



NSW Site Auditor Scheme

Site Audit Statement

A site audit statement summarises the findings of a site audit. For full details of the site auditor's findings, evaluations and conclusions, refer to the associated site audit report.

This form was approved under the *Contaminated Land Management Act 1997* on 12 October 2017.

For information about completing this form, go to Part IV.

Part I: Site audit identification

Site audit statement no. **0503-2304**

This site audit is a:

☐ statutory audit

☒ non-statutory audit

within the meaning of the *Contaminated Land Management Act 1997*.

Site auditor details

(As accredited under the *Contaminated Land Management Act 1997*)

Name **Andrew Lau**

Company **JBS&G**

Address **Level 1, 50 Margaret Street**

Sydney **NSW**

Postcode **2000**

Phone **02 8245 0300**

Email **alau@jbsg.com.au**

Site details

Address **215 Badgerys Creek Road**

Bringelly NSW

Postcode **2556**

Property description

(Attach a separate list if several properties are included in the site audit.)

Part Lot 101 in DP 1282949

Local government area **Liverpool**

Area of site (include units, e.g. hectares) **94.56 hectares**

Current zoning **ENZ Environment and Recreation and MU Mixed Use**

Regulation and notification

To the best of my knowledge:

☐ ~~the site is~~ the subject of a declaration, order, agreement, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*, as follows: (provide the no. if applicable)

☐ Declaration no. _____

☐ Order no. _____

☐ Proposal no. _____

☐ Notice no. _____

☒ **the site is not** the subject of a declaration, order, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*.

To the best of my knowledge:

☐ ~~the site has been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*~~

☒ the site **has not** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*.

Site audit commissioned by

Name **Paul Hedge**

Company **Western Parkland City Authority**

Address **Level 2, 10 Valentine Avenue**

Parramatta NSW

Postcode **2150**

Phone **0413 587 340**

Email Paul.Hedge@wpca.sydney

Contact details for contact person (if different from above)

Name **As Above**

Phone

Email

Nature of statutory requirements (not applicable for non-statutory audits)

☐ ~~Requirements under the *Contaminated Land Management Act 1997*
(e.g. management order; please specify, including date of issue)~~

☐ ~~Requirements imposed by an environmental planning instrument
(please specify, including date of issue)~~

☐ ~~Development consent requirements under the *Environmental Planning and Assessment Act 1979* (please specify consent authority and date of issue)~~

☐ ~~Requirements under other legislation (please specify, including date of issue)~~

Purpose of site audit

☐ ~~A1 To determine land use suitability~~

~~Intended uses of the land:~~

OR

☐ ~~A2 To determine land use suitability subject to compliance with either an active or passive environmental management plan~~

~~Intended uses of the land:~~ _____

OR

(Tick all that apply)

☒ **B1** To determine the nature and extent of contamination

☒ **B2** To determine the appropriateness of:

☐ ~~an investigation plan~~

☒ a remediation plan

☐ ~~a management plan~~

☐ ~~B3 To determine the appropriateness of a **site testing plan** to determine if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

☐ ~~B4 To determine the compliance with an approved:~~

☐ ~~voluntary management proposal or~~

☐ ~~management order under the *Contaminated Land Management Act 1997*~~

☒ **B5** To determine if the land can be made suitable for a particular use (or uses) if the site is remediated or managed in accordance with a specified plan.

Intended uses of the land:

- Public open space/recreation
- Commercial/industrial
- Medium to high density residential
- Mixed use – including retail, hotel, child care facilities, community and education

Information sources for site audit

Consultancies which conducted the site investigations and/or remediation:

Environmental Resources Management Australia Pty Ltd (ERM)

Titles of reports reviewed:

- *Aerotropolis Core Precinct, Review of Contamination Issues*. 17th June 2021, Rev 3, Final (Environmental Resources Management Australia Pty Ltd, 2021b);
- *Aerotropolis Core Precinct – Commonwealth Land, Sampling and Analysis Quality Plan*. 8 July 2021, Rev 2, Final V2 (Environmental Resources Management Australia Pty Ltd, 2021c);
- *Asbestos Management Plan, Bradfield City Centre*. 8 November 2022, Rev 2, Final (Environmental Resources Management Australia Pty Ltd, 2022b); and
- *Detailed Site Investigation, Bradfield City Centre, NSW*. 10 November 2022, Rev 5, Final V2 (Environmental Resources Management Australia Pty Ltd, 2022c).

Other information reviewed, including previous site audit reports and statements relating to the site:

- *Unexploded Ordnance (UXO) Consultancy Services, RAAF Receiving Station Site Bringelly, NSW*. V1.01, 13 January 2011. G-tek Australia Pty Limited (G-tek 2011);
- *Bringelly RAAF Receiving Station, Infrastructure Assessment Report, April 2011*. Rev no. 2, 8/2/11. GHD Pty Ltd (GHD 2011);
- *RAAF Bringelly Receiving Station, NSW, Heritage Assessment*. 0121954, 18 April 2011. Environmental Resources Management Pty Ltd (ERM 2011);
- *Bringelly RAAF Receiving Station, Bringelly, NSW. Stage 1 Overarching Report – Summary Outcomes of Due Diligence Investigations*. Final Report, August 2011. Sweet (Australia) Pty Ltd (Sweett 2011);
- *Hazardous Building Materials Assessment, Former RAAF Bringelly Receiving Station*. 107623154 018 Rev 0, August 2011. Golder Associates Pty Ltd (Golder 2011a);
- *Detailed Site Investigation, Former RAAF Bringelly Receiving Station*. 107623154 021 R Rev 0, October 2011. Golder Associates Pty Ltd (Golder 2011b);
- *Remedial Action Plan, Former RAAF Bringelly Receiving Station*. 117623154-036-R-Rev3, April 2014. Golder Associates Pty Ltd (Golder 2014);
- *215 Badgerys Creek Road, Bringelly, NSW, Detailed Site Investigation Report*. P19.114-RPT-DSI_0, 13/12/2019. Western Environmental Pty Ltd (Western Environmental 2019);
- *Sydney Metro Greater West Technical Paper 8: Contamination*. Rev 3, June 2020. M2A Pty Ltd (M2A 2020a);
- *Sydney Metro Western Sydney Airport Technical Paper: Non-Aboriginal heritage*. Draft Revision 5, July 2020. Artefact Heritage Services (Artefact Heritage 2020);
- *Sydney Metro – Western Sydney Airport, Technical paper 5: Aboriginal Heritage*. Rev 2, July 2020. M2A Pty Ltd (M2A 2020b);

- *Western Sydney Aerotropolis Constraints and Land Capability Assessment – Stage 1 Report*. September 2020. Aurecon Australasia Pty Ltd (Aurecon 2020);
- *Aerotropolis Core Precinct, Targeted Site Investigation*. Final, 21 May 2021 (Environmental Resources Management Australia Pty Ltd, 2021a);
- *Detailed Site Investigation, First Building Area Bradfield City Centre, NSW*. 10 June 2022, Rev 4, Final (Environmental Resources Management Australia Pty Ltd, 2022a); and
- *Site Audit Report 0503-2108. First Building Area Bradfield City Centre 215 Badgerys Creek Road Bringelly NSW*. Rev 0, July 2022. JBS&G 2022a.

Site audit report details

Title **Site Audit Report 0503-2304, Bradfield City Centre, 215 Badgerys Creek Road Bringelly NSW**

Report no. **60627/147,178 (Rev 0)**

Date **15 November 2022**

Part II: Auditor's findings

Please complete either Section A1, Section A2 or Section B, not more than one section.
(Strike out the irrelevant sections.)

- Use **Section A1** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **without the implementation** of an environmental management plan.
- Use **Section A2** where site investigation and/or remediation has been completed and a conclusion can be drawn on the suitability of land uses **with the implementation** of an active or passive environmental management plan.
- Use **Section B** where the audit is to determine:
 - (B1) the nature and extent of contamination, and/or
 - (B2) the appropriateness of an investigation, remediation or management plan¹, and/or
 - (B3) the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or
 - (B4) whether the terms of the approved voluntary management proposal or management order have been complied with, and/or
 - (B5) whether the site can be made suitable for a specified land use (or uses) if the site is remediated or managed in accordance with the implementation of a specified plan.

¹ For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

Section A1

~~I certify that, in my opinion:~~

The ~~site is suitable~~ for the following uses:

~~(Tick all appropriate uses and strike out those not applicable.)~~

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
 - ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
 - ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
 - ☐ ~~Day care centre, preschool, primary school~~
 - ☐ ~~Residential with minimal opportunity for soil access, including units~~
 - ☐ ~~Secondary school~~
 - ☐ ~~Park, recreational open space, playing field~~
 - ☐ ~~Commercial/industrial~~
 - ☐ ~~Other (please specify):~~
-

OR

- ☐ ~~I certify that, in my opinion, the **site is not suitable** for any use due to the risk of harm from contamination.~~

Overall comments:

Section A2

I certify that, in my opinion:

Subject to compliance with the attached environmental management plan² (EMP), the site is suitable for the following uses:

(Tick all appropriate uses and strike out those not applicable.)

- ☐ ~~Residential, including substantial vegetable garden and poultry~~
 - ☐ ~~Residential, including substantial vegetable garden, excluding poultry~~
 - ☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~
 - ☐ ~~Day care centre, preschool, primary school~~
 - ☐ ~~Residential with minimal opportunity for soil access, including units~~
 - ☐ ~~Secondary school~~
 - ☐ ~~Park, recreational open space, playing field~~
 - ☐ ~~Commercial/industrial~~
 - ☐ ~~Other (please specify):~~
-

EMP details

Title

Author

Date

No. of pages

EMP summary

This EMP (attached) is required to be implemented to address residual contamination on the site.

The EMP: (Tick appropriate box and strike out the other option.)

- ☐ ~~requires operation and/or maintenance of **active** control systems³~~
- ☐ ~~requires maintenance of **passive** control systems only³.~~

² Refer to Part IV for an explanation of an environmental management plan.

³ Refer to Part IV for definitions of active and passive control systems.

Site Audit Statement

Purpose of the EMP:

Description of the nature of the residual contamination:

Summary of the actions required by the EMP:

How the EMP can reasonably be made to be legally enforceable:

How there will be appropriate public notification:

Overall comments:

Section B

Purpose of the plan⁴ which is the subject of this audit:

Document site conditions in relation to previously detected and potential ACM impacts, and
provide measures for the safe management of potential ACM that may be encountered
during development works and remediation/validation of site areas as required.

I certify that, in my opinion:

(B1)

- ☒ The nature and extent of the contamination **has** been appropriately determined
☐ ~~The nature and extent of the contamination **has not** been appropriately determined~~

AND/OR (B2)

- ☒ The investigation, remediation or management plan **is** appropriate for the purpose stated above
☐ ~~The investigation, remediation or management plan **is not** appropriate for the purpose stated above~~

AND/OR (B3)

- ☐ ~~The site testing plan:~~
☐ ~~is appropriate to determine~~
☐ ~~is not appropriate to determine~~
~~if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*~~

AND/OR (B4)

- ☐ ~~The terms of the approved voluntary management proposal* or management order** (strike out as appropriate):~~
☐ ~~have been complied with~~
☐ ~~have not been complied with.~~

*voluntary management proposal no.

**management order no.

AND/OR (B5)

- ☒ The site **can be made suitable** for the following uses:
(Tick all appropriate uses and strike out those not applicable.)
☐ ~~Residential, including substantial vegetable garden and poultry~~
☐ ~~Residential, including substantial vegetable garden, excluding poultry~~

⁴ For simplicity, this statement uses the term 'plan' to refer to both plans and reports.

