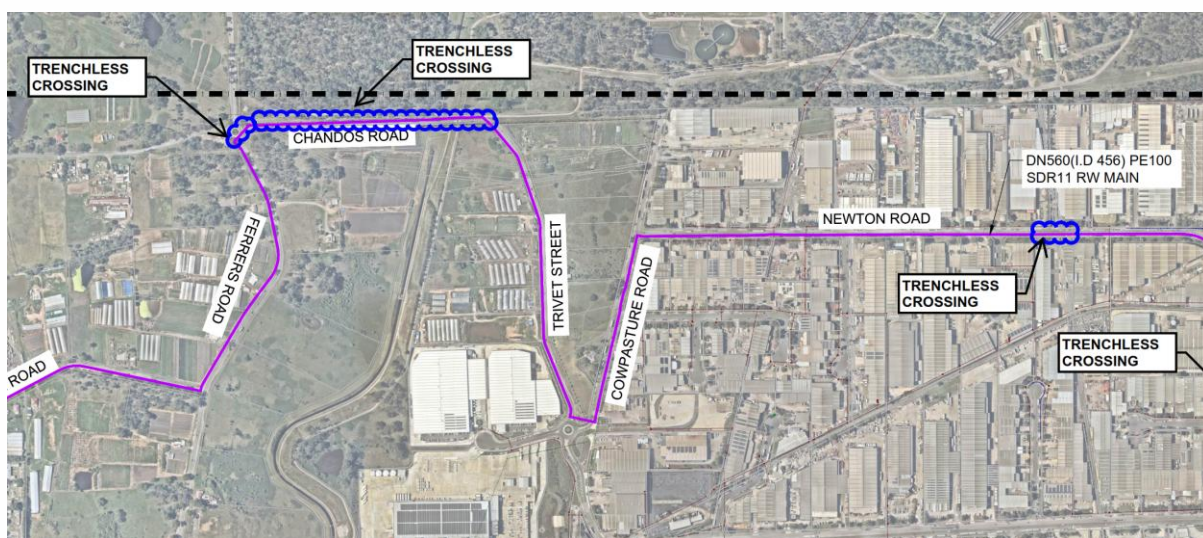


Figure 32. Detail of central part of the Project Area (purple) showing proposed trenchless crossing locations (blue). (Source: Provided by client)

3.2 Background

3.2.1 Pre-lodgement Consultation

No pre-lodgement consultations, approvals and/or exemptions relating to heritage considerations are known to have occurred in relation to the proposed work program.

3.2.2 Considerations of Alternatives

Several alternatives have been considered for the route of the pipeline, in addition to the current Project Area (Figure 1). A previous alternative was located along the length of Victoria Street through Smithfield and Wetherill Park, which was located adjacent to three local heritage items on the Fairfield LEP 2013: Smithfield cemetery (#I89), Bunya trees and spotted gums (#I101), and Monastery (#I102). Two alternative route/shortcut sections were also considered, between Elizabeth Street and Newton Road, and between Cowpasture Road and Chandos Road. The first alternative route/shortcut section deviated from the main Project Area within part of the road reserves of Elizabeth Street, Hargraves Place (crossing through part Lots 13 DP734488 over a stormwater drainage channel, through the driveway of 133-139 Newton Road, Lot 601 DP1004292) to Newtown

Road (by-passing Victoria Street in this area). The second section deviated north from Newton Road to Cowpasture Road and north of Lot 1 DP13961 to Chandos Road (by-passing Trivet Street).

4 Heritage Impact Assessment

The following section assesses potential heritage impacts in accordance with the Statement of Heritage Impact guidelines.⁷⁹

4.1 Matters for Consideration

The Project Area does not extend through heritage curtilages associated with identified local or state significant items, and as the proposed works adjacent to heritage items are limited to underground pipeline in the existing road reserves, there are no anticipated impacts to items in identified heritage curtilages. As such, no permits are required under section 60 of the *Heritage Act 1977* for the proposed works.

4.1.1 Fabric and Spatial Arrangements

No heritage items have been identified within the Project Area, and the installation of a new recycled water supply main and associated infrastructure will not impact the fabric or spatial arrangement of any heritage items.

