Appendix 15 - Preliminary Site Investigation - Auto Alley Precinct



Parramatta City Council Preliminary Site Investigation

Auto Alley Precinct Parramatta LGA, NSW, 2150

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List of Abbreviations

A list of the common abbreviations used throughout this report is provided below.

ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
ASS	Acid Sulphate Soil
ASSMP	Acid Sulphate Soil Management Plan
AST	Above Ground Storage Tank
BA	Building Application
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CBD	Central Business District
COC	Contaminants of Concern
COPC	Contaminants of Potential Concern
Council	Parramatta City Council
CSM	Conceptual Site Model
DA	Development Application
DCP	Development Control Plan
DEC	NSW Department of Environment and Conservation
DECCW	NSW Department of Environment, Climate Change and Water
DSI	Detailed Site Investigation
EPA	NSW Environment Protection Authority
ESA	Environmental Site Assessment
ha	Hectare
HBMS	Hazardous Building Material Survey
JBS&G	JBS&G Australia Pty Ltd
m bgs	Metres Below Ground Surface
OEH	Office of Environment and Heritage
PAHs	Polycyclic aromatic hydrocarbons
РСВ	Polychlorinated Biphenyl
PSI	Preliminary Site Investigation
ТРН	Total Petroleum Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compound



Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Parramatta City Council (Council, the client) to conduct a Preliminary Site Investigation (PSI) of the Auto Alley Precinct within the local government area (LGA) of Parramatta, NSW, herein referred to as the site. The location of the site and site layout are show in **Figures 1 and 2**, respectively.

The site is located south of the Parramatta Central Business District (CBD) and extends from the Great Western Highway in the north, to Boundary/Raymond Streets in the south, High Street to the east and along Dixon Street to the west. The site occupies and area of approximately 9.1 hectares (ha) and comprises over 90 allotments.

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) and DUAPP/EPA (1998¹) Planning Guidelines require consideration of contamination issues when rezoning land. If a rezoning allows a change of use that may increase the risk to health or the environment from contamination, then the planning authority must be satisfied that the land is suitable for the proposed use or can be remediated to make it suitable.

Based on information provided by Council, it is understood that the site is proposed to be rezoned potentially for more sensitive land uses, including residential developments. As such, a desktop preliminary investigation of land contamination is required to support the rezoning application, as per the requirements of SEPP 55 and in accordance with NEPC (2013²).

The objectives of the investigation were to assess the potential for contamination based on current and historical site activities and to draw conclusions regarding the potential contamination status of the site to support the rezoning application, as per the requirements of SEPP 55.

It is noted that the objective of the investigation was not to determine site suitability, rather to assess potential contamination issues that may preclude the rezoning of the site, specifically, contamination issues that cannot be readily addressed during the DA stages for redevelopment and assessment of site suitability.

The agreed scope of works completed for this assessment comprised; a review of available site history and background information to identify potential areas of environmental concern (AECs) and associated contaminants of concern (COC), inspection of the site, from public pedestrian pavements only, to identify potential AECs and confirm desktop findings; development and documentation of a conceptual site model (CSM) based on the available information; qualitative assessment of potential contamination risk levels for each of the land ownerships properties within the site; preparation of a PSI report in general accordance with relevant EPA Guidelines to support the rezoning application, as per SEPP 55.

The site, is largely occupied by car yards and associated uses including car washing facilities and repair and supply outlets, some of which incorporate underground and/or above ground fuel storage and dispensing infrastructure. Church Street, the main north south retail street, divides the site from east and west. Modern car showrooms generally line the Church Street road frontage with associated repair and supply outlets generally fronting

¹ Managing Land Contamination: Planning Guidelines, NSW Department of Urban Affairs and Planning and NSW Environment Protection Authority, August 1998 (DUAP/EPA 1998)

² National Environment Protection (Assessment of Site Contamination) Measure No. 1 2013. National Environment Protection Council (NECP 2013)



east west orientated streets. Several residential and commercial outlets (cafe and pub) were located within the site.

Based on the finding of this investigation, and subject to the limitations in **Section 8**, the following conclusions are made:

- The site has a long history of commercial land use as a car dealership and automotive repairs precinct.
- Council is proposing to rezone parts of the site to enable more sensitive land uses, potentially including residential in the proposed B4 Mixed Use zone. Council is also proposing to substantially increase the density of development on the site (by way of increased height and floor space ratio (FSR) controls).
- Site history review and a limited site inspection of accessible areas identified potential for contamination to exist at the site. Qualitative risk assessment resulted in risk levels of the identified AECs, as shown in **Table 6.1** and **Figure 5**. The majority of the site was assessed as moderate to high risk of potential contamination.
- Whilst the investigation identified the potential for soil and groundwater impacts to be present at the site, the investigation did not identify the potential for gross or wide spread contamination which may preclude rezoning (**Appendix A**) of the site. Identified potential soil and groundwater impacts are considered representative of common contaminants and potentially contaminating land use activities which can be readily dealt with during the DA stage for redevelopment and assessment for site suitability.
- In the absence of gross or widespread contamination, the requirements of the DUAP (1998) Planning Guidelines for this type of rezoning are considered to have been satisfied, namely that the rezoning can proceed, "provided that measures are in place to the ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made" (s.4.1.2 Generalised Rezonings, DUAP/EPA 1998).

It is recommended that upon submission of a development application (DA), Council enact their DCP³, which incorporate SEPP 55 provisions. Specifically, it is recommended that a preliminary and detailed site investigation be undertaken upon submission of a DA for redevelopment of any land within the site.

It is also recommended that Hazardous Building Material Surveys (HBMS) be undertaken prior to any demolition and redevelopment works on individual land parcels within the site.

³ Parramatta Development Control Plan 2011



1. Introduction and Background

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Parramatta City Council (Council, the client) to conduct a Preliminary Site Investigation (PSI) of the Auto Alley Precinct within the local government area (LGA) of Parramatta, NSW, herein referred to as the site. The location of the site and site layout are show in **Figures 1 and 2**, respectively.

Based on communication with Council, it is understood the site has a long history of commercial land use as a car dealership and automotive repairs precinct. Whilst currently and historically the site has been dominated by the automotive retail and repairs industry, it is understood that in recent years due to its potential to see the area revitalised, an uplift in land use controls is being considered as a way of:

- Ensuring that sufficient commercial development can be delivered to meet job growth targets; and
- Provide an incentive for redevelopment.

The changes to development controls that are being considered involve:

- The rezoning of land, on either side of a business-only spine along Church Street, to enable residential and other uses in a B4 Mixed Use zone;
- An increase in height and floor space ratio controls; and
- Provision to facilitate the dedication of land for public open space and new streets to service future development that is envisaged.

State Environmental Planning Policy No. 55 (SEPP 55⁴) and DUAP/EPA (1998⁵) Planning Guidelines require consideration of contamination issues when rezoning land. If rezoning allows a change of use that may increase the risk to health or the environment from contamination, then the planning authority must be satisfied that the land is suitable for the proposed use or can be remediated to make it suitable.

Based on information provided by Council, it is understood that the site is proposed to be rezoned as shown in **Appendix A**, potentially for more sensitive land uses, including residential. As such, a desktop preliminary investigation of land contamination is required to support the rezoning application, as per the requirements of SEPP 55 and in accordance with NEPC (2013⁶).

The investigation has been completed in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.2 Objectives

The objectives of the investigation are to assess the potential for contamination based on current and historical site activities and to draw conclusions regarding the potential contamination status of the site to support the rezoning application, as per the requirements of SEPP 55.

⁴ Managing Land Contamination. Planning Guidelines SEPP 55 – Remediation of Land. Department of Urban Affairs and Planning. Environment Protection Authority 1998 (SEPP 55)

⁵ Managing Land Contamination: Planning Guidelines, NSW Department of Urban Affairs and Planning, August 1998 (DUAP 1998)

⁶ National Environment Protection (Assessment of Site Contamination) Measure No. 1 2013. National Environment Protection Council (NECP 2013)



It is noted that the objective of the investigation was not to determine site suitability, rather to assess potential contamination issues that may preclude the rezoning of the site, specifically, contamination issues that cannot be readily addressed during the DA stages for redevelopment and assessment of site suitability.

1.3 Scope of Work

The agreed scope of works completed for this assessment comprised:

- A review of available site history and background information to identify potential areas of environmental concern (AECs) and associated contaminants of potential concern (COC), including:
 - Extracts of Section 149 certificates and building application/development applications (DA/BA) provided by Council;
 - Historical aerial photographs obtained from the Department of Lands;
 - Publicly available heritage records held by the Department of Planning and Council, where readily available;
 - Current and historical land title records for a selection of properties to gain an understanding of potential land use prior to historical aerial photographic records;
 - Records of environmental incidents or former environmental licenses as held by the EPA;
 - Review of previous environmental reports made available by the client; and
 - Licensed bores present within a 1.5 km radius of the site available on the online NSW Natural Resources Atlas.
- Review of the environmental setting including a review of the topography, geology and hydrogeology of the site and surrounding areas;
- Inspection of the site, from public pedestrian pavements only, to identify potential AECs and confirm desktop findings;
- Development and documentation of a conceptual site model (CSM) based on the available information;
- Development and documentation of a qualitative risk rating, from a contamination perspective, for each of the land ownerships properties within the site;
- Preparation of a PSI report in general accordance with relevant EPA Guidelines; and
- To assess the potential for contamination based on current and historical site activities and to draw preliminary conclusions regarding the potential contamination status of the site to support the rezoning application, as per SEPP 55 and where the contamination may be present, the investigation is required to provide a basis for a more detailed investigation.



2. Site Condition & Surrounding Environment

2.1 Site Identification

The site is located south of the Parramatta CBD and extends from the Great Western Highway in the north, to Boundary Street in the south, High Street to the east and varying distances west of Church Street, as shown on **Figures 1 and 2**. The site occupies an area of approximately 9.1 ha (excluding road reserves and Heartland Holden sites) and comprises over 90 allotments.

The location of the site is shown in **Figure 1**, the current site and lot layout is shown in **Figure 2** and individual ownership parcels are shown on **Figure 3**. The site details are presented in **Appendix B** and summarised in **Table 2.1**.

Lot and DP	Provided in Appendix B and shown in Figure 2
Address	Auto Alley Parramatta LGA. Detailed information is provided in Appendix B
Approximate co- ordinates (MGA 56) of the centre of site	E: 315308.408 N: 6255739.883
Site Area	Approximately 13.2 ha (9.1 ha excluding road reserves)
Local Government Authority	Parramatta City Council
Site Zoning	Proposed zoning - refer to Appendix A Current zoning – refer to Appendix B
Previous Land Use	Agricultural, residential and commercial/industrial land use
Current Land-use	Commercial land use as a car dealership and automotive repairs precinct with isolated areas of residential and retail (cafe) use
Current Land use	Detailed in Appendix B
Proposed Land use	Detailed in Appendix B

Table 2.1 Summary Site Details

*It is noted that properties associated with Heartland Holden in the north west of the site was excluded from the assessment, as these areas have been subject to a site specific preliminary contamination assessment (AECOM 2011⁷).

2.2 Site Condition

A limited site inspection from public pedestrian pavements was conducted on 31 March 2014 by Chris Bielby, one of JBS&G's trained and experienced environmental consultants and Matthew Bennett, a JBS&G Principal and Project Director, on 2 April 2014.

The site is highly accessible, generally has large allotments, and is largely occupied by car yards and associated uses including car washing facilities and repair and supply outlets. Church Street, the main north south retail street, divides the site. Modern car showrooms generally line the Church Street road frontage with associated repair and supply outlets generally fronting east west orientated streets. A large hotel, The Holiday Inn, is located in the north eastern part of the site. Several residential and commercial outlets (cafes and pub) were scattered across the site.

Individual land ownership parcel details are presented in **Appendix B** and shown in **Figure 3**. Areas of Environmental Concern (AECs) within individual land parcels are discussed below and shown on **Figure 4**.

⁷ Phase 1 Environmental Site Assessment, Church Street Rezoning Project. AECOM Australia Pty Ltd, 7 September 2011 (AECOM 2011)



2.2.1 Parcel A

Fronting the Great Western Highway, these allotments comprised the Yamaha BikeBiz dealership. The majority of the property was concrete paved and was noted to be in poor condition. An older style two storey brick showroom and service centre occupied land within the eastern and south eastern property extent. A single storey workshop and repair centre of brick construction occupied land within the south western property extent.



Photo 1 – BikeBiz fronting the Great Western Highway facing south

2.2.2 Parcel B

Fronting Landsdowne Street, this allotment comprised a single storey brick commercial building tenanted by R.W Brown Automotives. The building occupied the majority of the property. Land surrounding structures comprised concrete hardstands, the ground surface of which appeared to have been altered in areas. Surface staining was observed in areas of hardstands.



Photo 2 – R.W Brown Automotives fronting Landsdowne Road facing north

2.2.3 Parcel C

Fronting Rosehill Street, these allotments comprised a commercial style building of brick construction. The building occupied the majority of the property. Surrounding areas comprised bituminous and concrete hardstands. Scrap metal, timber, furniture and various manufacturing equipment were stored at the front of the property on hardstands.





Photo 3 – Commercial style building fronting Landsdowne Road facing south

2.2.4 Parcel D

Fronting Landsdowne Road, this allotment comprised a residential duplex of brick construction with corrugated iron roofing. Land surrounding the residences comprised concrete hardstands. The building was noted to be in moderate condition with minor areas of flaking paint.



Photo 4 – View of the property facing south from Lansdowne Road

2.2.5 Parcel E

Fronting Dixon Street, these allotments comprised several single storey older style residences of wooden panelling and fibre cement (ACM) sheet construction with ceramic tile roofing. The residences were noted to be in poor to moderate condition with flaking paint and fragments of ACM observed in areas. Land surrounding the residences generally comprised landscaped areas and lawn.



Photo 5 – Residence fronting Dixon Street facing north



2.2.6 Parcel F

Fronting Lansdowne, Church and Dixon Streets, these allotments generally comprised structures surrounded by concrete and bituminous hardstands. A shade cloth covered occupied a portion of allotments fronting Dixon Street. A stormwater easement (Clay Cliff Creek), with a west east alignment, dissected the northern extent of the property.

Several modern and older style car dealerships, including Thomson Suzuki, Fiat and Alfa Romeo fronted Church Street. Suzuki, Alfa Romeo and Ford service centres were located within the south eastern property extent, fronting Dixon Street. The buildings were noted to be of various construction materials suggesting the buildings were progressively constructed over time. A riser, potentially associated with a UST, and bowser were observed within the north eastern extent of Lot 1 in DP 180199 (**Figure 4**). An above ground storage tank (AST) was observed in proximity to Lot Y in DP 401259 and Lot 8 in DP 12623 (**Figure 4**).



Photo 6 – The Ford service workshop fronting Dixon Street facing north with potential UST and bowser to the north of canopy area



Photo 7 – The auto service workshops fronting Dixon Street facing north east

2.2.7 Parcel G

Fronting Church Street, this allotment comprised an Audi car dealership. A modern showroom fronted Church Street. A carwash was observed in the western property extent. Land surrounding structures generally comprised concrete hardstands.



Photo 8 – Audi car dealership comprising a modern showroom



Photo 9 – Carwash in the western property extent

2.2.8 Parcel H

Fronting Rosehill Street, these allotments comprised an older two storey warehouse style structure of brick and fibre cement sheet (ACM) construction. The warehouse style structure appeared to occupy the southern and central property extent, with yard areas to the north.





Photo 10 – Warehouse style building fronting Rosehill Street facing north

2.2.9 Parcel I

Fronting Church, Dixon and Rosehill Streets, these allotments comprised the car dealership of Thompson Ford. The majority of the property comprised concrete and bituminous hardstands, the ground surface appeared to have been altered when compared to surrounding allotments. Potential exists for the placement of fill beneath raised roads and loading docks in areas. Surface staining was observed in areas.

A large older style multi storey warehouse, Thomas Ford Parts, occupied the majority of Lot 1 in DP 778374. Lot 1 in DP 129414 and Lot 4 in DP 12623 contained the Thompson Ford car dealership which comprised caryard areas and an older style sales building in the western extent of Lot 4 in DP 12623.



Photo 11 – Thomas Ford parts warehouse facing south



Photo 12 – Thomas Ford car dealership facing south from Dixon Street

2.2.10 Parcel J

Situated on the corner of Church and Rosehill Streets, this allotment comprised a Porsche car dealership. A modern showroom and sales building was located within the southern property extent. A small workshop area occupied land within the western property extent. The ground surface surrounding the properties structures comprised bituminous pavements and appeared to be have been subject to cut and fill activities.