☐ ~~Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry~~

☒ Day care centre, preschool, primary school

☒ Residential with minimal opportunity for soil access, including units

☒ Secondary school

☒ Park, recreational open space, playing field

☒ Commercial/industrial

☒ Other (please specify):

- retail
- hotel
- child care facilities
- community

IF the site is ~~remediated~~/managed* in accordance with the following plan (**attached**):

*Strike out as appropriate

Plan title **Asbestos Management Plan**

Plan author **Environmental Resources Management Australia Pty Ltd**

Plan date **8 November 2022** No. of pages **35**

SUBJECT to compliance with the following condition(s):

-

Overall comments:

- The site investigation works (ERM 2021b and ERM 2022c) are considered to have met the requirements of the *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition)* (EPA 2017).
- The soil investigations identified elevated concentrations of heavy metals above the adopted EILs in shallow fill or natural material which are considered representative of natural background conditions and unlikely to pose risks for current or future land uses. Similarly, concentrations of heavy metals exceeding the adopted site criteria detected in groundwater and surface water samples are not considered to be indicative of anthropogenic impacts and do not require further assessment.
- Assessment of groundwater conditions did not identify levels of the identified contaminants of potential concern in groundwater which are considered to require remediation or management under the proposed uses.
- Assessment of surface water and sediment conditions did not identify levels of the identified contaminants of potential concern which are considered to require management under the proposed uses.

- While ACM was not identified at the site during the recent site investigations (ERM 2021b and 2022c), there is potential for asbestos impact to exist in fill materials (particularly around the former Married Quarters) and in on-site service pits/conduits. Implementation of an AMP is required during development of the site to manage any unexpected finds.
- Consideration of aesthetic issues including staining, odours, anthropogenic contaminants and presence of asbestos has been adequately addressed in the assessment of soils at the site.
- The AMP (ERM 2022b) prepared for the site addresses the identified contamination issue; with the site management approach documented in the AMP checked by the auditor and found to be: technically feasible; environmentally justifiable given the nature and extent of the identified potential contamination; and consistent with relevant laws, policies and guidelines.
- The auditor notes that the site management and validation procedures outlined in the AMP (ERM 2022b) are considered appropriate to make the site suitable for the proposed Public open space/recreation and mixed uses including medium to high density residential, commercial/industrial, retail, hotel, child care facilities, community and education, subject to the following requirements:
 - Any amendments to the AMP that result in changes to site management will be required to be reviewed and endorsed by the site auditor prior to implementation.
 - Appropriate supervision by an Environmental Consultant and / or Occupational Hygienist during any asbestos management works.
 - A validation report is prepared in accordance with relevant EPA requirements confirming the suitability of the site for the intended landuses prior to occupation of the site.

Part III: Auditor's declaration

I am accredited as a site auditor by the NSW Environment Protection Authority (EPA) under the *Contaminated Land Management Act 1997*.

Accreditation no. **0503**

I certify that:

- I have completed the site audit free of any conflicts of interest as defined in the *Contaminated Land Management Act 1997*, and
- with due regard to relevant laws and guidelines, I have examined and am familiar with the reports and information referred to in Part I of this site audit, and
- on the basis of inquiries I have made of those individuals immediately responsible for making those reports and obtaining the information referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete, and
- this statement is, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties under the *Contaminated Land Management Act 1997* for wilfully making false or misleading statements.

Signed 

Date 15 November 2022

Part IV: Explanatory notes

To be complete, a site audit statement form must be issued with all four parts.

How to complete this form

Part I

Part I identifies the auditor, the site, the purpose of the audit and the information used by the auditor in making the site audit findings.

Part II

Part II contains the auditor's opinion of the suitability of the site for specified uses or of the appropriateness of an investigation, or remediation plan or management plan which may enable a particular use. It sets out succinct and definitive information to assist decision-making about the use or uses of the site or a plan or proposal to manage or remediate the site.

The auditor is to complete either Section A1 or Section A2 or Section B of Part II, **not** more than one section.

Section A1

In Section A1 the auditor may conclude that the land is *suitable* for a specified use or uses OR *not suitable* for any beneficial use due to the risk of harm from contamination.

By certifying that the site is *suitable*, an auditor declares that, at the time of completion of the site audit, no further investigation or remediation or management of the site was needed to render the site fit for the specified use(s). **Conditions must not be** imposed on a Section A1 site audit statement. Auditors may include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section A2

In Section A2 the auditor may conclude that the land is *suitable* for a specified use(s) subject to a condition for implementation of an environmental management plan (EMP).

Environmental management plan

Within the context of contaminated sites management, an EMP (sometimes also called a 'site management plan') means a plan which addresses the integration of environmental mitigation and monitoring measures for soil, groundwater and/or hazardous ground gases throughout an existing or proposed land use. An EMP succinctly describes the nature and location of contamination remaining on site and states what the objectives of the plan are, how contaminants will be managed, who will be responsible for the plan's implementation and over what time frame actions specified in the plan will take place.

By certifying that the site is suitable subject to implementation of an EMP, an auditor declares that, at the time of completion of the site audit, there was sufficient information satisfying guidelines made or approved under the *Contaminated Land Management Act 1997*

(CLM Act) to determine that implementation of the EMP was feasible and would enable the specified use(s) of the site and no further investigation or remediation of the site was needed to render the site fit for the specified use(s).

Implementation of an EMP is required to ensure the site remains suitable for the specified use(s). The plan should be legally enforceable: for example, a requirement of a notice under the CLM Act or a development consent condition issued by a planning authority. There should also be appropriate public notification of the plan, e.g. on a certificate issued under s.149 of the *Environmental Planning and Assessment Act 1979*.

Active or passive control systems

Auditors must specify whether the EMP requires operation and/or maintenance of active control systems or requires maintenance of passive control systems only. Active management systems usually incorporate mechanical components and/or require monitoring and, because of this, regular maintenance and inspection are necessary. Most active management systems are applied at sites where if the systems are not implemented an unacceptable risk may occur. Passive management systems usually require minimal management and maintenance and do not usually incorporate mechanical components.

Auditor's comments

Auditors may also include **comments** which are key observations in light of the audit which are not directly related to the suitability of the site for the use(s). These observations may cover aspects relating to the broader environmental context to aid decision-making in relation to the site.

Section B

In Section B the auditor draws conclusions on the nature and extent of contamination, and/or suitability of plans relating to the investigation, remediation or management of the land, and/or the appropriateness of a site testing plan in accordance with the *Temporary Water Restrictions Order for the Botany Sands Groundwater Source 2017*, and/or whether the terms of an approved voluntary management proposal or management order made under the CLM Act have been complied with, and/or whether the site can be made suitable for a specified land use or uses if the site is remediated or managed in accordance with the implementation of a specified plan.

By certifying that a site *can be made suitable* for a use or uses if remediated or managed in accordance with a specified plan, the auditor declares that, at the time the audit was completed, there was sufficient information satisfying guidelines made or approved under the CLM Act to determine that implementation of the plan was feasible and would enable the specified use(s) of the site in the future.

For a site that *can be made suitable*, any **conditions** specified by the auditor in Section B should be limited to minor modifications or additions to the specified plan. However, if the auditor considers that further audits of the site (e.g. to validate remediation) are required, the auditor must note this as a condition in the site audit statement. The condition must not specify an individual auditor, only that further audits are required.

Auditors may also include **comments** which are observations in light of the audit which provide a more complete understanding of the environmental context to aid decision-making in relation to the site.

Part III

In **Part III** the auditor certifies their standing as an accredited auditor under the CLM Act and makes other relevant declarations.

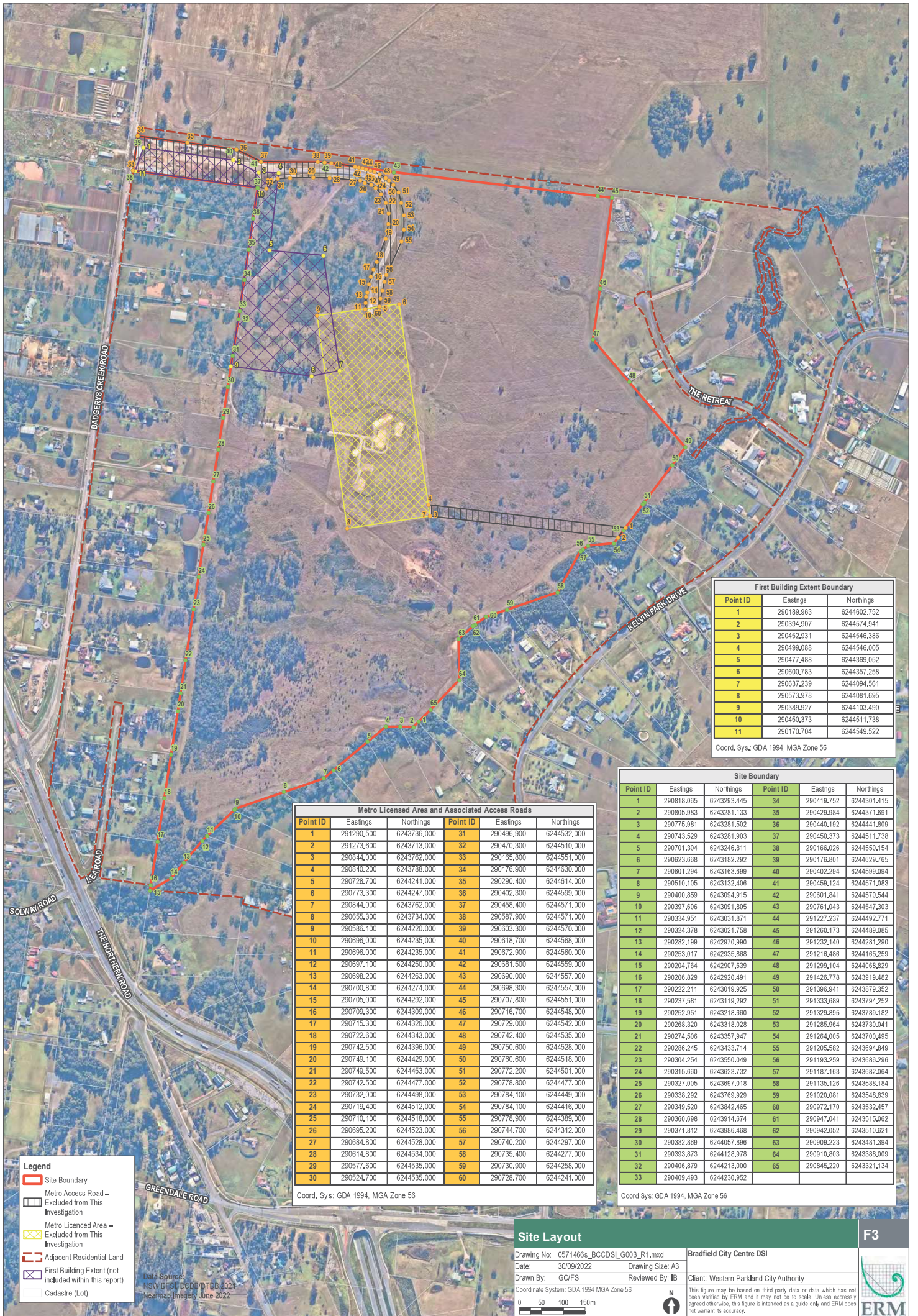
Where to send completed forms

In addition to furnishing a copy of the audit statement to the person(s) who commissioned the site audit, statutory site audit statements must be sent to

- the **NSW Environment Protection Authority**:
nswauditors@epa.nsw.gov.au or as specified by the EPA

AND

- the **local council** for the land which is the subject of the audit.



