DISCOVERY STRATEGY
REMEDIATION ACTION PLAN
&
VERIFICATION PLAN

Client	Bugler Developments Limited
Works	Discovery Strategy, Remediation Action Plan and Verification Plan
Site	Land at Otterfield Road, Yiewsley, UB7 9PE

Project	Version	Date
25-205.01	1	1 July 2025

SECTION 1

INTRODUCTION

1.1 Appointment

Aviron Associates Limited (Aviron) was instructed by Bugler Developments Limited (The Client) to prepare a Discovery Strategy (DS), Remediation Action Plan (RAP) and Verification Plan (VP) to be used to discharge the relevant pre-commencement land contamination planning conditions, and also to be used as a 'Site' document to be followed by site operatives.

This DS, RAP and VP is based on the contaminative risk assessment presented in the following report:

Geotechnical and Geoenvironmental Interpretative Report
Project number: GB866-GGEIR-MAR-2005
Dated: March 2025

1.2 Summary of Site Investigation

The aforementioned Geotechnical and Geoenvironmental Interpretative Report (GGEIR) summarises data from the recent site investigation along with several earlier Phase 2 intrusive ground investigations which have been undertaken since 2014 alongside a Phase 1 preliminary risk assessment (PRA) and PRA addendum letters.

A summary of the findings and recommendations from the GGEIR is presented below.

The site is recorded as open ground up to the time of the 1935 series OS map when an open swimming baths (or Lido) was constructed. By the 1960s a series of buildings were also recorded on the site. This configuration remained until the mid-1980s, at which point these buildings are replaced by an enclosed swimming pool structure located at the approximate location of the historical baths or lido. Further detached structures are also mapped on the northern portion of the site by the 1980s. Commercial activities are believed to have been carried out on the site including rubber and plastic manufacturing. A substation is also recorded on the 1973 OS map. The swimming pool structure was last recorded on the 2011 Google Earth image.

A total of thirty-eight (38no.) exploratory holes have been constructed on the site over a period of 11 years since 2014. Three investigations were undertaken by CET Infrastructure (2013 & 2014), CGL (2021) and GBCP (2024) with gas and ground water monitoring and sampling most recently completed in February 2025. The range of exploratory hole types chosen for the site include cable percussive (CP), dynamic cone penetrometer (DCP), inspection pits (IP), trial pits (TP) and trial trenches (TT), and has therefore enabled these different exploratory hole methods to provide a broad and detailed understanding of the ground conditions across the site.

Made Ground was identified across the site to a maximum depth of 2.2m below ground level (bgl), indicating areas of previously placed or disturbed materials. Analysis of shallow soils onsite, along with data from previous investigations, recorded exceedances of Polycyclic Aromatic Hydrocarbons (PAHs) that are recorded above the assessment criteria. No evidence of asbestos fibres or asbestos containing materials (ACMs) was found.

Given the site's intended end use, the contaminant concentrations require mitigate measures to reduce potential risks to human health and the environment. This can be achieved using soil capping layers in private gardens and landscaped open areas. Building footprint, roads and hardstanding will provide a physical barrier and break any pollution linkages between land contamination and humans and/or the environment.

A detailed remediation strategy should be developed to address the contamination and ensure the site meets regulatory standards for its proposed future use, which is the objective of this RAP.

Based on the review of the relevant findings of the ground investigation conducted by GBCP, the risk to the proposed development from ground gas is assessed as Very Low. The site can be classified as Characteristic Situation CS1 in accordance with BS8485. No gas protection measures are deemed necessary for the proposed development.

Chemical testing of groundwater was undertaken as part of the GBCP (2024) investigation The results of the chemical testing were screened against the assessment criteria for environmental quality standards and UK drinking water standards. No exceedances were recorded and no remedial measures are required for groundwater quality.

Given that contaminated material has been identified within shallow soils onsite, localised unforeseen ground contamination might be found during the construction works. A Discovery Strategy should also be prepared, which is herein.

This document shall provide method and guidance on to mitigate/remediate the risks presented by PAH soil contamination and the risk of discovered previously undiscovered contamination.

A selection of drawings are provided within **Appendix I**, which include:

1. **Figure 1** – Proposed Development Plan
2. **Figure 2** – Cover System Remediation and Verification Plan

As a result of the investigation and, given the sensitive new use of the site, remediation measures are recommended for this site.

1.3 Remediation Options Appraisal

New homes have gardens and amenity areas which are demarked upon **Figure 1** by green soft landscaping. To the frontage and around the parking bays of the new homes/development is soft landscaped public open space.

The pollutant linkage pathway to cause harm is considered to exist to site end users and construction/maintenance workers upon completion of the development.

The source of the soil contamination has been identified as PAH contaminated soils remaining in-situ. The routes of exposure are considered to be ingestion and inhalation (of dust) and dermal contact.

