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Former Tudor Inn, Cimla, Neath Proposed Residential Housing Development Remedial Strategy and Implementation Plan

Report Reference: ESP.9254.02.4511

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Former Tudor Inn, Cimla, Neath Proposed Residential Housing Development Remedial Strategy and Implementation Plan

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Report Reference: **ESP.9254.02.4511**

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Contents

1	Introduction	3
1.1	Background.....	3
1.2	Outline Objectives	4
1.3	Limitations of Report	7
2	Basic Site Details	8
2.1	Site Location and Description.....	8
2.2	Site History.....	8
2.3	Published Geology.....	9
2.4	Recent Site Changes.....	9
2.5	Summary of Contamination Status.....	9
2.6	Remediation Objectives.....	16
2.7	Remediation Project Team.....	16
3	Remedial Strategy	17
3.1	Context.....	17
3.2	Outstanding Pollution Linkages	17
3.3	Environmental Permits.....	20
3.4	Durability of Remedial Works.....	20
3.5	Sustainable Remediation Practices.....	20
3.6	Invasive Plant Species	21
3.7	Communication with Local Residents.....	21
3.8	Waste Handling.....	21
4	Implementation Plan	22
4.1	Remedial Objectives	22
4.2	Detailed Implementation Plan	22
4.3	Remediation Logistics.....	25
4.4	Remediation Programme	25
4.5	Remediation Approvals and Permits.....	25
4.6	Environmental Protection	25
4.7	Post Remediation Monitoring	25
4.8	Remediation Verification.....	25
5	References	27
Figure 1	Proposed Development Plan	
Figure 2	Conceptual Ground Model	
Figure 3	Remedial Site Plan	
Figure 4	Capping System Typical Detail	

General Notes

1 Introduction

1.1 Background

The site is to be developed for residential purposes and the Earth Science Partnership (ESP) were instructed by Rhyd Consult, on behalf of Bluefield Land, who are developing the site for Tai Tarian, to prepare a Remedial Strategy and Implementation Plan for the site in line with our emailed Proposal dated 20th January 2025. The site location is shown on Insert 2 in Section 2.1.

Some previous assessments have been undertaken for a smaller site boundary, the orange shaded area in Insert 1 which will be referenced 'the Development Area' in this report, the current site boundary includes two residential properties on Beacons View to the north and part of the Beacons View highway, as shown by the red line boundary in Insert 1.

The existing and new road part of the site will be referred to as the Access Area of the site.



Insert 1: Site Plan showing red line boundary of the wider site, made of the Development Area, shaded in orange and the Access Area to the northeast.

The proposed development will comprise conventional two-storey residential dwellings with private gardens, landscaping and estate roads. The proposed development layout is presented as Figure 1, and shows a large apartment block in the northwest, with link of three dwellings and seven further residential structures around a central northwest to south-east orientated estate road. The proposed structures are classified as Geotechnical Category 2 (BS5930:2020). A new

access road for the development will be constructed from Beacons View to the northeast, created by the demolition of two existing properties. An infiltration basin (for SuDS) is shown just to the east of the new access.

1.2 Outline Objectives

The remediation strategy and verification plan has been prepared in general accordance with Environment Agency Land Contamination Risk Management (LCRM) guidelines (2021). These guidelines require a staged approach as follows:

- Stage 1: Risk Assessment.
- Stage 2: Options Appraisal.
- Stage 3: Remediation and Verification.

The first two elements above (the risk assessments and remedial options appraisal) have been completed in various phases or reports by ESP (Ref. 8398.3830, October 2024, 8398.03.4163 November 2024, 8398.03.4285 February 2025 and 9254.02.4507, December 2025).

This report comprises a remedial strategy for the proposed works, which forms the first part of Stage 3 of the EA guidance (EA, 2021). The remedial strategy and implementation plan is required to include a clear set of remediation activities and how they will be implemented and verified. It is a record of how the remediation objectives will be met. The EA prescribe that the strategy needs to:

- Clearly set out how the selected remediation option will mitigate the risks from the relevant contaminant linkages identified in the conceptual site model.
- Meet the remediation objectives and criteria set in the options appraisal.
- Meet any regulatory requirements – such as to fulfil a planning condition, a Part 2A obligation or to comply with permit conditions.
- Be compatible with other areas of work such as redevelopment or geotechnical aspects.
- State how it will protect human health, the environment, ecology and other receptors.
- Provide a sustainable approach.
- Be practical, achievable, effective, durable and verifiable.

The Client has obtained planning permission for the proposed development. The Local Planning Authority (LPA) have imposed ground related planning conditions as follows:

CONDITION 4:

No development shall commence until:

a) a scheme of intrusive investigations has been carried out on site to establish the risks posed to the development by past shallow coal mining activity; and

b) any remediation works and/or mitigation measures to address land instability arising from coal mining legacy, as may be necessary, have been implemented on site in full in order to ensure that the site is made safe and stable for the development proposed.

The intrusive site investigations and remedial works shall be carried out in accordance with authoritative UK guidance.

Reason: To ensure that the assessment of the risk from past coal mining activity is satisfactory, and to ensure compliance with Policies SP16 and EN8 of the Adopted Neath Port Talbot Local Development Plan.

CONDITION 5:

Notwithstanding any other details which may be given in the application hereby approved, no development shall commence on site until a scheme to assess the nature and extent of any contamination on the site, and confirmation of whether or not it originates on the site shall be submitted to and agreed in writing with the Local Planning Authority. The investigation and risk assessment must be undertaken by competent persons in accordance with the following document:- Land Contamination: A Guide for Developers (WLGA, WAG & NRW, 2012) and shall be submitted as a written report which shall include:

- I. a survey of the extent, scale and nature of contamination and coal mine gas risk;*
- II. an assessment of the potential risks to:*
 - human health,*
 - ground waters and surface waters,*
 - adjoining land,*
 - property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes,*
 - ecological systems, and*
 - archaeological sites and ancient monuments;*
- III. an appraisal of remedial options, and proposal of the preferred remedial option(s).*

Reason: To ensure that information provided for the assessment of the risks from land contamination to the future users of the land, neighbouring land, controlled waters, property and ecological systems is sufficient to enable a proper assessment, and to ensure compliance with Policies SP16 and EN8 of the Adopted Neath Port Talbot Local Development Plan.

CONDITION 6:

No development shall commence on site until a remediation scheme to bring the site to a condition suitable for the intended use by removing any unacceptable risks to human health, buildings, other property and the natural and historic environment shall be prepared and submitted to and approved in writing with the Local Planning Authority. The scheme shall

include all works to be undertaken, proposed remediation objectives, remediation criteria and site management procedures. The measures proposed within the remediation scheme shall be implemented in accordance with an agreed programme of works.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors, and to ensure compliance with Policies SP16 and EN8 of the Neath Port Talbot Local Development Plan.

CONDITION 22:

Prior to the occupation of the development, or it being taken into beneficial use, a signed statement or declaration prepared by a suitably competent person confirming that the site is, or has been made, safe and stable for the approved development shall be submitted to the Local Planning Authority for approval in writing. This document shall confirm the methods and findings of the intrusive site investigations and the completion of any remedial works and/or mitigation necessary to address the risks posed by past coal mining activity.

Reason: To ensure that the assessment of the risk from past coal mining activity is satisfactory, and to ensure compliance with Policies SP16 and EN8 of the Adopted Neath Port Talbot Local Development Plan.

CONDITION 25:

Prior to beneficial use of the proposed development commencing, a verification report which demonstrates the effectiveness of the agreed remediation works carried out in accordance with condition 7 [ESP consider this an error and this should read Condition 6] shall have been submitted to and approved in writing by the Local Planning Authority.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors and to ensure compliance with Policies SP16 and EN8 of the Adopted Neath Port Talbot Local Development Plan.

Condition 4 has been addressed in previous phases of work and discussed in report references 8398.3830 dated October 2024, 8398.03.4163 dated November 2024 and 8398.03.4230 dated December 2024.

Condition 5 has been addressed in the ESP report Additional Geo-environmental Assessment (Ref ESP.9254.02.4507 dated 18th December 2025). This Remedial Strategy and Implementation Plan has been written to provide the information required for Condition 6. The recommendations contained within this plan should be followed in developing the site to ensure that no residual contamination risks remain.