First Building Extent Boundary		
Point ID	Eastings	Northing
1	290189,963	6244602,752
2	290394,907	6244574,941
3	290452,931	6244546,386
4	290499,088	6244546,005
5	290477,488	6244399,052
6	290600,783	6244357,258
7	290637,239	6244094,561
8	290573,978	6244081,695
9	290389,927	6244103,490
10	290450,373	6244511,738
11	290170,704	6244549,522

Coord. Sys.: GDA 1994, MGA Zone 56

Metro Licensed Area and Associated Access Roads					
Point ID	Eastings	Northing	Point ID	Eastings	Northing
1	291290,500	6243736,000	31	290496,900	6244532,000
2	291273,600	6243713,000	32	290470,300	6244510,000
3	290844,000	6243762,000	33	290165,800	6244551,000
4	290840,200	6243788,000	34	290176,900	6244630,000
5	290728,700	6244241,000	35	290290,400	6244614,000
6	290773,300	6244247,000	36	290402,300	6244599,000
7	290844,000	6243762,000	37	290458,400	6244571,000
8	290655,300	6243734,000	38	290587,900	6244571,000
9	290586,100	6244220,000	39	290603,300	6244570,000
10	290696,000	6244235,000	40	290618,700	6244568,000
11	290696,000	6244235,000	41	290672,900	6244560,000
12	290697,100	6244250,000	42	290681,500	6244559,000
13	290698,200	6244263,000	43	290690,000	6244557,000
14	290700,800	6244274,000	44	290698,300	6244554,000
15	290705,000	6244292,000	45	290707,800	6244551,000
16	290708,300	6244309,000	46	290716,700	6244548,000
17	290715,300	6244326,000	47	290729,000	6244542,000
18	290722,600	6244343,000	48	290742,400	6244535,000
19	290742,500	6244396,000	49	290750,600	6244528,000
20	290749,100	6244429,000	50	290760,600	6244518,000
21	290749,500	6244453,000	51	290772,200	6244501,000
22	290742,500	6244477,000	52	290778,800	6244477,000
23	290732,000	6244468,000	53	290784,100	6244449,000
24	290719,400	6244512,000	54	290784,100	6244416,000
25	290710,100	6244518,000	55	290778,900	6244389,000
26	290655,200	6244523,000	56	290744,700	6244312,000
27	290684,800	6244528,000	57	290740,200	6244297,000
28	290614,800	6244534,000	58	290735,400	6244277,000
29	290577,600	6244535,000	59	290730,900	6244258,000
30	290524,700	6244535,000	60	290728,700	6244241,000

Coord. Sys.: GDA 1994, MGA Zone 56

Site Boundary					
Point ID	Eastings	Northing	Point ID	Eastings	Northing
1	290818,065	6243293,445	34	290419,752	6244301,415
2	290805,983	6243281,133	35	290429,984	6244371,691
3	290775,981	6243281,502	36	290440,192	6244441,809
4	290743,529	6243281,903	37	290450,373	6244511,738
5	290701,304	6243246,811	38	290166,026	6244550,154
6	290623,668	6243182,292	39	290176,801	6244629,765
7	290601,294	6243163,699	40	290402,294	6244599,094
8	290510,105	6243132,406	41	290459,124	6244571,063
9	290400,859	6243094,915	42	290601,841	6244570,544
10	290397,606	6243091,805	43	290761,043	6244547,303
11	290334,951	6243031,871	44	291227,237	6244492,771
12	290324,378	6243021,758	45	291260,173	6244489,085
13	290282,199	6242970,990	46	291232,140	6244281,290
14	290253,017	6242935,868	47	291216,486	6244165,259
15	290204,764	6242907,639	48	291299,104	6244068,829
16	290206,829	6242920,491	49	291426,778	6243919,482
17	290222,211	6243019,925	50	291396,941	6243879,352
18	290237,581	6243119,292	51	291333,089	6243794,252
19	290252,951	6243218,660	52	291329,895	6243789,162
20	290268,320	6243318,028	53	291285,964	6243730,041
21	290274,506	6243357,947	54	291264,005	6243700,495
22	290286,245	6243433,714	55	291205,582	6243694,849
23	290304,254	6243550,409	56	291193,259	6243686,296
24	290315,660	6243623,732	57	291187,163	6243682,064
25	290327,005	6243697,018	58	291135,126	6243588,184
26	290338,292	6243769,929	59	291020,081	6243548,839
27	290349,520	6243842,465	60	290972,170	6243532,457
28	290360,898	6243914,674	61	290947,041	6243515,062
29	290371,812	6243986,468	62	290942,052	6243510,621
30	290382,869	6244057,896	63	290909,223	6243481,394
31	290393,873	6244128,978	64	290910,803	6243388,009
32	290406,879	6244213,000	65	290845,220	6243321,134
33	290409,493	6244230,952			

Coord Sys.: GDA 1994, MGA Zone 56

Site Layout

Drawing No: 0571466a_BCCDSI_G003_R1.mxd
Date: 30/09/2022
Drawn By: GC/FS
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56

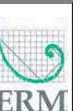
Bradfield City Centre DSI
Drawing Size: A3
Client: Western Parkland City Authority

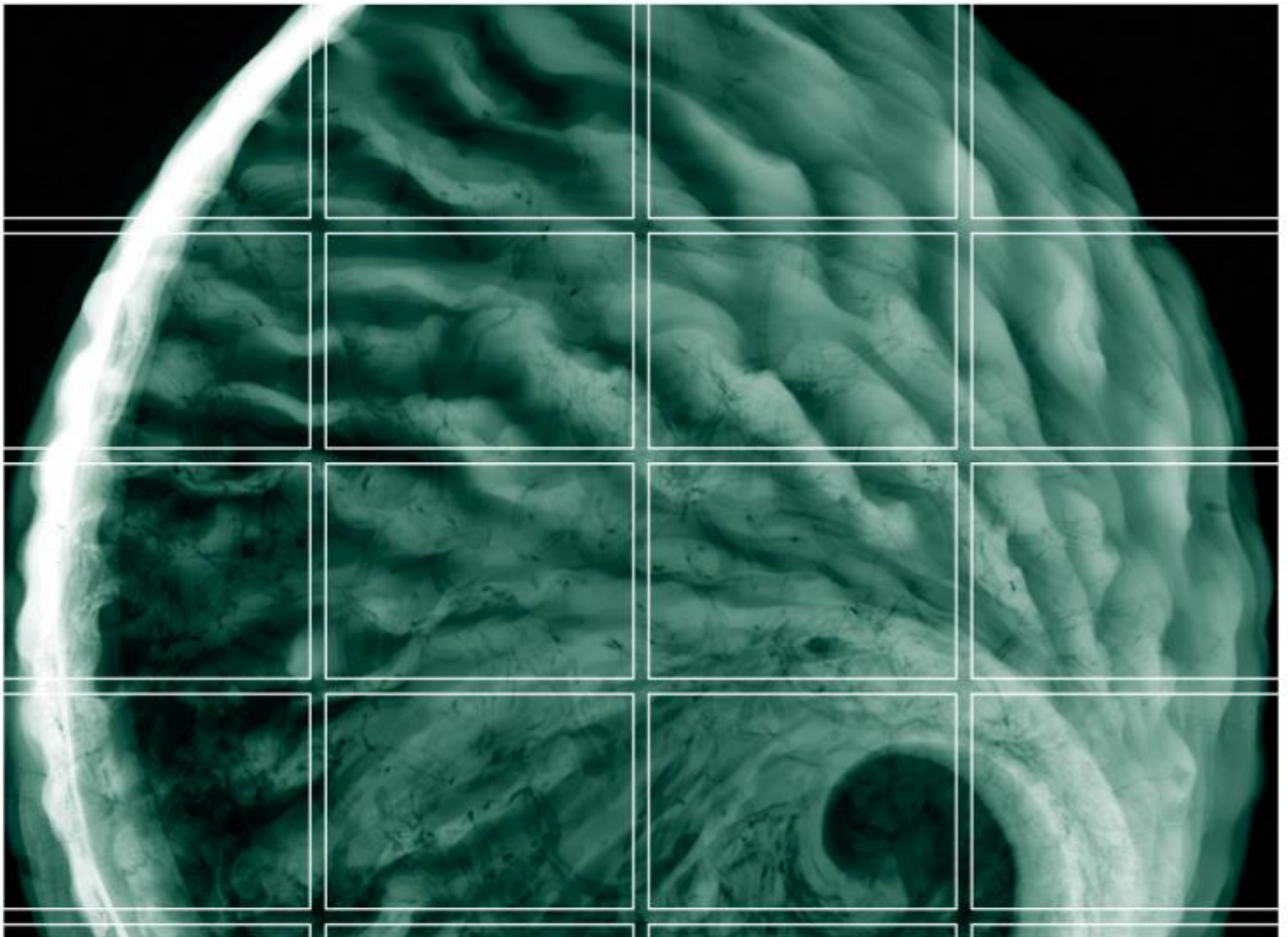
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Western Parkland City
Authority

Asbestos Management Plan

Bradfield City Centre

8 November 2022

Project No.: 0571466

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Signature Page

8 November 2022

Asbestos Management Plan

Bradfield City Centre



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Acronyms and Abbreviations

Acronym	Definition
ACT	Australian Capital Territory
AHD	Australian Height Datum
AMG	Australian Map Grid
ANZECC	Australian and New Zealand Environment and Conservation Council
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
EPA	Environment Protection Authority
ESL	Ecological Screening Level
LAA	Licensed Asbestos Assessor
LOR	Limit of Reporting
m	Metre
m ³	Cubic Metres
m AHD	Metres Australian Height Datum
m bgl	Metres Below Ground Level
MGA	Map Grid of Australia
MPC	Major Projects Canberra
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
PID	Photo-Ionisation Detector
QA	Quality Assurance
QC	Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAQP	Sampling Analysis and Quality Plan
WPCA	Western Parkland City Authority

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site).

Asbestos Containing Material (ACM) was reported to have been previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is anticipated that any unexpected finds of ACM that might be identified during future works would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

The specific objectives of this AMP are therefore to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

All work related to the excavation, movement, handling and disposal of any unexpected finds of ACM should be undertaken in accordance with the requirements of this AMP and in compliance with relevant legislation detailed within **Section 3**.

Potential Residual Contamination at the Site

The Site in its current form poses a low risk of harm to human health and / or sensitive environmental receptors. This AMP has been prepared to manage the risk from potential unexpected finds of ACM.

Asbestos Management Requirements

Any works undertaken within the Site involving the management of unexpected finds of ACM impacted fill materials are to be undertaken in accordance with this AMP.

The primary control measure for the management of potential ACM contamination within the Site is ensuring that all potentially ACM contaminated fill materials located within the Site are appropriately disposed offsite or managed within onsite containment areas.

ERM notes that where ACM impacted fill is identified, upon completion of offsite disposal / onsite containment a validation report is required to be prepared by a suitably qualified environmental professional and reviewed / endorsed by the nominated NSW EPA accredited Site Auditor.

1. INTRODUCTION AND OBJECTIVES

1.1 Introduction

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by the Western Parkland City Authority (WPCA, or 'the Client') to develop an Asbestos Management Plan (AMP) for the Site identified as the Bradfield Development Area, located at 215 Badgerys Creek Road, Bringelly NSW (the Site – refer to Figure 1 of Appendix A).

Asbestos Containing Material (ACM) was previously reported in an investigation undertaken by Golder Associates in 2011 in a portion of the Site identified as the "former married quarters" (Figure 2 of Appendix A). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site, including within the former married quarters.

- The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.
- While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for **onsite containment of impacted soils may be considered**.
- It is noted that at the time of this AMP, the final site layout / design levels had not been finalised and as such, the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitability of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

1.2 Objectives

The specific objectives of this AMP are to:

- Summarise background environmental information and possible or likely conditions at the Site;
- Document the current status of the Site regarding previously identified ACM impact;
- Provide procedures for asbestos removal, should ACM be encountered during Site works;
- Provide criteria for asbestos clearance/validation should ACM removal occur during works;
- Provide Asbestos Clearance/Validation procedures to be followed should ACM removal works occur;
- Discuss safety measures / considerations for dealing with potentially contaminated soil / fill material; and
- Provide general environmental requirements for undertaking works within the Site.

