



Intended for
St Edward Homes Ltd

Project no.
1620000492

Date
10 August 2016

ASBESTOS MANAGEMENT PLAN

GREEN PARK VILLAGE – PHASE 5

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Revision History

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1. INTRODUCTION

1.1. Introduction

Ramboll have been instructed by St Edward Homes Ltd (St Edward) to advise on and provide watching brief role for the site enabling works, comprising obstruction removal and the construction of a clean working corridor for further works at the Phase 5 area, Green Park Village (GPV) site, Reading.

Previous ground investigations indicate the Made Ground soils with the western portion of the Phase 5 area are impacted with Asbestos Containing Materials (ACMs). Therefore, Ramboll have been tasked to produce this Asbestos Management Plan (AMP) contained herein, and produce watching brief to advise St Edward and their appointed groundworks contractor on industry best practice based on onsite observations.

The Asbestos Management Plan (AMP) developed herein has been completed in general accordance with Regulation 7, Control of Asbestos Regulations 2012 (CAR, 2012, 2012/632).

Locations in which Asbestos Contaminated Soils (ACS) have been encountered on the Phase 5 Site to date are shown on the Figure below, as of 7th July 2016 The plan is being continually updated and is therefore subject to change but also shows areas where ACS are provisionally presumed to be present.

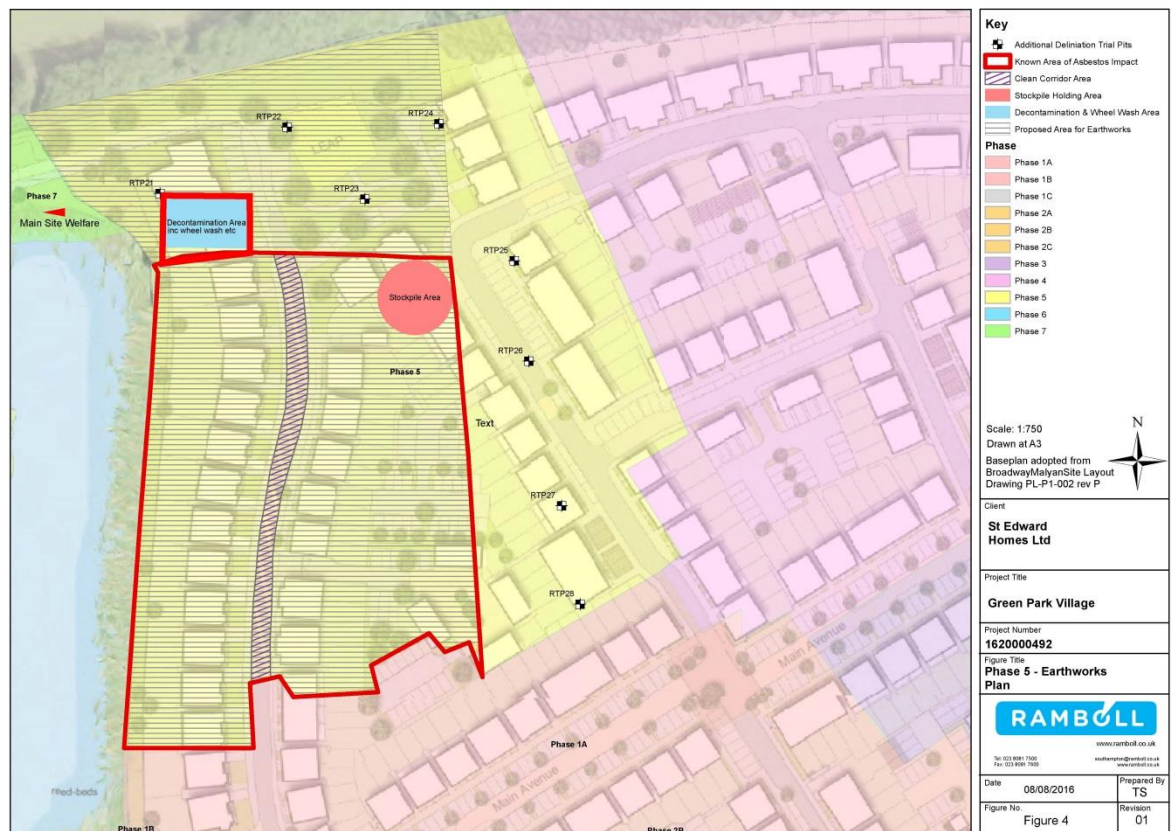


Figure 1: Location on Phase 5 Site where ACMs have been encountered to date, main working area, and delineation works area, and provisional location of clean corridors.

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1.2. Key Stakeholders

For ease of reference the following project stakeholders have been defined:

- **St Edward Homes*** – Main Client / Site Owner / Developer
 - *A joint venture between The Berkeley Group Holdings plc (Berkeley) and The Prudential Assurance Company Ltd (Prudential). Such the client is more commonly known as Berkeley and for clarity further referred to as **Berkeley**;
- **Ramboll** –Environmental Consultant & asbestos watching brief;
- **Competent Contractor [yet to be appointed]** – Principal Earthworks Contractor; and
- **Lucion Environmental Ltd** – Specialist Asbestos Contractor – Onsite Analysis;

1.3. Objectives and Purpose of Study

The Phase 5 site area is located approximately 4km to the south of Reading town centre Berkshire, located off Longwater Avenue in Green Park. The wider GPV site is intended for approximately 737 No. residential properties, including housing with both private and communal gardens, a school, retirement care home, community uses, commercial premises and public open spaces. The development also includes access roads and soft landscaping. Ground levels across the entire site are intended to be raised for flood alleviation purposes.

Within the wider site area, the site has been split into a number of phases, of which Phase 5 is planned to comprise residential housing with gardens, areas of soft landscaping and associated roads and infrastructure. Generally ground levels are proposed to be raised by approximately 1.0m to 1.5m above current levels under a Bespoke Environmental Permit ref EPR/DB3206HL.

Details of the Phase 5 and wider GPV site area including; site history, relevant potentially contaminative onsite activities, environmental setting and previous phases of ground investigation are provided with the reports detailed below:

- Green Park Village Ground Contamination Interpretative Report, Ramboll, March 2016; and
- Green Park Village Phase 5 Ground Investigation Findings and Remedial Options [DRAFT], August 2016.

As reported within GPV Phase 5 Ground Investigation Findings and Remedial Options (Ramboll 2016), large area of the Phase 5 site was found to be impacted with visibly discrete asbestos fragments across the majority of the site typically presenting as cement type materials with isolated asbestos insulation boards fragments. Residual asbestos fibres within the soil matrix were also identified across the majority of the site typically presenting as insulation/lagging type materials, cement type materials and loose fibres.

As part of the outline Remediation Strategy, it was proposed to undertake a further phase of delineation trial pitting and site enabling works which are to include **obstruction clearance works** within the onsite Made Ground soil areas and the **creation a clean corridor working areas** to aid further site development. The clean corridor working areas are to be created in the locations of the proposed roadways. In these locations material will be excavated to natural strata and to a width of 2m in the centre of the proposed roadways Following this a brightly coloured membrane separator is to be placed to the base and sides of the corridor and filled with material compliant with the bespoke environment permit .