The routes of exposure that remain open could present a risk to human or plant health if not addressed.

Given the size of the site and the intended landscaping plan there are only two viable methods to break the pollutant linkage and achieve remediation. These are:

1. Encapsulation by means of permanent hardstanding.
2. Source removal and construction of an overlying Clean Cover System.

Given the proposals include a variety of gardens and areas of permanent hardstanding (building footprints) it is possible to use both methods by amending the proposals to ensure that the soils are suitable for use.

This RAP remains a live document throughout the construction process. It is intended for use by site personnel and subject to updates during constructions, as data becomes available.

1.4 Typical Remediation Sequencing

A summary of the environmental risks and corresponding remediation was presented in the SSI report. The summary was used as basis for the remediation and corresponding verification strategy of which a suggested sequencing so this document can be considered in the context of a turn-key solution can be considered; table 1.4 provides a summary of typical remedial sequencing.

Table 1.4: Remediation and Verification Sequences

Typical Remedial Action	Proposed Verification Action and Objective
Pre-Construction Consult local water authority prior to water main installation.	To ensure correct water supply pipe to provide wholesome water to new homes.
Pre-Construction Site induction of all operatives to familiarise with Discovery Strategy and flow-chart of **Appendix II** which should be affixed within the site office.	To ensure any previously undiscovered soil contamination is appropriately managed.
During Construction Construction of permanent hardstanding.	Action: Photography to evidence construction of permanent hardstanding. Objective: to break the pollutant linkage pathway with any residual contaminative soils beneath thus removing exposure risks to construction workers, end users and maintenance workers. Shall also provide a 'hard dig line' in which to construct soft landscaping cover system.
Final Stages of Construction Construction of soft landscaped cover system by removing in-situ soil within private gardens to 600mm below final levels and public open space to 300mm. Layering the formation at 600mm/300mm with a Hi-Viz Terram (or similar product) geotextile membrane to prevent soil mixing between native soils and 'clean' imported soils. Import of 600mm/300mm of 'clean' sub-soil and Topsoil to complete private gardens, as necessary.	Action: Photographs of soil removal works to necessary 600mm/300mm formation levels. Photographs of membrane laying. Photographs of importing of soils to landscaped areas. Samples of imported soils should be submitted for appropriate laboratory analysis to confirm chemical suitability. Once constructed hand excavation of post-holes to confirm soil quality within soft landscaped areas as shown in **Figure 2**, thickness of soil/cover system and presence of membrane; as secondary method of verification should aforementioned photographs be insufficient. Objective: to prove the construction and physical/chemical quality of the cover system.

SECTION 2

NEW WATER MAIN

During the early stages of design (and well in advance of installation) an application should be made to the local water authority in regard of new water supplies to new homes. The local water authority should be presented with the report referenced in section 1 to enable them to consider ground conditions and soil chemical quality in lieu of their specification for water main supply (pipe) materials.

It is the responsibility of the local water authority to ensure wholesome water is supplied to new homes as such they should specify the correct supply material prior to installation and connection to the main supply.

Empirical verification of the correct water main supply material is provided by a water source within buildings; written evidence can be provided with the enquiry and purchase order documentation.

SECTION 3

POST GROUNDWORKS SITE STRIP TO REDUCE GROUND TO FORMATION LEVEL

This section shall present a method for:

1. General contamination discovery and management.
2. Removal and inspection of the concrete slab and verification of the exposed formation following slab removal.

Should additional contaminative discoveries be made during the below works, the strategy shall require updating.

3.1 General Site Discovery Strategy

Whilst the investigations undertaken on the site to date have been as thorough as conditions allowed, it remains possible that previously unexpected soil conditions may be encountered during the construction process. Examples may include, potential for asbestos, remnant demolition materials containing deleterious substances, black ashy materials, soils exhibiting strong odours, brightly coloured materials, and oily pockets within the soil.

During site clearance and groundworks all site operatives should be briefed on the discovery strategy, which provides an action plan should potentially contaminated materials be identified during works.

The Discovery Strategy flow chart should be:

1. Affixed to the site office notice board;
2. Form part of the site induction for all operatives;
3. Form part of the site health and safety file.

The Discovery Strategy flow chart is presented as **Appendix II.** This should be printed and laminated.

Each site operative should be aware of their duties in the event of a potential 'contamination' discovery.

Any discovery of previously undiscovered contamination should be reported to the Local Planning Authority (LPA) and appropriate management of this must be approved by the LPA.

The action of discovery applies in the event local soil contamination is discovered. Thus, variations to this plan may be necessary following the results of 'Discovery Works' and should this be so further revisions of this VP shall be prepared and consulted; hence this VP remains a live document.