Remedial work to reduce risks from shallow abandoned mine workings has recently been completed and a separated report will be prepared, along with a supporting letter that will satisfy Condition 22.

Once the remedial works are complete, a Verification Report will be prepared to satisfy Condition 25.

There is an additional ground contamination condition that is relevant to unexpected contamination, Condition 26.

1.3 Limitations of Report

This strategy comprises an explanation of the nature and extent of the remediation works required to mitigate residual contamination risks in the area of the development (Insert 1), and details of the tasks required to implement the strategy so to ensure all external areas are 'suitable for use' for the development detailed in Section 1.2 above. It does not consider any other development use on the site, should an alternative end use be considered, the findings of the assessment should be re-examined relating to the new proposals.

Consultation with regulatory authorities will also be required with respect to proposed works as there may be overriding regional or policy requirements which demand additional work to be undertaken. It should be noted that both regulations and their interpretation by statutory authorities are continually changing.

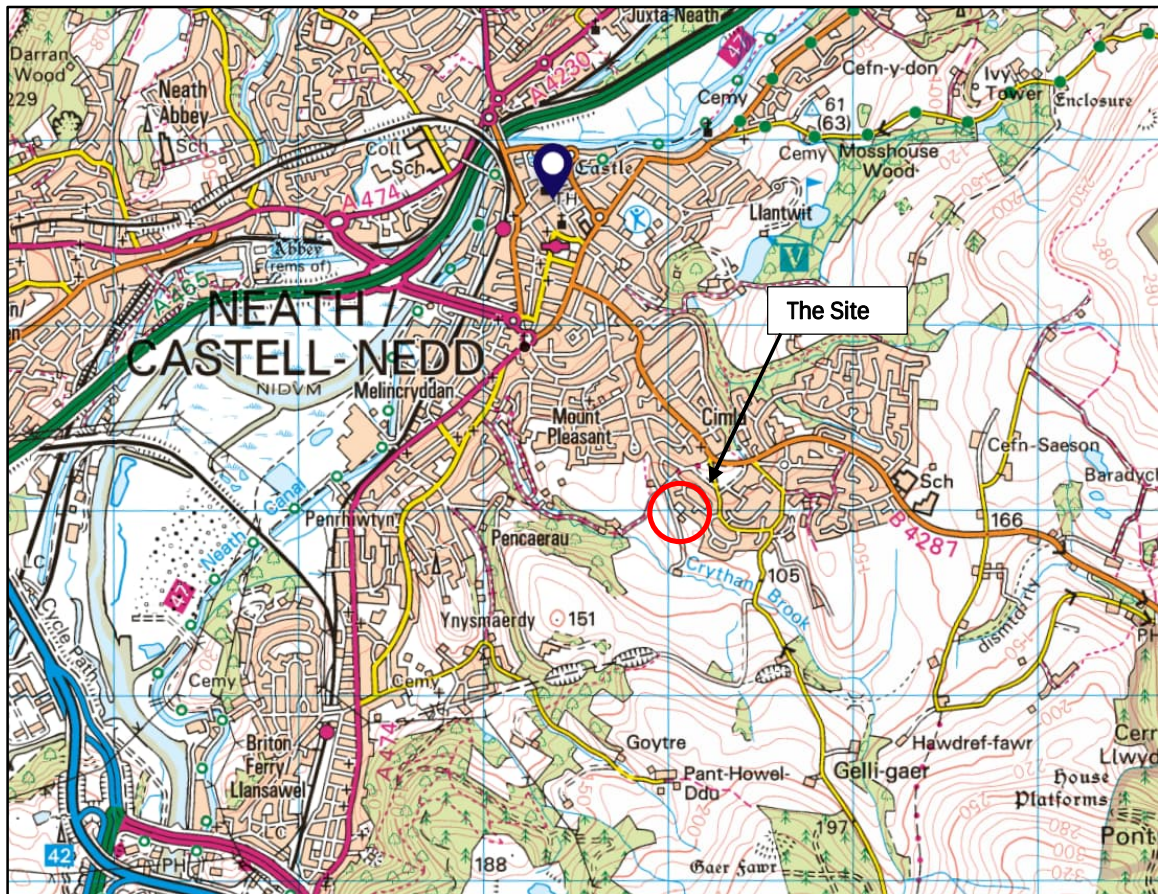
This report represents the findings and opinions of experienced geo-environmental specialists. Earth Science Partnership does not provide legal advice and the advice of lawyers may also be required.

This report is issued as a digital version only.

2 Basic Site Details

2.1 Site Location and Description

The proposed housing development is on the grounds of the former Tudor Inn, located on the southwestern side of Cimla, Neath. The National Grid Reference of the centre of the site is (SS) 276060 196010 and the postcode is SA11 1JA. A Site Location Plan is presented as Insert 2 below.



Insert 2: Site Location Plan from Ordnance Survey 1:25,000 scale map. Reproduced with permission (OS License No.: AL100015788).

The site is irregular in shape, consisting in the main of a roughly rectangular area around 100m by 60m in size, with a narrow triangular extension running up to the site entrance on Cae Rhys Ddu Road in the north-western margins and an irregular shaped portion covering two residential properties off Beacons View in the north-east (see Insert 1). In total, the site is approximately 0.8 hectares in area.

The housing development will have areas of soft landscaping, private gardens and hardstanding. We understand that there will be no significant changes to the current ground levels.

2.2 Site History

The previous desk study for the site showed a suspected farm building, Cae Rhys Ddu, to have been on the site prior to the first map, dated 1881, buildings in the same location were called a 'club' and then the Tudor Inn. The Tudor Inn was apparently demolished in 2009.

The houses in the northern portion of the site (the Access Area) were developed in the 1960s and this appears to be the only development in these areas.

2.3 Published Geology

The published geological map for the area of the site (1:10,560 scale, Sheet SS 79 NE) indicates the site to be underlain by sandstone bedrock of the Swansea Beds of the Upper Coal Measures. No superficial deposits are shown.

An outcrop of 'false bedded flaggy sandstone' is indicated on the site, probably representing the sandstone exposure on the south-western boundary. The bedrock in the vicinity is shown to dip to the north-northeast at around 12 to 18° to the horizontal. The conjectural outcrop of the Graigola coal seam is shown to run broadly northwest-southeast some 20m to the west (downslope) of the site. Therefore, with a north-north-easterly dip, this seam would be anticipated to underlie the site at shallow depth.

2.4 Recent Site Changes

Ecological works included a strip of topsoil in parts of the site, the arising topsoil has been carefully stockpiled.

Rubble associated with the demolition of the former Tudor Inn, which included asbestos has been removed and the foundations of the former Tudor Inn removed.

ESP also understands that demolition of the two houses and gardens within the 'Access Area' is scheduled.

2.5 Summary of Contamination Status

2.5.1 Previous Investigations and Assessments

ESP have previously undertaken a series of prior works comprising:

- Geo-environmental Assessment Ref. 5201e/1933 dated 2013;
- Geotechnical and Geo-environmental Assessment Review of the 2013 Investigation and an Integral Geotechnique Wales Limited (2022) Ref. 8398.3830 dated January 2023;
- Geotechnical and Geo-environmental Assessment Ref. 8398.3830 dated October 2024;
- Additional Soakaway Investigation Ref ESP.8398.02.4057 dated 22nd February 2024;
- Updated Coal Mining Risk Assessment Ref. 8398.03.4163 dated 11th November 2024;
- Additional Investigation ref. 8398.03.4230 dated December 2024;
- Ground Gas Addendum Report Ref ESP.8398.03.4285 dated February 2025; and
- Additional Geo-environmental Assessment Ref ESP.9254.02.4507 dated 18th December 2025.

Whilst pertinent information is referred to and summarised within this report, our previous assessment should be referred to for full content and context as this document addresses only the requirements of the Remedial Strategy and Implementation Plan (see Section 1.2).

ESP are also preparing another report for the site concentrating upon work to remediate the site from shallow mine hazards, this is not discussed in this report.

2.5.2 Summary of Ground Conditions

For the purposes of this report, the overall site ground conditions based upon all previous phases of investigation have been summarised below.