4.1.2 Setting, Views and Vistas

The installation of underground pipelines and temporary compounds within the Project Area is not anticipated to impact any settings, views or vistas associated with the adjacent heritage items. The installation of new pumps and associated infrastructure at 46 Victoria Street makes use of an existing building that is not heritage listed, and will be located inside the building. Although the reservoir at 156-166 Walworth Road will require demolition of an existing house before installation, the building is not a heritage item, and there are no heritage values associated with the setting. The storage tanks to be installed will be set into raised earthwork and will represent a negligible change to the views from heritage items in the vicinity.

4.1.3 Landscape

The installation of underground pipelines within the Project Area will require ground disturbance, either from trenches or underground boring to install the pipeline. The pipeline routes are limited to the road reserve, which is already disturbed in some areas by other services, and the routes (and temporary compounds) are not within any heritage curtilages. As such, the proposed works are not anticipated to cause impacts to the landscape of any adjacent heritage items.

4.1.4 Use

No heritage items have been identified within the Project Area, and the proposed works will not result in a change of use to nearby heritage items. Where the proposed recycled water main runs adjacent to the state heritage curtilage of Prospect Reservoir and sections of the Upper Canal, there are no plans to link the proposed works to either of the water supply systems that would alter their use or significance.

⁷⁹ Department of Planning and Environment, *Guidelines for Preparing a Statement of Heritage Impact*.

4.1.5 Demolition

No demolition of heritage items is proposed.

4.1.6 Curtilage

No changes to the existing curtilage of heritage items in the vicinity of the Project Area are proposed.

4.1.7 Moveable Heritage

No items of moveable heritage are located within the Project Area.

4.1.8 Aboriginal Cultural Heritage

The s170 register statement of significance for Sydney Water item 'Prospect Reservoir (operational land), #4575804' includes the following note regarding Aboriginal heritage (section 2.2.2):

The site contains numerous areas of potential for further understanding of the Aboriginal history of the Sydney area and NSW...

The potential for Aboriginal cultural heritage is addressed in a separate report prepared by Heritage Now: *Aboriginal Heritage Due Diligence Report – Rosehill Recycled Water Scheme Extension, 2026*.

4.1.9 Historical Archaeology

The pipeline routes are limited to the road reserve, which is already disturbed in some areas by other services, and the routes (and temporary compounds) are not within any heritage curtilages. Aerial imagery also indicates that the potential compound sites have been subject to previous disturbance. As such, the proposed works are not anticipated to cause impacts to areas with historical archaeological potential.

4.1.10 Natural Heritage

No items with natural heritage values are located within the Project Area, and the underground pipeline is not anticipated to impact on the adjacent Spotted Gum forest (SEPP #5).

4.1.11 Conservation Areas

The Project Area is not located within a heritage conservation area, and the underground pipeline is not anticipated to impact on the adjacent Spotted Gum forest conservation area (SEPP #5).

4.1.12 Cumulative Impacts

The proposed works are not located within the curtilage of any heritage items, and therefore no cumulative impacts are anticipated.

4.1.13 The Conservation Management Plan

The Project Area is not located within the curtilage of the Upper Canal System (SHR #01373) or the Prospect Reservoir and surrounding area (SHR #01370), and the conservation management plans for these items do not contain any policies for the land adjacent to these curtilages.

4.1.14 Other Heritage Items in the Vicinity

There are no additional heritage items in the vicinity of the Project Area that are not already addressed in the Matters for Consideration.

4.1.15 Commonwealth/National Heritage Significance

There are no items of Commonwealth or national heritage significance in the vicinity of the Project Area. There will be no impacts to any Commonwealth or national heritage values from the proposed works.

4.1.16 World Heritage Significance

There are no items on the World Heritage List within the vicinity of the Project Area. There will be no impacts to any world heritage values from the proposed works.

5 Summary and Recommendations

The Project Area does not extend through heritage curtilages associated with identified local or state significant items, and as the proposed works adjacent to heritage items are limited to underground pipeline in the existing road reserves, there are no anticipated historic heritage or historical archaeological impacts. As such, no permits are required under section 60 or section 140 of the *Heritage Act 1977* for the proposed works.