The site enabling works are programed to commence on the 16th August 2016 and last for 2 No. weeks.

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This AMP has been prepared to address the risks associated with ACS in the Phase 5 area and to allow the site enabling works to progress in an appropriate and safe manner.

The wider site works, risks controls are more fully described in the Contractor Construction Method Statement and Risk Assessments (RAMS).

A competent Contractor is to be commissioned to undertake all of the enabling works to be carried out on site. This work also includes the removal of all hardstanding's, buried infrastructure and foundations. This document only considers the removal of such where they are in contact with ACS.

The anticipated programme for the remediation works in Phase 5 is circa 2 weeks and approximately 5 – 10 personnel may be employed at any one time on works that may include direct work with ACS.

A separate RAMS will be prepared by Ramboll for Ramboll site staff undertaking the watching brief role. Input to the Contractor RAMS is to be provided by Ramboll following incorporation of the requirements detained herein.

1.4. Report Structure

The report structure is as follows:

1. **Introduction** – provides background and consultant's brief for the project;
2. **Licensed / Unlicensed** – provides procedure for determining if work is licensed or unlicensed;
3. **Communication** – provides lines of communication throughout the Phase 5 earthworks process;
4. **Controls** – provides details on the control to be used during the Phase 5 earthwork;
5. **Management of Asbestos Waste** - details regarding final destination of asbestos impacted wastes;
6. **Reporting** – final reporting procedures; and
7. **References** -

1.5. Constraints and Limitations

This report has been prepared on behalf of Berkeley for the purpose of assisting them in the management of ACMs at the Phase 5, Green Park Village, Reading. This report shall not be relied upon by any third party unless that party has been granted a contractual right to rely on this report for the purpose for which it was prepared.

This report has been prepared in accordance with current UK guidance.

The findings and opinions in this report are based upon information derived from a variety of information sources. Ramboll believe these information sources to be reliable. This review has been prepared on the basis of the above information. Ramboll cannot accept any liability for the accuracy or otherwise of any information derived from third party sources.

It should be noted that some of the aspects considered in this study are subject to change with time. Therefore, if the development is delayed or postponed for a significant period, a review should be completed to confirm that no changes have taken place, either at the site or within relevant legislation.

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2. LICENSED / NON LICENSED WORK

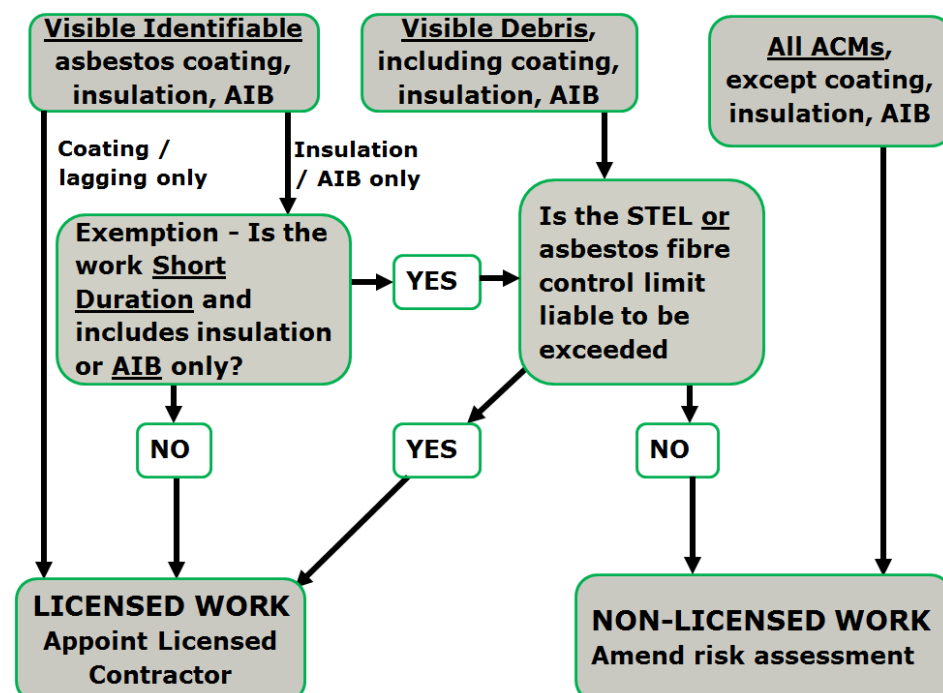
2.1 Status of Work

As reported within GPV Phase 5 Ground Investigation Findings and Remedial Options (Ramboll 2016) regarding the type and condition of the ACMs present on site. It is anticipated that the Ramboll watching brief during the enabling will be categorised as unlicensed work.

Figure 2.1 below shows the procedure to determine if the work is Licensed or Unlicensed and Figure 2.2 shows the procedure to determine if the work is Unlicensed or Notifiable Unlicensed work.

Note for the purposes of the decision making process at the Phase 5 site the following comments are made:

- Following a review of the Phase 5 area ground investigation onsite asbestos air monitoring results, the types of ACM/ACS expected and the assumption that the control specified control measures are implemented that the short term exposure limit will not be exceeded (STEL).
- The ACM recorded within the Phase 5 ground investigation were **not** noted to be degraded and the expected site activities are not expected to significantly induce any deterioration.
- 3No. isolated visible fragments of asbestos insulation board (AIB) were encountered during the site works and this isolated occurrence is considered not to represent the wider site conditions;]
- However, should further fragments of AIB material be encountered, it is likely that localised areas of the Phase 5 area may be categorised as Notifiable Non Licensed Works or if significant fragments of AIB or lagging type materials are encountered then the work will be categorised as Licenced Works and notification would and other mandatory actions would apply.



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Figure 2.1 Flow Chart to Determine Licensed vs. Non Licensed Work

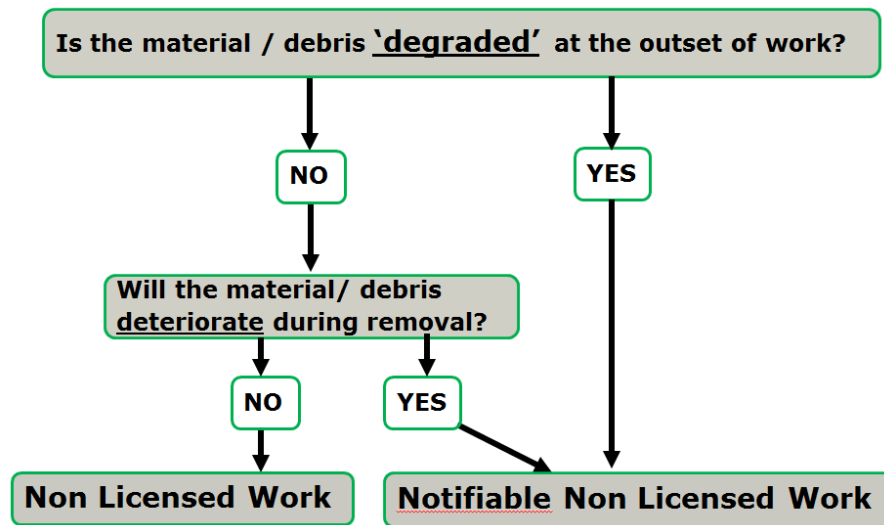


Figure 2.2 Flow Chart to Determine Unlicensed vs. Notifiable Non Licensed Work

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3. COMMUNICATION

3.1. Chain of command

The following lines of communication have been established:

1. **Berkeley** Homes - Client and Principal Contractor;
2. **Competent Compactor [to be appointed]** – ground workers/plant operators;
3. **Ramboll** – Consultant for Berkeley & watching brief role;
4. **Lucion** Environmental – asbestos air monitoring analysis (report to Ramboll).