∲JBS&G





Photo 13 – The Porsche car dealership fronting Church and Rosehill Streets

Photo 14 – Workshop area in the western extent of the property

2.2.11 Parcel K

Fronting Rosehill Street, this allotment comprised the eastern portion of a residential duplex of brick construction with cement tile roofing. The residence was noted to be in moderate condition with flaking paint in areas. The eaves of the residence were noted to be of potential ACM construction. A garage was observed within the south eastern lot extent. The ground surface surrounding structures generally comprised concrete hardstands with the exception of a small grassed yard area to the north.

2.2.12 Parcel L

Fronting Rosehill Street, this allotment comprised a bituminous car park, utilised by the Audi Service Centre within neighbouring allotments (**Section 2.2.13**).



Photo 15 – Bituminous paved lot facing south from Rosehill Street

2.2.13 Parcel M

Fronting Church, Rosehill and Boundary Streets, these allotments comprised an Audi Service Centre encompassing multiple buildings.

A large warehouse style structure of concrete and sheet metal construction occupied the majority of Lot 39 in DP 597587. A riser, potentially associated with a UST, was observed along the eastern façade of the warehouse style structure (**Figure 4**). A modern electrical substation was observed within the north eastern extent of Lot 2 in DP 203854.

A large warehouse style structure occupied the entire footprint of Lot 7 in DP 71134, Lot 1 in DP 962456 and the western extent of Lot 1 in DP 78099. The warehouse was noted to be of brick and metal with Super Six roofing (ACM). Two risers and bowsers, potentially associated with two USTs were observed along the southern façade of the warehouse style structure (**Figure 4**).

A smaller older warehouse style structure occupied the majority of Lot 8 in DP 586637. The warehouse was noted to be of brick and wooden panelling construction and to be in poor condition with flaking paint.



An Audi car dealership fronted Church Street (Lot 1 in DP 78099 and Lot 10 in DP 581263). A small showroom and sales office occupied land within the western extent of Lot 10 DP 581263.

Land surrounding structures generally comprised concrete and bituminous hardstands, the ground surface of which appeared to have been altered when compared to neighbouring allotments, notability in areas fronting Church Street and the southern extent of Lot 2 in DP 203854.





Photo 16 – Warehouse building with Super Six roofing fronting Boundary Street

Photo 17 – One of two red bowsers observed fronting Boundary Street

2.2.14 Parcel N

Situated on the corner of Church and Rosehill Streets, these allotments comprise the car dealership of Citroen. The majority of the site comprised concrete and bituminous hardstands, the ground surface of which appeared to have been altered in areas. A small older style sales office was situated within the western property extent.



Photo 18 – The Citroen car dealership facing west from Church Street

2.2.15 Parcel O

Fronting Church Street, these allotments comprised a Holden car dealership. A small older style sales office occupied land within the western property extent. The balance of the property comprised concrete pavements, the ground surface of which appeared to have been altered.





Photo 19 –Holden car dealership facing north from Boundary Street

2.2.16 Parcel P

Situated on the corner of Church, Parkes and Anderson Streets, this allotment comprised a two storey building of brick construction tenanted by PJ's Irish Pub. The building was noted to be in good condition. Land surround the building comprised landscaped areas and bituminous hardstands.



Photo 20 – PJ's Irish Pub facing south west from Parkes Street

Photo 21 – The car park at the rear of the pub facing west from Anderson Street

2.2.17 Parcel Q

Fronting Church Street and extending to Anderson Street, this allotment comprised the modern car dealerships of Peugeot and Skoda. Two show rooms occupied the majority of the property. The ground surface surrounding site structures appeared to comprise concrete and bituminous hardstands.



Photo 22 – The Peugeot and Skoda car dealerships facing west from Anderson Street



2.2.18 Parcel R

Situated on the corner of Church, Marion and Anderson Streets, these allotments comprised the car dealerships of Trivett Classic BMW, Mini, Honda, Porsche, Landrover, and Jaguar.

A large modern showroom occupied the majority of Lot 1 in DP 734700 encompassing a multilevel building with rooftop and basement parking. The balance of the lot comprised concrete paved hardstands.

The majority of Lot 2 in DP 734955 and Lot 3 in DP 827013 comprised paved concrete and bituminous hardstands. Within the south western extent, an older style show room fronted Church Street. A workshop occupied land to the east of the show room, accessible from Anderson Street. The workshop was noted to be of ACM construction in areas. A suspected riser (**Figure 4**), potentially associated with a UST, was observed within the workshop. Potential exists for the placement of fill beneath ramps providing access to rooftop parking.

A modern show room occupied land within the central extent of Lot 2 in DP 734955. Several modern and older style show rooms occupied land within the northern extent of Lot 2 in DP 734955 and the majority of Lot 3 in DP in DP 827013.





Photo 23 – Trivett Classic BMW and Mini show room building

Photo 24 – Trivett Honda car dealership facing west

2.2.19 Parcel S

Situated on the corner of Anderson and Parkes Streets, this allotment comprised a vacant single storey building previously tenanted by Lonestar Steakhouse restaurant. The building was of timber and brick construction and appeared to be in moderate condition with no visible signs of flaking paint. The ground surface surrounding the property structures generally comprised landscape areas and bituminous hardstands. It is noted at the time of inspection shade cloth with signage was present around the site indicating potential future redevelopment.



Photo 25 – The western side off the building face east from Anderson Street

Photo 26 - The eastern site of the building facing west



2.2.20 Parcel T

Fronting Anderson Street, this allotment comprised a multi storey commercial building (Holiday Inn) occupying the majority of the property. A large multilevel car park was present in the southern extent of the property. Surrounding the buildings of concrete construction were landscaped areas and bituminous hardstands. A stormwater easement (Clay Cliff Creek), with a west east alignment, ran below the multistorey car park within the southern property extent.



Photo 27 – The Holiday Inn Hotel facing south east from Anderson Street



Photo 28 – Clay Cliff Creek easement below the multilevel car park within the south property extent

2.2.21 Parcel U

Fronting Anderson Street, this allotment comprised a modern multistorey style commercial building of concrete construction, the footprint of which occupied the entire allotment. The property appeared to be used by the Trivett dealership as an automotive service centre.



Photo 29 – The Trivett automotive service centre building facing east from Anderson Street

2.2.22 Parcel V

Situated on the corner of Anderson and Marion Streets, this allotment comprised a single story commercial style building of concrete and brick construction with sheet metal roofing. The building occupied the entire property footprint. At the time of the site inspection the building appeared vacant with no signage apparent. Based on the building's configuration it appeared the property may have potentially been used as a mechanics/automotive repair centre or car dealership with automotive repair centre facilities.





Photo 30 – Commercial style building facing east from Anderson Street

2.2.23 Parcel W

Fronting Marion Street, this allotment comprised a single story brick warehouse style structure within the north property extent tenanted by Sydney Competition Warehouse. The remainder of the property comprised concrete and bituminous hardstands. Scrap metal, timber and construction goods were stored on hardstands within the southern lot extent.



Photo 31 – Street view of the warehouse building fronting Marion Street

2.2.24 Parcel X

Fronting Marion and Andersons Streets and Jubilee Lane, these allotments comprised a warehouse style building (Trivett Tyres) of concrete and brick construction. The warehouse style structure occupied the entirety of Lot 3 in DP 71096. The remainder of the property comprised concrete hardstands. Heavy surface staining was observed along the Marion Street and Jubilee Lane road frontages. The rear of this property, fronting Jubilee Lane, was a car wash facility, with staining from the vehicle entry, into the lane.

A suspected riser and bowser, potentially associated with a UST was identified within the north eastern property extent (**Figure 4**).



Photo 32 – The southern portion of the warehouse building fronting Marion Street facing north



2.2.25 Parcel Y

Situated on the corner of Marion and Church Streets, these allotments comprised the car dealership of Parramatta Best Cars and 4WDs and vacant land parcels.

The property's ground surface largely comprised concrete and bituminous hardstands, the ground surface of which appeared to have been altered in areas when compared to neighbouring allotments. A small two storey showroom and sales office of brick construction with corrugated iron roof occupied land within the south eastern extent of Lot 21 in DP 777325. A large single story warehouse style, presumably used as a workshop, occupied the majority of Lot 2 in DP 163344.

The balance of the property (Lots 1 and 2 in DP 996565) comprised cleared vacant land parcels, the ground surface of which was surfaced with grass cover. Land within the southern extent of Lots 1 and 2 in DP 996565 appeared disturbed, the subject of filling. A dangerous goods storage cabinet was observed within the south eastern extent of the vacant land parcels.





Photo 33 – The car dealership of Parramatta Best Cars and 4WDs facing south east

Photo 34 – The vacant land parcel facing south

2.2.26 Parcel Z

Fronting Marion and High Streets, these allotments comprised Neil Baileys Auto Electrical, a café (Oasis) and Parramatta Automotive.

A large single story commercial style building of brick construction occupied Lot 11 in DP 1138238 (Neil Baileys Auto Electrical). Within the rear yard were several workshop areas of brick construction. The remainder of the lot comprises of bituminous hardstands. Surface staining was observed in areas.

Lot 10 in DP 1138238 comprised several structures. The northern extent comprised a single story residential style structure of brick construction with a corrugated iron roof. The residential style structure appeared to have been converted into a café (Oasis) with outside dining and signage apparent. Several galvanised sheds were observed within the rear yard, either associated with the land use occurring in Lot 1 DP 706520 given the thoroughfare to the neighbouring allotment or an automotive repairs workshop based on painted signage on the roof of the residential (café) style structure. The land surrounding structures was observed to be largely paved with bituminous hardstands.

Parramatta Automotive occupied Lot 1 in DP 706520 situated to the south of Neil Baileys Auto Electrical and café Oasis. A single storey commercial style building of brick construction was observed within the south western lot extent. The surrounding areas comprised largely of concrete and bituminous hardstands. A riser, potentially associated with a UST was observed along the southern lot boundary (**Figure 4**).







Photo 35 – Parramatta Automotive fronting High Street, facing west

Photo 36 – Neil Baileys Auto Electrical and Oasis Café facing south

2.2.27 Parcel AA

Situated on the corner of Marion and High Streets, this allotment comprised a residence of brick construction with a slate tile roof. Within the rear yard were extensions to the residence, several sheds, potentially of ACM construction (**Figure 4**) and a double car brick garage. The residence and site structure were in moderate conditions with minor areas of flaking paint.





Photo 37 – The residence fronting Marion Street facing south

Photo 38 – The eastern side of the residence facing west

2.2.28 Parcel AB

Fronting Church Street and extending to High Street, these allotments comprised the Denlo car dealerships of Isuzu, Commercial and Used Cars.

An older style office and small workshop area were situated within the western extent of Lot 1 in DP 736399 and Lot 10 in DP 22771. The remainder of these allotments comprised concrete and bituminous paved surfaces, the ground surface of which appeared to have been altered by a combination of cut and fill activities (when compared to the regional topography). Land immediately east of Lot 1 in DP 736399 and Lot 10 in DP 22771 comprised vacant land parcels, the ground surface of which comprised road base gravels, utilised for vehicle parking. Surface staining was observed in unsealed areas.

An older style showroom and sales office occupied land within the central eastern extent of Lot 1 in DP 816376. Land surrounding the lot structures comprised bituminous hard stands.

∲JBS&G



Photo 39 - The Denlo used car dealership facing east

Photo 40 – The Denlo Isuzu car dealership facing east

2.2.29 Parcel AC

Fronting High Street, these allotments comprised vacant land parcels, the ground surface of which comprised largely of concrete hard stands, part of the Denlo used car dealerships (Section 2.2.30). The ground surface in areas appeared stained.



Photo 41 - View of the property from High Street

2.2.30 Parcel AD

Fronting Church Street and extending through to High Street, this allotment comprised the car dealerships of Denlo Subaru and Volkswagon. Two modern showrooms fronted Church Street. Several older style structures were observed within the central property extent comprising workshops and offices associated with the used car dealership occupying the eastern property extent. Within workshop areas several 205 L (44 gallon) drums were observed within unbunded areas.

The property's topography appears to have been filed in areas when compared to surrounding allotments. The ground surface surrounding structures largely comprised hardstands and pavements. A small area of exposed soils was observed within the north eastern property extent. A modern electrical substation was observed within the south eastern property extent.





Photo 42 – View of the car dealerships fronting Church Street

Photo 43 - View of the workshop buildings facing east



2.2.31 Parcel AE

Situated on the north-eastern corner of Raymond and Church Streets and extending east to High Street, these allotments comprise the car dealerships of Terry Shields Toyota and Lexus. The majority of the property comprises paved concrete hardstands, the ground surface of which appear to have been altered in areas from the regional north east trending topography. A showroom occupied the majority of Lot 1 in DP 318189. An older style two storey split level warehouse conversion comprising offices; showroom and workshop areas occupied the majority of Lot 3 in DP 234313. A riser associated with an underground storage tank (UST), and bowser were observed along the south, western façade of the warehouse style structure (**Figure 4**). A small electrical substation was observed within the south eastern extent of Lot 2 DP 500595. Lot 2 in DP 318189 fronting High Street appeared to be used for parking and comprised a level parcel of land, surfaced with road base gravels.



Photo 44 – View of the caryard looking north west towards Church Street with substation in the foreground



Photo 45 – Two storey warehouse situated on Lot 3 in DP 234313 facing north

2.2.32 Parcel AF

Fronting High Street, these allotments comprised an old two storey residential style structure of brick construction with cement tile roofing. The residence was noted to be in generally good condition with minor areas of flaking paint. Two smaller structures, a garage and shed, potentially of fibre cement sheeting (asbestos containing material (ACM)), were observed along the northern property boundaries (**Figure 4**). Yard areas surrounding the residence and property structures were surfaced with grass cover.



Photo 46 – Side view of parcel AF from the neighbouring property to the north west



Photo 47 – The front gate of the residence fronting High Street



2.2.33 Parcel AG

Fronting High Street, this allotment comprised a vacant land parcel, the ground surface of which comprised concrete hardstands, part of the Terry Shields Toyota dealership as discussed above in **Section 2.2.31**. The ground surface appeared to have been altered (potentially filled) sloping south towards Raymond Street and east in areas towards High Street.



Photo 48 - View of the caryard facing north



Photo 49 – View of the caryard facing west along the eastern property boundary

2.3 Surrounding Land use

The current land use of adjacent properties or properties across adjacent roads is summarised below.

- North The site is bound to the north by the Great Western Highway and Parkes Street, beyond which are numerous commercial and residential properties.
 Parramatta Train Station is located approximately 300 m, north east of the site.
 Further afield is the Parramatta CBD and Parramatta River.
- East The site is bound by High Street in the south east, beyond which are residential allotments. Further afield is Harris Park Train Station. The north eastern site extent is bound by Jubilee Lane, a stormwater easement (Clay Cliff Creek) and Jubilee Park, beyond which are residential and commercial properties.
- South The site is bound to the south by Boundary and Raymond Streets, beyond which is the continuation of the Auto Alley Precinct within the LGA of Holroyd.
- West The site is generally bounded by residential allotments.

Based on the surrounding land uses identified during the site inspection, there are no significant potential off-site contamination sources located within the vicinity of the site with the notable exception of the continuation of the Auto Alley precinct to the south.

2.4 Topography

Review of the regional topographic map (LPI 2002⁸) indicated that the south western site extent has an elevation of approximately 25 m Australian Height Datum (AHD) gently sloping to the north east with an elevation of 15 m AHD.

The site was observed to be relatively level with a gentle slope towards the stormwater easement of Clay Cliff Creek. As discussed in **Section 2.2**, site levels appeared to have been altered in areas as a result of cut and fill activities.

⁸ Parramatta River 1:25 000 Topographic Survey Sheet 9130-3N (Edition 3). Land and Property Information, 2002 (LPI 2002)



2.5 Geology and Soil Landscape

Reference to the 1:100.000 Geological Series Sheet for Sydney (DMR 1983⁹) indicates that the site is underlain by Ashfield Shales of the Wianamatta Group. Ashfield Shale typically comprises black to dark grey shales with laminate formed within the Triassic period.

Review of 1:100,000 'Sydney' Soil Landscape Series Sheet 9130 (LWC 1983¹⁰) revealed the site's soil landscape predominantly comprises undulating to rolling hills on Wianamatta Group Shales. The natural soil is described as shallow to moderately deep, red and brown Podzolic soils on upper slopes, deep yellow podzolic soils on lower slopes and humic gleys, yellow and gleyed podzolic soils along drainage lines.