1.3 AMP Revision

WPCA is responsible for ensuring that all required stakeholders are provided with the current revision of this AMP. The current revision of this AMP is detailed within the table below. Updates to this document must be undertaken in accordance with the requirements detailed within **Section 2.3**.

- WPCA is responsible for any subsequent revisions of this AMP. All subsequent revisions must include a clear date / revision identifier and details of the revisions to ensure the most current version of the AMP is implemented.

Document Name	Document Revision Number	Date
Asbestos Management Plan – Bradfield City Centre	Revision 2	18/10/2022

2. APPLICATION AND RESPONSIBILITIES

2.1 Application of AMP

Due to the potential for ACM to be present both within underlying soils and on the Site surface, the AMP has been developed to provide ongoing management of potential asbestos contamination within the Site and will be applied immediately upon the initiation of any works within the Site, which may involve the following activities:

- Excavation of fill and natural soil materials to facilitate maintenance, realignment and construction of any subsurface infrastructure;
- Construction of any subsurface site infrastructure;
- Temporary stockpiling of excavated material resulting from onsite intrusive works;
- Off-site disposal of any waste soil / fill materials (if required); and
- Any other forms of soil / ground disturbance that may disturb or encounter ACM at or beneath the soil surface.

2.2 Responsibilities

The responsibilities for the measures outlined within this AMP are details below.

Position and Company	Responsibilities
Site Auditor	<ul style="list-style-type: none"> ■ Approve the AMP. ■ Review and approval of any subsequent revisions of the AMP
Land Custodian	<ul style="list-style-type: none"> ■ Implement this AMP. ■ Require all contractors and sub-contractors comply with the AMP and statutory and license requirements.
Site Superintendent (if required)	<ul style="list-style-type: none"> ■ Maintain records of all works undertaken within the Site as required within this AMP ■ Provide all required information relating to soil disposal to the Land Custodian.
Site Contractor	<ul style="list-style-type: none"> ■ Implement this AMP. ■ Ensure all personnel are inducted into the requirements of this AMP. ■ Where required, engage a suitably qualified environmental specialist (or professional) and / or occupational hygienist / Licenced Asbestos Assessor (LAA) to undertake sample collection, reporting and other works designated within this AMP. ■ Oversee overall implementation of AMP and undertake monitoring and inspections of the Site as required. ■ As required, undertake site inspections and monitoring of the Site operations to ensure they are carried out in an environmentally responsible manner. ■ Monitor the environmental protection measures put in place to assess if they are appropriate and functioning properly. ■ Assess any unexpected finds. ■ Notify the land custodian and / or superintendent of any significant environmental issues. ■ Notify the Land Custodian of any significant environmental issues ■ Comply with the relevant conditions of the consents and licenses (i.e. comply with all regulatory requirements). ■ Complete all necessary registers, databases, and records required in the AMP.

Position and Company	Responsibilities
	<ul style="list-style-type: none"> ■ Conduct all site operations in an environmentally responsible manner on a day to day basis. ■ Meet all OH&S regulatory requirements. ■ Provide adequate training of all employees and contractors during site induction, and as required on an ongoing basis during the works. ■ Complete non-conformance and corrective action reports, and follow up as required. ■ Complete incident reports and complaint reports, and follow up as required. ■ Conduct monitoring as required in the AMP. ■ Undertake audits of the project activities in accordance with the requirements of the AMP. ■ Ensure all non-conformance and/or complaints are reported to the Superintendent.
Licensed Asbestos Removalist	<ul style="list-style-type: none"> ■ An entity licensed to carry out Class A or Class B asbestos removal work in NSW.
Environmental Consultant	<ul style="list-style-type: none"> ■ The entity engaged to assess the Site for contamination and, where required, to develop a remediation plan, implement the plan and validate the remediation.
Competent Person	<ul style="list-style-type: none"> ■ A person who has acquired through training, qualification or experience, the knowledge and skills related asbestos removal industry practice to carry out clearance inspections of asbestos removal areas. ■ An independent competent person is required to conduct asbestos clearance inspections for bonded asbestos removal works.
Licensed Asbestos Assessor	<ul style="list-style-type: none"> ■ An independent Licensed Asbestos Assessor is required to conduct asbestos clearance inspections for friable asbestos removal works. ■ A Licensed Asbestos Assessor is also considered to be a Competent Person for the purposed of bonded asbestos clearance inspections.

2.3 Document Revision

This AMP may be regularly reviewed and updated as necessary. Therefore, it is the responsibility of the reader of this document to ensure they have the current version of the AMP.

Where onsite works vary from expected or where inspections / audits (identify that the AMP requires updating, a suitably qualified environmental specialist (or professional) will update the AMP as required.

- ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an NSW EPA approved Site Auditor prior to implementation.

The master document, with the up-to-date version of the AMP will be available from WPCA.

3. STATUTORY REQUIREMENTS

During the course of works, all works within the Site shall comply with the applicable environmental and occupational health and safety (OH&S) regulatory requirements in the New South Wales (NSW) at the time of work, and in particular to those related to asbestos and asbestos management.

3.1 Legislation and Codes of Practice

Asbestos exposure, both personal and to the environment is covered generally by the requirements of SafeWork NSW Codes of Practices and NOHSC Guidance Notes: The guidelines most relevant to this AMP are:

- Code of Practice: How to Safely Remove Asbestos (SafeWork NSW, 2019);
- Code of Practice: How to Manage and Control Asbestos in the Workplace (SafeWork NSW, 2019); and
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres (NOHSC:3003 (2005)).

Other relevant regulatory guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- Australian Standard (2005). AS 4482.1 2005, Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 2: Non-volatile and Semi-volatile compounds;
- Australian Standard (1999). AS 4482.2 1999, Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances;
- National Environment Protection Council (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999. This is hereafter referred to as 'the ASC NEPM';
- WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia;
- NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd edition); and
- NSW EPA (2020) Consultants reporting on contaminated land, contaminated land guidelines.

Other relevant legislation guidelines relevant to the assessment and disposal of ACM impacted fill and potential site suitability requirements for the Site include:

- NSW WHS Act 2011;
- NSW WHS Regulation 2017;
- Environmentally Hazardous Chemicals Regulation 1999;
- Protection of the Environment Operations (Waste) Regulation 2005;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (General) Regulation 2009;
- Protection of the Environment Operations (Waste) Regulation 2014;
- Contaminated Land Management Act 1997; and
- State Environmental Planning Policy (Resilience and Hazards) 2021.

ERM notes that in response to the WA Department of Health (2021). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, the NSW EPA issued a position statement that the processes and procedures for assessment, management and remediation of ACM impacted fill materials is considered to not be wholly consistent with the position of the NSW EPA.

ERM notes that in the event that unexpected finds of asbestos were made and remediation of ACM impacted fill was subsequently required to be undertaken within the Site, all works must be undertaken in accordance with the above regulations / guidelines made or endorsed by the NSW EPA or updated approved guidance at the time of those works.

3.2 Definitions

Definitions regarding the friable or bonded nature of ACM is provided within the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW 2019). The definitions for friable and non-friable asbestos provided in that document are as follows:

- **Friable Asbestos:** Material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos; and,
- **Non-Friable Asbestos:** Material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound (also known as bonded asbestos).

The friable or bonded nature of asbestos fragment materials within the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) is defined as follows:

- **Bonded ACM (bonded Asbestos):** Asbestos-containing-material which is in sound condition and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). Bonded ACM refers to, in this instance, material that cannot pass a 7 mm x 7 mm sieve.
- **Fibrous Asbestos (FA):** Friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This material is in a condition such that it can be broken or crumbled by hand pressure.
- **Asbestos Fines (AF):** AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

4. SITE DESCRIPTION AND BACKGROUND INFORMATION

4.1 Site Identification

Site identification information is presented in **Table 1** below

Table 1: Site Identification Details

Item	Detail
Site Address	215 Badgerys Creek Rd, Bringelly NSW 2556
Lot and Deposited Plan	Part Lot 101 DP1282949
Local Government Authority	Liverpool City Council
Zoning	The majority of the Site is zoned as MU (Mixed Use) with the Southern and Eastern boundary of The Site zoned as ENZ (Environment and Recreation). The North Western portion of the Site is zoned as ENT (Enterprise) under the State Environmental Planning Policy (Precincts – Western Parkland City) 2021.
Site Area	Approximately 94.56 hectares (ha) (Excluding First building area and Sydney Metro site area and access roads)
Site Location	Refer to Figure 1
Site Layout	Refer to Figure 2

4.2 Site Setting

A summary of the Site setting, documented in the PSI and DSI is provided in **Table 2**.

Table 2: Site Identification Details

Item	Description
Historical and Current land-use	<ul style="list-style-type: none"> ■ The Site forms part of the larger lot (Lot 101) acquired by the Commonwealth in 1959 for use as the Royal Australian Air Force (RAAF) Bringelly Radio Receiving Station. The Bringelly Radio Receiving Station closed in 2005. ■ The Site was acquired by WPCA from the Commonwealth in 2020. The buildings associated with the former Radio Receiving Station were demolished in works which took place during February and March of 2022. ERM notes that the former radio receiving station buildings were located within the central compound within the Sydney Metro site area and are excluded from this investigation.
Surrounding Land use	<p>The land uses surrounding the Site include:</p> <ul style="list-style-type: none"> ■ North: Directly north of the Site is agricultural land followed by low density/semi-rural residence (approximately 290 m north of the Site). Residential properties are located approximately 550 m north of the Site and beyond. The north western boundary of the Site forms part of the wider Bradfield City Centre land and is comprised of the area identified as Priority Area 1 which is subject to a separate investigation. ■ South: Directly south of the Site is a strip of vegetation followed by Thompsons Creek located approximately 40 m south of the Site. An area of rural residential housing lies beyond Thompsons Creek. ■ East: Thompsons Creek runs along the majority of the eastern border of the Site beyond which is The Retreat Road located approximately 115 m east of the Site. Residential properties are located approximately 150 m to the east of the Site and beyond. ■ West: Directly west of the Site are residential properties which extend for approximately 500 m and beyond. <p>ERM notes that the central and northern portion of the proposed Bradfield City Centre is comprised of the Sydney Metro works area and excluded from this AMP.</p>

Item	Description
Site Elevation	<ul style="list-style-type: none"> Based on topographical data obtained as part of an information search conducted during the PSI (ERM, 2021), the Site slopes generally to the east. The highest elevation on site is approximately 78 m AHD on the western boundary of the Site. <p>The lowest elevation is approximately 60 m AHD on the eastern boundary of the Site.</p>
Topography	<ul style="list-style-type: none"> Topography within the surrounding area is variable with gentle/undulating slopes generally in a South Easterly direction.
Hydrology	<ul style="list-style-type: none"> The nearest surface water body to the Site is Moore Gully which crosses the western boundary of the Site and enters Thompsons Creek at the eastern boundary of the Site. Five unnamed ephemeral drainage lines are indicated on Site mapping to flow through the Site and into Thompsons Creek to the South and East. Thompsons Creek is a South Creek tributary with the confluence between the two creeks occurring approximately 1.3 km North-East of the Site.
Geology, Soils and Acid Sulfate Soils	<ul style="list-style-type: none"> The Penrith 1:100,000 Geological Mapping Sheet identifies the underlying geology as Bringelly Shale and is described as shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff from the Middle Triassic age. The soil landscape of the Site is described as ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping and rounded hilly to steep hilly areas and relatively narrow valleys. Chief soils are hard acidic red soils (with hard acidic yellow mottled soils in places some ironstone gravels occur in both these soils. Associated are hard neutral and alkaline red soils and in saddles and some mid-slope positions soils, usually in depressions; and small areas of undescribed soils in wet soaks and valley areas. Small areas of other soils are likely throughout. This is consistent with site observations during the DSI where site soils were mostly noted to be red, grey and brown clays with minor shale inclusions, and finer tan / grey clays in low-lying areas near natural drainage lines. According to the Atlas of Australian Acid Sulfate Soils (ASS), ASS onsite and within the search buffer have an extremely low probability of occurrence. There is a 1-5% chance of occurrence with occurrences in small, localised areas.
Hydrogeology	<ul style="list-style-type: none"> Previous investigations undertaken within the Site by ERM in 2021 identified groundwater at variable depths ranging from approximately 2.5 m bgl to 13 m bgl within underlying fractured shale bedrock (Bringelly Shale). A search of registered groundwater bores identified five groundwater bores within the Site boundary. All bores were reported to be drilled for monitoring purposes. An additional eight registered groundwater bores are found within a 2km buffer zone from the Site. Two of the bores within the buffer zone were reported to be drilled for domestic/stock purposes, three are reported to be drilled for monitoring purposes, one for domestic/industrial/stock purposes and one for domestic purposes. Aquifers onsite and within the buffer area are described as porous, extensive aquifers of low to moderate productivity.