This AMP must be communicated to those undertaking the work and those that may be affected by the works. This communication can be sub-divided into internal and external parties.

Internal Parties are those individuals that will actually undertake work with ACS, namely, Ramboll watching brief supervisor, Contractor Banksman and excavator operators etc.

External are those parties that may be affected by the works. These will include other trades working on the wider site. Due to the controls and proximity to any other potential receptor beyond the site boundary, public consultation is not considered necessary.

This document should also be submitted kept with the H&S File managed by the Principal Contractor so that it can be presented to the local authority (Environmental Health or Contaminated Land Officer) for information if requested.

3.2. Internal

This document must be available for inspection and reference by all personnel employed to actually undertake work with ACS namely, Ramboll watching brief supervisor, Contractor Banksman/ Plant operators, and Lucion analysts. Therefore, **a hard copy must be maintained on site at all times.**

Prior to the main works with ACS, all personnel must be inducted and briefed on this document, and be provided with an opportunity to ask questions or make comment. They must then sign to say that they have received induction, been talked through and understand, this document.

In the event that this document is reviewed, then details of the review must also be similarly communicated.

3.3. External

An overview of the works and controls should be communicated to all personnel involved in the enabling works in the Phase 5 area. This could be achieved through a presentation to senior site based personnel for Berkeley Homes and the Contractor who could then disseminate the information to other interested parties in an appropriate manner. This should also include other trades employed at the site.\

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4. WORKING METHODOLOGY AND CONTROLS

4.1. Working Scenarios

Three scenarios exist for work in the Phase 5 area:

1. Standard enabling work provided by the Contractor contracted works – where ACMs are not expected (*i.e.* in areas where delineation exercise has demonstrated that there is no impact by asbestos or areas as yet investigated).
2. Excavation where ACMs have been observed but condition is considered to constitute Non Licensed Work which also is not notifiable work; and
3. Excavation where ACMs have been observed and condition is considered to constitute Licensed Work or Notifiable Non Licensed work.

Note for the proposed asbestos delineation works it is considered prudent to assume that scenario 2 would be most appropriate. Under CAR 2012, this assessment needs to be continually reviewed by Ramboll watching brief personnel in conjunction with all parties.

During the creation of the clean corridor working area, where there is potential for ground workers to come into contact with or disturb ACS then scenario 2 will apply.

Whenever stockpiles of material are created onsite, e.g. concrete obstruction prior to removal for crushing, it is recommended that a visual inspection of these materials is undertaken by the Watching Brief to assess for the presence of visible ACMs or potential ACS.

An overview of the Methodology and controls is given in Table 4.1 below.

Table 4.1 Overview of Control Measures

Methodology	Responsible Party	Control Measures
Watching Brief	Ramboll	Trained and competent person to assess contaminated soils during the excavation process.
Air monitoring	Lucion Environmental	Independent air monitoring to be conducted around the Phase 5 site to provide quantitative data with respect to fibre suppression mitigation measures. To include boundary, operational and personal air monitoring.
Controlled Earthworks and site quarantine	Contractor	Impacted area fenced off, adequate signage provided.
Dust suppression	Contractor	Dust suppression will be required in all areas of excavation. Dust suppression method shall be dependent on available water supply, but as a minimum will comprise low pressure jet-washers with bowzers in each of the areas in which Ramboll personnel are working. Dust suppression to be the responsibility of the Contractor personnel.
Movement of	Contractor	Implement Contractor Materials Management Plan (MMP) to control the movement of

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Methodology	Responsible Party	Control Measures
impacted soils [If required]		asbestos contaminated soils. Contaminated soil movements further outlined if required.
Movement of non-impacted materials [e.g. concrete obstructions for crushing],	Contractor	Adherence to MMP for all material movements. Inspection of stockpiles prior to movement by Watching Brief for the presence of visible asbestos. Following processing of materials further testing recommended.
PPE	All parties	Use appropriate PPE at all times: - Washable safety boots or a dedicated pair of safety boots for the 'dirty' side of the decontamination unit; - Disposable gloves and Category 3 Type 5/6 Tyvek disposable hooded overalls; - Face Fitted Respirators EN140 with P3 filter, semi-disposable respirators – EN405 with P3 filter

4.2. Proposed Methodology for ACM management in Phase 5: STANDARD EXCAVATION

Ramboll Role

Ramboll will provide one **competent** and trained asbestos operative as a watching brief for Contractor to undertake watching brief of any excavation or enabling works within Made Ground soils (where required). Ramboll are to provide an indication to Berkeley if Made Ground soils have the potential to contain ACMs.

Note it is *not considered likely* that all excavation or enabling works within the Phase 5 area will require Ramboll Watching Brief role.

Ramboll operatives to take ownership of the watching brief on behalf of Contractor to **visually assess Made Ground** for the presence of ACMs during excavation works.

Due to the recorded presence of ACM within the Phase 5 site area it is recommended that **Lucion Environmental** to provide asbestos analyst throughout 2 No week programme of works for **background air monitoring** (monitoring adjacent to the excavation and at perimeter) and personal monitoring (Note Lucion Environmental can analyse up to 12No. samples per day and only two of these samples will be from personal monitors) – Ramboll to review and collate this data.

Berkeley and Ramboll to decide on a daily basis best course of action with regards to placement of static and personal monitors (*i.e.*, plant operators and static points dependent on works location).

Asbestos air monitoring is recommended when any ACS are to be worked, i.e. subsequent works following this initial 2 No. week programme.

Ramboll operatives to provide constant site presence during intrusive works to assess potential impacted soils (where required) and provide feedback to the Contractor supervisor.

Where asbestos is not suspected – enhanced PPE is not required.

While not required, in soils not suspected of containing ACM, **adequate dust suppression methods is recommended** and should comprises as a minimum jet-washers with bowzers to be in operation in each of the working areas.

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If ACM material is identified by Ramboll personnel, excavation works to cease immediately and Ramboll to assess material type with regards to licensable / un-licensable / notifiable works – refer to Flow Chart Guide – see **Section B**;

Outcome of above assessment to provide next actions:

- Works are non-notifiable non-licensed – Ramboll take ownership – refer to Flow Chart Guide provided – Appendix B;
- Works are notifiable non-licensed – Ramboll take ownership but consult and agree with Berkeley – refer to Flow Chart Guide provided – Appendix B;
- Works are notifiable and licensed. Area quarantined, licensed asbestos contractor contacted. Contractor to erect localised barriers and erect signage and control access to area.