A previous Phase Two Environmental Site Assessment (ESA) completed by Aargus (2011¹¹) on properties currently owned by TC Properties Pty Ltd and Parramatta 101 Pty Ltd encountered fill across the assessment site. The fill was described as medium grained silty sand with inclusions of gravel, bricks, ash, ceramic, wood, glass and concrete. It is noted that the investigation failed to delineate the depth of fill.

Based on review of registered groundwater bore information obtained from the National Resource Atlas database, as discussed in **Section 2.7**, regional soil in the vicinity of the site has been identified to comprise residual clay soils over shale bedrock.

2.6 Hydrology

Clay Cliff Creek, comprising a concrete conduit, intersects the central western site extent and traverses north east. Within the western site extent, within land Parcel F, and the north eastern site extent, within land Parcel T, the creek comprises an open concrete conduit. Across the remainder of the site the creek comprises an enclosed concrete conduit at depth.

The Parramatta River/Clay Cliff Creek confluence is located approximately 1.5 km north east from the site.

Individual properties are generally surfaced with concrete and bituminous hardstands. Given the sealed nature, the majority of precipitation is expected to be collected by individual property stormwater drainage networks before discharging into the stormwater drains present along road frontages and in turn into Clay Cliff Creek.

In unpaved areas, it is anticipated surface water generated during periods of rainfall is likely to result in infiltration into the ground surface at a rate reflective of the silty clay low permeability soils and/or heterogeneous moderate permeability fill material. In periods of heavy or prolonged rainfall, excess water is expected to follow the topographic gradient and migrate off-site and in turn collected by stormwater drainage present along road frontages.

2.7 Hydrogeology

Registered groundwater bore information was obtained from the National Resource Atlas database on the 26 March 2014. A review of the registered bore information indicated that thirteen bores are located within a 1 km radius of the site. The details of those bores are summarised in **Table 2.2**.

 ⁹ Sydney 1:100 000 Geological Series Sheet 9130 (Edition 1). Department of Mineral Resources, 1983 (DMR 1983)
¹⁰ Sydney 1:100,000 Soil Landscape Series Sheet 9130 (LWC 1983)

¹¹ Phase II Environmental Site Assessment 54-72 Church Street, Parramatta NSW. Prepared for T.C.Properties Pty Ltd. Aargus Pty Ltd dated March 2011(Aargus 2011)



Table 2.2 Groundwater Bore Search

GW111322 0.	1.6 km NE 1.7 km SE 1.7 km SE	General Use Monitoring Monitoring	4.60 3.60 4.10	2.40 N/R N/R	2.40 N/R N/R	0.00-2.40: Sand 0.00-0.30: Topsoil, Gravelly silty sand 0.30-2.20: Fill, silty clay, medium density 2.20-3.50: Sand, medium grain, grey, soft 3.50-3.60: Clay, low to moderate plasticity, grey, shale. 0.00-0.30: Topsoil,
						Gravelly silty sand 0.30-2.20: Fill, silty clay, medium density 2.20-3.50: Sand, medium grain, grey, soft 3.50-3.60: Clay, low to moderate plasticity, grey, shale. 0.00-0.30: Topsoil,
GW111323 0).7 km SE	Monitoring	4.10	N/R	N/R	•
						silty sand, fine grain 0.30-2.50: Fill, sandy clay, red brown, grey mottling 2.50-4.10: Shale, weathered, stiff to hard, some clay.
GW111324 0.).7 km SE	Monitoring	8.10	N/R	N/R	0.00-0.30: Topsoil, silty sand, fine grain, brown 0.30-5.50: Fill, Gravely clay, moderate plasticity, red brown 5.50-8.10: Shale, dark grey, hard, uniform, wet.
GW110396 0.).4 km S	Monitoring	7.00	N/R	N/R	0.00-0.30: Fill, loose, brown, sandy 0.30-6.00: Clay, light brown, soft, plastic0 6.00-7.00: Clay, red brown, plastic, fill
GW110397 0.).5 km SE	Monitoring	5.00	N/R	N/R	0.00-1.50: Fill, clay, soft, brown, plastic 1.50-3.50: Clay, red, pink, purple, hard. 3.50-4.30: Clay, light brown, hard. 4.30-4.50: Clay, light brown, soft, plastic 4.50-5.00: Clay, dark yellow, silty
GW110398 0.).5 km SE	Monitoring	6.00	N/R	N/R	0.00-0.50: Fill, road base 0.50-1.50: Clay, red, grey, plastic, moist 1.50-4.00: Clay, red brown, stiff, plastic 4.00-5.50: Clay, orange/brown, stiff 5.50-6.00: Shale, grey, weathered
GW110399 0.).4 km S	Monitoring	5.30	N/R	N/R	0.00-1.50: Fill, clay



Groundwater	Location	Intended	Drilled	Standing	Water	Geological Profile
Bore Number	(approx.	Purpose	Depth (m)	Water	Bearing	
	distance from		bgs	Level (m)	Zones	
	centre of site)			bgs	(m) bgs	1.50-2.00: Clay,
						yellow, brown, hard
						2.00-2.50: Clay, light
						brown, soft, silty,
						plastic
						2.50-3.40: Clay, light
						grey, silty soft plastic
						3.40-5.30: Clay,
01/// 40 400			5.40	N/5	N/D	orange, grey mottle
GW110400	0.4 km S	Monitoring	5.40	N/R	N/R	0.00-0.80: Fill, clay,
						sandy, gravelly 0.80-4.30: Fill, clay,
						light brown, soft,
						plastic
						4.30-5.40: Clay, light
						brown, pink, soft, silt
GW110401	0.4 km S	Monitoring	7.00	N/R	N/R	0.00-0.85: Fill, loose
						sand/gravel
						0.85-7.00: Fill,
						crushed sandstone.
GW110402	0.5 km SW	Monitoring	8.00	N/R	N/R	0.00-0.85: Fill, loose
						sand, with gravel
						0.85-5.00: Fill, crushed sandstone
						5.00 8.00: Fill, soft,
						sandy clay with
						gravel.
GW110403	0.5 km SW	Monitoring	9.00	N/R	N/R	0.00-0.10: Topsoil
		_				0.10-0.20: Basalt
						gravel fill
						0.20-0.85: Fill, silty
						sand
						0.85-1.50: Fill, stiff,
						grey/brown, sandy clay
						1.50-4.00: Fill,
						crushed sandstone
						4.00-6.40: Silty clay,
						very soft, grey.
GW110404	0.5 km SW	Monitoring	9.00	N/R	N/R	0.00-0.90 0.90: Fill,
						clay sand, gravel
						0.90-1.50: Fill,
						gravelly silty sand
						1.50-6.50: Fill, crushed sandstone
						6.50-8.50: Silty clay,
						with minor sand
						8.50-9.00: Shale, grey,
						extremely weathered.

Based on regional topography, groundwater flow is anticipated to be to the north east towards the Clay Cliff Creek and in turn the Parramatta River.

Based on the available geological and hydrogeological information it is anticipated that perched water may be encountered at the soil-rock interface as a result of subsurface water movement during and following wet weather. Given the proximity of the site to the Parramatta River, it is anticipated shallow (perched) groundwater conditions may occur beneath the site (3-5 m bgs).



As the site lies within a residual shale formation, the permanent groundwater table is anticipated to occur within the underlying bedrock, within zones of relatively higher permeability associated with inconsistencies in the bedrock (faults, joints, weathered zones, etc). Given these conditions potential contaminants at or near surface are less likely to migrate to deeper permanent groundwater within bedrock aquifers beneath the site.

2.8 Acid Sulphate Soils

A review of the NSW Natural Resources Atlas (2013¹²) indicated that there was no evidence of acid sulphate soils (ASS) in the area of the site.

Review of the Prospect/Parramatta River ASS Risk Map (DLWC 1997¹³) revealed that the central portion of the site (in the vicinity of Clay Cliff Creek) lies within disturbed terrain which may include filled areas, which often occur during reclamation of low lying swamps/drainage areas for urban development. Other disturbed terrain includes areas which have been mined or dredged, or have undergone heavy ground disturbance through general urban development or construction of dams or levees. For soils of this landscape group it is recommended that soil investigations are undertaken to assess these areas for ASS.

Tabulated planning data provided by Council for the site (**Appendix C**) indicates the majority of the site's soils are identified as Class 4 and Class 5 on the Parramatta Local Environmental Plan (LEP) 2011 ASS Map.

Reference to Clause 6.1 of the Parramatta LEP 2011 indicates the following:

- For land within the Class 4 area, development consent is required for works that are more than 2 m below the natural ground surface and/or when works by which the water table is likely to be lowered more than 2 m below the natural ground surface.
- For land within the Class 5 area, development consent is required for development which may result in the water table being lowered on the adjoining land classified as Class 1, 2, 3 or 4 on the ASS Map.

Furthermore, Council requires the preparation of a preliminary assessment indicating an acid sulfate soil management plan (ASSMP) is not required, or alternatively an ASSMP will be required prior to consent for development in this land classification.

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Parramatta North [Masons Drive] AMO¹⁴) indicates the site is located within the following meteorological setting:

- Average minimum temperatures vary from 6.2°C in July to 17.6°C in February;
- Average maximum temperatures vary from 17.3°C in July to 28.4°C in January;
- The average annual rainfall is approximately 961 mm with rainfall greater than 1 mm occurring on an average of 90 days per year; and
- Monthly rainfall varies from 46 mm in July to 124 mm in February with the wettest periods occurring on average in January to March.

¹² NSW Natural Resource Atlas website, <u>http://www.nratlas.nsw.gov.au</u> accessed 14 April 2014

¹³ Prospect/Parramatta River 1:125,000 Acid Sulfate Soil Risk Map Edition Two (DLWC 1997)

¹⁴ <u>http://www.bom.gov.au/climate/averages/tables/cw_066124.shtml</u> Commonwealth of Australia, 2013 Bureau of Meteorology, Product IDCJCM0028 prepared at 10 April 2014 and accessed by JBS&G on 14 April 2014.



3. Site History

3.1 Aerial Photographs

3.1.1 General Land Use

Historical aerial photographs were obtained from NSW Land and Property Information for review. Relevant information from the aerial photograph review is summarised below based on a general overview of the Auto Alley Parramatta LGA Precinct as well as key features within individual land Parcels as listed in **Table 3.1** and shown in **Figure 4**.

• **1930**: The quality of the aerial photograph precluded a thorough review of the site and surrounding land use. Notwithstanding this the site appeared heavily developed comprising low and medium density residential allotments, within the central and southern site extent, while the northern site extent appeared to comprise residential and commercial/industrial allotments. The site's road reserves were discernible, similar to their current alignment.

Clay Cliff Creek was apparent within the central site extent with a west to north east orientation. The creek appeared to comprise a man-made open stormwater conduit across the majority of the site.

The surrounding land use appeared to comprise largely residential and commercial land use with the notable exception of Jubilee Park to the north east.

• **1951**: The site appeared similar to the previous aerial photograph, however, the poor clarity precluded a more thorough review of land use activates. A large warehouse style structure was apparent north of Dixon Street, with the ground surface surrounding the structure appearing to be heavily disturbed. Several other warehouse style structures were apparent on the corner of Dixon and Church Streets and Marion and Church Streets. The balance of the site appeared to comprise residential allotments with the isolated commercial/industrial property.

The surrounding land use appeared similar to the previous aerial photograph.

• **1962**: The site appeared to have undergone significant transformation with numerous residential allotments making way for large commercial/industrial style uses. Residences appeared largely confined to the western site extent fronting Dixon Street, the south eastern site extent fronting High Street and north eastern site extent fronting Anderson Street. Several car yards were apparent along Church Street. Clay Cliff Creek appeared to have been slightly modified, with overlying structures in areas no longer apparent.

Land surrounding the site appeared to comprise largely residential allotments with areas of isolated commercial/industrial allotments, notably to the north.

• **1972**: The site appeared to more developed with an expansion of commercial/industrial land use activities along east west orientated streets. Church Street appeared to be flanked by car yards and Clay Cliff Creek appeared to have been in filled/built over in areas. A service station style property was apparent on the corner of Raymond and Church Streets.

The surrounding land use appeared similar to the previous aerial photograph with the notable exception of a continuation of the Church Street industrialisation to the south.

• **1982**: The site experienced further expansion of the automotive industry with car yards and associated uses, potentially including car washing facilities and repair and supply outlets, occupying the majority of the site. Roofing on several warehouse style



structure appeared potentially of fibre cement sheet (ACM) construction. The Clay Cliff Creek alignment between Church and Andersons Streets was no longer apparent, either in filled or built over. Similar modifications were also apparent to the west, south of Lansdowne Street. Residential properties were largely confined to isolated areas along Dixon and High Streets.

The surrounding area appeared similar to the previous aerial photograph, with the exception of an expansion of the automotive industry to the north and south of the site along Church Street, the demolition of several large warehouse style structures associated with the Heartland Holden development lots. Residences to the north west appeared more developed, with an increase in building density.

1994: The site appeared similar to the previous aerial photography with the notable exception of the demolition of several large warehouse style structures and the erection of a large multi storey commercial building (Holiday Inn) within the north western site extent. Several other site structures appeared to have been demolished/modified to make way for newer commercial style structures and/or increase in floor space.

Clay Cliff Creek was discernible only within the western site extent, either in filled or built over.

The surrounding area appeared similar to the previous aerial photograph.

• **2005**: The site appeared similar to the previous aerial photograph. Several residential style structures formerly fronting High Street within the south eastern site extent were no longer present, making way for commercial land uses (car yard floor space, repair centres and showrooms). Numerous buildings experienced modifications and a large commercial style building was apparent on the corner of Church, Marion and Anderson Streets and adjacent fronting Anderson Street.

The surrounding area appeared similar to the previous aerial photograph.

• **2012:** The site and surrounds appeared similar to the current site configuration. Modern showrooms and bituminous and concrete hardstand front Church Street. Commercial/industrial warehouse style structures presumably car washing facilities and repair and supply outlets line east west orientated streets. Several residences were apparent fronting Dixon Street.

The surrounding area appeared similar to the previous aerial photograph.

3.1.2 Property Specific Land Use

Relevant information from historical aerial photographs with regards to individual land ownership parcels, as identified by Council, is summarised in **Table 3.1** below.

Land Parcel	Land Use Activity Summary
Parcel A	The property appeared to comprise two residences fronting the Great Western Highway. A large shed like structure was apparent within the 1972 aerial photograph within the southern extent of Lot 1 DP 129170. The residence within Lot 79 DP 735541 was no longer apparent in the 1982 aerial, with the ground surface comprising grass cover. By 1994 all of the property's structures were levelled, with a large commercial style structure occupying land within the eastern and southern extent of Lot 79 DP 735541. A smaller commercial style structure occupied the southern extent of Lot 1 DP 129170. Slight modifications and extensions to existing structures were observed in subsequent aerial photographs.
Parcel B	The property appeared to comprise a vacant land parcel. By 1962 a large warehouse style structure occupied the majority of the property. Slight modifications and extensions to existing structures were observed in subsequent aerial photographs.