SECTION 4

REMEDIATION AND VERIFICATION

SOFT LANDSCAPING

CONSTRUCTION OF CLEAN COVER SYSTEM AND VERIFICATION

4.1 Cover System Appraisal

The research undertaken to prepare BRE465 "Cover systems for land regeneration" indicates the maximum mixing depth of soils within a private garden is 600mm (section 5.4). This takes into account factors such earth worm activity, burrowing animals, plant/tree roots, digging the garden, crop uptake and intermixing of leaf fall. Ingestion pathways for contamination soils (section 4.5) are likely to be limited to 500mm. Site limitations which may affect the design of the cover system (section 2) are:

- Presence of the water table which may mobilise soluble soil contaminants;
- Significant contamination;
- Risk to controlled waters;
- Deeper excavations for tree planting, fencing etc;
- Excavation for buried services;
- Slopes; and
- Abundant rabbit/badger activity.

In this regard it is considered a conventional cover system is suitable because the water table rests at depth greater than 1m+ bgl, soil contamination is not considered significant, the risk to controlled waters is considered to be LOW, deeper excavations are unlikely and within areas of tree planting there shall be a root barrier, services shall be installed prior to cover system construction to prevent cross contamination, there are no steep slopes and burrowing animal activity is likely to be limited in the residential development. In order to determine the thickness of the cover system the BRE465 spreadsheet can be used. Input values were the maximum contaminant concentration for the contaminant in the ground, current C4SL/S4UL for contamination of cover and since only one end use at the site target concentrations are residential. The thickness of the cover system can vary by applying lower concentrations for the cover system (imported soils), however, given the practical difficulties of procuring imported soils with a specific chemistry it is assumed the concentrations shall be compliant with current C4SL/S4UL.

Table 4.1 presents the cover system requirements, which present a typical industry requirement and provide consistency with LPA requirements.

Table 4.1: Cover Systems

Garden Type	Depth (bgl)	Description
Private (produce growing)	Ground Level - 300mm	BS3882:2015 'clean' topsoil
	300mm - 600mm	BS8601:2013 'clean' subsoil
	At 600mm coloured permeable geotextile membrane	Terram Hi-Vis or similar product
Communal soft landscaping (non-produce growing)	Ground Level - 300mm	BS3882:2015 'clean' topsoil
	At 450mm coloured permeable geotextile membrane	Terram Hi-Vis or similar product

Figure 2 is enclosed within **Appendix I,** which presents a Remediation and Verification Plan.

The suitability criteria for imported soils are enclosed as **Appendix III** and should be considered when procuring soils for importing on to site.

4.2 Method Statement: Cover System Construction

The following method statement is presented to construct and verify a 'clean cover' system to soft landscaped areas identified in **Figure 2**.

Where permanent hard landscaping is proposed remediation shall not be necessary since the construction of permanent hard landscaping shall break pollution linkages.

4.2.1 Remediation Method

For all private rear gardens where produce may be grown references of 'private' and '600mm' shall be made. For all communal gardens, open spaces and small landscaped frontages where produce will not be grown references of 'communal' and '300mm' shall be made.

The following remedial method is recommended for cover system construction to soft landscaping:

1. Contact environmental consultant prior to undertaking works and request site attendance. Ensure sufficient lead-in time is allowed.
2. Operatives undertaking remediation works should be provided with suitable personal protective equipment (PPE).
3. This action is best completed following the formation of hard landscaping areas to 'frame out' the soft landscaping.
4. Excavate soft landscaping to a depth of 600mm private or 300mm communal below final levels using the aid of a laser level to achieve the necessary formation level.
5. Subject to the location of protection trees and remedial areas consultation shall need to be made with an arboricultural consultant to ensure both trees remain protected and human health of site ensures (specifically children) is safeguarded.
6. During the excavation process the environmental consultant should over-see and supervise to ensure works are completed diligently and the final excavation depths are met. The environmental consultant should diarise, log, measure and photograph works by means of verification of the cover system and include within the final 'verification report'.
7. Waste soils should be disposed off-site and not re-used. Waste consignment notes should be retained to evidence soil removal and disposal.
8. Layer the formation at 600mm private or 300mm communal with geotextile membrane (Terram Hi-Viz or similar). The membrane needs to rest upon the base of the excavation and lap up the sides of the excavation to cover all residual Made Ground which is exposed.
9. Upon laying of membrane or suitable verification (see below) gardens can be landscaped/infilled with 600mm private or 300mm communal of 'clean' Subsoils and Topsoil in accordance with the criteria set out in **Appendix III.**
10. The remediation will be verified by a suitably qualified specialist and the works documented in a verification report taking note of the verification plan below.

4.2.2 Verification Plan

The following plan is presented to verify the construction of at least a 600mm private or 300mm communal thick cover system to new soft landscaped areas.