4.3 Previous Investigations

In developing this AMP, ERM undertook a review of the following previous investigations relating to asbestos contamination within the Site:

Detailed Site Investigation: Former RAAF Bringelly Receiving Station (Golder Associates, October 2011, Report No. 107623154 021 R RevA)

- ACM, as asbestos containing cement debris, was identified in the location of the former Married Quarters and in a soil stockpile to the South of the central compound area.
- The DSI reported that free asbestos fibres were not identified in the soil or stockpile samples analysed during the investigation.
- A suspected asbestos cement cable pit was observed on the eastern side of the Compound area.
- The DSI concluded there is a potential for asbestos cement debris to be present elsewhere on the Site.

Detailed Site Investigation Report 215 Badgerys Creek Road, Bringelly, NSW: (Western Environmental, 13th December 2019, Report No: P19.114-RPT-DSI 0)

- The report stated that no surface ACM fragments were identified on the Site and the opportunity for future exposure was considered unlikely, however there was still a risk that ACM fragments may be present within surface and/or subsurface soils that may be revealed during Site works and/or via wind and water erosion.
- Results from 17 sampling locations demonstrated that asbestos concentrations did not exceed the adopted guideline value of 0.01% w/w for ACM or 0.001% w/w for asbestos fines (AF) or fibrous asbestos (FA).
- The report concluded that based on the proposed future land use for industrial/commercial and/or residential purposes, the risks associated with the presence of asbestos may be qualitatively considered to be very low and do not pose an unacceptable risk to future Site users.

ERM Detailed Site Investigation, Bradfield City Centre, 11th October 2022, Rev 04, Ref No 0571466

Results of the DSI indicated the following:

- Fill materials were generally found to be shallow, extending to depths of approximately 0.1 – 0.2 m below ground level (bgl) with the exception of TP92 (in which fill extended to 0.4 m bgl) and comprised a mixture of orange, red and grey mottled clays and tan fine—coarse grained sand.
- During investigation works, no evidence of staining or odours were noted within fill materials. Observations of anthropogenic inclusions such as bitumen, glass, metal wiring, ceramic or brick in fill materials were limited to a few isolated locations near the northern side of the bitumen access road leading to the former Site compound and one isolated location in the gully towards the south of the Site.
- Natural materials were generally encountered at surface or at depths ranging between 0.1 and 0.4 m bgl in locations with identified overlying fill. Natural materials were generally comprised of brown and red clays with occasional grey / orange inclusions, varying in stiffness and plasticity to a depth of approximately 2.5 m bgl overlying fine-grained interbedded shale and sandstone bedrock with clay bands to the maximum depth of investigation works.
- Results of field observations and laboratory analysis from soil samples collected as part of the DSI did not identify ACM within the Site, however as ACM has previously been reported within the portion of the Site identified as the “former married quarters area” ERM recommended that prior to the commencement of construction works an AMP should be developed and implemented during all onsite works to manage potential unexpected finds of ACM.

4.4 Potential for Unexpected Finds at the Site

The following table summarises the potential for unexpected finds of contamination within the Site requiring management under this AMP:

Table 3: Potential Residual Contamination

Potential Contaminated Media	Location	Contaminants of Concern	Comment
Asbestos contaminated soil beneath and potentially at surface	<ul style="list-style-type: none"> ■ Location of Site detailed within Figure 1 ■ Location of the "Married Quarters" illustrated in Figure 2 	Asbestos.	<ul style="list-style-type: none"> ■ Asbestos Containing Material (ACM) was previously identified during investigations undertaken by Golder Associates in 2011 within a portion of the Site identified as the "former married quarters" (Appendix A – Figure 2). ERM notes that field observations and laboratory analysis undertaken during two more recent investigations undertaken by Western Environmental in 2019 and ERM in 2022 did not identify evidence of asbestos impacts within the Site including within the former married quarters. ■ Given the extensive sampling undertaken throughout the Site as part of previous investigations, it is expected any finds of ACM would be limited to isolated pockets of ACM within surface fill soils or ACM within service pits and conduits on the Site.

4.5 Preferred Asbestos Management Approach

The table below summarises the preferred management approach for any unexpected finds of ACM within the Site.

Table 4: Preferred Asbestos Management Approach

Media	CoPC	Preferred Remedial Approach
Soil	Asbestos	<ul style="list-style-type: none"> ■ Due to the isolated nature of potential ACM contamination it is considered that the most practical and cost effective approach for the management of ACM impacted fill will be achieved via targeted / <u>selective excavation and offsite disposal</u>. ■ While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for <u>onsite containment of impacted soils</u> may be considered. It is noted that at the time of this AMP, the final Site layout / design levels had not been finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitability of materials and containment cell design would require review and approval by a NSW EPA accredited Site Auditor.

5. ASBESTOS IDENTIFICATION AND REMOVAL PROCEDURES

5.1 Suspected ACM Identification Procedure

While asbestos has reportedly been previously identified within the portion of the Site identified as the “former married quarters” (Appendix A – Figure 2), during soil investigation works undertaken as part of the Western Environmental (2019) DSI and ERM (2022) DSI, no evidence of ACM or other indicators of significant / widespread anthropogenic wastes were identified.

- As a result, any discoveries of suspected ACM would be considered an unexpected find.

Given the extensive sampling distribution across the Site it is expected that any finds of ACM would be limited to isolated pockets of ACM within surface fill soils within the former married quarters area, or ACM within service pits and conduits on the Site. The procedures to be followed in the event of an unexpected find are documents below.

During Site works, features that may indicate the potential for ACM to be present are:

- Fill soils containing anthropogenic artefacts such as rubble, plastics, metal etc.;
- Material with visible fibres; and
- Any material that has evidently been dumped at the Site.

Additionally, given the potential for ACM to be within the service infrastructure all service infrastructure should be visually inspected upon being uncovered, but prior to any disturbance, to determine if it is potentially asbestos containing.

5.1.1 Initial Find Procedure

- Cease disturbance of the affected portion of the Site and evacuate the immediate area;
- Contact the Principal Contractor and the other relevant subcontractors;
- Principal Contractor and any relevant subcontractors to conduct an assessment of the location and extent of the unexpected find:
 - High risk areas should be isolated and secured against unintended access;
- Where potential contamination has been encountered temporary encapsulation (sealing) of the high risk area to ensure no airborne spread of contamination occurs may be appropriate:
 - This may involve clean soil, plastic sheeting, etc;
- Dust should be prevented by wetting the soil and drainage controls should be arranged where there is a potential for runoff to occur (runoff should be minimised);
- Appropriate warning signs should be placed in the vicinity;
- If the Principal Contractor or relevant subcontractor considers that the material warrants further investigation, the area is to be barricaded to provide an exclusion zone;
- If necessary, environmental controls should be established to minimise the potential for migration of contaminants from the impacted area;
- Where material is to be excavated and stockpiled efforts are required to minimise the mixing of visually different materials types to avoid cross contamination:
 - Where possible stockpiles are to be placed onto 200µm thick plastic or impervious hardstand;
- Principal Contractor (or designated representative) to complete Unexpected Finds Protocol (UFP) form (refer to **Appendix B**) and issue to all relevant stakeholders;

- Further visual assessment, sample collection and analysis undertaken by a qualified environmental consultant. If necessary, samples will be sent to a NATA registered laboratory:
 - Soil sampling where it occurs will be in accordance with National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC, 2013);
 - Material will be sampled at a rate of 1 sample/25 m³ of impacted material;
- Evaluation of analytical data with respect to specific health screening levels to be undertaken:
 - Following receipt of analytical data the UFP Form/Register is to be amended with final classification of soils, including whether the soils are suitable for the proposed land use or need to be remediated or disposed of offsite to a suitably licensed facility;
- If soils are suitable to remain on-site and/or the area is found to be clean, a work instruction will be provided by the environmental consultant to this effect;
- If materials are unsuitable to remain on Site a waste classification report will be prepared prior to any offsite disposal;
- If the material is subsequently found to contain asbestos, it is required to be disposed of in accordance with the NSW WHS Regulations and NSW EPA Waste Classification Guidelines. This includes waste tracking requirements; and
- If required asbestos air monitoring should also be undertaken by a suitably qualified environmental consultant/occupational hygienist during the disposal of asbestos contaminated materials.

Notes:

- Any licenced asbestos removal works must be notified to SafeWork NSW a minimum of 5 calendar days prior to works commencing;
- Any suspected asbestos containing should be left in place and not disturbed. The Principal Contractor and relevant subcontractors will organise appropriate environmental professionals for further investigation purposes;
- It is essential that material of differing compositions not be mixed;
- Where possible excavated materials should be stockpiled on 200µm thick plastic or impervious hard stand (ie concrete or asphalt) to limit the potential for cross-contamination:
 - Where stockpiled material cannot be placed on an impervious material, stockpile footprint sampling will be required as part of the validation process. Stockpile footprints will be sampled at a rate of 1 sample/100m² and subject to analysis for relevant contaminants of concern;
- All sampling for validation, waste classification or characterisation purposes will be carried out in accordance with the following documents:
 - *Contaminated Sites: Sampling Design Part 1 Application* (NSW EPA, 2022);
 - *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)* (NEPC, 2013);
 - *Waste Classification Guidelines* (NSW EPA, 2014);
- Any unexpected finds encountered should be listed on a UFP register, which should include the action taken and the status of the unexpected find. A suitable register is included in **Appendix B**:
 - The principal contractor (or their designated representative) is responsible for the maintenance and updating of the UFP Register;

- Once an unexpected find has been identified and a UFP form filled in the Principal Contractor and relevant subcontractors should liaise with the client as to the appropriate means of managing the situation. This should include discussions around the handling, treatment and disposal of material, WHS considerations and how the affected area will be validated and reopened for works;
- Prior to closing out an unexpected find it will be important to ensure the appropriate documentation is obtained, such as: photographs, the UFP form, waste classification letter(s) and a validation report or letter; and
- Identified unexpected finds generated from site works in the process of being assessed onsite are to be tracked as part of the Site Material Tracking Register. This register is to be updated during any activities onsite such as moving the find from the original source location, material assessment works to date, and tracking materials for ultimate reuse or offsite disposal.

5.2 Asbestos Removal Procedures

The following asbestos removal procedures are to be implemented for isolated finds of asbestos contamination within surface soils, or for the removal of redundant asbestos containing service infrastructure. Off Site disposal of the ACM will be the nominated removal strategy.

- **The most likely remediation option for any unexpected finds of ACM identified during the development of the Site will be excavation and offsite disposal, as it is envisioned that any unexpected finds will be small in volume.**
- **While significant volume of ACM impacted soils are considered unlikely, where large volumes of ACM impacted fill are identified during construction works that would result in significant costs for offsite disposal the potential for onsite containment of impacted soils may be considered.**
- **It is noted that at the time of this AMP, the final Site layout / design levels had not be finalised and as such the location, design etc. for a potential containment cell would be developed at a later time. It is further noted that where onsite containment is required, the specific location, suitability of materials and containment cell design would require review approval by a NSW EPA accreted site auditor.**

In accordance with the Work Health and Safety Regulation 2017 (NSW), only Class A asbestos removal licence holders are permitted to conduct asbestos removal work or asbestos-related work that involves friable asbestos. Should friable asbestos be encountered a Class A Licensed Removal Contractor will be required to undertake any proposed removal works. Non-friable removal works can be undertaken by a Class A or Class B Licensed Removalist.