4.3. Proposed Methodology for ACM management in Phase 5: NON-NOTIFIABLE UNLICENSED WORK AND NOTIFIABLE UNLICENSED WORK

Once ACM has been observed and the work falls into NON Notifiable Unlicensed or Notifiable Unlicensed work then works can proceed as per best practice given below. As discussed above, due to the presence of ACM and fibres within the soil, site works within the impacted Phase 5 area are initially classified as Non Notifiable Unlicensed Works

NOTE the only exception is that if work is Notifiable then the HSE must be notified and all operatives require a health screening assessment before work can continue.

Working procedure and PPE precautions MUST be as standard:

PPE to include:

- Washable safety boots or a dedicated pair of safety boots for the 'dirty' side of the decontamination unit;
- Disposable gloves and overalls (Type 5,6 Tyvek disposable overalls); and
- Face Fitted Respirators EN140 with P3 filter, semi-disposable respirators – EN405 with P3 filter - .

Procedures to include:

- **Ramboll** to confirm that air monitoring results demonstrate no exceedences of fibre target levels – defined below;
- **Ramboll** to ensure area is cleared of all personnel except Contractor operatives – *i.e.*, plant operators and Banksman;
- Area to be fenced off by **Contractor**;
- **Ramboll** to confirm any operatives working within the asbestos impacted area to be trained and competent (including Banksman and excavator operator);
- **Ramboll** to record daily excavation/enabling works and note location of ACM impacts annotated on site plan and photographic log;
- **Contractor** to confirm correct PPE and RPE is being worn by their staff (Banksman, excavator driver and dust suppression operative) – as stated above;
- **Ramboll** to confirm personal air monitors have been issued to all staff involved in excavation (to be provided by **Lucion Environmental**, up to 2 No. tests in total per day);
- **Ramboll** to confirm static air monitoring have been put into correct positions (adjacent to excavation and perimeter monitoring – Lucion Environmental);
- **Ramboll** to confirm adequate dust suppression equipment has been mobilised to correct areas;

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- Area to be doused in water and jet-wash with mobile bowser to be used to provide continuous misting to working area prior to commencement of works (**Contractor** personnel);
- Working areas to be kept to a minimum, as to allow for dust suppression measure to saturate the soils accordingly;
- **Contractor** to stop works intermittently to allow Ramboll operatives to assess working area and determine whether quantity and type of visible asbestos;
- During the enabling works following obstruction clearance works, **Ramboll** operative will check for the presence of surface impacts by ACMs. If visible ACM are of sufficiently low volume and not high risk materials then *limited* hand picking may occur, where Ramboll will then double bag the ACM (swan neck tied, tapping etc.) and remove to a lockable skip contained within the wider GPV area
- Should high volumes be encountered, localised covering with loose soils are recommended to minimise potential further risks.
- **Ramboll** to reassess risks to operatives (review air monitoring data) and assessment of control measures and determine whether further works are to continue;
- When only occasional ACM fragments remain, **Ramboll** will then hand pick and double bag the ACM (swan neck tied, tapping etc.) and remove to a lockable skip contained within the wider GPV area;
- **Ramboll** to confirm working areas are clear of visible ACMs at the surface and to record such by annotating the Asbestos Location Plan, or a blank site plan with grid lines. Confirmation that the area is considered to be clear of visible ACMs at the surface to be provided verbally to Contractor personnel;
- **Contractor** to wash down excavator vehicles / equipment as part of decontamination procedures; and
- Personal decontamination to be undertaken via decontamination unit (where required);
- **Ramboll** to place their own used PPE in red asbestos waste bag whilst still inside 'dirty' end of decontamination unit; subsequent double-bagging, swan necking and taping, etc., can be done elsewhere if preferred. Bagged waste to be placed in lockable hazardous waste skip located in the wider GPV site.

4.4. Proposed Methodology for ACM management in Phase 5: LICENSED EXCAVATION

When there is visual evidence of asbestos lagging, insulation or AIB which is in a degraded form, then the work will be considered to be **LICENSABLE** work.

Ramboll operatives will stop the work and ensure that the area is cleared of all personnel except **Contractor** operatives who will erect a fence and quarantine area.

Berkeley will erect additional signage and control access to area and take control of this location from Contractor. Where upon a Licence Asbestos Contractor should be contacted to undertake site works.

Also, if the ACM material cannot be identified but is in a friable form, then until laboratory testing confirms otherwise, a worse case condition will be assumed and the work will be deemed to be LICENSABLE.

4.5. Air Monitoring Control Limits

The following legal definitions apply to air monitoring control limits:

The legal control limit for asbestos is 0.1 fibres per cubic centimetre of air (0.1f/cm³) over 4 hours;

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Short duration work is defined as when working with the ACS will not take more than 2 hours in any seven day period and no one person works for more than one hour in that two hour period; and

Sporadic and low intensity work (SLIW) is when the concentration of asbestos fibres in air should not exceed $0.6f/cm^3$ over 10 minutes.

4.6. Asbestos Plan of Works Schematic

A Asbestos Plan of Works Schematic drawing has been produced in order to comply with the requirement of CAR 2012 regulations. This document is live and subject to revisions based on on-site observations and analysis. The Asbestos Plan of Works Schematic is provided within Appendix C.

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5. MANAGEMENT OF ASBESTOS WASTE

5.1. ACM Impacted Soils

Ramboll understand that no removal of potentially ACM impacted soils are planned during the GPV Phase 5 site works. As such this document would require updating in the event of deviation from this.

5.2. Waste PPE

Used sheeting, PPE, wipes and Tack rags should be disposed of as asbestos waste. Used PPE (suits/gloves) will be double bagged, swan necked and taped and placed in a lockable hazardous waste skip located in the GPV site area. The placement of used PPE into the first [red] bag will take place in the 'dirty' end of the decontamination unit. The subsequent double bagging can then be done elsewhere if this is preferable.

5.3. Waste Consignment Notes

Waste Consignment Notes for the asbestos impacted material removed from site will be managed by Contractor/Berkeley.

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6. REPORTING

On completion of the works, a brief report should be compiled by Ramboll to confirm what works have been completed in terms of asbestos remediation works. As part of the Phase 5 works an Environmental Verification Report is to be prepared by Ramboll as part of its wider Project Environmental Consultant role. This verification report will also constitute a verification report for the MMP.

With regards to the asbestos contamination on and as a minimum, the report should include the following:

- i. Re-assurance monitoring records;
- ii. Daily log/diary of completed works;
- iii. Duty of care and consignment notes;
- iv. Any additional testing data;
- v. Confirmation of any major review of the AMP;
- vi. Records of communication / consultation;
- vii. Date and duration of the works;
- viii. As-built drawing showing area and depth of any ACS removed and area and depth of ACS reused;
- ix. Copy of the notification to the HSE (if required);
- x. Photographs of the works especially those showing the controls in place;
- xi. Any other relevant information.