Soft landscaped areas should be infilled with chemically clean certified Subsoils and Topsoil as per the recommendation of **Appendix III** and as necessary the landscape architect. The following verification method is proposed:

1. Photographing the stripped landscaped formation to 600mm private or 300mm communal below final levels with a levelling staff set against a fixed point relating to finished levels.
2. Checking the Suppliers test certificates for any soils to be imported to site to confirm the provenance of the supply chain.
3. Performing a visual/olfactory inspection of the imported material be carried out prior to placement in the proposed areas
4. The remediation engineer shall independently sample and test Subsoils and Topsoil once on-site and at a frequency of one test per 50cu.m for manufactured Subsoil/Topsoil or 250cu.m for Subsoil/Topsoil from a Greenfield source. As a minimum at least three samples should be taken of the imported soils and submitted to a UKAS accreted laboratory for chemical testing as set out in **Appendix III**.

5. Should imported soils fail the criteria set out in **Appendix III** the material should be rejected, removed from site and returned to the supplier of suitability disposed. The Client should manage the contractual necessities of this action.
6. The laying and lapping up the sides of the geotextile membrane (Terram Hi-Viz or similar) over the 600mm reduced dig formation.
7. When the full 600mm private or 300mm communal depth is completed and layered with geotextile, then 600mm private or 300mm communal of clean imported soil should be placed upon the membrane, divided into layers of subsoil and topsoil, to the finish levels.

In regard of the chemical selection criteria for **Appendix III**; although there is a mix of private and communal gardens/soft landscaped areas which have slightly different assessment guidelines, it was considered that one set of guidelines (ie the more conservative 'residential with homegrown produce' guidelines) should be used to assess all analytical results.

Figure 2 provides suggestion of verification positions to confirm cover system thickness/construction providing spatial arrangement across the soft landscaped areas of the site.

Table 4.2.2 provides a check list of items (lines of evidence) which shall need to be documented or enclosed within the expected Verification Report, which have been chronologically itemised in terms operational progress and sequencing.

Table 4.2.2: Verification Report Lines of Evidence Checklist

Item	Description	Tick
1	Photographic evidence of reduced level excavation to achieve the necessary 600mm/300mm depth for private/communal gardens.	
2	Copies of Wate Transfer Notes (WTN) for waste soil disposal or subject to digital file size of WTN scans (limit 10MB for portal upload) a 'cloud' link so WTN can be viewed.	
3	Full details of imported soils source; name of supplier, their address and any necessary permitting (materials re-use).	
4	Imported soil supplier certification (refer to **Appendix III**) to ensure suitability for acceptance.	
5	Inspection of imported soils to confirm the absence of deleterious objects.	
6	Photographs of stockpiles of imported soils in appropriate quarantine to prevent cross contamination while stored on-site.	
7	Laboratory certificates of analysis following independent on-site/in-situ testing of imported soils to confirm soils delivered are chemically acceptable and concur with supplier certification to complete the provenance of the supply chain.	
8	Verification trial hole logs and photographs to confirm ground conditions and soil make-up/layering within cover system. Photographs to be taken alongside tape-measure/measuring staff to evidence depth/thickness. Photographs to be taken with photo-board in shot to reference; site name, hole location and date.	
9	Photographs to prove the soft and hard landscaping is complete and taken with the context of background features to marry with a site plan indicating photograph (arrow) direction.	

SECTION 5

WASTE MANAGEMENT

The report listed in section 1.1, and specifically laboratory test results, should be presented to haulage contractors to formally classify waste soils.

All materials leaving site should be conveyed by a registered waste carrier and waste transfer notes should be signed and held on file for submission upon completion of the project. This process shall be managed by the principal contractor as part of waste management diligence.

To enhance the waste management process, the following could be adopted:

- Locate a suitable area on site where two stockpiles can be created.
- Sheet the areas out to create bunds.
- During the site stripping and excavation process visually screen the soils in accordance with the discovery strategy.
- Where soils are of a visually 'clean' appearance place these upon stockpile 1; which shall be termed the (potentially) inert stockpile.
- Where soils are visually 'abnormal' and contain (though not limited to) anthropogenic (harmful) objects and soil discolouration (black/dark grey staining) place these upon stockpile 2: which shall be termed the (potentially) non-hazardous stockpile.
- Once the stockpiles are formed, collect representative soil samples from the stockpiles. Samples should be submitted for chemical testing to establish soil chemistry, waste streams and potential re-use of the material.

SECTION 6

VERIFICATION REPORT

Table 7 provides a check list of items (lines of evidence) which shall need to be documented or enclosed within the expected Verification Report, which have been chronologically itemised in terms operational progress and sequencing.