Prior to the commencement of remediation works, the nominated asbestos removal contractor will notify SafeWork NSW of the intention to complete the removal of greater than 10m² of bonded ACM or the removal of friable asbestos as applicable. The works boundary will be defined as the extent of the Site so as to avoid any requirements of re-notification throughout Site works.

In addition to notifying Safe Work NSW, all site workers will be made aware of the location/nature of identified asbestos. This notification can be done daily during a toolbox talk.

Personal protection equipment (PPE) to be worn at all times during asbestos remediation works must include:

- Disposable overalls;
- Respiratory protection (P2 Minimum);
- Safety boots;
- Hard hat and other Site/task specific PPE; and
- Enclosed cabin (the above PPE is not required within an enclosed cabin).

5.2.1 Isolated ACM within Surface Soils

Where ACM fragments are identified in surface soils and not in underlying fill, the fragments will be hand-picked by a Class B licensed asbestos contractor and placed in appropriately labelled bags. Bags will be packaged in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

Following the completion of hand-picking, the residual soils will be systematically inspected by a suitably qualified environmental consultant for the presence of visible ACM fragments in a back and forth fashion in systematic transects. Where suspected ACM is visually identified by the consultant, additional hand-picking will be carried out.

Following the completion of a successful visual clearance by the consultant where no ACM fragments are identified on residual soils, validation soil sampling will be carried out in accordance with **Section 5.4** of this document.

5.2.2 ACM within Sub-surface Soils

Where ACM fragments are identified within both surface and subsurface soils, the removal procedure will be as follows:

1. Nominate and set out the impacted area for excavation;
2. Prior to the commencement of excavations in any given area, establish a 10 metre Exclusion Zone with the installation of safety warning signs and barricade measures around the boundary of the excavations;
 - a. No personnel are to enter the exclusion zone without adequate PPE and training;
3. Excavate the material impacted by ACM to the depth of natural soil;
 - a. Excavator operator(s) and truck driver(s) within enclosed cabs are to remain inside their vehicles during the loading operation. The air-conditioning is to be on 'recirculate' or switched off. If the cab is not enclosed, full PPE is to be worn;
 - b. During the excavation operation the materials are to be wetted thoroughly;
 - c. Material inadvertently spilt on the ledges of the truck or truck sides are to be washed off prior to the truck leaving the area; and,
 - d. On completion of the work the operators should move to the designated decontamination area;
4. Excavated ACM contaminated material to be disposed of at a suitably licensed landfill following waste classification;
 - a. Classification may occur in-situ prior to excavation or ex-situ from stockpiles dependent on Site conditions;
5. The excavation will require asbestos clearance/validation following load out; and,
6. Following receipt of an Asbestos Clearance Certificate the area can now be accessed by the general personal to proceed with the Site works.

5.2.3 Asbestos Containing Service Infrastructure

Where redundant asbestos containing infrastructure (i.e. pipework or pits) is identified removal works will be carried out in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019) and the following methodology:

1. Soil overlying the infrastructure will be excavated by, or under the supervision of licensed asbestos contractors and stockpiled to one side of the service line. The infrastructure will not be exposed during this process, with only preliminary excavation undertaken to expose the infrastructure in order to check the depth and ensure an appropriate buffer was maintained to prevent disturbance. This soil is to be stockpiled for onsite reuse, as no contact with asbestos has occurred at this point.
2. On a subsequent pass, the infrastructure will be fully exposed and gently removed by the contractors. The infrastructure will be disposed off-site as asbestos waste.
3. Soils removed during Step 2 should be stockpiled alongside the excavation area, on the opposite side of the excavation to the overlying spoil. These soils previously in direct contact with infrastructure (i.e. material within approximately 100 mm) will undergo sampling and analysis for either beneficial reuse onsite or disposed off-site as asbestos waste.

NOTE: If laboratory results indicate the material requires disposal, chemical sampling will be conducted to adequately characterise the soils in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014).

4. Following removal of the asbestos containing infrastructure and potential asbestos impacted soil, asbestos validation sampling of the excavation faces, stockpiled soil and stockpile footprints is to be carried out in accordance with **Sections 5.4** of this document.
5. If results indicate no asbestos is detected, no further material will be removed from the area. Where asbestos is detected in validation samples, further remediation and validation sampling will be conducted.

5.3 Decontamination

5.3.1 Personal Decontamination

Issue Appropriate hygiene and decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.

Criteria No contaminated clothing or PPE to leave the work areas.

- Controls**
1. Eating, drinking, chewing gum and smoking will be prohibited at all times whilst working in potentially hazardous areas.
 2. All individuals undertaking asbestos disturbing works at the Site will pass through a decontamination unit or decontamination prior to exiting work areas in accordance with *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019). All outer work material will be physically removed from personnel prior to exiting work areas.
 3. Remain in full PPE in work areas at all times.
 4. Plant operators are to remain inside vehicle during operation with windows and doors closed and air-conditioning on recycle only or switched off.

5.3.2 Vehicle Decontamination

Issue	Appropriate vehicle and equipment decontamination assists with minimising worker exposure and the transportation of potentially contaminated materials from work areas to more sensitive environments.
Criteria	No contaminated vehicle or equipment to leave the work areas.
Controls	<ol style="list-style-type: none">1. Trucks and equipment required for asbestos removal/remediation works will remain within the works area until the completion of works. Vehicles will not traffic between work areas and other areas of the Site, including lunch areas, car parks, etc.2. Truck cleaning areas will be used to wash down all vehicles potentially coming into contact with contaminated soil leaving all remediation or works areas. The surface of internal access roads carrying vehicular traffic will be kept clean.3. Vehicles carrying fill materials sourced from the Site will at all times be covered with an “enviro-tarp” or similar impervious material to prevent the escape of dust or other material.4. A log of all trucks removing fill material from the Site or importing soil to the Site will be kept in a Truck Log book.

5.4 Asbestos Clearance / Validation Procedures

All asbestos removal locations will be subject to asbestos clearance and validation at the completion of removal works and generally will comprise of visual inspection and validation sampling of:

- Surface soils following hand-picking of ACM fragments;
- Walls and base of excavations created on-site to facilitate removal of asbestos contaminated soils or asbestos containing infrastructure; and,
- Stockpile footprints following on-site relocation or off-site disposal. However, where stockpiles are placed onto 200µm plastic, footprint sampling will not be required.

All clearance inspections outlined hereafter, should be conducted in accordance with Section 3.10 *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2018). In accordance with Clause 473 and 474 of the WHS Regulations (2017) at the completion of any asbestos removal works (should they occur) a written asbestos clearance certificate is required before the removal area can be re-occupied and works resumed. As asbestos removal works on the Site are most likely going to be occurring in distinct pockets each removal area will require a separate clearance certificate to allow for reoccupation. At the completion of works a Validation Report will be prepared in accordance with *Consultants reporting on contaminated land: Contaminated Land Guidelines* (NSW EPA, 2020) and include all clearance certificates issued for the Site.

The following sections outline the sampling and analysis plan for conducting asbestos clearance and validation works depending on the type of asbestos contamination.

5.4.1 Asbestos Clearance/Validation Criteria

The adopted Health Screening Level have been sourced from the NSW EPA endorsed *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) and are provided in **Table 5** below.

Table 5: Asbestos Clearance/Validation Criteria

Form of Asbestos	Health Screening Level (w/w)
Bonded ACM	0.01%
Fibrous Asbestos	0.001%
Asbestos Fines	0.001%
Surface Asbestos (0-0.1 m BGL)	No visible asbestos

5.4.2 Surface ACM Validation

Following hand-picking of ACM fragments from the surface or the removal/relocation of an ACM impacted stockpile a clearance inspection will be carried out of surface soils and samples collected to confirm no residual asbestos contamination.

The clearance inspection will be performed by a competent environmental consultant or hygienist walking systematic transects of the impacted area with clearance/validation samples collected at a rate of one sample per 50 m² (or part thereof).

In the case that the clearance inspection identifies ACM fragments or results indicate concentrations that exceed the adopted HSLs, the surface of the area will be hand-picked or scraped by the remediation contractor and another round of inspection and validation sampling will be carried out. This will continue until the remedial objectives are achieved.

5.4.3 Asbestos Excavation Validation

Following the excavation of asbestos impacted soils a clearance inspection will be conducted and validation samples collected. As a minimum, sampling numbers and analysis will conform to the plan presented in **Table 6**.

Table 6: Asbestos Excavation Validation Plan

Location	Sampling Density
Excavation Base	One sample per 50 m ² or part thereof.
Excavation Walls (North, East, South, West)	A minimum of one sample from each wall, where the depth of excavation is greater than 0.5 m bgl; At least 1 sample from each wall per 5 m length of strata of interest; Where a wall is greater than 1 m high, there is a change of strata, or visual evidence of contamination, an additional sample will be collected at the rate of 1 sample per 1 m depth interval and additional discretionary samples where there is visual or olfactory evidence of contamination

In the case that the clearance inspection identifies ACM fragments, or laboratory analysis reports elevated contaminant concentrations, additional excavation will occur at the inspection/sampling location, followed by another round of inspection and validation sampling to be carried out. This will continue until the remedial objective is achieved.

5.4.4 Validation of Asbestos Pipe Removal

Following the removal of asbestos pipe, a clearance inspection will be conducted and asbestos validation samples collected. As a minimum, sampling numbers and analysis will conform to the validation plan presented in **Table 7**.

Table 7: Asbestos Pipe Removal Validation Plan

Location	Sampling Density
Trench Base	One sample per 20 Lineal metres
Trench Walls	One wall sample per 20 lineal metres, at the depth of pipe removal, where the depth of excavation is greater than 0.5 m bgl; (Where a wall is greater than 1 m high, a greater number of samples may be collected in a vertical plane at discretionary sampling locations)

Each asbestos sample will be collected as a bulk sample and constitute five grab samples from the 20 m interval of wall or base, to ensure adequate coverage and representation of the validation area. Based on a typical 1m wide by 1 m deep excavation, one sample per 20 m length interval (wall or base), is equivalent to 1 sample per 20 m² area.

6. ASBESTOS REMEDIATION / REMOVAL AND CLEARANCE REQUIREMENTS

Outlined below are the minimum asbestos clearance certification procedures and methodology to be utilised following the completion of removal of asbestos-contaminated material. The procedures were formulated from methods outlined in Section 3.10 "Clearance Inspection" and Section 3.11 "Air Monitoring" in the *Code of Practice: How to Safely Remove Asbestos* (SafeWork NSW, 2019).

6.1 Visual Asbestos Clearance Inspection

Following the movement of ACM impacted materials; a visual inspection must be conducted of the residual materials. The remediation area is to be systematically visually inspected in a back and forth fashion across the area by an appropriate independent competent person or licensed asbestos assessor (LAA) in systematic transects.

The area is to be inspected thoroughly for the presence of visual ACM. Upon completion of the remediation process and satisfactory visual inspection results, asbestos clearance soil sampling can be conducted within the remediation area as appropriate.

6.2 Asbestos Air Monitoring Program

With regards to the Site, Project Management in association with the designated environmental consultant will establish monitoring programs as appropriate, to ensure that all activities undertaken in relation to asbestos comply with relevant exposure limits, standards and guidelines. Where disturbance of identified Bonded ACM is a potential, a monitoring program can be implemented. Should friable asbestos be identified an air monitoring program is required.