Made Ground – near Tudor Inn and northern boundary: encountered to a maximum depth of 0.8m around the Former Tudor Inn and hardstanding areas as what are likely to be 'sub-base' gravels or dark brown gravelly sandy silts and clays with fragments of brick, ash, glass, concrete and plastic or re-worked topsoil.

Made Ground – along western boundary: thicker, with depths in excess of 3.2m, typically as heterogeneous sandy, clayey gravel with fill and tip material.

Topsoil: encountered in the field away from the Tudor Inn and hardstanding area to a maximum depth of 0.5m.

Swansea Member - Pennant Sandstone Formation: encountered at shallow depth across site beneath the topsoil or Made Ground. Typically comprising a weathered horizon of soft orange-brown slightly sandy gravelly clay or a sandy gravel or cobble of sandstone to a maximum encountered depth of 1.6m. Below the relatively thin weathered horizons, competent bedrock was encountered, typically comprising the Sandstone. A coal seam with several leaves was identified at the base of the sandstone which was noted to have evidence of being worked/mined.

Hughes Member - Pennant Sandstone Formation:

Below the coal seam, thought to be the Graigola coal seam, the boreholes encountered mudstone which is likely to be of the Hughes Member.

The coal seam was encountered between depths of 4.0m (RO1) and 17.6m (RO206) depth and was typically 1.5 to 2m in thickness, and dipping to the northeast.

Groundwater:

The previous investigations did not identify any groundwater to a depth of 19m. However, the investigation points were completed within one working day and the near-surface soils were fine-grained in nature. Due to the soils low permeability, it is possible that groundwater may be present within the depth of investigation, but there was insufficient time for it to be recorded.

Based on the Conceptual Ground Model, we consider that the main groundwater body beneath the site is within the Pennant Sandstone Formation bedrock at depth. There may be perched pockets of water, notably near existing structures (the former Tudor Inn) or services and with Made Ground, particularly on the southwestern portion of the site.

2.5.3 Summary of Site Contamination

The assessment criteria used are presented on the tables in the following sections. The proposed development comprises conventional residential properties with private gardens. Therefore, the GAC appropriate for the residential land use with plant uptake have been adopted.

The GAC for most organic compounds are dependent on the organic content of the soil, for the Generic Quantitative Risk Assessment conducted a soil organic content of 1% was adopted.

2.5.3.1 Asbestos

Asbestos was previously visually identified in the demolition rubble on site which was in the location of the former Tudor Inn building, this demolition rubble has since been removed by the Client.

Previous investigations did not identify obvious visual asbestos fragments in any of the shallow trial pits across the site. Samples from the trial pits were screened for asbestos, 34no. did not identify asbestos and one (TP320) received a positive identification for chrysotile present as fibre bundles. The material in TP320 the asbestos was noted within was a hardcore material, comprising a gravel below a hardstanding area.

Quantification of the asbestos indicated a total mass of 0.007%.

In summary, asbestos fragments are not anticipated in the Topsoil. Testing has shown that asbestos is not widespread in the Made Ground, but may be present as it has been identified in a samples screened.

2.5.3.2 Made Ground

Using data from previous phases, eight samples of made ground have been tested in total and the results are presented in Table 1.

Table 1 - Generic Assessment of Human Health Risks (Residential with Plant Uptake) for Made Ground

Determinand	Minimum Recorded (mg/kg)	Maximum Recorded (mg/kg)	GAC (mg/kg)	Source of GAC	Exceedances
Metals and Semi-metals					
Arsenic	11	42	37	C4SL ²	2 of 8
Beryllium	0.4	1.8	1.7	S4UL ⁴	1 of 8
Boron	0.2	0.6	290	S4UL ⁴	None of 8
Cadmium	0.2	1.2	22	C4SL ²	None of 8
Chromium (total) ⁵	12	130	910	S4UL ⁴	None of 8
Chromium (hexavalent)	< 1	< 1	21	C4SL ²	None of 8
Copper	54	140	2,400	S4UL ⁴	None of 8
Lead	54	200	200	C4SL ²	None of 8
Mercury ⁶	< 0.05	0.22	40	S4UL ⁴	None of 8
Nickel	9.2	59	130	S4UL ⁴	None of 8
Selenium	<0.5	1.9	250	S4UL ⁴	None of 8
Vanadium	23	82	410	S4UL ⁴	None of 8
Zinc	200	1500	3,700	S4UL ⁴	None of 8
Polyaromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.03	< 2	210	S4UL ^{4,7}	None of 8
Acenaphthylene	< 0.03	< 2	170	S4UL ^{4,7}	None of 8
Anthracene	0.05	< 2	2,400	S4UL ^{4,7}	None of 8
Benzo(a)anthracene	0.31	17	7.2	S4UL ^{4,7}	1 of 8
Benzo(a)pyrene	0.34	37	5.0	C4SL ^{2,7}	2 of 8
Benzo(b)fluoranthene	0.06	41	2.6	S4UL ^{4,7}	3 of 8
Benzo(ghi)perylene	0.16	21	320	S4UL ^{4,7}	None of 8
Benzo(k)fluoranthene	0.2	11	77	S4UL ^{4,7}	None of 8

Chrysene	0.46	23	15	S4UL ^{4,7}	1 of 8
Dibenzo(a,h)anthracene	0.04	6	0.24	S4UL ^{4,7}	4 of 8
Fluoranthene	0.93	16	280	S4UL ^{4,7}	None of 8
Fluorene	< 0.03	<2	170	S4UL ^{4,7}	None of 8
Indeno(123-cd)pyrene	0.17	17	27	S4UL ^{4,7}	None of 8
Naphthalene	< 0.03	<2	2.3	S4UL ^{4,7}	None of 8
Phenanthrene	0.35	5.1	95	S4UL ^{4,7}	None of 8
Pyrene	0.77	13	620	S4UL ^{4,7}	None of 8
BTEX Compounds					
Benzene	< 0.01	< 0.01	0.87	C4SL ^{2,7}	None of 2
Toluene	< 0.01	< 0.01	130	S4UL ^{4,7}	None of 2
Ethyl benzene	< 0.01	< 0.01	47	S4UL ^{4,7}	None of 2
Xylene ⁷	< 0.01	< 0.01	56	S4UL ^{4,7}	None of 2
Aliphatic Petroleum Hydrocarbons (Equivalent Carbon Number)					
Ali EC 5-6	< 0.01	< 0.01	42	S4UL ^{4,7}	None of 2
Ali EC 6-8	< 0.01	< 0.01	100		None of 2
Ali EC 8-10	< 0.01	< 0.01	27		None of 2
Ali EC 10-12	< 1.5	< 1.5	130*		None of 2
Ali EC 12-16	< 1.2	< 1.2	1,100*		None of 2
Ali EC 16-35	< 4.9	213	65,000*		None of 2
Aromatic Petroleum Hydrocarbons (Equivalent Carbon Number)					
Aro EC 5-7	< 0.01	< 0.01	70	S4UL ^{4,7}	None of 2
Aro EC 7-8	< 0.01	< 0.01	130		None of 2
Aro EC 8-10	< 0.01	< 0.01	34		None of 2
Aro EC 10-12	< 0.9	< 0.9	74		None of 2
Aro EC 12-16	< 0.5	< 0.5	140		None of 2
Aro EC 16-21	< 0.6	14	260		None of 2
Aro EC 21-35	< 1.4	390	1,100		None of 2
Other Organic Compounds					
Phenol	< 0.3	0.6	280	S4UL ^{4,7}	None of 8
Notes:					
1. Assessment for residential land use <u>with home-grown produce uptake</u> and Made Ground only.					
2. C4SL: Category 4 Screening Level, published by CL:AIRE.					
3. SGV: Soil Guideline Value published by Environment Agency.					
4. S4ULs Suitable 4 Use Levels. Copyright Land Quality Management Limited, reproduced with permission; Publication No. S4UL3156. All Rights Reserved.					
5. In the absence of Chromium VI, all chromium present likely to be Chromium III. GAC for Chromium III adopted.					
6. GAC for inorganic mercury adopted.					
7. GAC for organic compounds based on 1% soil organic content.					
8. GAC for xylene based on p-xylene (lowest S4UL).					
9. Exceedances highlighted in red and bold.					
10. Results below the limit of detection mark with '<'. Limits of detection may vary where sample dilutions have occurred.					