Table 7: Verification Report Lines of Evidence Checklist

Item	Description	Tick
1	Evidence of correspondence with the local water authority to ensure it can be demonstrated they are aware of the chemical conditions of soil at the site and have accordingly specified, installed and connected the correct wate supply pipe.	
2	Full details of imported soils source; name of supplier, their address and any necessary permitting (materials re-use).	
3	Imported soil supplier certification (refer to **Appendix III**) to ensure suitability for acceptance.	
4	Inspection of imported soils to confirm the absence of deleterious objects.	
5	Laboratory certificates of analysis following independent on-site/in-situ testing of imported soils to confirm soils delivered are chemically acceptable and concur with supplier certification to complete the provenance of the supply chain.	
6	Verification trial hole logs and photographs to confirm ground conditions and soil make-up/layering within cover system. Photographs to be taken alongside tape-measure/measuring staff to evidence depth/thickness.	
7	Photographs to prove the soft and hard landscaping is complete and taken with the context of background features to marry with a site plan indicating photograph (arrow) direction.	

SECTION 8

LONG TERM MONITORING

Long-term monitoring is not considered necessary for the site.

Long-term monitoring typically applies to a groundwater treatment scheme, where variations in post-remedial groundwater quality may occur in the short and long-term. As previously indicated, groundwater (and surface water) is (are) not considered to pose or be at risk.

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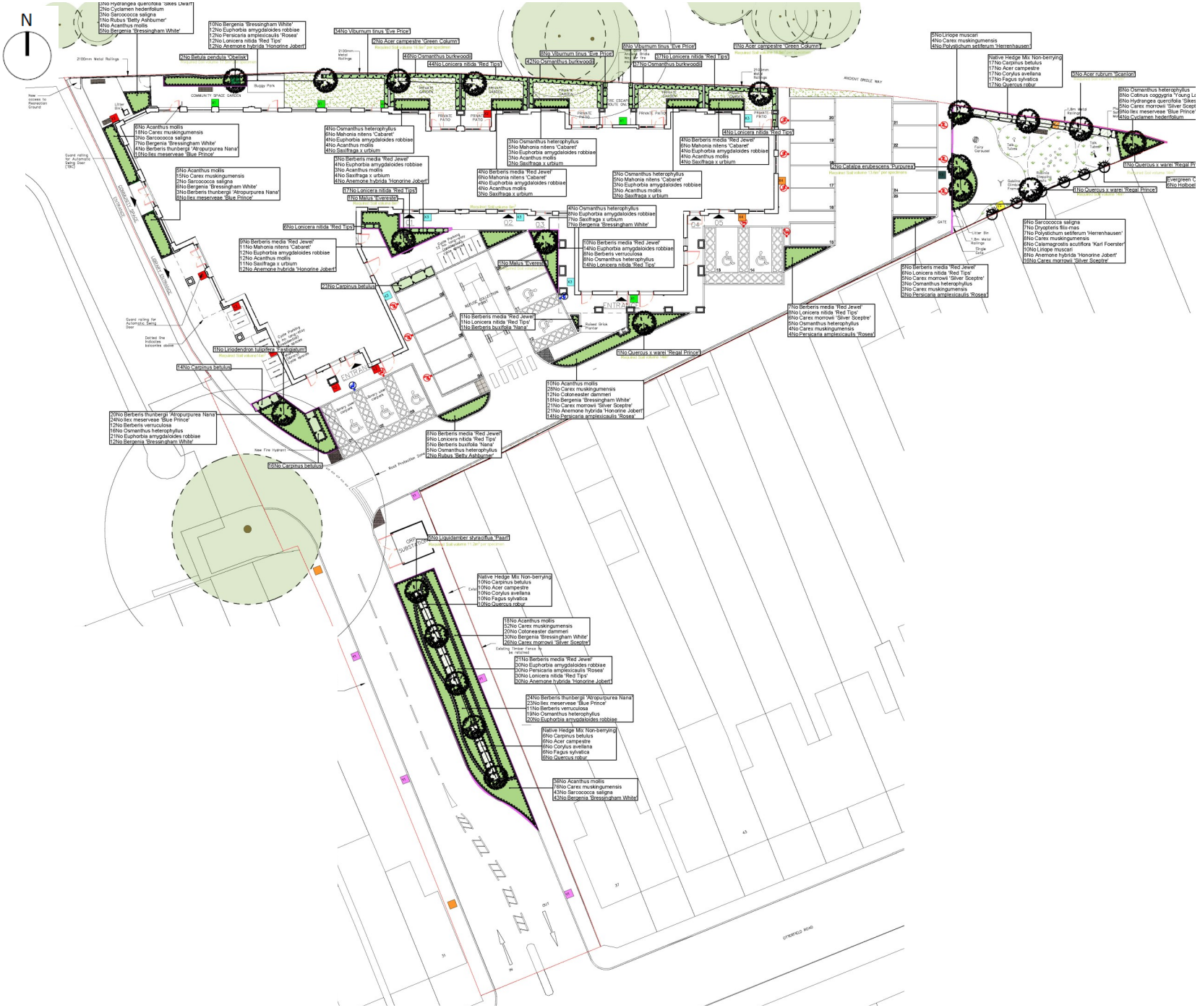
Appendix I