Table 3.1 Site Ownership Aerial Photograph Summary



Land Parcel	Land Use Activity Summary
Parcel C	The property comprised a residential allotment. The residence observed in previous aerial
	photographs was no longer apparent in the 1982 aerial photograph with a large commercial
	industrial style structure apparent.
Parcel D	The property appeared to accommodate a duplex residence. Slight modifications to the
	residence were observed in subsequent aerial photographs.
Parcel E	The property appeared to accommodate several residential style structures. Lot B DP 372964
	comprised a vacant land parcel. Clay Cliff Creek, comprising a concrete conduit, was apparent within the northern property extent. The vacant land parcel identified within the previous
	aerial photograph now accommodated a residence. Slight modifications and extensions to
	existing structures were observed in subsequent aerial photographs.
Parcel F	The property comprised residential and light commercial land use. A large service station
	style structure was situated on the corner of Church and Dixon Streets. Clay Cliff Creek, with
	a west north east orientation, comprising a concrete conduit, was observed within the
	northern property extent. By 1951 several residences fronting Dixon Street appeared to have
	been levelled with a large commercial/industrial land use apparent. The property
	experienced further development with the residences lining Church Street no longer
	apparent in the 1962 aerial photograph, with commercial/industrial land use activities
	apparent. A residence fronting Lansdowne Street also appeared to have been levelled. By
	1972, the property accommodated numerous commercial/industrial style structures. Numerous vehicles were parked across the property, indicating land use activities included
	car dealerships and associated service and repair centres. The roofing of several structures
	appeared to be of fibre cement sheet (ACM) construction. The remaining residence fronting
	Lansdowne Street was no longer apparent in the 1982 aerial photograph. Slight
	modifications and extensions to existing structures were observed in subsequent aerial
	photographs.
Parcel G	The property appeared to accommodate residential land use fronting Church Street. The
	residence within the south eastern property extent was no longer apparent in the 1962 aerial
	photograph. A small structure was observed within the south western property extent. A
	large shed like structure was also observed to the west of the residence within the north
	eastern property extent with appeared to have been adapted for commercial use. The roofing of additional structures appeared to be of fibre cement sheet (ACM) construction.
	Several vehicles were observed in the 1994 aerial photograph, indicating land use activities
	may have been associated with the automotive industry (car dealership and repairs/service
	centres). Slight modifications and extensions to existing structures were observed. Site
	structures identified in previous aerial photographs were no longer apparent in the 2005
	aerial photograph, with a large modern carport like structure occupying land within the
	western property extent (car wash). The balance of the property comprised bituminous
	hardstands. A modern showroom style structure fronted Church Street in the 2012 aerial
Deveel	photograph, occupying land previous comprising bituminous hardstands.
Parcel H	The property appeared to comprise of a residential style structure. By 1951 the residence was no longer apparent, with a commercial/industrial style structures apparent within the
	northern and southern property extents. The central property extent appeared to comprise
	hardstands and a smaller structure, potentially a shed. Modifications of existing site
	structures were apparent in 1962 and 1972. By 1972, the structure within the northern
	property extent was no longer apparent, with the structure in the southern property extent
	occupying the southern and central property extent. Slight modifications were apparent
	between 1972 and 2012.
Parcel I	The property appeared to comprise residential and commercial land use activities. Several
	residences were apparent along Church and Rosehill Streets. The northern property extent appeared to be used for commercial purposed with a large warehouse/commercial style
	structure apparent. Several vehicles were observed within the 1962 aerial photograph
	indicating land use activities may have been associated with the automotive industry (car
	dealership and repairs/service centres). A residence fronting Church Street appeared to have
	been levelled, with the residence no longer apparent. By 1972 a single residence was
	apparent fronting Rosehill Street. A large warehouse style structure occupied land within the
	central northern property extent, the roof of which appeared to potentially be of fibre
	cement sheet (ACM) construction. Land use fronting Church Street appeared to comprise car
	dealerships. By 1972 the majority of the properties structures were no longer apparent, with
	the exception of the recently constructed warehouse structure within the central western
	property extent and several small commercial (showroom) style structure off set from Church Street. The property appeared to be largely used as a car dealership. A large commercial
	style structure was apparent within the southern property extent in the 1994 aerial
	איזיב אי אבוער איש מאאמיבור אונווון ווב אסמוובוו אוסאבוגא באובווג ווו נווב דאא מבוומו



Land Parcel	Land Use Activity Summary
	photograph. Slight modifications and extensions to existing structures were observed in subsequent aerial photographs.
Parcel J	A small structure was apparent in the 1930 aerial photograph fronting Rosehill Street. The structure fronting Rosehill Street in the previous aerial photograph was no longer apparent with a service station style structure apparent on the corner of Church and Rosehill Streets. A residential/commercial style structure was observed within the northern property extent fronting Church Street. By 1962 the commercial style structure situated on the corner of Church and Rosehill Streets was no longer apparent with a smaller structure observed. A car dealership comprising a showroom style building and hardstand areas occupied the property in the 1972 aerial photograph. Slight modifications and extensions to existing structures were observed in subsequent aerial photographs. In 2012 the property appeared similar to previous aerial photographs, however, the property appeared untenanted.
Parcel K	The property appeared to be part of a residential duplex fronting Rosehill Street. Slight modifications and extensions to the existing residence were observed in subsequent aerial photographs.
Parcel L	The property appeared to comprise a residence fronting Rosehill Street. Slight modifications and extensions to the existing residence were observed in subsequent aerial photographs. The residence and associated structures were no longer apparent in the 1982 aerial photograph with the property comprising bituminous hardstands. Numerous vehicles were observed in aerial photographs indicating land use activities may have been associated with the automotive industry.
Parcel M	The property appeared to comprise of residential uses fronting Rosehill, Church and Boundary Streets. By 1972, the residences were no longer apparent with land use activities comprising commercial land use (car dealerships and repair/service centres). Two large warehouse style structures lined the western property boundary. A small car dealership fronted Church Street. The property experienced further development for commercial land use activities with a large warehouse style structure fronting Boundary Street. The roof of the warehouse style structure appeared to be of fibre cement sheet (ACM) construction.
Parcel N	The property appeared to be of residential land use with two residences fronting Church Street. By 1972 the residences were replaced by a small showroom like structure along the western property extent. The balance of the property comprised hard stands on which numerous vehicles were observed.
Parcel O	The property appeared to comprise residential land use. The residences were no longer apparent in the 1972 aerial photograph with the site occupied by a car dealership. A small showroom style structure occupied the north western property extent.
Parcel P	The property appeared to comprise a residential/commercial style structure. Several modifications to the site structure were observed from 1951 to 2012.
Parcel Q	The property appeared residential. In the 1962 aerial photograph several structures appeared to have been cleared making way for a warehouse style structure to the north. A single residence fronted Church Street. The roofing of the warehouse style structures appeared to be of fibre cement sheeting (ACM). By 1982, the residence fronting Church Street was no longer apparent. A modern warehouse/showroom style structure was apparent in the 1994 aerial photograph occupying the central and southern property extent where the former residence once stood. Modifications to existing property structures were apparent. The warehouse style structure occupying the northern property extent appeared to have been levelled, making way for a more modern showroom like structure.
Parcel R	The property appeared residential and commercial with a large warehouse style structure apparent on the corner of Church and Marion Street. Clay Cliff Creek, comprising a concrete lined conduit, was apparent. By 1951 several residences appeared to have been cleared, making way for larger warehouse style structures and the stormwater easement (Clay Cliff Creek) appeared to have been either in filled or built over. By 1962 the property comprised numerous large warehouse style structures. An area of vacant land was apparent to the east of Early Street, which had previously occupied by a residential style structure. By 1972, numerous structures appeared to have been cleared making way for smaller structures and/or the modification of existing structures. At this stage, the advent of car dealerships land use activities was also apparent. Following 1972 the property appeared to be subject to further demolition and the construction of more modern showroom like structures and an increase in paved area. Structures within Lot 2 DP 734955 appeared potentially of fibre cement sheet construction (ACM).
Parcel S	The property appeared to comprise residential style structures fronting Parkes Street. In the 1972 aerial photograph, the residences within the central and western extent were no longer



Land Parcel	Land Use Activity Summary
	apparent with the ground surface comprising grass cover. 1982 saw the advent of
	commercial land use with the levelling of the remaining residences and construction of a
	structure within the central property extent. The balance of the property appeared paved
	with the exception of an elongated warehouse style structure along the eastern property
	boundary. The warehouse situated along the eastern property boundary was no longer apparent in the 1994 aerial photograph.
Parcel T	The property appeared to comprise several residences and potentially light commercial land
	use. By 1962 the northern and western property extent appeared to comprise a car
	dealership. Further development saw the property accommodate several large
	warehouse/commercial style structures part of the Hillsdone Holden dealership, as evident in
	the 1972/1982 aerial photographs. The property appeared to have been levelled by 1994,
	with a multi storey commercial style structure (Holiday Inn) and car park apparent.
Parcel U	The property appeared to comprise several residences which were progressively levelled
	from 1962 up until 1994 when the property comprised hardstand, presumably part of the
	neighbouring car dealership. Review of the 2005 aerial photograph identified a large multi
Deveal	storey commercial style structure.
Parcel V	The property appeared to accommodate a residential style structure. By 1972 the residence was no longer apparent with a large commercial/industrial style building occupying the entire
	property.
Parcel W	The property appeared to comprise a residential style structure. The residence was no longer
	apparent in the 1982 aerial photograph, with a warehouse style structure occupying the
	central and northern property extent. Material appeared to have periodically stored on hard
	stand areas fronting Marion Street.
Parcel X	The property appeared to comprise commercial land use presumably a car wash or service
	repair centre with several warehouse/factory style structures apparent. Slight modifications
	and extensions to existing structures were observed in the 1951, 1962, 1982 and 1994 aerial
	photographs. Structures occupying Lot 102 DP 1054466 were no longer apparent in the 2005
	aerial photograph.
Parcel Y	The property appeared commercial with two large warehouse style structures apparent along
	with several other smaller structures. By 1962 the warehouse and associated structures on
	the corner of Church and Marion Streets were no longer apparent with a car dealership and show rooms occupying the western site extent and an elongated warehouse occupied the
	majority of Lot 2 DP 163344. In the 2012 aerial photograph, the large warehouse style
	structure occupying the north eastern property extent was no longer apparent, with this area
	comprising disturbed terrain with grass cover. Modifications to property structures were
	observed between 1972 and 2012.
Parcel Z	The property appeared residential with several residences apparent. By 1982 the residence
	occupying Lot 11 DP 1138238 was no longer apparent, making way for a warehouse style
	structure and associated structures (sheds). The rear yard of the allotment fronting High
	Street appeared to be used for the storage of goods. The property appeared
	commercial/industrial in the 1994 aerial photograph with several warehouse and shed like
	structures occupying the majority of the property. The residence occupying Lot 10 DP 1138238 appeared to have been converted into a commercial premise. Modification to
	property structures were observed between 1972 and 2012.
Parcel AA	The property appeared residential. Several additional structures and extensions to the
	residence were apparent in the 1962 aerial photograph. Further modification to property
	structures were observed between 1972 and 2012.
Parcel AB	The property appeared to comprise several residences. By 1962 the residences fronting
	Church Street appeared to have been cleared making way for car dealerships. Several small
	structures were apparent, presumably showrooms and workshop areas, the roofing of which
	appeared to be of fibre cement sheet construction (ACM) in areas. By 1994 the residences
	fronting High Street were no longer apparent with the car dealership fronting Church Street
	expanded to occupy land to the east. Modification of site structures was observed over time
Parcel AC	including upgrades to the roofing of structures. The property comprised a residence. The residence occupying the property was no longer
ParcerAC	apparent in the 1994 aerial photograph with the property comprising cleared unpaved areas.
	In the 2005 aerial photograph the property appeared to have been paved with either
	hardstands or with road base gravels.
Parcel AD	The property appeared to comprise several residences. By 1962 the residences fronting
	Church Street appeared to have been cleared making way for large warehouse style
	structures and car yard areas. Modification to existing structures and the erection of smaller



Land Parcel	Land Use Activity Summary
	structures were observed in the 1972 aerial photograph, along with an increase in paved areas. Several residences fronting High Street appeared to have been cleared by 1982 making way for an expansion of what appeared to be work shop areas and floor space. The roofing of several structures appeared to be of ACM construction. By 2005 the property comprised two modern showroom style structures fronting Church Street. The remainder of the property comprised largely of paved and unpaved floor space with areas of smaller structures, presumably workshop areas. The balance of the property appeared paved by 2012.
Parcel AE	The property appeared to comprise several low density residences. In the 1962 aerial photograph allotments fronting Church Street appeared to have been cleared making way for two large warehouse style structures. Land fronting High Street remained residential. One of the warehouses identified in the 1962 aerial photograph was no longer apparent with a service station and rectangular warehouse style structures apparent in the 1972 aerial photograph. A large warehouse style structure was also presence on the corner of Raymond and High Streets. Several modifications to site structures were observed in the 1982 aerial photograph, with the canopy area of the service station like structure no longer apparent and areas fronting Church Street comprising a car yard. The warehouse on the corner of Raymond and High Streets was no longer along with the remainder of the service station like structure in the 1994 aerial photograph. The residence within the north eastern property extent was cleared making way for a road based paved parcel of land used for vehicle parking. In 2005, a structure was apparent in the vicinity of the former service station building, presumably a showroom.
Parcel AF	The property appeared residential. Between 1951 and 1972 several slight modification were apparent to small structures (shed and garage) along the northern property boundary. In the 1994 aerial photograph an awning was apparent from the residence to a structure along the northern property boundary. 2005 saw modifications/extensions to the residence and areas of disturbed terrain along the northern property boundary. The structure situated within the northern central property extent was no longer apparent.
Parcel AG	The property appeared residential until 1994 when the residence was cleared and the ground surface paved with hardstand, part of the neighbouring car dealership. The ground surface appeared to have been altered to facilitate the display of vehicles. By 2005 the property's surface was either repaved or painted to match allotments to the south and west.

3.2 EPA Records

A search of the EPA's public register under the *Protection of the Environment Operations Act 1997* was undertaken for this report. The search identified, for the site, there were:

- No prevention, clean-up or prohibition notices; and
- No transfer, variation, suspension, surrender or revocation of an environment protection licence.

A search was also undertaken through the EPA's public Contaminated Land Register and public record of sites notified to the EPA under s60 of the *Contaminated Land Management Act 1997* (CLM Act). The search identified that there have been no notices issued under the CLM Act for the site, and that no properties within the site have been notified to the EPA as potentially containing significant contamination under s60 of the CLM Act, as of 7 December 2015.

A review of Council supplied data (**Appendix C**) identified Lot 2 DP 163344 (3 Marion Street), Lot 11 DP 1138 238 (7 Marion Street) and Lot 10 DP 1138238 (9 Marion Street) as having been identified as potentially contaminated in accordance with Section 59(2) of the CLM Act. It is noted however, that Council documentation did not record the presence of gross contamination which would require notification to the EPA under the CLM Act.

The impacts are considered representative of common contamination issues which can be readily addressed at the DA stage with regard to site suitability for redevelopment and proposed land use.


3.3 Title Details

To gain an understanding of potential land use prior to historical aerial photographic records, current and historical land title records were obtained for a selection of representative properties. The results are summarised below. Current details regarding ownership and/or occupation of land parcels within the site are provided in **Appendix B**.

Based on a review of selected historical title documentation, the site appears to have been used for commercial/industrial land use (automotive retail and repairs industry) from circa 1950's. Prior to circa 1950's, land parcels were owned by various proprietors, presumably for a variety of residential and light commercial purposes.

3.4 Heritage

3.4.1 Australian and NSW Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory did not reveal any Heritage listed items at the site. Heritage information covers Aboriginal as well as European heritage.

3.4.2 Parramatta Local Environmental Plan (LEP) 2011

Review of Schedule 5 Environmental Heritage of Parramatta LEP 2011 identified the following heritage listed properties within the site:

- 42 High Street (Lot 1 DP 1003369, Lot 1 DP 81523 and Lot 1 DP 81603) comprising a two storey residence;
- 49 Lansdowne Street (Lot 19 DP 12623) comprising semi-detached cottages;
- 9 Marion Street (Lot 1 DP 794747) comprising a residence/industrial structure; and
- 11 Marion Street (Lot 1 DP 574174) comprising a single storey residence.

The site was also identified as having Aboriginal significance ranging from Low to High across the site.

3.5 WorkCover Dangerous Goods Search

A WorkCover Dangerous Goods search for individual allotments was not conducted given the short project timeframe, the project objectives and authorisation requirements.

3.6 Council Records

3.6.1 Planning Certificates

Planning certificates for the site were requested from Council. Given the number of allotments within the site, planning certificate information was provided in an Excel data base. Relevant information is provided in **Appendix C.**

Data provided included the following information regarding the site:

- The site is zoned B5 Business Development within the Parramatta LEP 2011 with the exception of 12, 14, 16, 18 and 20 Dixon Street which are zoned R4 High Density Residential and 5-7 Parkes Street which is zoned B4 Mixed Use.
- The site is not declared as significantly contaminated land within the meaning of the *Contaminated Land Management Act 1997 (the Act 1997),* or subject to a management order within the meaning of the Act.

However, Lot 2 DP 1633 (3 Marion Street), Lot 11 DP 1138 (7 Marion Street) and Lot 10 DP 1138238 (9 Marion Street) have been identified as potentially contaminated in accordance with section 59(2) of the *Act 1997*.



As discussed in **Section 3.2**, these allotments have not been reported to the EPA, nor notices issued. It is considered that these properties may have been subject to previous investigations and a SAS issued indicating the potential for contamination. The potential for impact is considered representative of common contamination issues which can be readily dealt with during the DA stage for redevelopment and site suitability.