In summary, some metals and some polyaromatic hydrocarbons are anticipated in the Made Ground.

2.5.3.3 Topsoil

With the exception to an area (TP01) of surface burning where dibenzo(a,h)anthracene was noted in the topsoil, previous investigation and testing has shown that only arsenic is elevated in the Topsoil. Table 2 provides the previous test results for arsenic in the Topsoil.

Table 2 - Generic Assessment of Human Health Risks (Residential with Plant Uptake) for Topsoil

Determinand	Minimum Recorded (mg/kg)	Maximum Recorded (mg/kg)	GAC (mg/kg)	Source of GAC	Exceedances
Arsenic	21	61	37	C4SL ²	15 of 22
1. Assessment for residential land use <u>with home-grown produce uptake</u> and Made Ground only. 2. C4SL: Category 4 Screening Level, published by CL:AIRE. 3. Exceedances highlighted in red and bold.					

The Generic Acceptance Criteria assume that all the contaminants ingested into the body (intake) are then fully absorbed by the body and enter the bloodstream (uptake). However, this is commonly not the case, as the contaminants present are not always in a form which can be absorbed, with a proportion of the contaminant passing straight through the body. It is only the proportion that is absorbed by the body (i.e., the bio-accessible fraction) which can cause harm.

The bio-accessible fractions of arsenic within the Topsoil across the site were measured using the BARGE method. The levels of bio-accessible gastric and gastrointestinal arsenic are between 3.1% and 3.5%.

Based on the BARGE testing, revised site-specific assessment criteria (SSAC) for arsenic have been generated using the exposure and toxicological assumptions within the CLEA model. Both oral and inhalation exposure routes have been considered to calculate a combined SSAC.

Based on the total bio-accessible fraction of 3.5% (the worst case determined in the testing), a revised combined SSAC (oral and inhalation) for arsenic of 1,664mg/kg has been calculated.

2.5.4 Risks to Controlled Waters – Leachates

To allow an initial assessment of the potential pollution risks to controlled waters, samples of leachate have been generated from five samples of Made Ground. The leachate preparation was carried out in accordance with BS EN 12457, at a 10:1 eluate ratio. The results of the leachate testing and their comparison to the relevant assessment criteria are presented in Table 3 below, based on the River Neath as the most vulnerable receptor, however the risks to general groundwater are also considered, as per Table 4.

Table 3 – Controlled Waters Risk Assessment – Leachate Results – River Neath

Compound	Range Recorded		EQS - AA	Exceedances
	Min (µg/l)	Max (µg/l)		
Metals and Semi-metals:				
Arsenic ¹	3.8	9.1	50µg/l	None of 5
Cadmium ^{2,4}	<0.03	0.05	0.08µg/l	None of 5
Chromium ^{2,5}	0.85	2.2	3.4µg/l	None of 5
Copper ²	4.7	8.2	1.0µg/l	5 of 5
Iron ³	190	660	1,000µg/l	None of 5
Lead ¹	3.5	22	1.2µg/l	5 of 5
Nickel ²	0.8	1.4	4.0µg/l	None of 5
Zinc ^{2,6}	14	21	13.7µg/l	5 of 5
Polyaromatic Hydrocarbons				
Anthracene ¹	<0.01	0.02	0.1µg/l	None of 5
Benzo[a]pyrene ¹	0.01	0.03	0.00017µg/l	5 of 5
Naphthalene ²	<0.05	<0.05	2.0µg/l	None of 5
Fluoranthene ¹	0.02	0.03	0.0063µg/l	5 of 5
Other Contaminants				
Cyanide ²	<0.1	0.2	1.0µg/l	None of 5
Phenol ²	<1.5	2.1	7.7µg/l	None of 5
Notes:				
1. Hazardous substance (JAGDAG, 2019).				
2. Non-hazardous substance (JAGDAG, 2019).				
3. Iron not classified by JAGDAG 2019.				
4. EQS levels based on most stringent water hardness values.				
5. All chromium present assumed to be chromium VI (conservative approach).				
6. Zinc EQS based on ambient background concentration in River Neath catchment.				
7. EQS-AA – Environmental Quality Standard (freshwater/inland) - Annual Average or Mean.				
8. Exceedances indicated in bold and colour coded as shown.				

Table 4: Controlled Waters Risk Assessment – Leachate Results – General Groundwater

Compound	Range Recorded		UKTAG ⁵	Exceedances
	Min (µg/l)	Max (µg/l)		
Metals				
Arsenic ¹	3.8	9.1	5.0µg/l	4 of 5
Chromium VI ^{1,3}	0.85	2.2	5.0µg/l	None of 5
Lead ¹	3.5	22	5.0µg/l	4 of 5
Mercury ¹	<0.01	0.01	0.5µg/l	None of 5
Polyaromatic Hydrocarbons				
Anthracene ¹	<0.01	0.02	0.05µg/l	None of 5
Benzo[a]pyrene ¹	0.01	0.03	0.005µg/l	5 of 5
BbF ¹	0.03	0.07	0.05µg/l	3 of 5
BghiP ¹	0.02	0.06	0.05µg/l	2 of 6
BkF ¹	0.01	0.04	0.05µg/l	None of 5
IDP ¹	0.02	0.07	0.05µg/l	2 of 5
Notes:				
1. Hazardous substance. 2. Non-hazardous substance. 3. All chromium present assumed to be chromium VI (conservative approach). 4. Assessment based on non-potable groundwater beneath the site. 5. UKTAG – UK TAG concentration below which the danger of deterioration in the groundwater quality is avoided. For hazardous substances only. 6. Exceedances indicated in bold and colour coded as shown.				
Key to PAH compounds:				
BbF: benzo[b]fluoranthene			BkF: benzo[k]fluoranthene	
BghiP: benzo[ghi]perylene			IDP: indeno[123-cd]pyrene	

The leachate testing of samples of Made Ground has recorded metals and polyaromatic hydrocarbons which exceed surface water and groundwater assessment criteria.

2.5.5 Ground Gas Risk

Previous investigations included the installation and monitoring of gas wells across the site to assess the risk of ground gas from both the shallow coal and possible workings, and the Made Ground found across the site.

Nine wells were installed, six with response zones targeting the coal seam/workings and three with shallow response zones within shallow bedrock and/or Made Ground. Methane, and Carbon dioxide was measured in both the shallow and deeper wells. Using the monitoring information enabled preliminary GSVs to be calculated for the site; and a preliminary Characteristic Situation CS-2 for a residential development (CIRIA C665:2007) was reported.

Hydrogen Sulphide was also recorded, generally as peaks before dropping to zero, with one occasion of steady state of hydrogen sulphide was noted in RO204 (deep well). There is no obvious source of the gas.

Drill and grout treatment of abandoned mine workings has been carried out and further subsequent monitoring will be undertaken. This will enable the design of suitable gas protection measures which will need to account for 'normal' sources of ground gas i.e. made ground and a mines gas risk assessment. The further monitoring and assessment will be reported in an addendum report.

2.5.6 Relevant Pollutant Linkages

The proposed residential development comprises conventional two-storey residential dwellings and an apartment block with private gardens, landscaping and estate roads and a multi-storey apartment block in the northwest.

The general methodology set out in CIRIA C552 *Contaminated Land Risk Assessment – A Guide to Good Practice* (Rudland et al, 2001), has been used to reassess Plausible Pollutant Linkages (PPL) based on the Conceptual Site Model generated for the site and proposed development, and to evaluate the risks posed by those linkages, using information about the site gathered in previous investigations. The pollutant linkages have been summarised in Table 5 below.