Figure 1 – Proposed Development Plan

Figure 2 – Remediation and Verification Plan



Legend

Notes

Drawing prepared by Client

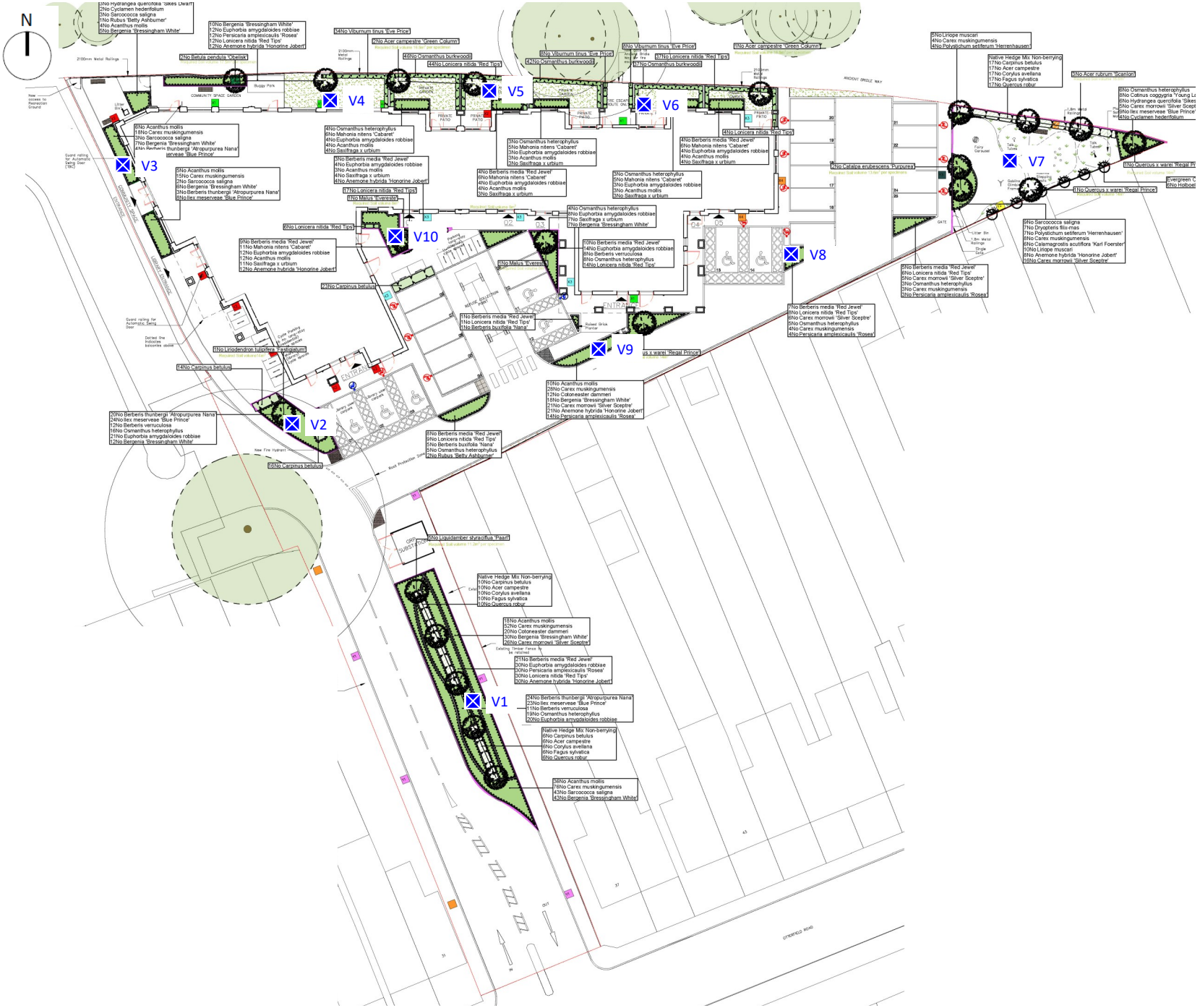
Figure 1

Drawing Title

Proposed Development Plan

Project Number	25-205.01
Project Title	Land at Otterfield Road, Yiewsley, UB7 9PE
Drawn by	DN
Checked by	JB
Scale	NTS

Aviron Associates Limited - Badgemore House - Gravel Hill - Henley on Thames - RG9 4NR - T: 01491 413 722 - M: 07787 771 686 - E: james@aviron.co.uk



Legend

⊠ Verification Trial Hole

Notes

Drawing prepared by Client

Figure 1

Drawing Title

Proposed Development Plan

Project Number	25-205.01
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Aviron Associates Limited - Badgemore House - Gravel Hill - Henley on Thames - RG9 4NR - T: 01491 413 722 - M: 07787 771 686 - E: james@aviron.co.uk

Appendix II
Discovery Strategy Flow Chart

HOW TO IDENTIFY CONTAMINATED SOILS
AND
WHAT TO DO?