- The land is identified as being subject to ASS risk on the ASS Map of the Parramatta LEP 2011 with the sites soil classified as Class 4 and/or Class 5 (refer to **Section 2.8**).
- Several land parcels are identified as Flood Prone Land.
- The land is not listed under the NSW Heritage Act 1997. Properties were identified as having Aboriginal Heritage ranging from Low Sensitivity to High Sensitivity under the Parramatta LEP 2011. Properties identified as being of historical significance are described in **Section 3.4.2**.
- Individual land parcels are subject to a Tree Preservation Order.
- Individual land parcels are subject to SEPP (Urban Renewal) 2010.

3.6.2 Development Application and Building Approvals

Based on the detailed site inspection and desktop review, development application (DA) and building approval (BA) records for a selection of properties were requested from Council. The search identified the following:

- Parcel X (2 Anderson Street Lot 102 DP 1094466). No. UA1192/2005 dated 30 September 2005 – development consent for car washing facilities and company vehicle fuel supply representing a high risk area (Figure 5).
- Parcel A (7 Great Western Highway Lot 79 DP 735541). No. DA/808/2008 dated 17 December 2008 – additions to existing mezzanine floor within an existing commercial building.
- Parcel AA (5 Marion Street). Development consent for the construction of a single storey building for a commercial car detailing business including carwash/detailing works.
- Parcel N (21 Church Street Lots 1, 2 and 3 DP 1035905).
 - No. DA/42/1993 dated 19 January 1993 development consent for the installation of illuminated light box.
 - No. DA/162/2001 dated 01 February 2001 development consent for the demolition of existing buildings and construction of a new motor showroom.
 - No. DA162/2001A dated 29 May 2001 development consent to demolish existing structure and construction of a new showroom.
 - No. DA/161/2013 dated 20 April 2013 development consent for replacement of business identification signage, building of a new pylon sign and installation of sunshielding louvres.
 - No. DA/161/2013A dated 20 May 2013 development consent under Section 96(1) Modification to an approval for replacement of business identification signage, building of a new pylon sign and installation of sun-shielding louvres. The modification includes one deletion of Condition No. 18 relating to illumination of the signage.



- Parcel J (23 Church Street Lot 10 DP 707836) No. DA/351/2012 dated 13 August 2012

 development consent for alterations and additions to the existing building and use of the ground floor as a vehicle showroom with associated signage.
- Parcel J (23 Church Street Lot 10 DP 707836) No. DA/1424/2004 dated 12 May 2005 development consent for alterations and additions to the existing building, removal of advertising signage and construction of new signage.
- Parcels R and Q (40-58, 60-64 and 66-70 Church Street Lot 1 DP 734700, Lot 2 734955, Lot 3 DP 827013 and Lot 1 DP 1025899) - No. DA/455/2011 dated 12 April 2011 – development consent for the demolition and construction of a four storey motor showroom over a basement service centre with roof top carpark.
- Parcel I (41 Church Street Lot 2 DP 734955) No. DA/539/1994 dated 21 July 1994 development consent for demolition of the existing motor vehicle showroom and replacement with a single storey showroom.
- Parcel G (49-51 Church Street Lot 1 DP 1013618) No. DA/697/2010 dated 31 August 2010 development consent for alterations and additions plus new signage to the front façade of an existing Kia motor vehicle dealership.
- Parcel G (49-51 Church Street Lot 1 DP 1013618) No. DA/770/2008 dated 23 January 2009 development consent for alterations and additions to an existing vehicle showroom including the construction of a two storey showroom at the front of the property and conversion of the existing showroom into a customer car park.
- Parcels AB and AC (24 Church Street, 46-54 High Street and 56 High Street) No. DA/15/2013 dated 19 April 2013 – development consent for the alteration and additions to existing motor show rooms.

3.7 Anecdotal Information

Based on communications with Council, the following was established:

- It is understood that Parcel AE located at 2 Church Street has an active UST, consistent with the riser and bowser observed from public footpaths;
- Fill along the concrete lined channel (Clay Cliff Creek) has been identified as potentially containing asbestos;
- Circa 2009, an oil spill was reported to have occurred on Parcel I property fronting Dixon Street, associated with an AST; and
- Council have identified car wash facilities in the precinct as a potential source of soil and groundwater contamination.

3.8 Integrity Assessment

The information obtained from the historical sources reviewed has been found to be in general agreement. Information regarding the storage of dangerous goods, DA/BA and heritage records were not obtained prior to the issue of this PESA report. However, the lack of WorkCover, DA/BA information are considered to be a minor issue due to the information provided in the other historical searches and from observations of sites from public areas.



4. Previous Investigation Information

A summary of Council supplied and publically available previous environmental investigations undertaken within and adjacent the site are provided below.

4.1 Aargus 2011 – Phase II Environmental Site Assessment

In 2011, Aargus Pty Ltd (Aargus) conducted a Phase Two ESA at 54-72 Church Street for Parcel R. The primary objective of the ESA was to assess the environmental suitability of the property in regards to the ongoing commercial/industrial land use.

The scope of works comprised a review of limited background information. Based on the desktop review the consultant identified the following AECs:

- "Whole site due to previous uses;
- Whole site where uncontrolled fill may have been imported to level the site prior to the construction of the buildings and the filling of previous low lying areas;
- Where pesticides were potentially utilised;
- Car park areas where leaks and spills from cars may have occurred;
- Vicinity of metal features; and
- Asbestos / Fibro features within the warehouses".

The consultant reported the property was used for residential land use up until the 1930's when commercial operations and building occupied the property (car dealerships).

Intrusive investigation comprised the advancement of 17 generally systematic sample locations across the site and the collection of fill samples. Several locations were adjusted to target identified AECs, however, it is noted that no sample locations were advanced beneath site structures. Site characterisation works were largely restricted to surface soils (0-0.5 m), with the maximum depth of the investigation 1.0 m bgs. It is noted that refusal in fill was encountered at all locations whereby the vertical extent of the fill was not established

Fill was described as silty sand, medium grained, with rocks, bitumen, gravel, bricks, ash, glass and concrete inclusions.

Selected samples were analysed for the identified contaminants of concern (COC) including heavy metals (As, Cd, Cr, Cu, Pb, Ni, Zn and Hg), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene and xylenes (BTEX), polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs) and asbestos.

Analytical results were compared to EPA made or endorsed criteria for commercial/industrial land. All samples submitted for analysis were below the adopted DEC 2006 (commercial/industrial) site criteria and EPA (1994) levels for petroleum hydrocarbons.

It was concluded that Parcel R was suitable for the proposed ongoing commercial/industrial land use.



4.2 AECOM 2011¹⁵ – Phase 1 Environmental Site Assessment

Although not included in the current assessment site the following report was reviewed to provide an understanding of the history of the Auto Alley precinct and potential sources of contamination from neighbouring allotments.

AECOM Australia Pty Ltd (AECOM) was engaged by Heartland Motor Group to undertake a Phase 1 ESA, including ASS assessment, for a property located at 57, 63 and 83 Church Street and 44 Early Street, Parramatta, located in the north west of the site. The Phase 1 ESA and ASS assessment were required to inform a Planning Proposal for the site. The Planning Proposal involved rezoning the land from B5 Business Development to B4 Mixed Use and an increase in height and density standards. The Planning Proposal would facilitate a mixed use (high density residential and commercial) redevelopment of the site.

The Phase 1 ESA comprised a review of historical and current environmental information, the findings of which were used to assess potential risks at the site, with respect to contamination, where additional investigations and/or remediation may be necessary.

Based on the history review the consultant concluded that the property appeared to have been used for light commercial/industrial land use from circa 1928 including car dealership, car repair/maintenance and potentially a builder's yard among others land use activities.

Based on the desktop review, the following AECs were identified:

- Three USTs in use at the time and four historical USTs (one of which was reported to be likely still on-site) and associated bowser and transfer lines;
- ASTs within a plant room;
- Light commercial/industrial land use of surrounding properties;
- Drains around the site transporting surface runoff to the plant room;
- Existing site structures;
- Car service centre;
- Detritus material within areas of the property (Lot B DP 304570);
- Potential for ASS;
- Electrical substation;
- Storage of hazardous materials;
- Fill materials to create former/current site grade;
- Fill materials with the former UST; and
- Current and former site structures.

The consultant also identified the potential for historical agricultural land and in turn application of pesticides.

COC identified associated with identified AECs included:

- Heavy metals and asbestos within fill material;
- OCPs and organophosphate pesticides (OPPs) associate with the potential historical application of pesticides;

¹⁵ Phase 1 Environmental Site Assessment, Church Street Rezoning Project. AECOM Australia Pty Ltd dated 7 September 2011 (AECOM 2011)



- Hazardous material (asbestos) and lead based paints with current and former site structures;
- Polychlorinated biphenyl associated with electrical substations;
- Volatile and semi volatile liquids associated with current and historical servicing; and
- TPH, BTEX and PAHs associated with current and former USTs and above ground storage tanks (ASTs)

Based on the findings of the investigation the consultant recommended a Phase Two ESA, otherwise referred to as a DSI, be undertaken to characterise the potential risks to human health and the environment should the site be redeveloped. The consultant also concluded that a hazardous materials survey be undertaken prior to any demolition or redevelopment activity.

The study did not find any contamination which would preclude site rezoning.



5. Conceptual Site Model Potential Areas and Substances of Environmental Concern

Based on the site history review, review of previous investigations and observations of during the limited site inspection, AECs and associated COC have been identified and are presented in **Table 5.1**.

Area of Environmental Concern (AEC)	Contaminants of Concern (COC)
Site Wide	
Fill material used to create former/existing site levels	Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs and asbestos
Potential application of pesticides prior to residential and commercial development	Heavy metals, OCPs/OPPs
Potential for acid sulphate soils	High acidity
Potential for groundwater impacts associated with historical land use activities (automotive repairs, carwash	Heavy metals, PAHs, TPH/ BTEX, phosphates and volatile organic compounds (VOCs)
activities, fuel dispensing etc.)	
Parcel A	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former/existing site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel B	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel C	
Existing site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with commercial and industrial activities	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel D	
Existing site structures	Lead and asbestos
Parcel E	
Existing and former site structures	Lead and asbestos
	Lead and asbestos
Existing and former site structures	Lead and asbestos Lead, PAHs, TPH/BTEX
Existing and former site structures Parcel F	
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with	Lead, PAHs, TPH/BTEX
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek Potential former land use as a service station	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek Potential former land use as a service station Parcel G Potential for groundwater impacts associated with	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos Lead, PAHs, TPH/BTEX
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek Potential former land use as a service station Parcel G Potential for groundwater impacts associated with petroleum infrastructure	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek Potential for groundwater impacts associated with petroleum infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Existing and former site structures Parcel F Potential UST/AGST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential car washing operations Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Fill material used to backfill Clay Cliff Creek Potential for groundwater impacts associated with petroleum infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential for groundwater impacts associated with petroleum infrastructure Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX

Table 5.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern



Area of Environmental Concern (AEC)	Contaminants of Concern (COC)
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Parcel I	
Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX, VOCs and
	phosphates
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Parcel J	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Potential former land use as a service station (soil and	Lead, PAHs, TPH/BTEX
groundwater impacts)	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Parcel K	
Existing and former site structures	Lead and asbestos
Parcel L	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former site structures	Lead and asbestos
Parcel M	
Potential UST and associated infrastructure	Lead, PAHs, TPH/BTEX
Potential for groundwater impacts associated with	Lead, PAHs, TPH/BTEX
petroleum infrastructure Potential for leaks and spills form parked vehicles	
Existing and former site structures	Lead, PAHs, TPH/BTEX Lead and asbestos
Storage and maintenance of equipment and consumables	
associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel N	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Parcel O	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Parcel P	
Existing and former site structures	Lead and asbestos
Parcel Q	
Potential for leaks and spills form parked vehicles	
Existing and former site structures	Lead, PAHs, TPH/BTEX Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	Heavy metals, FAIIs, IFII, BILA and VOCS
Parcel R	
Potential UST and associated infrastructure	Lead PAHs TPH/BTEX
Potential for groundwater impacts associated with	Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX
i otentiar for Broundwater impacts associated with	
netroleum infrastructure	
	Heavy metals PAH TPH/ RTFY OCDs/DCBs and
Fill material used to backfill Clay Cliff Creek	asbestos
petroleum infrastructure Fill material used to backfill Clay Cliff Creek Potential for leaks and spills form parked vehicles Existing and former site structures	Lead, PAHs, TPH/BTEX
Fill material used to backfill Clay Cliff Creek	asbestos



Area of Environmental Concern (AEC)	Contaminants of Concern (COC)
Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Parcel S	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Parcel T	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Fill material used to backfill Clay Cliff Creek	Heavy metals, PAH TPH/ BTEX, OCPs/PCBs and asbestos
Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Parcel U	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former/existing site structures	Lead and asbestos
Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs
associated with vehicle servicing and repairs	
Parcel V	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former/existing site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Parcel W	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel X	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Former of the state of the stat	
Former site structures	Lead and asbestos
Former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs
Storage and maintenance of equipment and consumables	
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Lot 2 DP 163344 identified as potentially contaminated	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs,
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Potential car washing operations Potential UST and associated infrastructure Potential for groundwater impacts associated with petroleum infrastructure Parcel Y Potential for leaks and spills form parked vehicles Existing and former site structures Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs Lot 2 DP 163344 identified as potentially contaminated under the <i>CLM Act 1997</i>	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs,
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairsPotential car washing operationsPotential UST and associated infrastructurePotential for groundwater impacts associated with petroleum infrastructureParcel YPotential for leaks and spills form parked vehiclesExisting and former site structuresStorage and maintenance of equipment and consumables associated with vehicle servicing and repairsLot 2 DP 163344 identified as potentially contaminated under the <i>CLM Act 1997</i> Parcel ZPotential UST and associated infrastructurePotential for groundwater impacts associated with	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs, VOCs and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairsPotential car washing operationsPotential UST and associated infrastructurePotential for groundwater impacts associated with petroleum infrastructureParcel YPotential for leaks and spills form parked vehiclesExisting and former site structuresStorage and maintenance of equipment and consumables associated with vehicle servicing and repairsLot 2 DP 163344 identified as potentially contaminated under the <i>CLM Act 1997</i> Parcel ZPotential for groundwater impacts associated with petroleum infrastructure	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs, VOCs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairsPotential car washing operationsPotential UST and associated infrastructurePotential for groundwater impacts associated with petroleum infrastructureParcel YPotential for leaks and spills form parked vehiclesExisting and former site structuresStorage and maintenance of equipment and consumables associated with vehicle servicing and repairsLot 2 DP 163344 identified as potentially contaminated under the <i>CLM Act 1997</i> Parcel ZPotential for groundwater impacts associated with petroleum infrastructureLots 10 and 11 DP 1138238 identified as potentially	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs, VOCs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs,
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairsPotential car washing operationsPotential UST and associated infrastructurePotential for groundwater impacts associated with petroleum infrastructureParcel YPotential for leaks and spills form parked vehiclesExisting and former site structuresStorage and maintenance of equipment and consumables associated with vehicle servicing and repairsLot 2 DP 163344 identified as potentially contaminated under the <i>CLM Act 1997</i> Parcel ZPotential for groundwater impacts associated with petroleum infrastructure	Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX Lead and asbestos Heavy metals, PAHs, TPH/ BTEX and VOCs Heavy metals, PAHs, TPH/ BTEX, OCPs/PCBs, VOCs and asbestos Lead, PAHs, TPH/BTEX Lead, PAHs, TPH/BTEX



Area of Environmental Concern (AEC)	Contaminants of Concern (COC)
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Potential car washing operations	Heavy metals, PAHs, TPH/ BTEX, VOCs and phosphates
Parcel AA	
Existing and former site structures	Lead and asbestos
Parcel AB	
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel AC	
Former site structure	Lead and asbestos
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Parcel AD	
Electrical substation	PCBs
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Parcel AE	
Potential UST and associated infrastructure	Lead, PAHs, TPH/BTEX
Potential for groundwater impacts associated with petroleum infrastructure	Lead, PAHs, TPH/BTEX
Electrical substation	PCBs
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX
Existing and former site structures	Lead and asbestos
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Heavy metals, PAHs, TPH/ BTEX and VOCs
Potential former land use as a service station	Lead, PAHs, TPH/BTEX
Parcel AF	
Existing and former site structures	Lead and asbestos
Parcel AG	
Former site structure	Lead and asbestos
Potential for leaks and spills form parked vehicles	Lead, PAHs, TPH/BTEX

5.1 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Surface soils;
- Fill materials;
- Natural soils/bedrock;
- Surface water;
- Groundwater; and
- Soil vapours.