Recommendation 1

Any changes to the design or scope of works as described in this report may require further heritage assessment.

Recommendation 2

A heritage induction is to be provided to all on-site personnel undertaking construction works so that they understand their obligations for protecting heritage under the *Heritage Act 1977*. This includes protection of built heritage and historical archaeological sites and the reporting of any new or suspected heritage site/s. This may be done through an on-site induction or other suitable format.

Recommendation 3

In the unlikely event that archaeological, or suspected archaeological material is uncovered during works, then works in that area are to cease and the area is to be cordoned off. The material is to be inspected by a heritage consultant and works in that area are only to recommence once heritage clearance has been gained and/or mitigation and management measures implemented.

Recommendation 4

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area is to be cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene, then Heritage NSW will be consulted. The ideal conservation outcome is to leave the human remains undisturbed, however, if this is not possible then an appropriate approval is to be sought from Heritage NSW.

6 References

- Aquanet Network Extensions: Review of Environmental Factors*. Draft REF. Prepared for coNEXA Infrastructure Partners Pty Ltd, 2026.
- Australia ICOMOS. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. 2013.
- Department of Planning and Environment. *Assessing Heritage Significance: Guidelines for Assessing Places and Objects against the Heritage Council of NSW Criteria*. 2023.
- Department of Planning and Environment. *Guidelines for Preparing a Statement of Heritage Impact*. 2023.
- EMM Consulting Pty Ltd. *Prospect Reservoir: Conservation Management Plan*. 2021.
- Government Gazette of the State of New South Wales* (Sydney, New South Wales). "LOCAL GOVERNMENT ACT, 1919." October 29, 1920.
- Kass, Terry. *Fairfield City Heritage Study: Volume 1 Historical Context Report*. Liverpool City Council, 1993. <https://heritagensw.intersearch.com.au/heritagenswjsui/handle/1/6933>.
- "Prospect Reservoir and Surrounding Area, SHR 01370." Accessed November 11, 2025. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045336>.
- State Heritage Inventory. "Horsley Complex (Homestead, Outbuildings, Garden, Farm), SHR #00030." 2024. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045518>.
- State Heritage Inventory. "Slab Cottage, LEP I88." Accessed November 13, 2025. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1570019>.
- State Heritage Inventory. "Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), SHR 01373." Accessed November 11, 2025. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5051481>.
- State Heritage Inventory. "Victorian Georgian Cottage, LEP I87." 2011. <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1570046>.
- Stephenson, Jennifer. *A History of Whinstanes Hill Farm*. Unpublished. 2021. <https://heritagecollection.fairfieldcity.nsw.gov.au/nodes/view/4355>.
- Sydney Gazette and New South Wales Advertiser* (New South Wales). "Family Notices." May 23, 1829.
- Sydney Punch* (New South Wales). "Important Sale." March 5, 1881.
- Sydney Water. "Prospect Hill Reservoir (Elevated), S170 #4575776." Heritage & Conservation S170 Register, 2014. <https://www.sydneywater.com.au/water-the-environment/what-we-are-doing/heritage-conservation/heritage-search.html>.
- Sydney Water. "Prospect Reservoir (Operational Land), S170 #4575804." Heritage & Conservation S170 Register, 2016. <https://www.sydneywater.com.au/water-the-environment/what-we-are-doing/heritage-conservation/heritage-search.html>.
- Sydney Water. *Prospect Reservoir Site: Conservation Management Plan*. Sydney Water Corporation, 2005.
- The Biz* (Fairfield, New South Wales). "Some Early History of Smithfield." July 13, 1950.
- Vance, George. *Fairfield, A History of the District*. 2nd ed. The Council of the City of Fairfield, 1991. <https://heritagecollection.fairfieldcity.nsw.gov.au/nodes/view/389>.
- WaterNSW. *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines*. 2021. <https://www.watnsw.com.au/documents/publications/water-services/development/Guideline-for-development-adjacent-to-the-Upper-Canal-and-Warragamba-Pipelines-2021.pdf>.
- WaterNSW. "Sydney Drinking Water Catchment & Special Controlled Areas." Accessed December 9, 2025.

<https://nula.watarnsw.com.au/portal/apps/experiencebuilder/experience/?id=209dcb0ddf81449e97896a804d2077b1>.