ARE YOU AWARE YOU MAY BE WORKING WITH CONTAMINATED SOILS?

YES

ARE YOU WEARING PPE? HAVE YOU A PERMIT TO DIG?

YES

WHEN DIGGING IS THE SOIL :

FREE FROM ANY UNUSUAL COLOUR LIKE BLUE, GREEN, BLACK?

FREE FROM FUNNY SMELLS LIKE FUEL, SOLVENTS, GAS?

FREE FROM CEMENT FRAGMENTS OR FIBROUS MATERIAL?

FREE FROM HAZARDOUS CONTAINERS LIKE OIL/FUEL DRUMS OR TANKS?

FREE FROM RUSTED METALS, SHARPS ETC?

YES

CONTINUE WORKING SAFELY

NO

SAFELY **STOP** WORK
CONTACT YOUR SUPERVISOR.

SUPERVISOR CALL AVIRON ASSOCIATES LIMITED TO DISCUSS AND DETERMINE ACTION PLAN

NO

SPEAK TO SUPERVISOR. GET PPE AND PERMIT TO DIG.

YOU SHOULD HAVE PPE AND PERMIT TO DIG?

YES

NO

DO NOT START WORK UNTIL YOU HAVE PPE AND PERMIT TO DIG.

NO

DO NOT START WORK. SPEAK TO YOUR SUPERVISOR BEFORE STARTING AND COMPLETE YOUR TOOL BOX TALK.

YOU SHOULD BE AWARE AND READY NOW?

NO

LEAVE SITE.
SEEK FURTHER TRAINING.

CLIENT Bugler Developments Limited

PROJECT Land at Otterfield Road

NO. 25-205.01

ISSUE VERSION 1

AVIRON ASSOCIATES LIMITED

OFFICE 01491 413 722
JAMES 07787 771 686

Appendix III
Soil Import Criteria and Verification Chemical Targets

LAND CONTAMINATION CLEAN COVER SYSTEMS
SELECTION AND USE OF IMPORTED SOIL

GENERAL

Soils laid as clean cover soft landscaped areas of private or communal gardens or public open space gardens should not only meet the necessary chemical criteria as defined by Land Contamination Risk Management (LCRM) or site specifically derived chemical targets; but they must also provide a suitable growing medium for plants and not contain deleterious objects (sharps/hard materials) which may cause physical injury

POSSIBLE SOURCES OF MATERIAL

Imported soils may be obtained from various sources, however, the source of the soils must be demonstrated to be from land of a non-contaminative history or a reputable manufacturing plant. It shall remain the responsibility of the Client or their Contractor to obtain soils complying with the specification which are likely to be subject to additional on-site/in-situ tests specified by the Consultant to accord with Local Planning Authority (LPA) and/or build warranty requirements.

TOPSOIL – BS3882

Topsoil should meet the criteria set out by British Standard BS3882:2015 and prior to procurement of a Topsoil supplier certification should be sought to confirm that:

1. Specifically a laboratory test form a UKAS accredited laboratory should be completed where testing meeting the criteria of BS3882.
2. The date of certification is less than 3 months old to provide an arbitrary level of comfort that the Topsoil remains available for procurement and delivery.
3. The Topsoil meets the physical criteria set out by BS3882 such that the Topsoil can be considered a suitable growing medium to sustain plant growth.
4. The Topsoil meets the chemical criteria appended to this document such soil chemistry is not considered hazardous to human health of phytotoxic.

SUBSOIL – BS8601

Sub-soil should meet the criteria set out by British Standard BS8601:2013 and prior to procurement of a Sub-soil supplier certification should be sought to confirm the points made above, where the criteria for BS3882 should be substituted for BS8601 where Sub-soil is being appraised.

PHYSICAL CRITERIA

British Standards BS3882:2015 and BS8601:2013 should be consulted and as necessary the advice of a horticultural consultant to ensure suitable growing media for selected planting. Soils should be inspected to ensure no deleterious (harmful to humans) objects, such as sharps or hard materials.

CHEMICAL CRITERIA

Chemical concentrations considered to appropriate for a tier 2 Generic Quantitative Risk Assessment (GQRA) as recommended by LCRM are appended for the following residential land uses:

- Private gardens with homegrown produce.
- Communal gardens without homegrown produce.
- Public Open Space by residential development.

ACCEPTANCE/REJECTION OF MATERIAL

Where a material considered for procurement fails to meet the above criteria it should be rejected and an alternative source sought. Where material is tested in-situ/on-site and fails the necessary physical criteria (by testing or inspection) and chemical criteria (by testing) it should be removed from site and not used with soft landscaped areas or cover systems.