The aforementioned report should be used by the duty holder to update the asbestos written plan and site asbestos register as detailed in Regulation 4 CAR 2012.

All documentation generated as a result of Ramboll watching brief works are to be collated and provided to Berkeley for inclusion in the Berkeley asbestos on site hard copy file.

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APPENDICES

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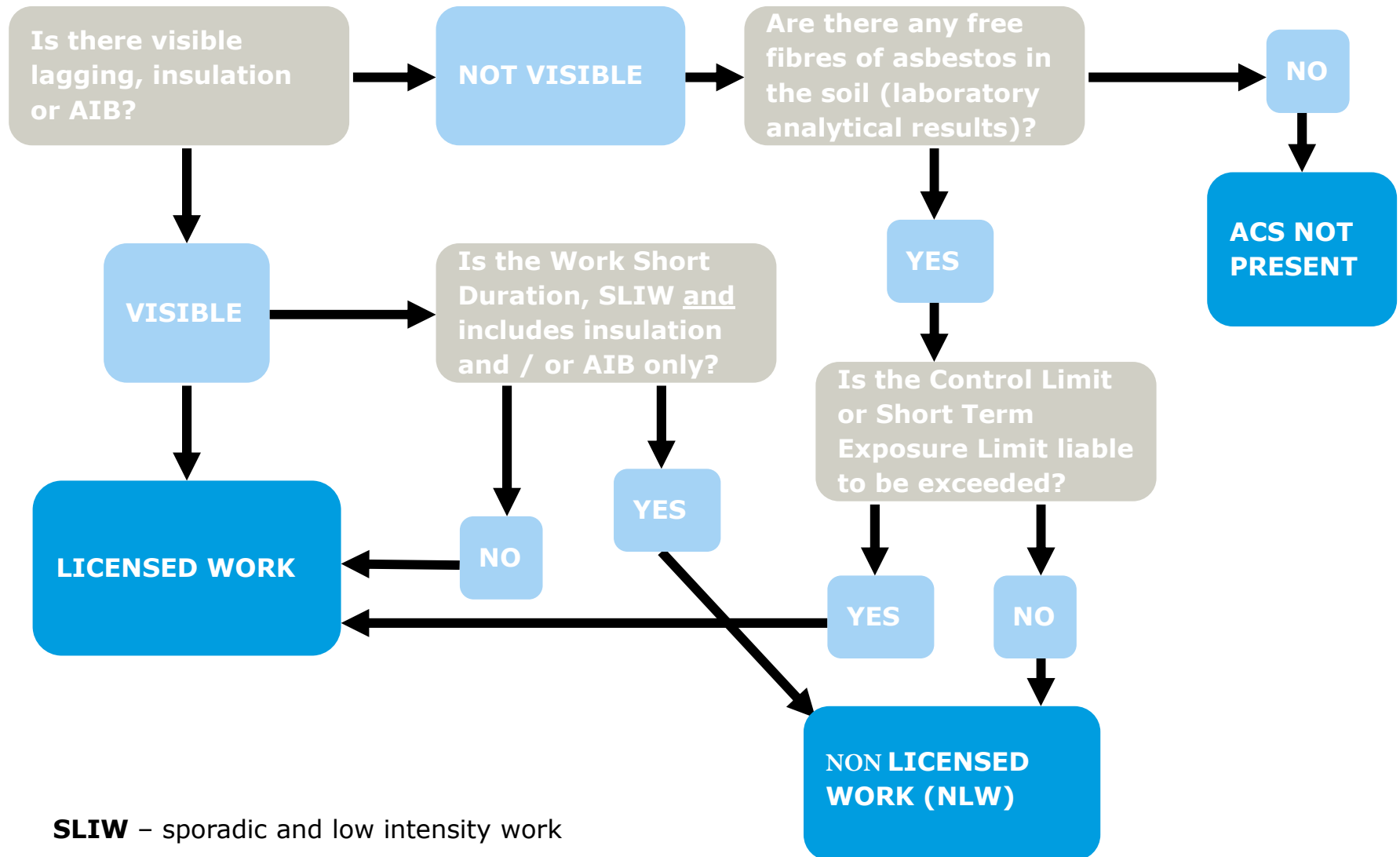
APPENDIX A:

**CONTRACTOR CONSTRUCTION PHASE 5 SAFE SYSTEM OF WORK
METHOD STATEMENTS [APPENDED UPON RECIEPT]**

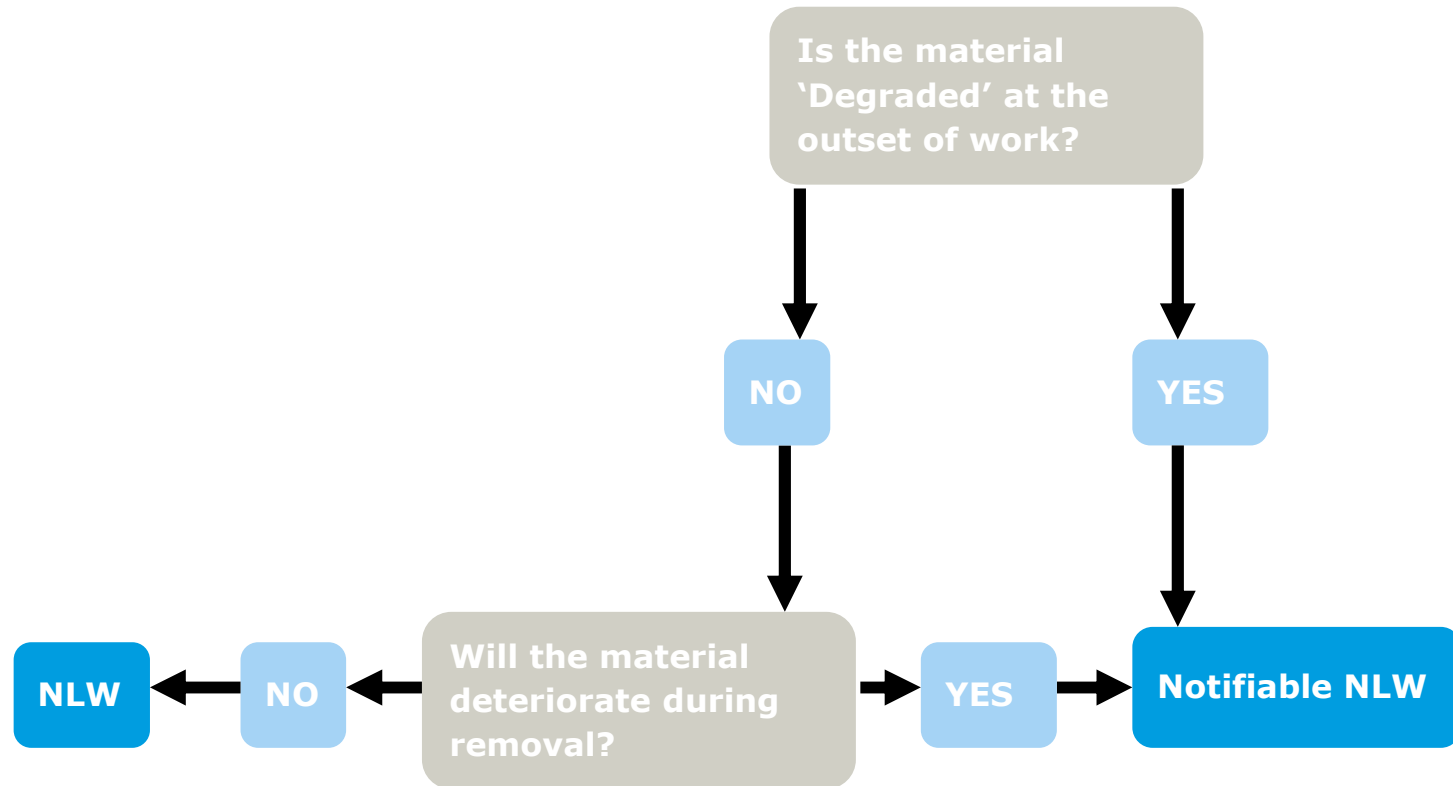
**ASBESTOS MANAGEMENT PLAN
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**APPENDIX B: FLOW CHART TO ASSESS LICENSABLE OR NON
LICENSABLE WORK**