WaterNSW. "Upper Canal." WaterNSW, Unknown LDAP User, 2025.

<https://www.watarnsw.com.au/education/learning-about-water/upper-canal>.

WaterNSW. *Upper Canal, Pheasants Nest to Prospect Reservoir Conservation Management Plan*. No. 13054. Public Works, Government Architect's Office, 2016.

WaterNSW. "Upper Nepean Scheme (Including Upper Canal and Prospect Reservoir), S170 Heritage & Conservation Register, #4580004." State Heritage Inventory, 2020.

<https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4580004>.

7 Plates



Plate 1. General view of a typical road verge within the Project Area. (Source: Heritage Now 2026)



Plate 2. General view of Kaluna Reserve, facing east. (Source: Heritage Now 2026)



Plate 3. General view of the potential compound located at Delaware Road, facing south. (Source: Heritage Now 2026)



Plate 4. General view of the potential compound, located at The Horsley Drive, facing south-west. (Source: Heritage Now 2026)



Plate 5. General view of the potential compound located at Victoria Street Reserve, facing west. (Source: Heritage Now 2026)



Plate 6. General view of the potential compound located at Victoria Street, facing west. (Source: Heritage Now 2026)



Plate 7. General view of the potential compound located at Herbert Place, facing north. (Source: Heritage Now 2026)



Plate 8. General view of the reservoir site located at Walworth Road, facing north. (Source: Heritage Now 2026)



Plate 9. General view of the proposed pump station located at Victoria Street, facing north-east. (Source: Heritage Now 2026)



Plate 10. Dirt and gravel track within the western portion of the Project Area, facing east. (Source: Heritage Now 2026)



Plate 11. A speed reduction hump and a landscaped curb extension installed on an asphalt road within the Project Area. (Source: Heritage Now 2026)



Plate 12. Example of a partially grassed and concreted road verge. (Source: Heritage Now 2026)



Plate 13. Example of a dirt road verge. (Source: Heritage Now 2026)



Plate 14. Example of services and a concrete pedestrian footpath within the road verge. (Source: Heritage Now 2026)



Plate 15. Example of signage and accessways within the road verge. (Source: Heritage Now 2026)



Plate 16. A water culvert within the road verge. (Source: Heritage Now 2026)



Plate 17. A portion of asphalted road meeting grass, within the western portion of the Project Area. (Source: Heritage Now 2026)



Plate 18. Cleared parkland within Kaluna Reserve, facing west. (Source: Heritage Now 2026)



Plate 19. Thick vegetation growing along the bank of Prospect Creek within Kaluna Reserve, facing west. (Source: Heritage Now 2026)



Plate 20. Services located within the portion of the Project Area that passes through Kaluna Reserve. (Source: Heritage Now 2026)



Plate 21. Example of the rural residential properties in the western portion of the Project Area, with market gardens in the background. (Source: Heritage Now 2026)



Plate 22. Example of the variety of industrial and warehouse buildings within the central portion of the Project Area. (Source: Heritage Now 2026)



Plate 23. Example of the different types of residential properties surrounding the Project Area. (Source: Heritage Now 2026)



Plate 24. Direct line of sight between the Victorian Georgian Cottage (187) and the Project Area, facing north. (Source: Heritage Now 2026)



Plate 25. Direct line of sight between the Slab Cottage (188) and the Project Area, facing south. (Source: Heritage Now 2026)



Plate 26. Direct line of sight between the Project Area and the listed item Spotted Gum Forest (5), which is partially obscured by a fence and vegetation. View to the west. (Source: Heritage Now 2026)



Plate 27. Direct line of sight between the Project Area and the Group of Hoop Pines (6), facing north. (Source: Heritage Now 2026)



Plate 28. View to the north of the Project Area at Chandos Street, in the direction of Prospect Reservoir, which is obscured by vegetation. (Source: Heritage Now 2026)



Plate 29. Line of sight between the Project Area and the Upper Canal is blocked by vegetation growing on a land bridge, when facing north. (Source: Heritage Now 2026)



Plate 30. Obscured view of the Upper Canal from the Project Area, when facing south. (Source: Heritage Now 2026)