STORAGE OF IMPORTED MATERIAL

Any imported material on to site must be kept in quarantine to prevent cross contamination from any residual soil contamination not yet encapsulated by hardstanding or from uncontrolled deposition of building materials; such

as operatives throwing waste on a heap. Ideally quarantine should be upon a membrane and behind fencing/under a tarpaulin.

Checklist Documentation		
Item	**Description**	**Tick**
1	Full details of imported soils source; name of supplier, their address and any necessary permitting (materials re-use).	
2	Supplier certification; less than three months old and evidences soils are physically (BS3882/BS8601) and chemically acceptable.	
3	Physical inspection of imported materials completed, confirmation no sharps, hard objects etc	
4	Photographs of stockpiles of imported soils in appropriate quarantine to prevent cross contamination while stored on-site.	
5	Complete on-site/in-situ sampling and testing of material once delivery to ensure it is chemically acceptable.	
6	Imported materials passed?	

Residential with Homegrown Produce
Soil Screening Values
Private Gardens

Determinant	1% SOM (mg/kg)	2.5% SOM (mg/kg)	6% SOM (mg/kg)	Criteria
METALS, SEMI-METALS, INROGANICS + PAH (ES-1)				
Arsenic	37	37	37	C4SL/LQM S4UL
Boron	290	290	290	LQM S4UL
Cadmium	11	11	11	LQM S4UL
Chromium III	910	910	910	LQM S4UL
Chromium IV	6	6	6	LQM S4UL
Copper	2,400	2,400	2,400	LQM S4UL
Mercury	1.2	1.2	1.2	LQM S4UL
Nickel	180	180	180	LQM S4UL
Lead	200	200	200	LQM S4UL
Selenium	250	250	250	LQM S4UL
Zinc	3,700	3,700	3,700	LQM S4UL
Free Cyanide	34	34	34	ATRISK
Acenaphthene	210	510	1100	LQM S4UL
Acenaphthylene	170	420	920	LQM S4UL
Anthracene	2,400	5400	11000	LQM S4UL
Benzo(a)anthracene	7.2	11	13	LQM S4UL
Benzo(a)pyrene	2.2	2.7	3	LQM S4UL
Benzo(b)fluoranthene	2.6	3.3	3.7	LQM S4UL
Benzo(ghi)perylene	320	340	350	LQM S4UL
Benzo(k)fluoranthene	77	93	100	LQM S4UL
Chrysene	15	22	27	LQM S4UL
Dibenz(ah)anthracene	0.24	0.28	0.3	LQM S4UL
Fluoranthene	280	560	890	LQM S4UL
Fluorene	170	400	860	LQM S4UL
Indeno(123-cd)pyrene	27	36	41	LQM S4UL
Naphthalene	2.3	5.6	13	LQM S4UL
Phenanthrene	95	220	440	LQM S4UL

Determinant	1% SOM (mg/kg)	2.5% SOM (mg/kg)	6% SOM (mg/kg)	Criteria
Pyrene	620	1200	2000	LQM S4UL
Phenols	78	0.98	1.1	LQM S4UL
TOTAL PETROLEUM HYDOCARBONS (ES-1)				
Benzene	0.087	0.17	0.37	LQM S4UL
Toluene	130	290	660	LQM S4UL
Ethlybenzene	47	110	260	LQM S4UL
o-xylene	60	140	330	LQM S4UL
m-xylene	59	140	320	LQM S4UL
p-xylene	56	130	310	LQM S4UL
Aliphatic EC 5-6	42	78	160	LQM S4UL
Aliphatic EC >6-8	100	230	530	LQM S4UL
Aliphatic EC >8-10	27	65	150	LQM S4UL
Aliphatic EC >10-12	130	330	760	LQM S4UL
Aliphatic EC >12-16	1,100	2400	4300	LQM S4UL
Aliphatic EC >16-35	65,000	92000	110000	LQM S4UL
Aliphatic EC >35-44	65,000	92000	110000	LQM S4UL
Aromatic EC 5-7 (benzene)	70	140	300	LQM S4UL
Aromatic EC >7-8 (toluene)	130	290	660	LQM S4UL
Aromatic EC >8-10	34	83	190	LQM S4UL
Aromatic EC >10-12	74	180	380	LQM S4UL
Aromatic EC >12-16	140	330	660	LQM S4UL
Aromatic EC >16-21	260	540	930	LQM S4UL
Aromatic EC >21-35	1,100	1500	1700	LQM S4UL
Aromatic EC >35-44	1,100	1500	1700	LQM S4UL
Aromatic EC >44-70	1,600	1800	1900	LQM S4UL
ASBESTOS				
None Detectable			Aviron Adopted Value	