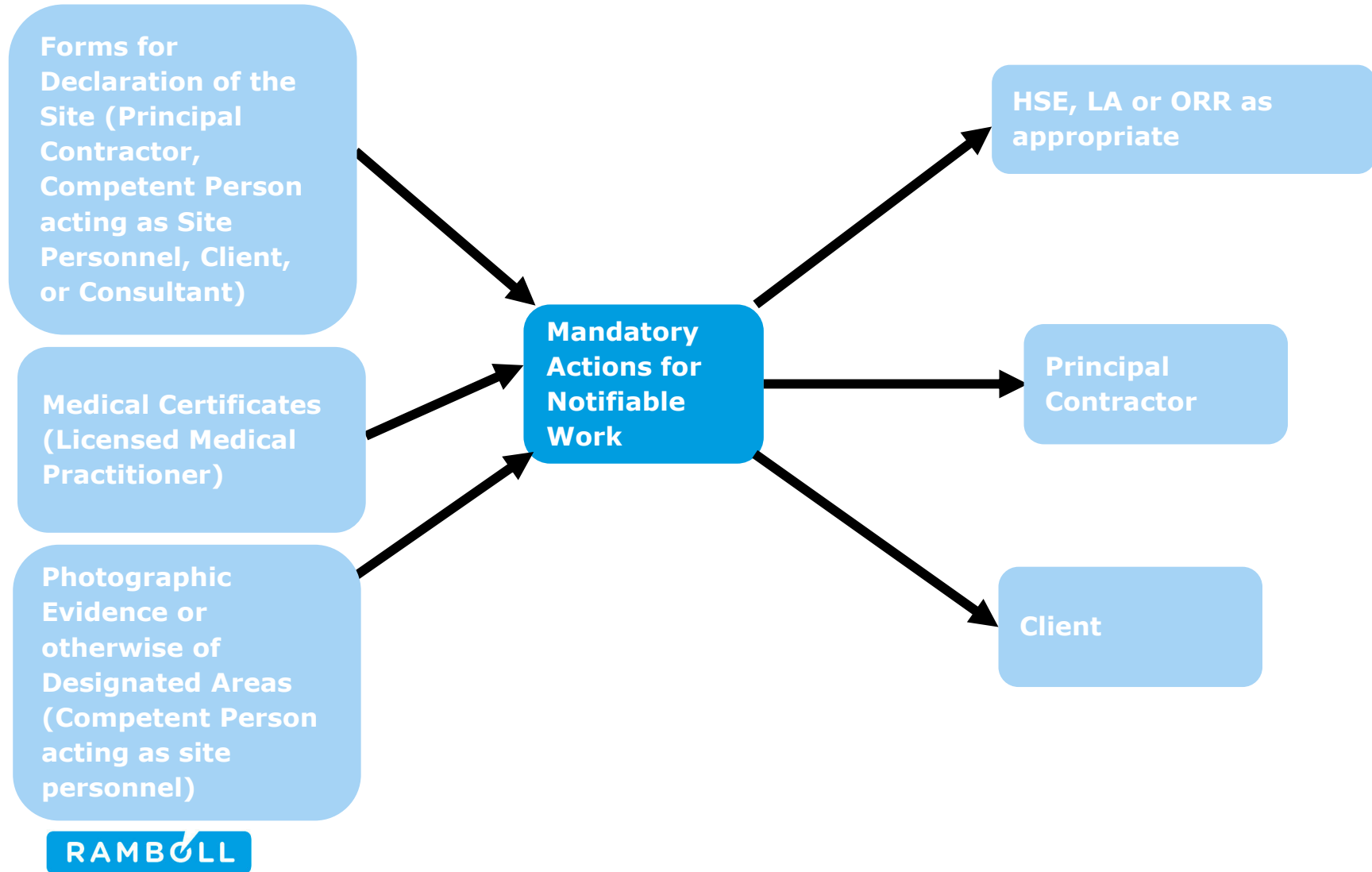
LICENSED VS UNLICENSED



UNLICENSED WORK (NLW) VS. NOTIFIABLE UNLICENSED WORK (NNLW)