Table 5: Plausible Pollutant Linkages

Source	Pathway	Receptor	Location	Risk Category
Contaminants in Made Ground, metals, PAHs and D(a,h)A in surface burning area.	Direct contact/ inhalation/ ingestion of contaminated soil or dust	Site Users (Residents)	Gardens and Soft Landscaping	High Risk
	Direct contact/ inhalation/ ingestion of contaminated soil or dust	Construction/ Maintenance Workers	In areas where Made Ground present.	Moderate / Low Risk
	Leaching of soil contaminants	Impact on Groundwater /Potable Water	Where Made is present.	Moderate / Low Risk
	Leaching of soil contaminants	Impact on River Neath (1.75km from site) and Crythan Brook (0.24km from site)		Very Low Risk
Asbestos in Stockpile and Made Ground	Inhalation of fibres	Demolition Workers/ Ground Workers	Within Made Ground (hardcore)	Moderate / Low Risk
Hazardous Ground Gas/Vapours	Asphyxiation/poisoning. Injury due to explosion.	Site Users (Residents).	Development-wide	High Risk
	Damage through explosion.	Building/Property		High Risk
	Asphyxiation/poisoning. Injury due to explosion.	Construction and Maintenance Workers.	Groundworks and confined spaces.	High Risk
Notes: D(a,h)A is an abbreviation of Dibenzo(a,h)anthracene				

A conceptual Ground Model is provided as Figure 2, which outlines the above plausible pollution linkages.

2.6 Remediation Objectives

The objectives of the remedial works are to mitigate the unacceptable pollution linkages identified in Table 5 in the previous section.

2.7 Remediation Project Team

The remediation for the development will be managed and implemented by Bluefield Land and the Client team.

3 Remedial Strategy

3.1 Context

This section provides details of the proposed remedial strategy for the development. Details of the proposed remedial plan is provided in Figures 3a, 3b and 3c.

3.2 Outstanding Pollution Linkages

3.2.1 Made Ground – Tudor Inn Demolition Rubble

Previous phases of work have shown the demolition material in the location of the former Tudor Inn to contain asbestos.

Previous reports recommended its removal and this Remedial Strategy would have also recommend its removal. Latest site visits show that the demolition material has been removed and records of its removal (photographs, waste transfer tickets) should be obtained to understand and document this process.

3.2.2 Made Ground

The levels of arsenic, beryllium and several polycyclic aromatic hydrocarbons in the Made Ground are elevated above the generic assessment criteria and, therefore, are present at unacceptable levels with respect to the users of the proposed residential development. Appropriate measures would need to be taken prior to development to break the pollutant linkage and mitigate these risks. Leachate testing has indicated that the metals and polycyclic aromatic hydrocarbons are leachable and present a possible risk to surface waters and groundwater.

The Made Ground in the Development Area, as shown on Figures 3a, 3b and 3c, is generally thin and the simplest method of removing risks to end users (and possible risks to controlled waters) is to remove the Made Ground from the site. Given the relatively shallow depth of competent bedrock and that levels are to remain near to existing, incorporation of a cover system in the housing plots is unlikely to be appropriate/feasible.

Made Ground is thickest in the southwestern portion of the site, where it has been measured to be in excess of 3m deep. A slope stability assessment will determine if this material can remain in place and if it can further detailed risk assessment will need to prove it can remain without posing a risk to controlled waters, a cover system would then be needed where it remained.

If the further detailed assessment above is carried out and indicates that the Made Ground does not present a risk to controlled waters, it is possible that it could remain on site. However, it would need to be placed under a cover system or under hard surfacing. As discussed above, this option across much of the Development Area is unlikely to be appropriate due to the shallow depth of bedrock and the levels required to incorporate a clean cover system, it would only likely be feasible in the southwestern portion of the site.

3.2.3 Topsoil

The investigations have shown elevated concentrations of arsenic in the Topsoil. The source of the arsenic in the topsoil is unknown but given the industrial heritage of the surrounding area it is possible that it originates from wind-blown debris and is present in the natural topsoil.

A single elevated concentration of dibenzo(a,h)anthracene was noted in a sample taken near an area of surface burning (TP1), as shown on Figures 3a, 3b and 3c.

Further detailed assessment allowed a site-specific assessment criteria (SSAC) for arsenic to be generated, based upon the site measured bioavailability of arsenic. The highest value of arsenic recorded in the Topsoil is 61 mg/kg, which is below the SSAC generated, which is 1,664mg/kg.

On this basis, the topsoil could be used on site as part of the development in areas of soft landscaping and gardens. Some topsoil has already been stripped as part of ecological clearance works and any further topsoil stripped should be done so in approved methods. It will be necessary to test the topsoil stockpiles prior to placement to ensure no cross contamination has occurred during development.

The area of surface burning should be removed from site. The chosen contractor should carefully remove and store the topsoil until needed for development and this process should be detailed in a Remediation Strategy.

3.2.4 Asbestos

Previous phases of investigation showed asbestos in a demolition rubble pile in the location of the former Tudor Inn building. With the exception to TP320, no asbestos was identified in surrounding shallow soils across the site.

A sample of chrysotile asbestos was encountered in TP320 within the Made Ground, likely to be hard core. As discussed in Section 3.2.1, there are different options for the Made Ground as it also contains elevated levels of metal and polyaromatic hydrocarbon contamination. Due to this it will either need to be removed off site, or if acceptable by further testing and assessment, it will need to be placed below hard surfaced areas, such as tarmac. This process would also block the pathways of the asbestos to the end users and could be considered as an option if needed.

There is no clear UK guidance on what would constitute an acceptable concentration of asbestos in soil. Working with asbestos (even within soils) is governed by the Control of Asbestos Regulations (2012). This requires that the excavation and removal of the asbestos contaminated soils must be undertaken by a licensed contractor. Alternatively, an asbestos specialist may be employed to undertake further assessment of the risk from the asbestos present in the soils beneath the site with a view to investigating whether there would be an alternative risk mitigation method to prevent the expensive and non-sustainable removal and disposal of soils.

3.2.5 Cover System

If a cover system is needed, and determined acceptable via further investigation and risk assessment; it will be in the southwestern portion of the site where the Made Ground is thickest.

The thickness and make up of this layer would need to be agreed with the regulators. For design and costing purposes, we consider that the clean cover layer would need to be at least 600mm in thickness (to include placed Topsoil) and would need to be proven to be 'suitable for use' by an appropriate scale of validation testing. Typical details for the cover system is provided in Figure 4.

The cover system must extend beneath patios and paved areas, although this is unlikely to be needed on the basis that all Made Ground is removed in the housing portion of the main Development Area, as shown on Figure 3c.

One possible and cost-effective option could be to utilise natural, unaltered and chemical suitable site won materials, such as weathered bedrock in foundation excavations. However, it is likely that these will be thin given the shallow depth of bedrock. If they are used, they must be suitable for use and further validation testing is required.

It is likely to be required, and recommended that clean soils are imported to site. Appropriate validation testing would be required to ensure that the materials used for the cover layer are suitable for use. Depending on the source site, these imported soils may also have been moved under waste legislation.

A suitable geotextile should be placed at the base of the cover layer due to the possible risk of asbestos to end users and immediately overlain by a capillary break layer to prevent contaminants being drawn up into the cover system.

A typical detail for the cover layer is included as Figure 4.

If any excavation of the existing surface soils is required to allow the construction of a 600mm thick, clean cover layer, the excavated soils (if they are Made Ground) would be unsuitable for use elsewhere on the site and should be removed to a soil treatment facility or landfill.

The anticipated area that may require a cover system is shown in Figures 3a, 3b and 3c.

3.2.6 Controlled Waters

No specific assessment of the risks to controlled waters has been undertaken to date. However, previous investigations and assessments has shown that:

- The site lies approximately 1.75km from the River Neath, and the nearest water feature is the Crythan Brook, located approximately 0.24km to the southwest and there are no surface water abstractions within 250m of the site.
- The bedrock below the site is a Secondary A Aquifer and there are no groundwater abstractions of Source Protection Zones within 500m of the site.
- There is no significant contaminative history at the site, however there are levels of metals and polycyclic aromatic hydrocarbons, mainly in Made Ground. Leachate testing has shown that the leachable levels of the metals and polycyclic aromatic hydrocarbons are above EQS and other standards and present a possible risk to controlled waters.
- Groundwater was not encountered in the investigation and is anticipated at a significant depth within the bedrock, thus it does not directly come into contact with the Made Ground on site.
- Weathered bedrock is near the surface; it has a fine-grained fraction in its upper layers but it is not present across the whole of the site.

This Remedial Strategy recommends removal of all Made Ground at the site; this action would remove the source of contamination and the risks to controlled waters would be removed.