Monitoring requirements include:

- Daily Airborne Asbestos Monitoring during all works undertaken within areas identified with unexpected finds of asbestos; and
- Final clearance monitoring within the remediation area following the removal of all visible asbestos contamination.

Should an air monitoring program be required the number of monitors used will be dependent on the proposed works with a minimum of two sample pumps to be used. The location of monitors will be based upon the most susceptible areas to airborne asbestos contamination and transportation or areas of higher risk, e.g. downwind of works, enclosure entry/exit etc.

Monitoring results will be reported to the Project Manager as soon as possible after the conclusion of the monitoring interval. Results are required to be readily available and accessible to both management and employees and displayed in a prominent position. Every week, the Project Manager will provide a summary of current monitoring results detailing dates of sampling, fibre concentration levels and the date of notification of results to the Project Manager. These results will be communicated to all site personnel.

The risk associated with asbestos relates to the inhalation of airborne asbestos fibres. These fibres may be liberated by disturbance of the asbestos-containing material or dusts. Air sampling is used to determine exposure to airborne asbestos fibres, using a modified version of the Membrane Filter Method (NOHSC, 2005). Once asbestos exposure levels are determined, a level of action is to be taken in response to the recorded levels. These actions are listed below in **Table 8**.

Table 8: Recommended Action Levels for Asbestos Exposures

Measured Fibre Concentration (% of Exposure Standard)	Recommended Action
<0.01 fibres/mL	No action necessary; maintain a low-level baseline air sampling program and Continue with Control Measures
> 0.01 fibres/mL	<ol style="list-style-type: none"> 1) Review Control Measures. 2) Ensure all PPE requirements and Decontamination practices are being complied with in the area. 3) Increase monitoring frequency, focusing on personal exposure monitoring and worker category assessment. Ensure personal exposures are maintained as low as practicable. Investigate workplace/work practices and control measures. Invoke agreed work and management procedures. Implement routine personal monitoring and auditing procedures.
Result > 0.02 fibres/mL	<ol style="list-style-type: none"> 1) Stop work in the affected area and investigate the cause of elevated results. 2) Designate area and take remedial action. Implement formal asbestos management procedures including cease work until such time as asbestos concentrations are acceptable.

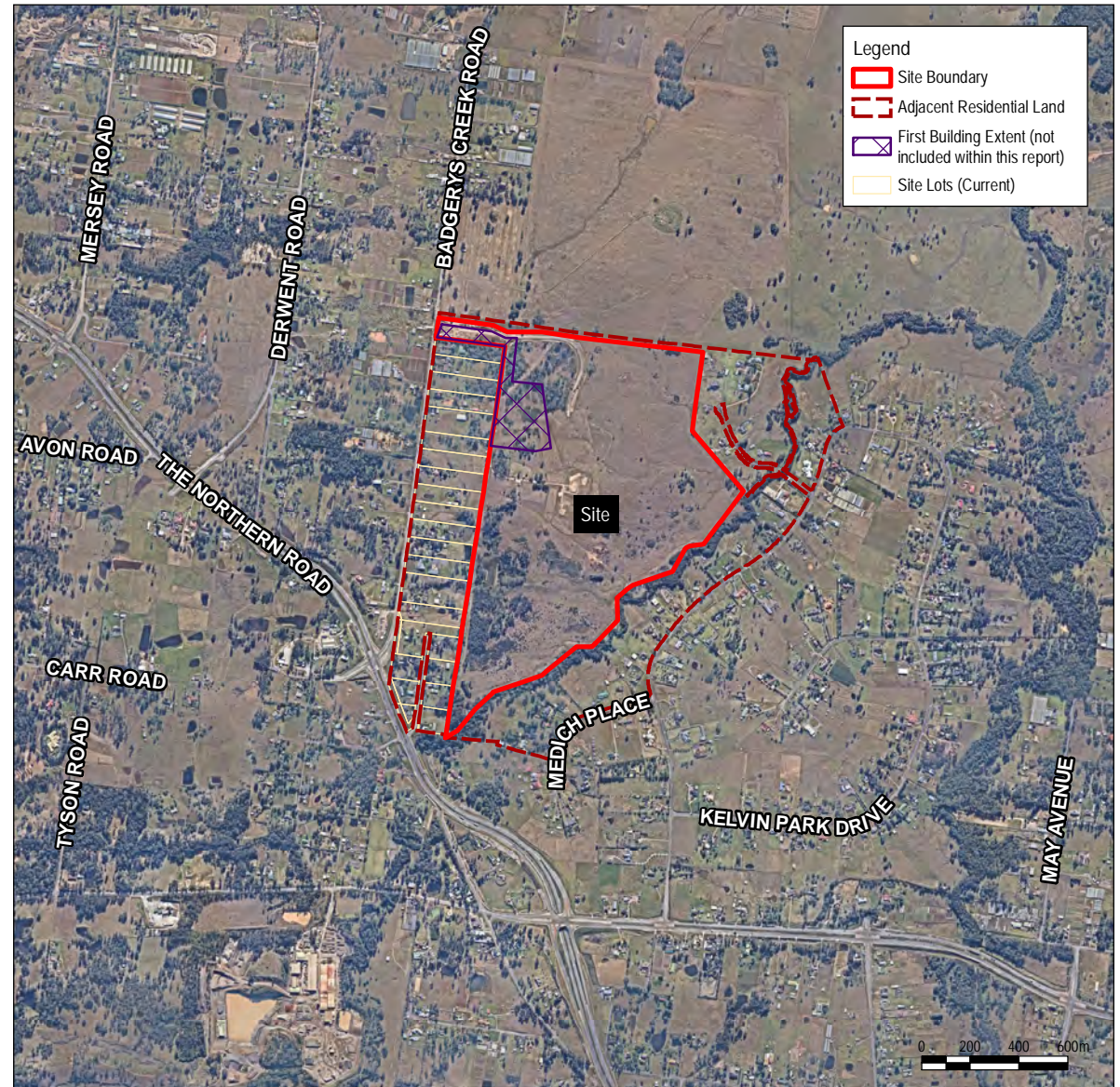
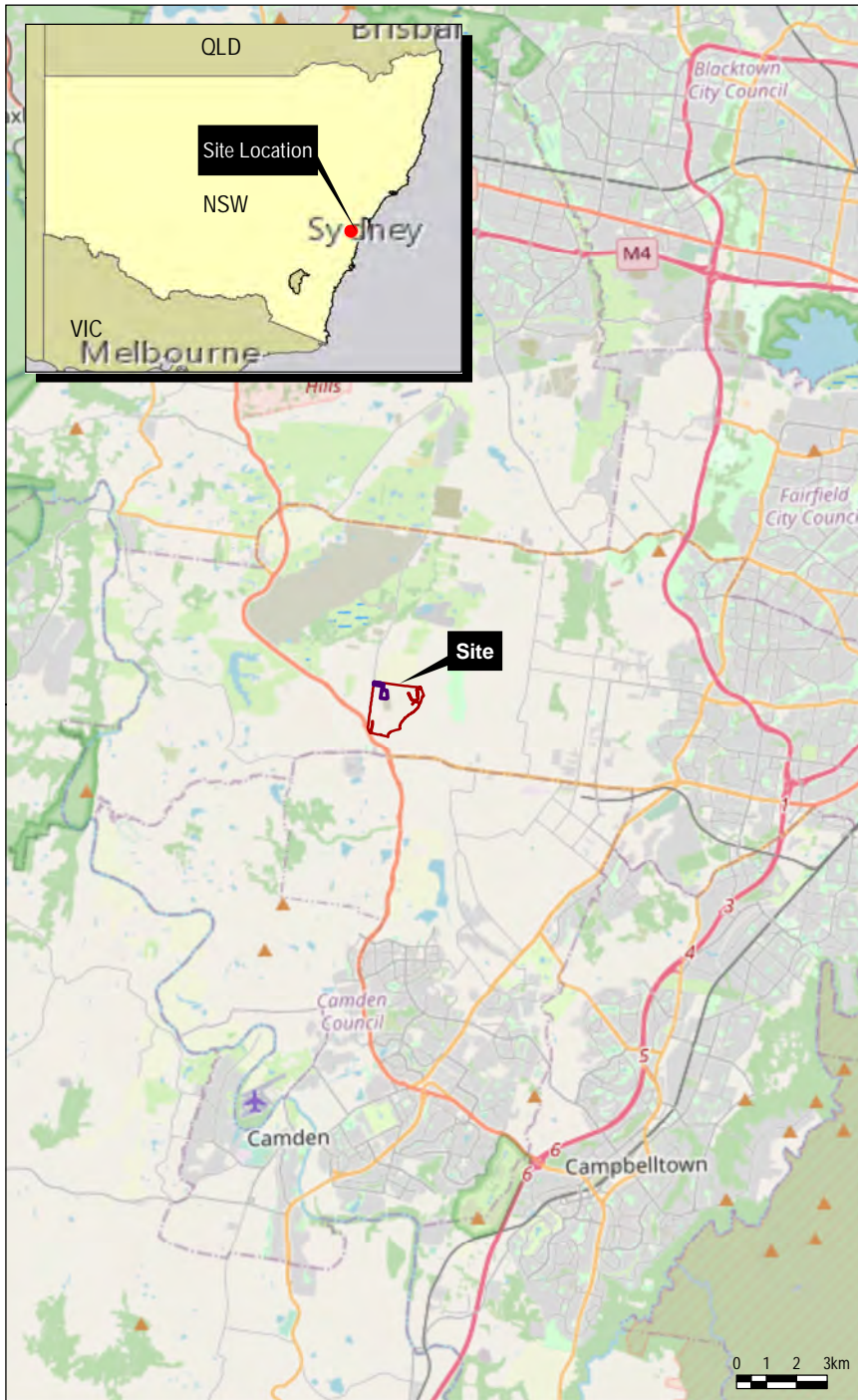
It is important that the interpretation of these results is undertaken by an experienced person conversant with the Membrane Filter Method and its limitations. All results of air sampling must be recorded and filed. The results will be reported and made available to all employees.

Auditing procedures should be used as the primary technique to ensure that agreed work and management procedures and control measures are operating effectively. Airborne Asbestos Monitoring will be carried out using the only internationally recognised sampling and analytical methodology - *the Membrane Filter Method for Estimating Airborne Asbestos Dust (NOHSC:3003 (2005))*.