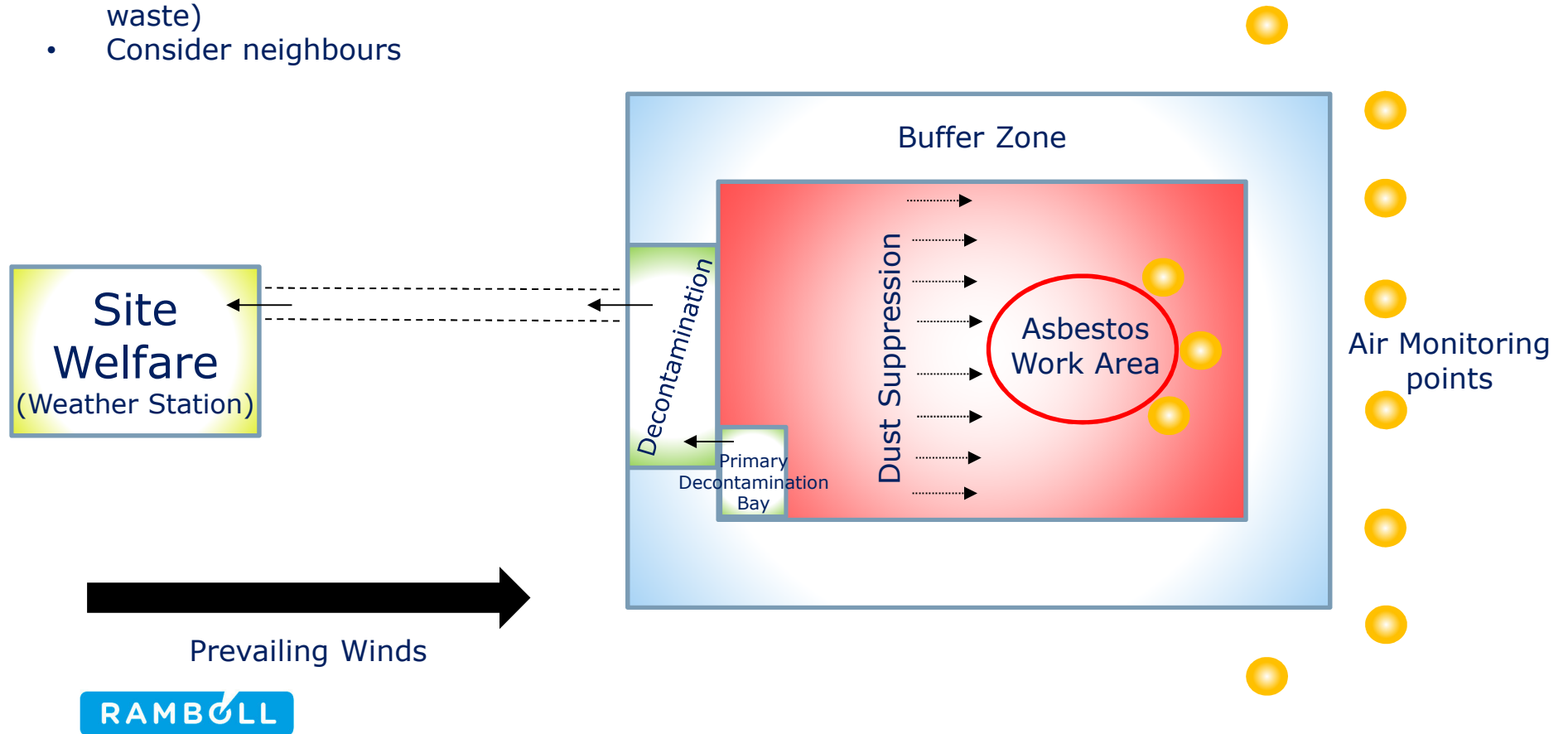


MANDATORY ACTIONS FOR NOTIFIABLE SITE PASSAGE OF INFORMATION



BEST PRACTICE SITE LAYOUT AND CONTROL MEASURES

- Prevailing wind direction (Westerly)
- Welfare set-up
- Fence off asbestos impacted areas
- Allow for 'buffer zone' if possible
- Consider traffic management (esp. waste)
- Consider neighbours



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APPENDIX C -ASBESTOS PLAN OF WORKS SCHEMATIC

Scope of Works

Delineation of asbestos impacted area (1 day).
Obstruction clearance works within exclusion zone, and removal of this material to onsite earthworks facility.
Creation of clean service corridors approx. 2m wide and 2m deep.

All works shall be undertaken in accordance with Ramboll Asbestos Management Plan (2016).

Areas of Responsibilities

- Overall Site Management – Berkeley
- Watching Brief Role – Ramboll.
- Plant Operations – Woodridge
- Dust Suppression – Wooldridge (directed by Ramboll)
- Air Monitoring – Lucion (directed by Ramboll)

Sequence of Work

- Day 1 - Pre start background air monitoring
 - Placement of decontamination equipment
 - Delineation trial pitting exercise.
- Day 2+ Obstruction clearance works & creating clean corridor.
- End - Remove all equipment & waste. End of programme air monitoring.

Specific Working Area

Hard barriers will demark the site wide working area.
Additional hard barriers will demark decontamination areas.

Specific Site Set-up Requirements

Self-contained DCU to be positioned close the active working area in designated decontamination area.

Air Monitoring Requirements

- Background
- Operational
- Personal

Site Address:

Green Park Village, Phase 5, off Longwater Avenue, Reading. RG30 3RU

Aerial View of site - before clearance works showing approximate working area.
For operational areas including exclusion zone see Ramboll Drawing: Earthworks Pan 01



Working Exclusion Zone for Controlled Works (Provisional)
Within the Asbestos Removal Zone – Full PPE/RPE is required at all times, i.e. overalls and respirator.

Within Decontamination Area – Full PPE/RPE required while undertaking any actives. i.e. changing waste bags/ decontaminating plant.

Your mask is always worn first and removed last.

Client Contact Details:

ANDREW WEST Senior technical Manger, Berkeley Homes
07590 672 701

Principal Designer Details

To be confirmed by Berkeley Homes

Principal Contractor Details

To be confirmed by Berkeley Homes

Programme of Works Dates

16th – 31st August 2016

Working Hours

08:00 – 17:00

Working Hours

To be confirmed by Berkeley Homes

Access Arrangements

To be arranged by Berkeley Homes

Fire Risk Precautions

Suitable & sufficient firefighting equipment to be supplied around the site by Berkeley Homes, including first aid box within both dirty and clean end of decontamination area.
Emergency muster points and procedures to be communicated during site induction.

RPE & PPE Requirements

Full and up to date details contained with Ramboll Asbestos Management Plan (AMP)
Hard copy to be maintained on site at all times.

- Requirements include:
- Washable safety boots or a dedicated pair of safety boots for the 'dirty' side of the decontamination unit;
 - Disposable gloves and overalls (Type 5,6 Tyvek disposable overalls); and
 - Face Fitted Respirators EN140 with P3 filter, semi-disposable respirators – EN405 with P3 filter.

Welfare Facilities

Located within Phase 7 area to the west of Phase 5.



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Outline Method of Works

Site works to be undertaken in accordance with Ramboll Drawing: Earthworks Plan 01

Outline method comprising:

- Shallow trial pitting with tracked 360 excavator and Watching Brief .
- Obstruction Removal with upto 2No. Tracked 360 excavators digging into Made Ground Soils (approx. 1.5mbgl).
- Localised excavation / profiling to create 2m wide clean corridors down to natural soils
- Limited surface handpicking of ACM is considered necessary by Ramboll

Formation Of Working Area.

The site works shall comprise the formation of a two distinct areas; The **WORK AREA** and an **EXCLUSION ZONE**.

The **EXCLUSION ZONE** shall be established by the use of physical barrier positioned around the access point to the work area. This area will form the **DECONTAMINATION AREA** and house the DCU, boot wash and wheel wash facilities. In this area operatives change will change into or out of white work overalls and where necessary carryout the clear bagging of asbestos wastes. When undertaking wheel washing or boot washing etc white overalls and specified RPE are to be worn.

The **WORK AREA** is a respirator zone at all times, for all operatives. Where necessary where asbestos removal and bagging in red bags is to be undertaken in this area only. All access points are to be controlled and for access on foot limited to one way in and out of the work area, i.e. in and out of the DCU. Warning signs are to be attached to the barriers warning of the exclusion zone.

Control Measures – to be in accordance with Ramboll AMP at all times

Watching Brief - Trained and competent person to assess contaminated soils during the excavation process.

Air Monitoring - to provide quantitative data with respect to fibre suppression mitigation measures. To include boundary, operational and personal air monitoring.

Controlled Earthworks - Impacted area fenced off, signage provided.