Further investigation, testing and assessment (detailed quantitative controlled waters risk assessment) could be undertaken and if this demonstrates that the risk to controlled waters is

low then the Made Ground in the southwestern portion of the site (Figures 3a, 3b and 3c) could remain insitu. A cover system, as discussed above would be needed to break pollution linkages to end users from soil contaminants.

3.2.7 Ground Gas

As discussed in Section 2.5.5, methane, carbon dioxide and hydrogen sulphide were recorded during previous gas monitoring.

A preliminary Gas Screening Value suggested that the site may be classed as Characteristic Situation CS-2 for a residential development. However, this would need confirming through further gas monitoring following completion of the drilling and grouting phase, and the protection measures should also be designed in accordance with the mine gas risk assessment.

Further gas monitoring is underway and recommendations for protection measures will be provided in a ground gas addendum report.

3.2.8 Buried Concrete

As per the ESP report Additional Investigation (ref. 8398.03.4230, December 2024), the site is classified as Design Class DS-1 for sulphate attack on concrete and Aggressive Chemical Environment for Concrete Class AC-2z, allowing for mobile groundwater. The management of the design of concrete will be undertaken by the project team and is outside the scope of this remedial strategy.

3.3 Environmental Permits

We understand that no environmental permit has been applied for as part of the scheme development. We do not anticipate that an environmental permit would be required for the remediation works proposed.

3.4 Durability of Remedial Works

The remedial works are anticipated to be durable and to perform their function for the lifetime of the development. However, this remedial strategy and the verification report should be included within the Health and Safety File for the development, so that those involved with any future changes to the development are aware of the remedial works undertaken.

3.5 Sustainable Remediation Practices

The topsoil can be re-used on site as part of the development in areas of soft landscaping and gardens and a Materials Management Plan (MMP) may be required.

Where contaminated Made Ground material is excavated, disposal at a soil treatment facility (rather than disposal at landfill) is encouraged as this could provide a sustainable re-use option (after treatment) for the soils on other development sites.

3.6 Invasive Plant Species

Japanese Knotweed has been identified on site. It is ESP's understanding that the client is liaising with a specialist and has had specialist advice on the treatment and management of the Japanese Knotweed.

It would be prudent to ensure that any construction or remedial works do not spread Japanese Knotweed.

3.7 Communication with Local Residents

The neighbouring properties immediately adjacent to the site comprise:

- To the north: Residential Properties along Cae Rhys Ddu
- To the east: Residential Properties along Beacons View
- To the west and south: private land consisting of open space or green field.

The closest residential properties to the site are located along Beacons View, to the east of the site, with some properties off Cae Rhys Ddu to the north. We consider that, as the remediation works will comprise a relatively small part of the larger development project, the remediation is unlikely to have any significant deleterious impact on the residents. Given this, no liaison with residents in the properties along Beacons View and Cae Rhys Ddu is necessary with regards to the remediation works.

3.8 Waste Handling

Any waste soils generated by the remediation works will be managed and transported by a licensed waste carrier under UK waste management guidelines.

4 Implementation Plan

4.1 Remedial Objectives

The objectives of the remediation works would be to remove any unacceptable pollution linkages within the development (Figure 1), so that the shallow soils and ground gas do not pose an unacceptable risk to future site users.

4.2 Detailed Implementation Plan

4.2.1 Background

The identified remedial works with regards to soil contamination involve the excavation and removal of Made Ground from site, and the stripping, storage and re-use of Topsoil. An area near TP1 where surface burning occurred will be identified and removed.

In order to mitigate risks from a shallow subsidence hazard, a drill and gout programme has been undertaken and this will alter the ground gas regime. Additional gas monitoring will be necessary and protection measures should be designed using the new data and a mines gas risk assessment.

4.2.2 Excavation of Soils

4.2.2.1 Excavation of Contaminated Soils – Made Ground

The ground model suggests the Made Ground is a source of contamination and should be excavated and removed from the site, and disposed of at a suitably licensed landfill site.

All Made Ground materials excavated should be managed, stored and handled appropriately in a controlled manner to ensure protection of site construction workers and neighbouring site users, and to prevent the transfer of contamination to other areas of the site.

Validation of the source removal will comprise photographic evidence, inspection and sampling of the remaining soil by a geoenvironmental engineer.

Where removal of contaminated soil is difficult, due to excessive costs or the presence of invasive plants (Japanese Knotweed was identified on site), a further assessment, including a Controlled Waters Assessment should be conducted. Further assessment will determine if it is possible to leave these deposits on site with an appropriate remedial strategy – for example the use of suitable geomembranes and clean soil capping.

4.2.2.2 Excavation of Contaminated Soils – Topsoil near Surface Burning

Marginally elevated levels of dibenzo (a, h) anthracene (when compared to a residential GAC) were noted near an area of surface burning in TP1. The impacted soils and immediately adjacent topsoil should be removed from site, and thus not included in the topsoil strip. This will remove the source of this contamination from site.

Validation of the source removal will comprise photographic evidence, inspection, sampling and testing of the remaining soil by a geoenvironmental engineer.

4.2.2.3 Excavation and Re-use of Topsoil

The Site-Specific Assessment Criteria (SSAC) generated for arsenic within the topsoil determined the topsoil to be safe for re-use on site as part of the development.

The topsoil should be carefully stripped, ensuring it is not mixed with Made Ground, and then stored separately and appropriately to avoid any cross-contamination. Re-use on site may require a Materials Management Plan (MMP) which is discussed further in section 4.2.3.

A geoenvironmental engineer should inspect the topsoil stockpiles prior to replacement and undertake sampling and testing to confirm cross contamination has not occurred and that it is suitable for use. It can then be placed in areas previously inspected to be free of Made Ground.

4.2.3 General Comments on Re-Use/Disposal of Soils on Site

All soils or other materials excavated from site are generally classified as waste under the Waste Framework Directive (European Union, 2008) and their re-use is controlled by this legislation.

If the soils are to be re-used on site (e.g. within the red line planning boundary), if they are 'uncontaminated' or other naturally occurring deposits and they are certain to be used for the purposes of construction in their natural state on the site from which they are excavated, they may be excluded from waste regulation (Duckworth, 2011). A Materials Management Plan (MMP) may be required, which may also enable the re-use of materials classed as waste on excavation (e.g. Made Ground or re-worked soils) if in accordance with the CL:AIRE Definition of Waste, Development Industry Code of Practice (DoWCoP). If excavated soils or materials are contaminated, their re-use potential on-site may be limited.

If the soils are to be removed from site, they are automatically classified as waste, and they may only be:

- Disposed at a licensed landfill
- Disposed at a licensed, permitted soil treatment centre.
- Removed to a Receiver Site for beneficial re-use.

Prior to removal from site, the excavated arisings would need to be classified as either 'hazardous' or 'non-hazardous' waste based on a WM3 assessment. Waste Acceptability Criteria (WAC) testing would be required to determine the type of landfill in which the arisings could be disposed.

Re-use of soils on a receiver site could be undertaken via an Environmental Permit or Exemption; however, these can take time and are costly to arrange. In certain circumstances, it is permissible to use the protocols laid down in the CL:AIRE DoWCoP (Duckworth, 2011) which is generally more efficient (in terms of time and cost) to implement.

Any stockpiles of demolition rubble/soil present on site would be initially classified as waste and cannot be managed under the DoWCoP protocols. If it can be demonstrated (by further testing

and assessment) that the materials are compliant with the WRAP protocols, they may be de-classified as waste. Exemptions from the waste legislation may also be applicable.

Further guidance on the legislative requirements of the re-use/disposal of materials generated by the development can be provided by ESP once the development proposals have been finalised.

4.2.4 Underground Service Installation

No newly installed existing underground services are known within the site. ESP is not aware when, or if, any new services are likely to be installed on site, however it is likely. If new services are installed after the remediation works where the Made Ground has been removed, then the contaminated soils would have been removed and the risk mitigated, no further action will be required.

If Made Ground is not removed in the southwestern portion of the site, and services run through this portion, services should be protected as necessary.

4.2.5 Potential Constraints

Mentioned in section 4.2.2.1, excessive costs or the presence of Japanese Knotweed may make it difficult to remove the section of Made Ground along the western boundary of site. If this is determined to be the case, further investigation, testing and assessment, including a Controlled Waters Assessment will be needed to determine if the Made Ground can remain on site, and any remedial action required.