7. REPORTING AND AMP AUDITING REQUIREMENTS

Report	Requirement
Material Classification Reports	<ul style="list-style-type: none"> ■ All reports relating to unexpected finds, offsite disposal of fill materials and importation of any materials used for construction / backfilling purposes are to be provided to the land custodian upon completion of works. ■ Reports are to include details on the methodology, sampling rationale, laboratory analysis and subsequent classification information and materials tracking information detailing the total volume and final placement / disposal location. ■ ERM notes that all waste classification works are to be undertaken in accordance with relevant NSW EPA requirements at the time of works.
Non-Conformance Reporting	<ul style="list-style-type: none"> ■ Non-conformances will be recorded in a Non-Conformance and Corrective Action Report. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by the land custodian. ■ It is the responsibility of the site foreman to immediately inform the land custodian of any non-conformances and initiate corrective actions, if required. Once completed, the site foreman will provide details of the actions undertaken on the Non-Conformance Report and sign, date and file the report.
Incident Reporting	<ul style="list-style-type: none"> ■ Records will be kept of any environmental incidents, accidents, hazardous situations, unusual events and unsafe health exposures and the corrective action taken. ■ The contractor / site superintendent will adequately investigate the cause of any incident so that necessary changes in work practices can be made to prevent the incident recurring.
Complaints Reporting	<ul style="list-style-type: none"> ■ The contractor will maintain a register of complaints, which will include a record of any action taken with respect to the complaints. ■ If a complaint identifies a non-conformance, a Non-Conformance and Corrective Action Report must be initiated. ■ A copy of all complaint reports and subsequent investigations are to be provided to the land custodian or their nominated representative for filing and included within compliance reporting (detailed below).
AMP Auditing	<ul style="list-style-type: none"> ■ Upon completion of any works involving the management of ACM within the Site, the contractor or its nominated representative will review all environmental documents, records and monitoring results to ensure compliance with the requirements of the AMP and current statutory requirements. ■ Results of audit findings are to be provided to the land custodian in accordance with any reporting criteria specified within relevant works approvals.
AMP Review / Update	<ul style="list-style-type: none"> ■ The AMP should be reviewed, and updated as necessary after 2 years or where audit findings indicate the need for updating / refining of management controls. ■ Results of review findings and potential recommendations for required updates are to be provided to the land custodian. ■ ERM notes that where the AMP requires updating, all changes / amendments must be undertaken by a suitably qualified environmental specialist (or professional) and approved / endorsed by an ACT EPA approved Site Auditor and the ACT EPA prior to implementation.
Site Validation Reporting	<p>Upon completion of any works requiring the management / offsite disposal of ACM impacted fill within the Site, the contractor is to provide the land custodian or their nominated representative an Site Validation Report written in accordance with NSW EPA guidelines for reporting on contaminated sites (at the time of works)</p> <ul style="list-style-type: none"> ■ <u>ERM notes that the Site Validation Report will require review / endorsement by a NSW EPA accredited site auditor.</u> <p>The report is to be provided to land custodian or their nominated representative within 21 days of completion of works.</p> <p>The land custodian should keep these reports for records.</p>
Record Keeping	<p>All records related to implementation and ongoing auditing of the AMP should be maintained by the land custodian or their nominated representative in a consolidated and easily accessible location.</p>

APPENDIX A FIGURES



Data Source:
NSW DFSI - DCDB / DTDB 2021
Nearmap Imagery June 2022
Esri OpenStreetMap 2022

Site Location

Drawing No: 0571466s_AMP_G001_R0.mxd
Date: 04/10/2022
Drawn By: GC / RH
Coordinate System: GDA 1994 MGA Zone 56

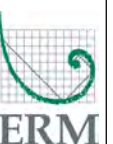
Drawing Size: A4
Reviewed By: IB

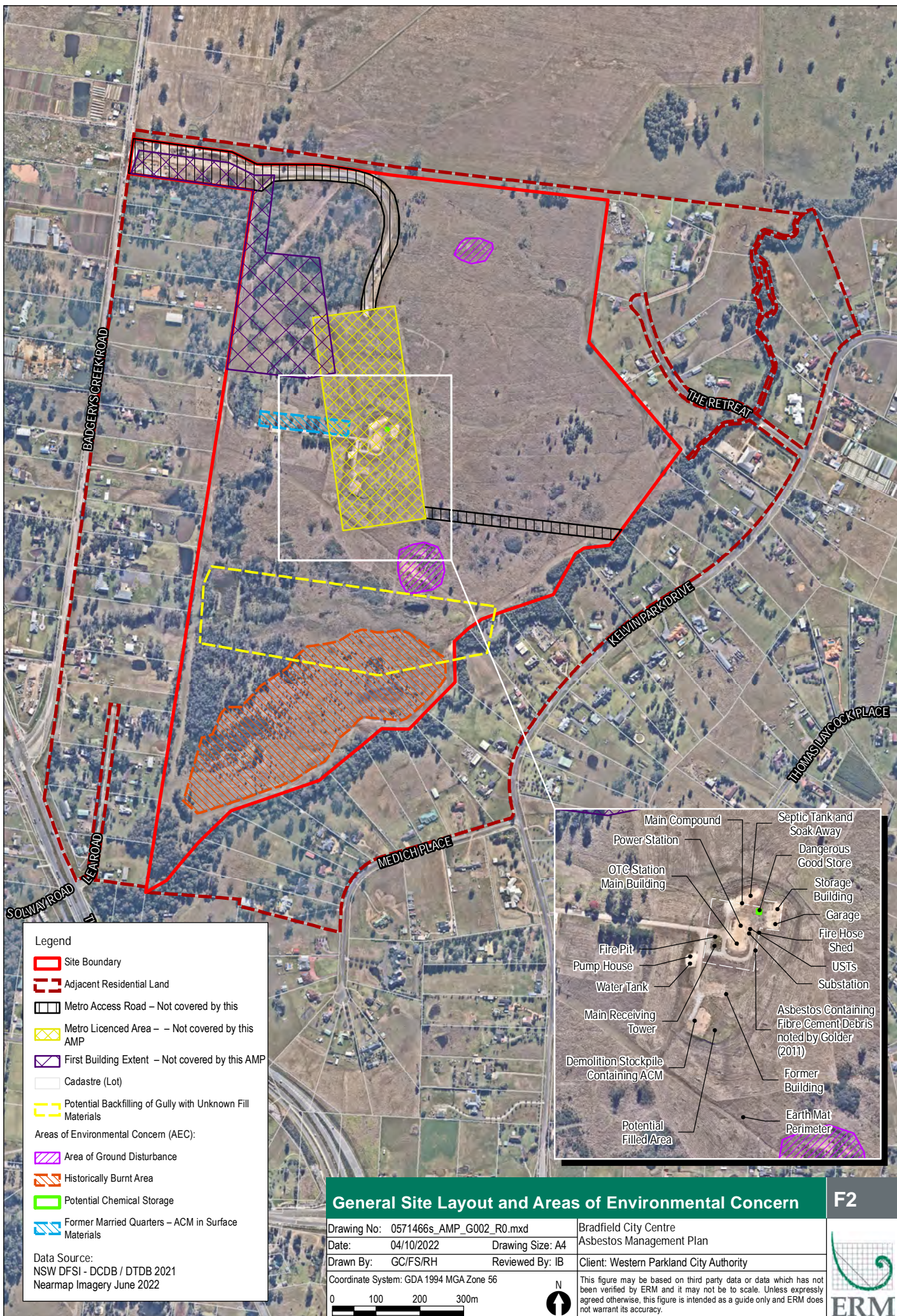
Bradfield City Centre
Asbestos Management Plan
Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.



F1





Legend

- Site Boundary
- Adjacent Residential Land
- Metro Access Road – Not covered by this
- Metro Licenced Area – Not covered by this AMP
- First Building Extent – Not covered by this AMP
- Cadastre (Lot)
- Potential Backfilling of Gully with Unknown Fill Materials
- Areas of Environmental Concern (AEC):
- Area of Ground Disturbance
- Historically Burnt Area
- Potential Chemical Storage
- Former Married Quarters – ACM in Surface Materials

Data Source:
NSW DFSI - DCDB / DTDB 2021
Nearmap Imagery June 2022

General Site Layout and Areas of Environmental Concern

Drawing No: 0571466s_AMP_G002_R0.mxd

Date: 04/10/2022

Drawing Size: A4

Drawn By: GC/FS/RH

Reviewed By: IB

Coordinate System: GDA 1994 MGA Zone 56

0 100 200 300m

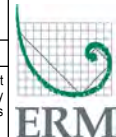


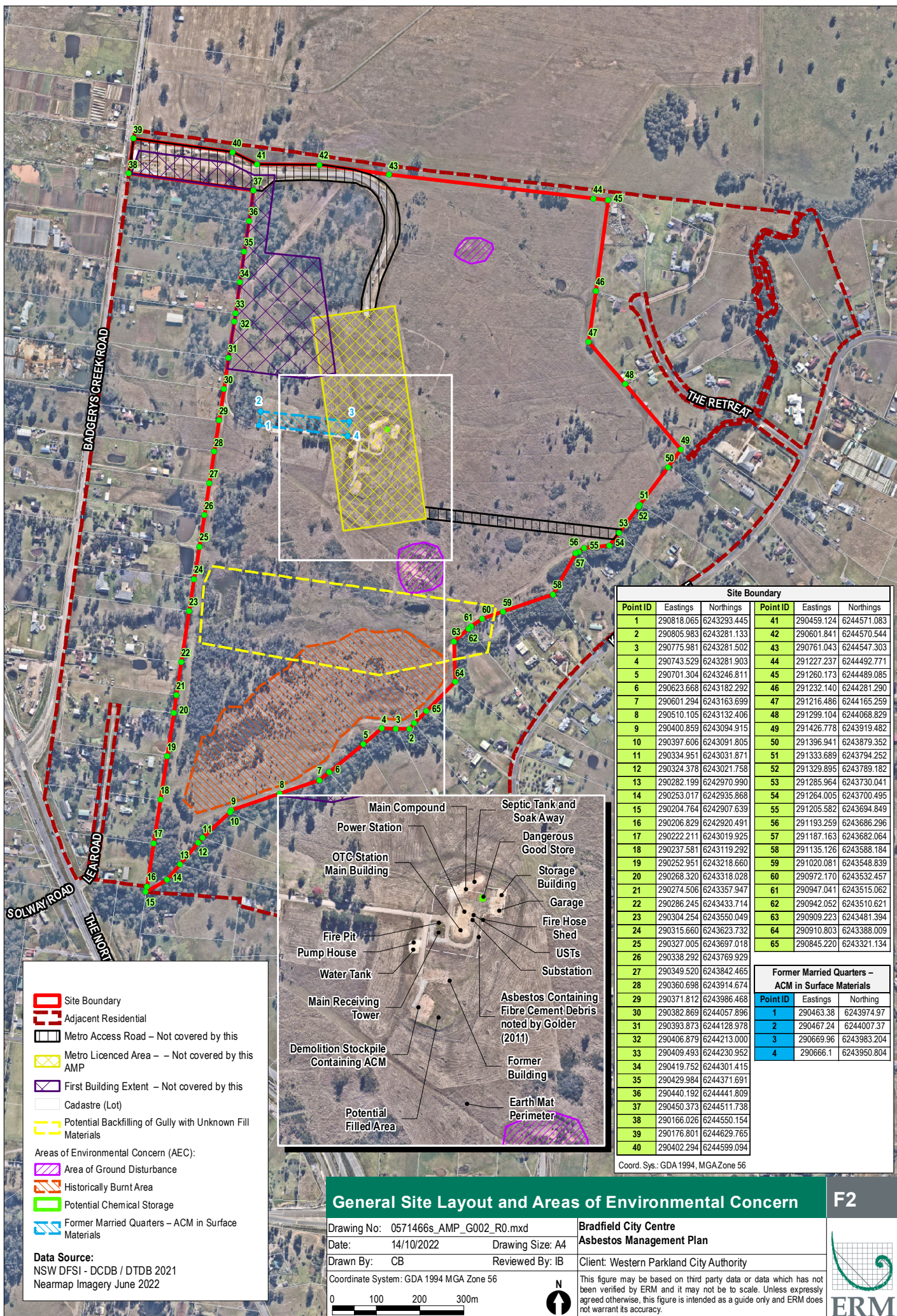
Bradfield City Centre
Asbestos Management Plan

Client: Western Parkland City Authority

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

F2





APPENDIX B

UNEXPECTED FIND PROTOCOL FORM AND REGISTER

UNEXPECTED FINDS PROTOCOL FORM EXAMPLE

To be completed by the Principal Contractor/Environmental Representative

SITE:

PERSONNEL ON-SITE:

DATE:

DAILY SUMMARY:

1. Suspect material encountered during daily activities: YES ☐ NO ☐
(if YES, complete 2 to 5)
2. Environmental Representative contacted: YES ☐ NO ☐
3. UFP Reference Number _____
(label occurrences sequentially 1, 2, 3, etc.).

DESCRIPTION OF MATERIAL ENCOUNTERED:

4. Asbestos or suspected ACM present: YES ☐ NO ☐
5. Brief written description of material:
6. Material isolated: YES ☐ NO ☐
7. Location of contaminated material (incl. field sketch/map if required):
8. Photographs taken: YES ☐ NO ☐

NAME:

SIGNATURE:

Unexpected Finds Register Example						
UFP No.	Date Found	Suspect Material	Description	Recorded on UFP Form	Action Taken	Status
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		

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