Prior to development for residential and commercial/industrial land use, land use activities have been identified to potentially comprise agricultural activities. Agricultural practices may have led to the application of pesticides which in turn may have resulted in contamination of the site's soils. As such, surface soils are considered a potentially contaminated media.

The potential use and storage of fuel, oil, lubricants, degreasers and other chemicals associated with current and historical land use activities including car dealerships, car washing facilities and repair/maintenance and supply outlets have been identified during



the review of historical site use. During such use, spillage/leakage and general site activities may have resulted in migration of contaminants through the former building/current building pavements at the site and via surface soils in areas of unpaved surfaces. As a result, surface soils are considered to be potentially contaminated media.

Given the proximity to historical filling of low lying areas and former drainage lines (Clay Cliff Creek), there is the potential for fill material to have been placed at the site from unknown sources prior to construction of the existing/former site grades.

It is acknowledged that fill material may have been imported from surrounding sites, including from the Parramatta River as sediment, or alternatively, sourced from industrial activities occurring in the region at that time. Based on this, the fill material underlying the site has been identified as a potentially contaminated medium.

Based on the potential leachability of contaminants within surface soils/fill material and the historical use of the site, vertical migration of contamination from the fill material/surface soils into the underlying natural soils/bedrock may have occurred. As such, the natural site soils and bedrock are considered to be potentially contaminated media.

As the site has a long history of commercial land use as a car dealership and automotive repairs precinct and given the presence of surface water (Clay Cliff Creek) within areas of the site and the potential for stormwater to discharge into the Clay Cliff Creek, surface water is considered to be potentially contaminated media.

Given the anticipated depth to bedrock (**Section 2.7**) and the occurrence of fill material associated with the reclamation of low lying areas, there is a possibility of shallow perched groundwater within either fill materials or occurring across the bedrock interface in near surface soils. The anticipated shallow depth to underlying shale bedrock of low permeability may result in relatively high potential for lateral migration of contaminants within subsoil water across the bedrock interface in surface and near-surface fill material and/or natural soil.

Taking into account the likely depth of groundwater (**Section 2.7**), the occurrence of identified and suspected petroleum infrastructure, and the potential leachability of the identified COC, it is considered that groundwater is a potentially contaminated medium. As with the natural soils, the potential for contamination of groundwater will depend upon the actual nature, occurrence and characteristics of contamination within the overlying fill material and natural soils.

Given the potential for volatile soil and groundwater contamination, associated with USTs and the former/current car washing and automotive service repair centres, soil vapour is also considered to be a potentially contaminated medium.

5.2 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is determined by the following factors:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.



The potential contaminants identified as part of the site history review and previous investigation are generally in either a solid form (e.g. heavy metals, asbestos, etc.) and liquid form (e.g. fuel, lubricants, pesticides, etc.), however, dependent upon concentrations, there is the potential for impacts from TPH/ volatile organic compounds (VOCs) impacts to occur in a vapour form also in soils and groundwater underlying the site.

As the site is primarily paved with asphaltic concrete or concrete pavements or vegetated with grass cover, the potential for windblown dust migration of contamination from the site is generally low. The potential for contamination migration via surface water movement and infiltration of water and subsequent migration through the soil profile is considered generally to be low given the extent of impermeable pavements at the site.

Given the potential for perched groundwater along the soil-rock interface and/or within fill material associated with the reclamation of low lying areas, migration of contamination via groundwater movement is considered to be a potential migration pathway for contaminants. However, where the site lies within residual silty clay soils, natural soils are anticipated to be relatively impermeable. As such, migration of contamination via groundwater movement is considered to be a potential migration groundwater with the reclamation of low lying areas, migration of contamination via solution with the reclamation of low lying areas, migration pathway for contaminants. However, where the site lies within residual silty clay soils, natural soils are anticipated to be relatively impermeable. As such, migration of contamination via groundwater movement is considered to be a potential migration pathway, albeit low.

The vapour generation potential associated with volatile and semi-volatile potential contaminants of concern (TPH, BTEX, VOCs) is identified as a potential migration pathway, particularly in areas of subsurface infrastructure, such as fuel lines and services that underlie the site, and within areas identified to contain fill materials.

5.3 Potential Exposure Pathways

Based on contaminants of concern (COC) identified in various media, as discussed above, and proposed site development activities, the exposure pathways for the site during and following development works include:

- Inhalation of potential COC vapours migrating upwards from fill material of unknown origins or impacted surface soils resulting from historical leaks/spills; and/or
- Potential dermal and oral contact to impacted soils as present at shallow depths and/or accessible by future service excavations across the extent of the site; and/or
- Potential oral and dermal contact to shallow groundwater as accessible by potential future service excavations and/or installed services pits; and/or
- Potential contaminant uptake by vegetation within landscaped areas.

5.4 Receptors

Potential receptors of environmental impact present within the site which will need to be addressed with respect to the suitability of the site for the proposed use include:

- Future workers of non-paved areas (landscapers, residents, construction works) and residents/occupants whom may potentially be exposed to COC through direct contact with impacted soils and/or inhalation of dusts / fibres associated with impacted soils; and/or
- Residents / excavation / construction / maintenance and landscaping workers conducting activities at the site, who may potentially be exposed to COC through direct contact with impacted soils present within excavations and/or inhalation of dusts from unsealed areas / fibres associated with impacted soils;
- Flora species to be established on the vegetated areas of the site; and/or



• The freshwater ecosystem of Clay Cliff Creek and in turn the Parramatta River which is located hydro-geologically down gradient of the site.

Where petroleum or other volatile hydrocarbon compound impact is identified, potential inhalation exposure to vapours will need to be considered.

5.5 Preferential Pathways

For the purpose of this assessment, preferential pathways have been identified as natural and/or man-made pathways that result in the preferential migration of COC as either liquids or gasses.

Man-made preferential pathways are present throughout the site, generally associated with fill materials present beneath existing ground surface, and at near surface depths over the remainder of the site. Fill materials are anticipated to have a higher permeability than the underlying natural soil and/or bedrock.

Sub-surface services are also present throughout the site at near surface depths, including the stormwater pipelines that discharge into Clay Cliff Creek and in turn the Parramatta River. Preferential pathways can be formed by the generally higher permeability backfill used to re-instate these trenches ad backfill along Clay Cliff Creek.

Preferential pathways are also important in the assessment of potential off-site sources of COC. Preferential pathways are potentially present in the adjoining road network, as associated with service easements.



6. Qualitative Assessment of Risk

6.1 Assessment of Risk

The following section provides an evaluation of the potential for the site to pose a risk of harm to human health and/or the environment, with respect to land contamination and the project objectives. The qualitative risk assessment provided in **Table 6.1** below has been based on the findings of the PESA and guidance presented in enHealth (2012) *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards* and AS/NZS ISO 3100: *2009 Risk Management Principles and Guidelines* (AS/NZS 2009).

To assess potential risk levels, consideration has also been given to the following:

- Potential land uses activities which may result in land contamination, as outlined in SEPP 55; and
- The proposed rezoning land use (**Appendix A**). It is noted that where a property comprises two or more proposed land use zonings, the more conservative risk rating has been adopted.

Table 6.1 below present a qualitative risk assessment based on the findings of the PESA using the aforementioned methodology.

Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Site Wide			
Fill material used to create former/existing site levels	Moderate Risk ¹⁶	N/A	A Moderate Risk rating has been applied to fill material across the site based on common contaminant issues associated with the importation of fill materials, however, further consideration will be given to the risk rating based on the proposed zoning and historical site development activities.
Potential application of pesticides associated with agricultural uses of the land prior to residential and commercial development	Low Risk	N/A	The history review identified the potential for historical application of pesticides associated with agricultural land use prior to development.
Potential for acid sulphate soils	Low to Moderate Risk ¹⁷	N/A	Based on soil landscape maps and Council documentation.
Potential for groundwater impacts associated with historical land use activities	Moderate Risk ¹⁸	N/A	Based on historical land use activities and soil landscape maps which have identified potential permeable fill material underlying the site in areas.

Table 6.1 Summary of Potential Contamination Risk

¹⁷ Consideration will be given to the geographical location to Clay Cliff Creek (i.e. where land parcels are in proximity to the creek alignment, the higher chance of ASS occurrence and contamination associated with potentially impacted material) ¹⁸ A Moderate Risk rating has been given to potential groundwater impacts beneath the site, however, further consideration will be given to proximity to Clay Cliff Creek and identified petroleum storage (i.e. land parcel in proximity to Clay Cliff Creek and identified petroleum storage (i.e. land parcel in proximity to Clay Cliff Creek and/or petroleum infrastructure have a greater potential for land/groundwater contamination compared to those offset to potentially impacted media)



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Parcel A			
Potential for leaks and spills from parked vehicles Existing and former site structures (i.e. asbestos, lead paint etc.) Storage and maintenance of	Moderate Risk Moderate Risk Moderate	Moderate Risk	Overall Moderate Risk rating based on the proposed Mixed Use zoning, current and previous land use and potential for fill material.
equipment and consumables associated with vehicle servicing and repairs	Risk		
Parcel B Detertial for looks and avilla from	N de de vete	Madavata Diak	Overall Madagete Disk geting
Potential for leaks and spills from parked vehicles	Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed Mixed
Existing and former site structures (i.e. asbestos, lead paint etc.)	Moderate Risk		Use zoning, current and previous land use and potential
Storage and maintenance of equipment and consumables	Moderate Risk		for fill material.
associated with vehicle servicing and repairs	NISK		
Parcel C			
Existing and former site structures (i.e. asbestos, lead paint etc.) Storage and maintenance of equipment and consumables associated with commercial and industrial activities	Moderate Risk Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed Mixed Use zoning, current and previous land use and potential for fill material.
Parcel D			
Existing and former site structures (i.e. asbestos, lead paint etc.)	Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed Mixed Use zoning, current and previous land use and potential for fill material.
Parcel E			
Existing and former site structures (i.e. asbestos, lead paint etc.)	Low Risk	Moderate Risk	Overall Moderate Risk rating based on the potential for
Fill material used to backfill Clay Cliff Creek	Moderate Risk		increased risk of ASS occurrence, fill material and potentially contaminated material used to back fill Clay Cliff Creek.
Parcel F			
Potential UST/AGST and associated infrastructure Potential for groundwater impacts	High Risk High Risk	High Risk	Overall High Risk rating based on the proposed land uses including Mixed Use, potential
associated with petroleum infrastructure			for petroleum infrastructure and associated soil and
Potential car washing operations	Moderate Risk		groundwater impacts, potential for increased risk of ASS
Potential for leaks and spills from parked vehicles	Moderate Risk		occurrence, potential for contaminated material used to
Existing and former site structures (i.e. asbestos, lead paint etc.)	Moderate Risk		back fill Clay Cliff Creek, current and previous land use and
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Moderate Risk		potential for fill material.
Fill material used to backfill Clay Cliff Creek	Moderate Risk		



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Potential former land use as a service station	High Risk		
Parcel G			
Potential car washing operations	Low Risk	Moderate Risk	Overall Moderate Risk rating
Potential for leaks and spills from	Low Risk	WIDUEIALE KISK	based on the potential for
parked vehicles	LOW RISK		increased risk of ASS
Existing and former site structures	Low Risk	-	occurrence, fill material and
(i.e. asbestos, lead paint etc.)	LOW RISK		potentially contaminated
Storage and maintenance of	Low Risk	-	material used to back fill Clay
equipment and consumables	LOW MISK		Cliff Creek.
associated with vehicle servicing and			
repairs			
Fill material used to backfill Clay Cliff	Moderate		
Creek	Risk		
Parcel H	THISK		
Potential for leaks and spills from	Moderate	Moderate Risk	Overall Moderate Risk rating
parked vehicles	Risk		based on the proposed Mixed
Existing and former site structures	Moderate	1	Use zoning, potential for fill
(i.e. asbestos, lead paint etc.)	Risk		placement and current and
Storage and maintenance of	Moderate		, former land use.
equipment and consumables	Risk		
associated with vehicle servicing and	-		
repairs			
Parcel I			
Potential car washing operations	Moderate	Moderate Risk	Overall Moderate Risk rating
	Risk		based on the proposed Mixed
Potential for leaks and spills from	Moderate		Use zoning, current and
parked vehicles	Risk		previous land use and potential
Existing and former site structures	Moderate		for fill material.
(i.e. asbestos, lead paint etc.)	Risk		
Storage and maintenance of	Moderate		
equipment and consumables	Risk		
associated with vehicle servicing and			
repairs			
Parcel J			
Potential for leaks and spills from	Low Risk	High Risk	Overall High Risk rating based
parked vehicles			on the potential former land
Existing and former site structures	Low Risk		use as a service station,
Storage and maintenance of	Low Risk		potential for fill placement and
equipment and consumables			current and former land uses.
associated with vehicle servicing and			
repairs			
Potential former land use as a	High Risk		
service station (soil and groundwater			
impacts)	1		1
Parcel K	Low Dial:	Low Diel:	
Existing and former site structures	Low Risk	Low Risk	Overall Low Risk rating based
	Low Risk	Low Risk	on historical residential land
Existing and former site structures	Low Risk	Low Risk	on historical residential land use, ongoing Mixed Use and
Existing and former site structures	Low Risk	Low Risk	on historical residential land use, ongoing Mixed Use and the absence of identified
Existing and former site structures (i.e. asbestos, lead paint etc.)	Low Risk	Low Risk	on historical residential land use, ongoing Mixed Use and
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L			on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement.
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L Potential for leaks and spills from	Moderate	Low Risk Moderate Risk	on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement. Overall Moderate Risk rating
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L Potential for leaks and spills from parked vehicles	Moderate Risk		on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement. Overall Moderate Risk rating based on the proposed Mixed
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L Potential for leaks and spills from parked vehicles Existing and former site structures	Moderate		on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement. Overall Moderate Risk rating based on the proposed Mixed Use zoning and previous and
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L Potential for leaks and spills from parked vehicles Existing and former site structures (i.e. asbestos, lead paint etc.)	Moderate Risk		on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement. Overall Moderate Risk rating based on the proposed Mixed
Existing and former site structures (i.e. asbestos, lead paint etc.) Parcel L Potential for leaks and spills from parked vehicles Existing and former site structures	Moderate Risk		on historical residential land use, ongoing Mixed Use and the absence of identified significant fill placement. Overall Moderate Risk rating based on the proposed Mixed Use zoning and previous and



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Potential for groundwater impacts	High Risk		infrastructure and historical
associated with petroleum	0		land use.
infrastructure			
Potential for leaks and spills from	Low Risk		
parked vehicles			
Existing and former site structures	Low Risk		
(i.e. asbestos, lead paint etc.)			
Storage and maintenance of	Low Risk		
equipment and consumables			
associated with vehicle servicing and			
repairs			
Parcel N			
Potential for leaks and spills form	Low Risk	Low Risk	Overall Low Risk rating based
parked vehicles			on the ongoing Commercial
Existing and former site structures	Low Risk		land use and absence of
			significant fill placement
			potential.
Parcel O			
Potential for leaks and spills from	Low Risk	Low Risk	Overall Low Risk rating based
parked vehicles			on the proposed ongoing
Existing and former site structures	Low Risk		commercial land use and
(i.e. asbestos, lead paint etc.)			current and former land uses.
Parcel P			
Existing and former site structures	Low Risk	Low Risk	Overall Low Risk rating based
(i.e. asbestos, lead paint etc.)			on the continued ongoing
			commercial land use and
			previous land uses.
Parcel Q			
Potential for leaks and spills from	Low Risk	Low Risk	Overall Low Risk rating based
parked vehicles			on the continued ongoing
Existing and former site structures	Low Risk		commercial land use.
(i.e. asbestos, lead paint etc.)			
Storage and maintenance of	Low Risk		
equipment and consumables			
associated with vehicle servicing and			
repairs			
Parcel R			
Potential UST and associated	High Risk	High Risk	Overall High Risk rating based
infrastructure		_	on the presence of petroleum
Potential for groundwater impacts	High Risk		infrastructure, proposed land
associated with petroleum			uses including Park Lands, the
infrastructure		4	presence of potentially
Fill material used to backfill Clay Cliff	Moderate		contaminated material used to
Creek		4	backfill Clay Cliff Creek, the
Potential for leaks and spills from	Moderate		potential for ASS, the presence
parked vehicles	Risk	4	of fill and potential impacts
Existing and former site structures	Moderate		associated with current and
(i.e. asbestos, lead paint etc.)	Risk	4	former land use.
Storage and maintenance of	Moderate		
equipment and consumables	Risk		
associated with vehicle servicing and			
repairs		4	
Potential car washing operations	Moderate		
	Risk		
Parcel S	Modoreta	Moderate Diele	Querall Mederate Bisk ratios
Potential for leaks and spills from	Moderate	Moderate Risk	Overall Moderate Risk rating
parked vehicles	Risk	4	based on the proposed land
Existing and former site structures	Moderate	use (Mixed Use), current a	
(i.e. asbestos, lead paint etc.)	Risk		