We are not aware of any further site constraints to the remediation works.

4.2.6 Management and Legal Considerations

The management of the implementation of the remedial works will be undertaken by the Client and their other third-party subcontractors.

This remedial strategy and implementation plan would need to be agreed with the Local Planning Authority prior to the commencement of the works.

Roles and responsibilities need to be adequately specified to ensure that the remedial works are implemented appropriately and are successful in their objectives to remediate the contamination risks at the site. Appropriate method statements and risk assessments should be prepared and the disposal site for the excavated soils defined so that waste management legislation is adhered with.

4.2.7 Technical Factors

The main requirement is that the contaminated Made Ground are appropriately excavated and removed from site. The Client and their third-party subcontractors will undertake the remedial works on site, which should be verified by ESP on completion (see Section 4.9).

4.2.8 Financial Factors

The Client will manage the financial factors, i.e. capital and running costs, and professional fees.

4.3 Remediation Logistics

The remedial logistics will be defined by the Client and their third-party subcontractors prior to implementation.

4.4 Remediation Programme

ESP is currently unaware of the specifics of the construction programme. It is recommended that remediation works commence as soon as possible following the submission of this report and prior to commencement of development.

4.5 Remediation Approvals and Permits

As necessary, the remedial works will need to be approved by the Local Planning Authority (LPP). All waste materials would need to be removed from site using appropriate licensed carriers. Appropriate permits will be required for the verification report following site assessment of remediation validation.

4.6 Environmental Protection

No significant environmental protection works are anticipated. As the programme for proposed remedial works is not available to ESP at the time of writing, the generation of dust cannot be assessed, however it is likely to be limited. Facilities for dust suppression should be held on site and used as required.

4.7 Post Remediation Monitoring

Following the removal of the Made Ground, area of topsoil around TP1 and the completion of the drill and grout programme, additional boreholes should be drilled across site (if others previously installed have been damaged) and installed with gas wells to confirm whether the source of the ground gas concentrations has been removed.

A combination of spot monitoring visits and continuous monitoring is proposed to help understand the post grouting ground gas regime and will feed into an updated ground gas risk assessment that will be reported as an addendum.

4.8 Remediation Verification

On completion of the remedial works, a verification report should be compiled demonstrating the completion and effectiveness of the works set out in the Remedial Strategy. The Verification Report should include, but not limited to, the following:

1. A record of any areas where made ground is removed.
2. A record of the volume of made ground soils removed and from which areas, and details of the receiving landfill. Transfer tickets should be retained.
3. A record of the number of imported soil sources and their respective volumes.
4. Details of the source and supplier of all imported soils.
5. Chemical test certificates for imported soils where available from the provider.

6. Chemical test data for all imported soils as sampled at source (if possible) and on site.
7. Details of the source and volume of any imported stone/aggregate.
8. Details of further investigation, risk assessment for a controlled waters risk assessment and associated actions.

Validation will comprise photographic evidence, inspection of the site and any remaining soil by a geoenvironmental engineer, and the drilling of additional shallow boreholes in the remaining soils to confirm that the source of ground gas has been removed. If concentrations of methane and carbon dioxide are still found to exceed acceptable levels, a new GSV should be assessed and conducted by ESP in the form of a Gas Addendum.

5 References

BRITISH STANDARDS INSTITUTION (BSI). 2017. Investigation of Potentially Contaminated Sites – Code of Practice. BS10175, HMSO, London.

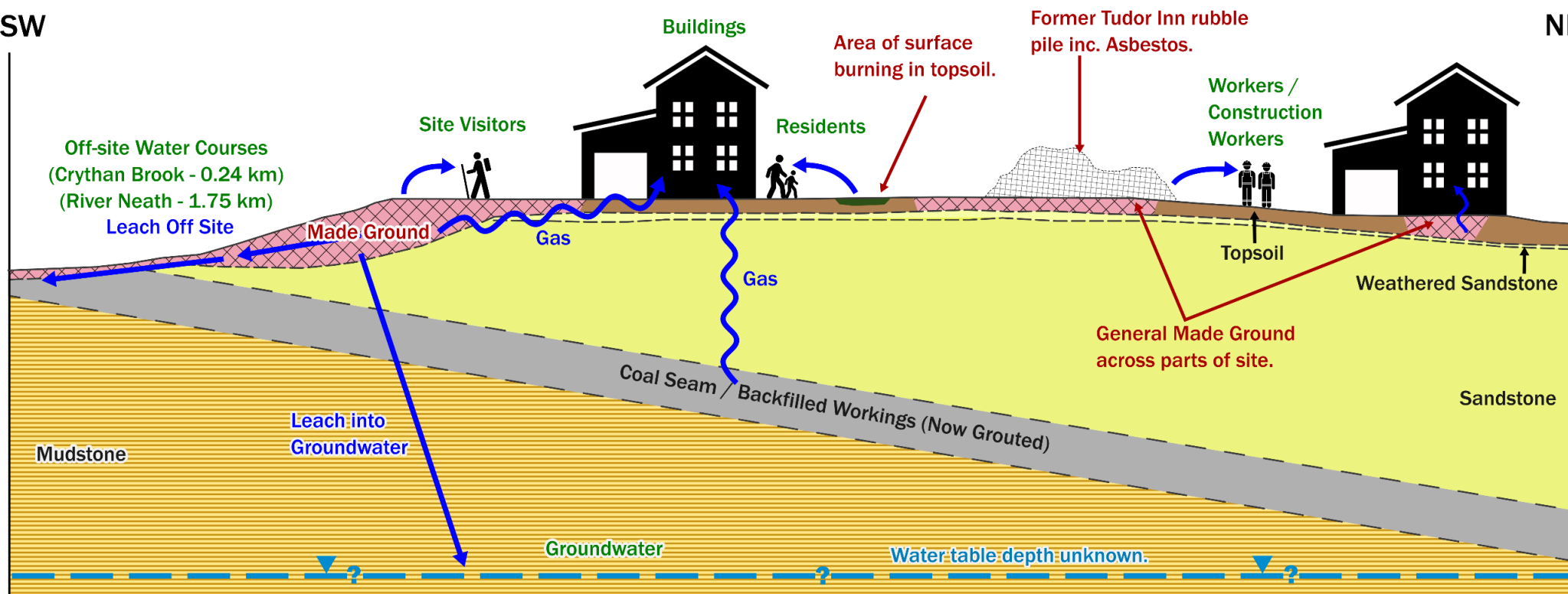
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SW

NE



Not to Scale.