Dust Suppression - Dust suppression will be required in all areas where Made Ground soils are disturbed. Dust suppression shall as a minimum comprise jet-washers with bowzers in each of the areas in which Ramboll personnel are working.

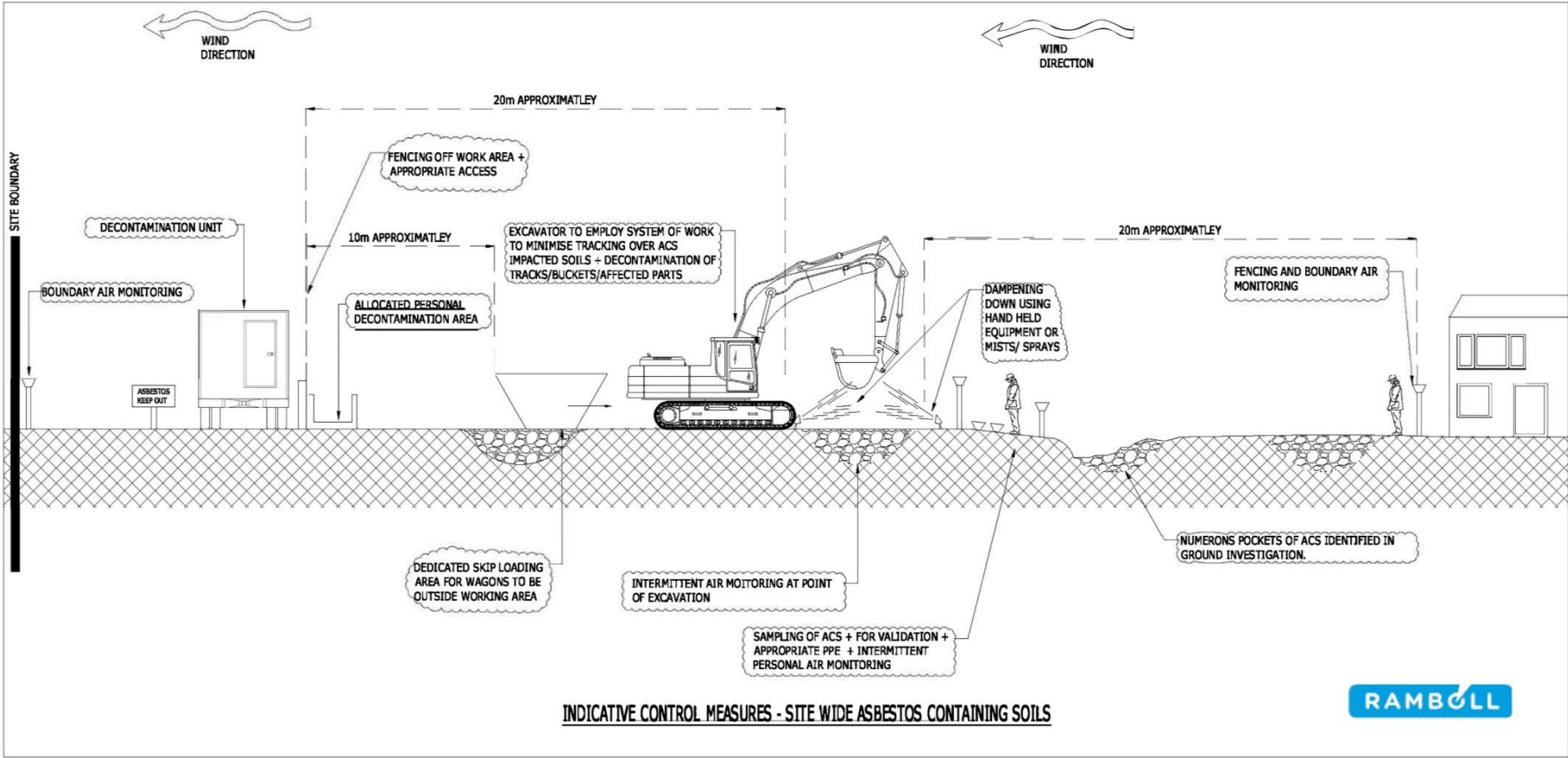
Movement of impacted soils [If required] – further controls required, See AMP for revisions.

Movement of Non-Impacted Materials [e.g. concrete obstructions for crushing] - Adherence to MMP for all material movements. Inspection of stockpiles prior to movement by Watching Brief for the presence of visible asbestos.

PPE/RPE - Use appropriate PPE at all times:

- Washable safety boots or a dedicated pair of safety boots for the 'dirty' side of the decontamination unit;
- Disposable gloves and Category 3 Type 5/6 Tyvek disposable hooded overalls;
- Face Fitted Respirators EN140 with P3 filter, semi-disposable respirators – EN405 with P3 filter.

Indicative Control Measures – Schematic View



INDICATIVE CONTROL MEASURES - SITE WIDE ASBESTOS CONTAINING SOILS



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Pre-Start Check List:

Does the Plan of Works reflect current site conditions or are amendments required?

☐ Yes ☐ No

Have you briefed all site personnel on the contents of this plan of Works, and the Ramboll Asbestos Management Plan?

☐ Yes ☐ No

Are any additional permits required:

☐ Yes ☐ No

Please Detail _____

Has the DCU been set up and tested?

☐ Yes ☐ No

Have all site personnel inspected and tested their PPE?

☐ Yes ☐ No

Have the working areas been formed in accordance with this working plan?

☐ Yes ☐ No

Has all site documentation been completed prior to commencement of site works?

☐ Yes ☐ No

This Plan of Works must be read and applied in accordance with any HSE Notifications (if applicable), the Ramboll Asbestos Management Plan and the Wooldridge Site Specific Risk Assessment and Method Statements.

I confirm I have read and understood this Plan of Works			
Name	Company & Role	Date	Sign

Amendments to this Plan of Works may ONLY be made by Ramboll personnel following approval from Ramboll Site Solutions Director – Phil Studds (Phil.Studds@Ramboll.co.uk / 07931 709943)

All changes must be communicated to site personnel by delivery of a tool box talk.

Ramboll Emergency Contact Details			
Role	Name	Telephone No.	Times on Site.
Ramboll Asbestos Site Works Co-Ordinator/Watching Brief	Chris Dawson	07870 810911	At all times (unless delegated to approved persons)
Environmental Project Manager	Tom Smith	07918 678240	Pre-commencement / start of work
Ramboll Site Solutions Director	Phil Studds	07931 709943	Office based / audit / on call advice
Ramboll HSE Manager	Rod Pirie	07834 101118	Office based

Waste Disposal Arrangements

Waste to placed in red bags, sealed and placed in white bags and further sealed before placed in lockable asbestos waste skip.

Waste to include - any handpicked ACM, used PPE/RPE etc.

Bulk asbestos impacted soil to be address under separate cover if required.

Waste Carrier

XXXX

Waste Receiver

XXXXX

Prepared by: Chris Dawson Consultant



10/08/2016

Reviewed by: Phil Studds Director



10/08/2016

Approved by: Phil Studds Director



10/08/2016

Revision History		
Revision	Date	Sign
-	10/08/16	



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