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Moderate Risk		previous land use and potential for fill material.
Parcel T			
Potential for leaks and spills from	Moderate	Moderate Risk	Overall Moderate Risk rating
parked vehicles	Risk	WIDGETALE MISK	based on the proposed land
Existing and former site structures	Moderate	-	use including Commercial Uses,
(i.e. asbestos, lead paint etc.)	Risk		the presence of potentially
Storage and maintenance of	Moderate	-	contaminated material used to
equipment and consumables	Risk		backfill Clay Cliff Creek, the
associated with vehicle servicing and	hist		potential for ASS, the presence
repairs			of fill and potential impacts
Fill material used to backfill Clay Cliff	Moderate	-	associated with current and
Creek	Risk		former land use.
Potential car washing operations	Moderate	-	
	Risk		
Parcel U			
Potential for leaks and spills form	Moderate	Moderate Risk	Overall Moderate Risk rating
parked vehicles	Risk	4	based on the proposed land
Former/existing site structures	Moderate		use including Mixed Use,
	Risk	-	current and previous land use
Storage and maintenance of	Moderate		and potential for fill material.
equipment and consumables	Risk		
associated with vehicle servicing and			
repairs			
Parcel V	N a davata	Madausta Diale	Overall Madavata Disk vation
Potential for leaks and spills from parked vehicles	Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed Mixed
Existing and former site structures	Moderate		Use zoning, current and
(i.e. asbestos, lead paint etc.)	Risk		previous land use and potential
Storage and maintenance of	Moderate	-	for fill material.
equipment and consumables	Risk		
associated with vehicle servicing and	hist		
repairs			
Potential car washing operations	Moderate	-	
	Risk		
Parcel W			
Potential for leaks and spills from	Moderate	Moderate Risk	Overall Moderate Risk rating
parked vehicles	Risk		based on the proposed Mixed
Existing and former site structures	Moderate		Use zoning, current and
(i.e. asbestos, lead paint etc.)	Risk		previous land use and potential
Storage and maintenance of	Moderate		for fill material.
equipment and consumables	Risk		
associated with vehicle servicing and			
repairs			
Parcel X			
Potential UST and associated	High Risk	High Risk	Overall High Risk rating based
infrastructure	Madavat	4	on the potential fuel storage
Potential for leaks and spills from	Moderate		and identified staining
parked vehicles	Risk	4	(potentially hydrocarbons or VOCs) beyond the property
Former site structures (i.e. asbestos,	Moderate		extent, proposed Mixed Use
lead paint)	Risk	-	zoning, current and previous
Storage and maintenance of equipment and consumables	Moderate Risk		land use and potential for fill
associated with vehicle servicing and	IN IN		material.
repairs			
Potential car washing operations	Moderate	+	
	Risk		
	1	1	



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level
Parcel Y			
Potential for leaks and spills from	Moderate	High Risk	Overall High Risk rating based
parked vehicles	Risk		on the identification as
Existing and former site structures	Low Risk		potentially contaminated under
(i.e. asbestos, lead paint etc.)			the <i>CLM Act 1997.</i>
Storage and maintenance of	Low Risk		
equipment and consumables			
associated with vehicle servicing and			
repairs			
Lot 2 DP 163344 identified as	High Risk		
potentially contaminated under the			
CLM Act 1997			
Parcel Z			
Potential UST and associated	High Risk	High Risk	Overall High Risk rating based
infrastructure			on the identification as
Potential for groundwater impacts	High Risk		potentially contaminated under
associated with petroleum			the CLM Act 1997, potential
infrastructure			presence of petroleum
Lots 10 and 11 DP 1138238 identified	High Risk		infrastructure, proposed land
as potentially contaminated under			uses including Mixed Use, the
the <i>CLM Act 1997</i>			presence of fill and potential
Potential for leaks and spills from	Moderate		impacts associated with current
parked vehicles	Risk		and former land use.
Existing and former site structures	Moderate		
(i.e. asbestos, lead paint etc.)	Risk		
Storage and maintenance of	Moderate		
equipment and consumables	Risk		
associated with vehicle servicing and			
repairs			
Potential car washing operations	Moderate		
	Risk		
Parcel AA			
Geographical location to	Moderate	Moderate Risk	Overall Moderate Risk rating
neighbouring properties identified to potentially contain a UST and	Risk		based on neighbouring
identified to be potentially			properties identified to be
contaminated under the CLM Act			potentially contaminated under the CLM Act 1997 and the
1997			potential presence of a UST.
Existing and former site structures	Low Risk		potential presence of a 031.
(i.e. asbestos, lead paint etc.)	LOW KISK		
Parcel AB			
Potential UST on neighbouring	Moderate	Moderate Risk	Overall Moderate Risk rating
property (soil and groundwater	Risk	WOUCHALE MISK	based on the presence of a
impacts)	NISK		potential UST on the
Potential for leaks and spills from	Moderate	-	neighbouring property
parked vehicles	Risk		(hydrogeologically down
Existing and former site structures	Moderate	1	gradient), proposed land uses
Existing and rother site structures	Risk		(a mix of residential and
Storage and maintenance of	Moderate	1	commercial uses), current and
equipment and consumables	Risk		previous land use and potential
associated with vehicle servicing and	N SK		for fill material.
repairs			
Parcel AC			
Former site structure	Moderate	Moderate Risk	Overall Moderate Risk rating
	Risk		based on the proposed land
Potential for leaks and spills from	Moderate	1	use (Mixed Use), current and
parked vehicles	Risk		previous land use.



Area of Environmental Concern (AEC)	Risk Level	Over All Risk Level	Basis for Risk Level	
Parcel AD				
Electrical substation Potential for leaks and spills from parked vehicles Existing and former site structures	Low Risk Moderate Risk Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed land uses (a mix of residential and commercial uses), current and previous land use and potential	
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Moderate Risk		for fill material.	
Parcel AE Potential UST and associated	High Risk	High Risk	Overall High Risk rating based	
infrastructure	TIIGH NISK	T light KISK	on the presence of	
Potential for groundwater impacts associated with petroleum infrastructure	High Risk	-	underground petroleum infrastructure, proposed land uses including Mixed Use, the	
Electrical substation	Low Risk		presence of fill and potential	
Potential for leaks and spills from	Moderate		impacts associated with current	
parked vehicles	Risk	_	and former land use.	
Existing and former site structures (i.e. asbestos, lead paint etc.)	Moderate Risk			
Storage and maintenance of equipment and consumables associated with vehicle servicing and repairs	Moderate Risk	_		
Potential former land use as a service station	High Risk			
Parcel AF				
Existing and former site structures (i.e. asbestos, lead paint etc.)	Low Risk	Low Risk	Overall Low Risk rating based on the proposed land use (Mixed Use and Park Lands, with existing heritage items on the site), the absence of commercial development, limited potential for fill placement and current and former land uses.	
Parcel AG				
Former site structure (i.e. asbestos, lead paint etc.) Potential for leaks and spills from parked vehicles	Moderate Risk Moderate Risk	Moderate Risk	Overall Moderate Risk rating based on the proposed land use (Mixed Use), current and previous land use and potential for fill material.	

Whilst the desktop review (**Table 5.1**) and subsequent qualitative risk assessment (**Table 6.1 and Figure 5**) identified potential for soil and groundwater impacts to be present at and underlying the site, the assessment did not identify gross or wide spread contamination which may preclude rezoning of the site.

Identified potential soil and groundwater impacts are considered representative of common contaminants and contaminating land use activities which can be readily addressed during the DA stages (i.e. including completion of preliminary and detailed site investigations consistent with relevant Council Development Control Plans (DCPs) and SEPP 55 requirements) for redevelopment within the site.



7. Conclusion and Recommendations

7.1 Conclusions

Based on the findings of this investigation, and subject to the limitations in **Section 8**, the following conclusions are made:

- The site has a long history of commercial land use as a car dealership and automotive repairs precinct.
- Based on information provided by Council, it is understood that the site (which contains some 90 plus separate allotments) is proposed to be rezoned to allow more sensitive land uses, including high density residential and commercial uses and new parks to service the future residents/workforce in the precinct.
- A site history review and a limited site inspection of accessible areas identified potential for contamination to exist at the site. Qualitative risk assessment resulted in risk levels for the identified AECs and associated COC, as shown in Table 6.1 and Figure 5. The majority of the site was assessed as being of moderate to high risk of potential contamination.
- Whilst the investigation identified the potential for soil and groundwater impacts to be
 present at the site, the investigation did not identify the potential for gross or
 widespread contamination which may preclude rezoning of the site. Identified
 potential soil and groundwater impacts are considered representative of common
 contaminants and potentially contaminating land use activities which can be readily
 dealt with during the DA stage (i.e. including completion of preliminary and detailed
 site investigations consistent with relevant Council DCPs and SEPP 55 requirements) for
 redevelopment and assessment for site suitability.
- In the absence of gross or widespread contamination, the requirements of the DUAP/EPA (1998) *Managing Land Contamination: Planning Guidelines* for this type of rezoning are considered to have been satisfied, namely that the rezoning can proceed, "provided that measures are in place to the ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made" (s.4.1.2 DUAP 1998).

7.2 Recommendations

It is recommended that upon submission of development application(s) within the site, Council enact their DCP¹⁹, which incorporate SEPP 55 provisions. Specifically, it is recommended that a preliminary and detailed site investigation be undertaken upon submission of DA for redevelopment of any land within the site.

It is also recommended that Hazardous Building Material Surveys (HBMS) be undertaken prior to any demolition and redevelopment works on individual land parcels.

¹⁹ Parramatta Development Control Plan 2011



8. Limitations

This report has been prepared for use by the client who commissioned the works in accordance with the project brief only and has been based in part on information obtained from other parties. The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.



Figures









Source: Base Image - © SIX Maps www.maps.six.nsw.gov.au, imagery date 01-04-2012, accessed 27-03-2014

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0 15 30		60	Legend:	Area of Environmental Concern			: Areas of Environmental
Scale: 1:1,600			Approximate Site Boundary	AEC - ACM (visible)	🔷 AEC - PAD Substation		
Datum: GDA 1994 MGA Zone 56 -	AHD		Areas Not Included in Current Assessmen	t 🔯 AEC - ACM (suspected)	🔀 AEC - AST		·
A3			Clay Cliff Creek	🕂 AEC - Bowser/Pump	AEC - UST	Client: Parramatta City Council	
			4	AEC - Bowser/Pump (suspected	d) 🦲 AEC - UST (former)		
1 Original Issue - R01	SE	05-06-2014	-	🕂 AEC - Riser/Vent	AEC - UST (suspected)	Project: Auto Alley ESA	
Rev Description	-	Date		AEC - Riser/Vent (suspected)		Job No: 43375	File Name: 43375_04



Appendix A – Proposed Zoning Map





Appendix B – Site Summary Details



Appendix B – Site Summary Details

Land Parcels	Current Land Use and Occupant	Lot and DP	Address	Current Zoning	Proposed Zoning	Area (m²)
AE	Commercial	Lot 1 DP 740616	2 Church Street	B5 Business	Commercial/mixed	6,439
	(Terry Shields Toyota)	Lot 2 DP 500595		Development	use, public domain	
		Lot 3 DP 234313		PLEP 2011	(footpath and	
		Lot 1 DP 318189			roads) and park	
		Lot 2 DP 318189	44 High Street		lands	
AF	Residential	Lot 1 DP 1003369	42 High Street	B5 Business	Mixed Use and	1,189
	(Private Residence)	Lot 1 DP 81523		Development	public domain	
		Lot 1 DP 81603		PLEP 2011		
AG	Commercial	Lot 1 DP 591977	40 High Street	B5 Business	Mixed use	868
	(Terry Shields Toyota)			Development		
				PLEP 2011		
AD	Commercial	Lot 1 DP 1036559	46-54 High Street	B5 Business	Commercial/mixed	5,849
	(Denlo Subaru and			Development	use and public	
	Volkswagon)			PLEP 2011	domain (footpath	
					and roads)	
AC	Commercial	Lot 1 DP 718281	56 High Street	B5 Business	Mixed use	537
	(Denlo Used Car	Lot 15 DP 666210		Development		
AB	Dealerships) Commercial	Lot 1 DP 816376	24 Church Street	PLEP 2011	Commercial/mixed	5,677
AB	(Denlo Isuzu, Commercial		24 Church Street	B5 Business Development	use and public	5,677
	and Used Cars)	Lot 10 DP 227771		PLEP 2011	domains (footpath	
	and osed cars)	Lot 1 DP 736399		FLLF 2011	and roads)	
		Lot 131 DP 549691			and rodusy	
		Lot 2 DP 736399				
		Lot 13 666209				
		Lot 1 DP 737679				
γ	Commencial	Lot 11 DP 668148	20 Church Chroat		Commencial and	2.224
Y	Commercial (Parramatta Best Cars and	Lot 21 DP 777325	36 Church Street	B5 Business Development	Commercial and public domain	2,234
	4WDs and vacant land	Lot 2 DP 163344	3 Marion Street	PLEP 2011	(footpath)	
	parcels)	Lot 2 DP 996565	5 Marion Street	PLEP 2011	(iootpatii)	
_		Lot 1 DP 996565		55.5		2.005
Z	Commercial	Lot 11 DP 1138238	7 Marion Street	B5 Business	Mixed Use and	2,095
	(Neil Baileys Auto	Lot 10 DP 1138238	9 Marion Street	Development PLEP 2011	public domains	
	Electrical, Oasis and Parramatta Automotive)	Lot 1 DP 706520	64 High Street	PLEP 2011	(roads)	
	Parlamatia Automotive)					



Land Parcels	Current Land Use and	Lot and DP	Address	Current Zoning	Proposed Zoning	Area (m²)
Editor arecis	Occupant	Lot und Dr	Address	current zoning		
AA	Residential	Lot 1 DP 574174	11 Marion Street	B5 Business	Mixed Use	633
	(Private Residence)			Development		
				PLEP 2011		
R	Commercial	Lot 1 DP 734700	40-58 Church Street	B5 Business	Commercial an	7,619
	(Trivett Classic BMW, Mini,			Development	park lands	
	Honda, Porsche, Landrover,			PLEP 2011		
	and Jaguar)	Lot 2 DP 519637	42 Church Street	B5 Business		
				Development		
				PLEP 2011		
		Lot 2 DP 734955	40-58 Church Street	B5 Business		
		Lot 3 DP 1025899	60-64 Church Street	Development		
				PLEP 2011		
Q	Commercial	Lot 1 DP 1025899	66-70 Church Street	B5 Business	Commercial	1,286
	(Peugeot and Skoda)			Development		
				PLEP 2011		
Р	Commercial	Lot 10 DP 732105	74 Church Street	B5 Business	Commercial	1,829
	(PJ's Irish Pub)			Development		
				PLEP 2011		
S	Commercial	Lot 511 DP 866023	5-7 Parkes Street	B4 Mixed Use	Mixed use	2,016
	(Lonestar Steakhouse)			PLEP 2011		
Т	Commercial	Lot 20 DP 792518	18 Anderson Street	B5 Business	Commercial use	8,660
	(Holiday Inn)			Development		
				PLEP 2011		
U	Commercial	Lot 103 DP 109446	Anderson Street	B5 Business	Mixed use and park	2,173
	(Trivett Service Centre)			Development	lands	
				PLEP 2011		
Х	Commercial	Lot 102 DP 1094466	2 Anderson Street	B5 Business	Mixed use	1,219
	(Trivett Tyres)	Lot 3 DP 71096	14 Marion Street	Development		
				PLEP 2011		
W	Commercial	Lot 2 DP 71096	12 Marion Street	B5 Business	Mixed use	598
	(Sydney Competition			Development		
	Warehouse)			PLEP 2011		
V	Commercial	Lot 1 DP 129407	10 Marion Street	B5 Business	Mixed use	598
	(Vacant previously Trivett			Development		
_	service centre)			PLEP 2011		
A	Commercial	Lot 1 DP 129170	11 Great Western Highway	B5 Business	Mixed use	1,721
	(Yamaha BikeBiz)	Lot 79 DP 735541	7 Great Western Highway	Development		
				PLEP 2011		