LEGEND

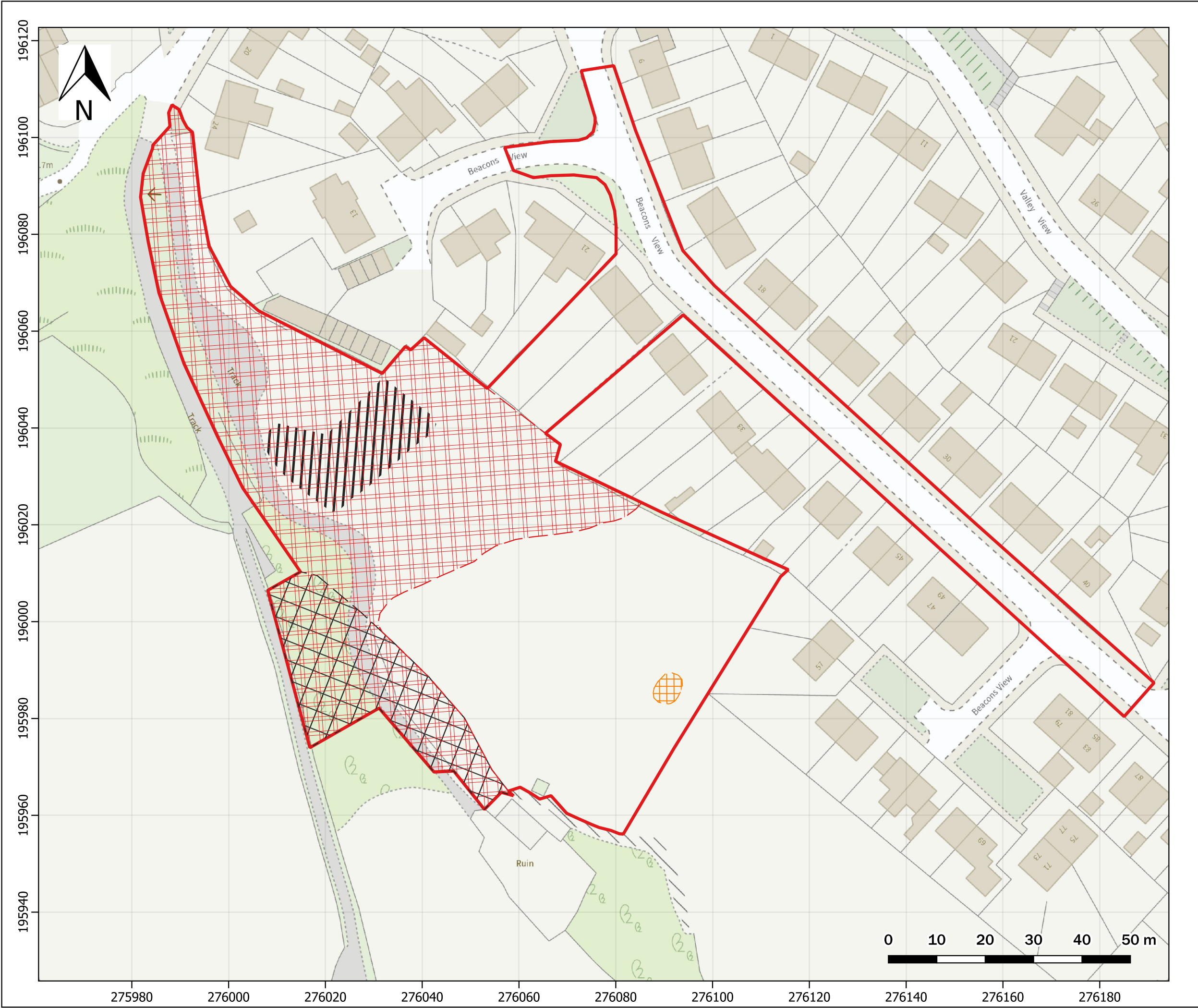
	TOPSOIL
	MADE GROUND
	Weathered Sandstone - PENNANT SANDSTONE FM.
	Sandstone - PENNANT SANDSTONE FM.
	Coal / Backfilled Workings - GRAIGOLA COAL SEAM
	Mudstone - PENNANT SANDSTONE FM.

Source	Potential contaminant or hazard.
Pathway	Route or means of contaminant exposure.
Receptor	Recipient at potential risk.
	Water Table (Estimated)

Project Name:	Former Tudor Inn - Remedial Strategy		
Report Ref:	ESP.9254.02.4511		
Client:	Rhyd Consult		
Figure Title:	Conceptual Ground Model		
Figure Number:	02	Rev:	00
Date:	07/01/2024	Drawn By:	NS

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists



LEGEND:

Site Boundary

Remedial Zones (Approximate)

- Demolition Rubble
- For Removal.
- Area of Surface Burning
- For Removal.
- Made Ground
- For Removal.
- Made Ground
- For removal or further assessment and cover system, if removal not possible.

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information. Site features are approximate locations.

2. Contains OS data © Crown copyright and database right (2026). Data may be re-used under the terms of the Open Government Licence (OGL).

PROJECT NAME: Former Tudor Inn - Remedial Strategy

REPORT REF: ESP.9254.02.4511

CLIENT: Rhyd Consult

FIGURE TITLE: Remedial Site Plan

FIGURE NO: 03b REV.: 00

DATE: 07/01/2026 SCALE: 1: 750

DRAWN BY: NS CHECKED BY: MTE



LEGEND:

Site Boundary

Remedial Zones (Approximate)

- Demolition Rubble
- For Removal.
- Area of Surface Burning
- For Removal.
- Made Ground
- For Removal.
- Made Ground
- For removal or further assessment and cover system, if removal not possible.

NOTES:

- Do not scale from drawing. This drawing should be read in conjunction with all other associated project information. Site features are approximate locations.
- Contains OS data © Crown copyright and database right (2026). Data may be re-used under the terms of the Open Government Licence (OGL).
- Proposed Development Plan after 'Site Layout' by Spring Design Consultancy, 2024. Drawing number 2617-00(03)100.

PROJECT NAME: Former Tudor Inn - Remedial Strategy

REPORT REF: ESP.9254.02.4511

CLIENT: Rhyd Consult

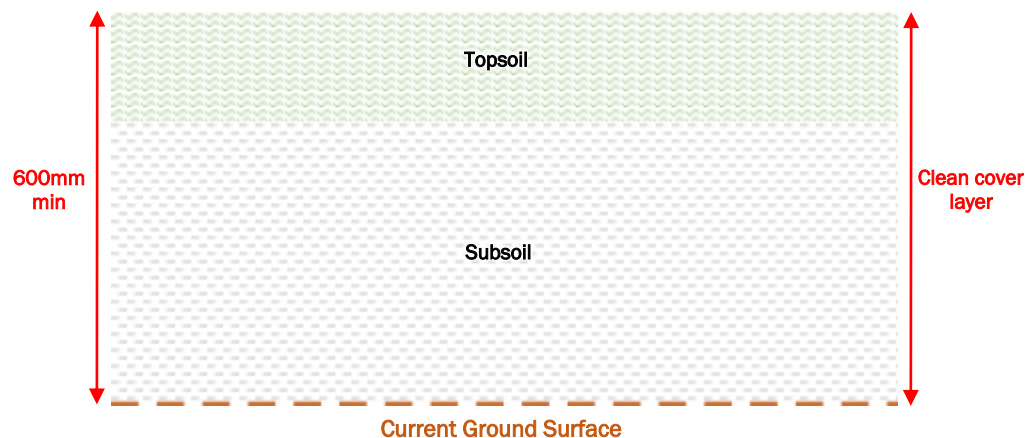
FIGURE TITLE: Remedial Site Plan

FIGURE NO: 03c REV.: 00

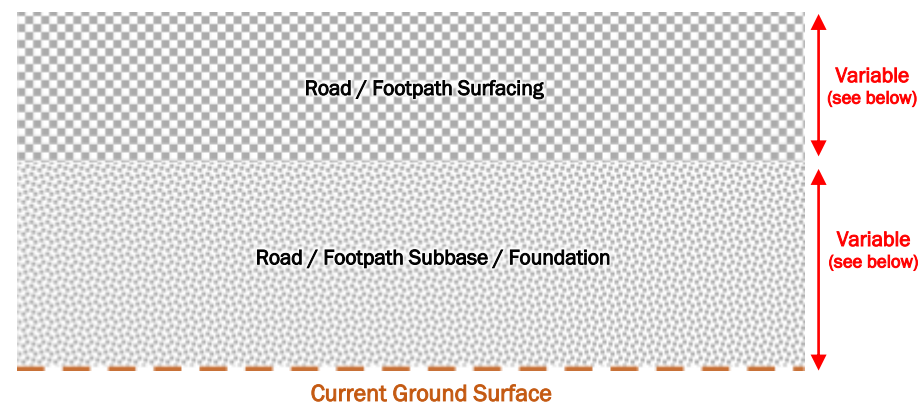
DATE: 07/01/2026 SCALE: 1: 750

DRAWN BY: NS CHECKED BY: MTE

Landscaping Areas



Roads/Footpaths



Not to scale.

Landscaping Areas:

Topsoil/Subsoil

Either imported to site, or existing site topsoil stock to be used. Certification and verification will be required to confirm source and suitability of any imported soils. Soil assessment and verification will be required to confirm suitability of onsite topsoil reuse, with MMP.

Hard Surfaces:

Road/Footpaths

comprising suitable clean, coarse fill. Road construction will be a minimum of 465mm thickness, resin bound footpath thickness will be a minimum 270mm thickness, and surface paving construction will be a minimum 300mm thickness.

Project Name:	Former Tudor Inn – Remedial Strategy		
Report Ref:	ESP.9254.02.4511		
Client:	Rhyd Consult		
Figure Title:	Remedial Strategy – Capping System		
Figure Number:	04	Rev:	00
Date:	07/01/2026	Drawn By:	NS