						·
Land Parcels	Current Land Use and Occupant	Lot and DP	Address	Current Zoning	Proposed Zoning	Area (m²)
В	Commercial	Lot 100 DP 635253	30 Lansdowne Street	B5 Business	Mixed use	528
	(R.W Brown Automotives)			Development		
				PLEP 2011		
С	Commercial	Lot 1 DP 512692	45 Lansdowne Street	B5 Business	Mixed use	442
	(Commercial Building)	Lot 2 DP 512692		Development		
				PLEP 2011		
D	Residential	Lot 19 DP 401259	49 Lansdowne Street	B5 Business	Mixed use	472
	(Private Residence)			Development		
				PLEP 2011		
F	Commercial	Lot X DP 401259	43 Church Street	B5 Business	Commercial, mixed	13, 351
	(Thomson Suzuki, Fiat and	Lot 17 DP 12623		Development	use, park land and	
	Alfa Romeo)	Lot Y DP 401259		PLEP 2011	public domains	
		Lot 8 DP 12623			(roads)	
		Lot 11 DP 12623				
		Lot 10 DP 12623				
		Lot 9 DP 12623				
		Lot 7 DP 12623				
		Lot 6 DP 12623				
		Lot 1 DP 180199				
		Lot 45 DP 1620				
		Lot 44 DP 1620				
		Lot 43 DP 1620				
		Lot 42 DP 1620				
		Lot 41 DP 1620				
		Lot 40 DP 1620				
G	Commercial	Lot 1 DP 1013618	49-51 Church Street	B5 Business	Commercial	1,368
	(Audi)			Development		
				PLEP 2011		
I	Commercial	Lot 1 DP 778374	41 Church Street	B5 Business	Commercial, mixed	4,885
	(Thompson Ford)	Lot 1 DP 129414		Development	use and public	
		Lot 4 DP 12623		PLEP 2011	domains (roads)	
J	Commercial	Lot 10 DP 707836	23 Church Street	B5 Business	Commercial	2,256
	(Porsche)			Development		
				PLEP 2011		
Ν	Commercial	Lot 1 DP 1035905	21 Church Street	B5 Business	Commercial	1,428
	(Citroen)	Lot 2 DP 1035905		Development		
		Lot 3 DP 1035905		PLEP 2011		



Land Parcels	Current Land Use and Occupant	Lot and DP	Address	Current Zoning	Proposed Zoning	Area (m²)
Н	Commercial	Lot 1 DP 798212	42-46 Rosehill Street	B5 Business	Mixed use	1,466
	Commercial	Lot 1 DP 114294		Development		
	(Warehouse)	Lot 2 DP 114294		PLEP 2011		
E	Residential	Lot A DP 372964	12 Dixon Street	R4 High Density	Mixed use	5,730
	(Several Private	Lot B DP 372964	14 Dixon Street	Residential		
	Residences)	Lot 37 DP 1620	16 Dixon Street	LEP 2011		
		Lot 2 DP 731278	18 Dixon Street	R4 High Density		
		Lot 39 DP 1620	20 Dixon Street	Residential PLEP 2011		
К	Residential	Lot 372 DP 624263	83 Rosehill Street	B5 Business	Mixed use	372
	(Private Residence)			Development		
				PLEP 2011		
L	Commercial	Lot 38 DP 567733	85 Rosehill Street	B5 Business	Mixed use	716
	(Land used by Audi)			Development		
				PLEP 2011		
Μ	Commercial	Lot 39 DP 597587	13 Church Street	B5 Business	Commercial and	4,592
	(Audi)	Lot 1 DP 203854		Development PLEP 2011	public domains	
		Lot 2 DP 203854		PLEP 2011	(roads)	
		Lot 10 DP 581263				
		Lot 1 DP 78099				
		Lot 8 DP 586637				
		Lot 7 DP 71134				
		Lot 1 DP 962456				
0	Commercial	Lot 1 DP 770426	1 Church Street	B5 Business	Commercial	977
	(Holden)	Lot 2 DP 770426		Development PLEP 2011		
	 [otal Site Area (excluding	road reserves)			91,823



Appendix C – Council Supplied Planning Data



Appendix C – Council Supplied Planning Data as at June 2014

Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
AE	Lot 1 DP 740616	2 Church Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 5
	Lot 2 DP 500595			Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007
	Lot 3 DP 234313			Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Acid Sulphate Soils Class 5, Land reserved acquisition 2007
	Lot 1 DP 318189			Land reserved acquisition 2007, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 2 DP 318189	44 High Street		Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Tree Preservation Order, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study
AF	Lot 1 DP 1003369	42 High Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Heritage Schedule 5 PCC LEP 2007, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007
	Lot 1 DP 81523			Aboriginal Heritage Study - High Sensitivity, Heritage Schedule 5 PCC LEP 2007, Tree Preservation Order, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007
	Lot 1 DP 81603			Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study, Heritage Schedule 5 PCC LEP 2007, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5
AG	Lot 1 DP 591977	40 High Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
AD	Lot 1 DP 1036559	46-54 High Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Restriction Use – Stormwater, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5
AC	Lot 1 DP 718281	56 High Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study
	Lot 15 DP 666210			Aboriginal Heritage Study - High Sensitivity, Tree Preservation Order, Land reserved acquisition 2007, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
AB	Lot 1 DP 816376	24 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007, Tree Preservation Order
	Lot 10 DP 227771			Aboriginal Heritage Study - High Sensitivity, Tree Preservation Order, Acid Sulphate Soils Class 5, Land reserved acquisition 2007
	Lot 1 DP 736399			Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5
	Lot 131 DP 549691			Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study
	Lot 2 DP 736399			Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study
	Lot 13 666209			Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 1 DP 737679			Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity
	Lot 11 DP 668148			Acid Sulphate Soils Class 5, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Parramatta Hist Archaeological Landscape Man Study
Y	Lot 21 DP 777325	36 Church Street	B5 Business Development PLEP2007	Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - Low Sensitivity
	Lot 2 DP 163344	3 Marion Street		Acid Sulphate Soils Class 5, Potential contamination/59(2) CLM act, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007
	Lot 2 DP 996565	5 Marion Street		Acid Sulphate Soils Class 5, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study
	Lot 1 DP 996565			Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study
Z	Lot 11 DP 1138238	7 Marion Street	B5 Business Development PLEP2007	Acid Sulphate Soils Class 5, Potential contamination/59(2) CLM act , Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 10 DP 1138238	9 Marion Street		Heritage Schedule 5 PCC LEP 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Acid Sulphate Soils Class 5, Potential contamination/59(2) CLM act , Land reserved acquisition 2007, Aboriginal Heritage Study - Low Sensitivity



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
	Lot 1 DP 706520	64 High Street		Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree Preservation Order
AA	Lot 1 DP 574174	11 Marion Street	B5 Business Development PLEP2007	Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Acid Sulphate Soils Class 5, Heritage Schedule 5 PCC LEP 2007
R	Lot 1 DP 734700	40-58 Church Street	B5 Business Development PLEP2007	Acid Sulphate Soils Class 4/5, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Flood Prone
	Lot 2 DP 519637	42 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 4, Land reserved acquisition 2007, Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study
	Lot 2 DP 734955	40-58 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Acid Sulphate Soils Class 4, Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Flood Prone
	Lot 3 DP 1025899	60-64 Church Street		Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Acid Sulphate Soils Class 4, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Flood Prone
Q	Lot 1 DP 1025899	66-70 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 4/5, Flood Prone, Parramatta Hist Archaeological Landscape Man Study
Р	Lot 10 DP 732105	74 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Hoxton Park Transport Corridor, Tree Preservation Order, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007, Flood Prone
S	Lot 511 DP 866023	5-7 Parkes Street	B4 Mixed Use PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Hoxton Park Transport Corridor, Land reserved acquisition 2007, Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study
Т	Lot 20 DP 792518	18 Anderson Street	B5 Business Development PLEP2007	Acid Sulphate Soils Class 4/5, Flood Prone, Land reserved acquisition 2007, Aboriginal Heritage Study - Low Sensitivity, Tree Preservation Order
U	Lot 103 DP 109446	6-16 Anderson Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Restriction Use – Stormwater, Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Flood Prone
Х	Lot 102 DP 1094466	2 Anderson Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Restriction Use – Stormwater, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5, Acid Sulphate Soils Class 4
	Lot 3 DP 71096	14 Marion Street		Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Acid Sulphate Soils Class 5



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
W	Lot 2 DP 71096	12 Marion Street	B5 Business	Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study,
			Development	Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree
			PLEP2007	Preservation Order, Acid Sulphate Soils Class 5, Flood Prone
V	Lot 1 DP 129407	10 Marion Street	B5 Business	Acid Sulphate Soils Class 4/5, Land reserved acquisition 2007, Aboriginal Heritage
			Development	Study - Low Sensitivity, Tree Preservation Order
			PLEP2007	
A	Lot 1 DP 129170	11 Great Western Highway	B5 Business	No Details Provided
	Lot 79 DP 735541	7 Great Western Highway	Development	No Details Provided
			PLEP2007	
В	Lot 100 DP 635253	30 Lansdowne Street	B5 Business	No Details Provided
			Development	
			PLEP2007	
С	Lot 1 DP 512692	45 Lansdowne Street	B5 Business	Tree Preservation Order, Acid Sulphate Soils Class 5, Flood Prone, Aboriginal
			Development	Heritage Study - Low Sensitivity, Land reserved acquisition 2007
	Lot 2 DP 512692		PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Tree Preservation Order, Flood Prone,
				Land reserved acquisition 2007, Acid Sulphate Soils Class 5, Parramatta Hist
				Archaeological Landscape Man Study
D	Lot 19 DP 401259	49 Lansdowne Street	B5 Business	Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007,
			Development	Parramatta Hist Archaeological Landscape Man Study, Acid Sulphate Soils Class 4/5,
			PLEP2007	Flood Prone, Tree Preservation Order, Heritage Schedule 5 PCC LEP 2007
F	Lot X DP 401259	43 Church Street	B5 Business	Potential Her/Con Area No4, Land reserved acquisition 2007, Aboriginal Heritage
			Development	Study - High Sensitivity, Acid Sulphate Soils Class 4/5, Parramatta Hist
			PLEP2007	Archaeological Landscape Man Study, Flood Prone, Tree Preservation Order
	Lot 17 DP 12623			Flood Prone, Land reserved acquisition 2007, Aboriginal Heritage Study - High
				Sensitivity, Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape
				Man Study, Tree Preservation Order
	Lot Y DP 401259			Tree Preservation Order, Acid Sulphate Soils Class 4/5, Aboriginal Heritage Study -
				High Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Flood Prone
	Lot 8 DP 12623			Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Parramatta
				Hist Archaeological Landscape Man Study, Acid Sulphate Soils Class 4/5, Flood
	Let 11 DD 12022			Prone, Land reserved acquisition 2007 Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study,
	Lot 11 DP 12623			
				Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Flood Prone, Land reserved acquisition 2007
	Lat 10 DD 12622			Land reserved acquisition 2007 Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study
	Lot 10 DP 12623			
				- High Sensitivity, Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study
	Lot 9 DP 12623			Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 4/5, Land
	LUL 9 DP 12023			reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study,
				Tree Preservation Order



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
	Lot 7 DP 12623			Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Acid Sulphate Soils Class 4/5, Flood Prone, Land reserved acquisition 2007
	Lot 6 DP 12623			Flood Prone, Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 4/5, Tree Preservation Order
	Lot 1 DP 180199			Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 4/5, Flood Prone, Land reserved acquisition 2007
	Lot 45 DP 1620			Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - High Sensitivity, Flood Prone, Land reserved acquisition 2007, Tree Preservation Order
	Lot 44 DP 1620			Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 4/5, Flood Prone, Tree Preservation Order, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study
	Lot 43 DP 1620			Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Flood Prone, Land reserved acquisition 2007, Aboriginal Heritage Study - High Sensitivity
	Lot 42 DP 1620			Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 4/5, Flood Prone, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 41 DP 1620			Tree Preservation Order, Acid Sulphate Soils Class 4/5, Aboriginal Heritage Study - High Sensitivity, Flood Prone, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007
	Lot 40 DP 1620			Aboriginal Heritage Study - High Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 4/5, Flood Prone, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
G	Lot 1 DP 1013618	49-51 Church Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - Low Sensitivity, Flood Prone, Land reserved acquisition 2007, Acid Sulphate Soils Class 4/5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
I	Lot 1 DP 778374	41 Church Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 5
	Lot 1 DP 129414			Parramatta Hist Archaeological Landscape Man Study, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Tree Preservation Order, Acid Sulphate Soils Class 5
	Lot 4 DP 12623			Parramatta Hist Archaeological Landscape Man Study, Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
J	Lot 10 DP 707836	23 Church Street	B5 Business Development PLEP2007	Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007
Ν	Lot 1 DP 1035905	21 Church Street	B5 Business Development PLEP2007	Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007
	Lot 2 DP 1035905			Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 2 DP 1035905			Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007
Н	Lot 1 DP 798212	42-46 Rosehill Street	B5 Business Development PLEP2007	Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Tree Preservation Order
	Lot 1 DP 114294			Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 5
	Lot 2 DP 114294			Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Acid Sulphate Soils Class 5
E	Lot A DP 372964	12 Dixon Street	R4 High Density Residential PLEP2011	Flood Prone, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Acid sulphate soils 2011 Class 5, Parramatta Hist Archaeological Landscape Man Study, Waste Scheduled Cleanup Zone 3
	Lot B DP 372964	14 Dixon Street		Aboriginal Heritage Study - Low Sensitivity, Flood Prone, Acid sulphate soils 2011 Class 5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Waste Scheduled Cleanup Zone 3
	Lot 37 DP 1620	16 Dixon Street		Aboriginal Heritage Study - Low Sensitivity, Acid sulphate soils 2011 Class 5, Parramatta Hist Archaeological Landscape Man Study, Waste Scheduled Cleanup Zone 3, Flood Prone, Tree Preservation Order
	Lot 2 DP 731278	18 Dixon Street	R4 High Density Residential PLEP2011	Acid sulphate soils 2011 Class 5, Waste Scheduled Cleanup Zone 3, Aboriginal Heritage Study - High Sensitivity, Flood Prone, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 39 DP 1620	20 Dixon Street		Aboriginal Heritage Study - High Sensitivity, Flood Prone, Waste Scheduled Cleanup Zone 3, Acid sulphate soils 2011 Class 5, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
К	Lot 372 DP 624263	83 Rosehill Street	B5 Business Development PLEP2007	Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Tree Preservation Order, Parramatta Hist Archaeological Landscape Man Study



Land Parcel	Lot and DP	Address	Current Zoning	Planning Controls Summary
L	Lot 38 DP 567733	85 Rosehill Street	B5 Business Development PLEP2007	Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study
М	Lot 39 DP 597587	13 Church Street	B5 Business Development PLEP2007	Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007, Tree Preservation Order
	Lot 1 DP 203854			Acid Sulphate Soils Class 5, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007
	Lot 2 DP 203854			Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Land reserved acquisition 2007
	Lot 10 DP 581263			Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study, Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity
	Lot 1 DP 78099			Acid Sulphate Soils Class 5, Max FSR 2:1 subject to Clause 22 PLEP07, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007
	Lot 8 DP 586637			Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order, Aboriginal Heritage Study - Low Sensitivity
	Lot 7 DP 71134			Acid Sulphate Soils Class 5, Aboriginal Heritage Study - Low Sensitivity, Land reserved acquisition 2007, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
	Lot 1 DP 962456			Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Aboriginal Heritage Study - Low Sensitivity, Parramatta Hist Archaeological Landscape Man Study, Tree Preservation Order
0	Lot 1 DP 770426	1 Church Street	B5 Business Development	Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Land reserved acquisition 2007, Tree Preservation Order
	Lot 2 DP 770426		PLEP2007	Land reserved acquisition 2007, Tree Preservation Order, Aboriginal Heritage Study - High Sensitivity, Acid Sulphate Soils Class 5, Parramatta Hist Archaeological Landscape Man Study



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Document Status

Rev	Author	Reviewer	Approved for Issue		
No.		Name	Name	Signature	Date
1	Nathan Cussen	Matthew Bennett	Matthew Bennett	Nobe At	5/6/2014
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3e*	Nathan Cussen	Matthew Bennett	Matthew Bennett	Nobe At	26/02/2016

* This document was initially prepared in 2014 as part of the Auto Alley Planning Framework review. The Auto Alley Planning Framework review was since incorporated into the Council-adopted Parramatta CBD Planning Strategy (2015), which subsequently required minor updates to this Study. This version (Rev 3e) of the report is provided for public exhibition.

