TWEED VALLEY HOSPITAL

- STAGE 2

HERITAGE AND ARCHAEOLOGICAL MANAGEMENT SUB PLAN



LENDLEASE BUILDING PTY LTD | 97 000 098 162

Sub Plan Revision Status					
Revision (in numbers)	Purpose and Summary of Amendments	Reviewed by	Approved by		
2	General update including LLB GMR and legislative amendments				
2.1	Project Specific – Preliminary	LB			
2.2	SSD Requirements added	AW			
3.0	Finalisation for EIS Submission MW				
4.0	Stage 2 SSD Specific Update JT				
5.0	HI/TSA Comments JT				
5.1	HI/TSA Comments	UT]			
	Revision (in numbers) 2 2.1 2.2 3.0 4.0 5.0	Revision (in numbers) Purpose and Summary of Amendments 2 General update including LLB GMR and legislative amendments 2.1 Project Specific – Preliminary 2.2 SSD Requirements added 3.0 Finalisation for EIS Submission 4.0 Stage 2 SSD Specific Update	Revision (in numbers) Purpose and Summary of Amendments Reviewed by		

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1. OVERVIEW

The Tweed Valley Hospital Project broadly consists of:

- Construction of a new Level 5 major regional referral hospital to provide the health services required to meet the needs of the growing population of the Tweed-Byron region (in conjunction with the other hospitals and community health facilities across the region);
- Delivery of the supporting infrastructure required for the Tweed Valley Hospital, including green space and other amenities, roads and car parking, external road upgrades and connections, utilities connections, and other supporting infrastructure.

1.1.1 Stage 2 Hospital Main Works and Operation

The Stage 2 SSD component seeks consent for the Main Works and Operation of the Tweed Valley Hospital, including:

- Construction of Main Hospital Building
 - Main entry and retail area
 - Administration
 - Community health
 - In-Patient units
 - Outpatient clinics and day only units
 - Child and Adolescent Services
 - Intensive Care Unit
 - Mental Health Unit
 - Maternity Unit and Birthing Suites
 - Renal Dialysis
 - Pathology
 - Pharmacy
 - Radiation Oncology as part of integrated Cancer Care
 - Emergency Department
 - Perioperative Services
 - Interventional Cardiology
 - Medical Imaging
 - Mortuary
 - Education, Training, Research

- Back of House services
- Rooftop Helipad
- Construction of Support Buildings, referred to as the 'Health Hub', containing:
 - Oral Health
 - Community Health
 - Aboriginal Health
 - Administration
 - Education, Training and Research
- Internal Roads and carparking, including multideck parking for staff, patients and visitors;
- Construction of a temporary building for the 'Tweed Valley Skills Centre'
- External road infrastructure upgrades and main site access
- Environmental and wetland rehabilitation, including rehabilitation of existing farm dam as outlined in the Biodiversity Development Assessment Report (BDAR) prepared for the Concept Proposal and Stage 1 works
- Site landscaping
- Signage
- Utility and service works

The works outlined above comprise five key components, which are subject to various funding allocations and may be delivered independently to each other. Stage 2 has therefore been defined in the following sub-stages:

Stage 2A – Main Hospital Building complete with supporting roads, services infrastructure and landscaping

Stage 2B – Main Hospital Building incremental expansion areas

Stage 2C - Health Hub

Stage 2D - Tweed Valley Skills Centre

Stage 2E - Multi-deck car park.

Refer to the Staging Report for details of staging.



2. SSD REQUIREMENTS

State Significant Development Conditions

Name of this Plan (as per SSD Conditions): N/A

B13. Prior to the commencement of construction, the Applicant must submit a Construction

Environmental Management Plan (CEMP) to the Certifier and provide a copy to the Planning Secretary. The CEMP must include, but not be limited to, the following:

(m) an unexpected finds protocol for Aboriginal and non-Aboriginal heritage and associated communications procedure including recommendations for works within the Tweed Coast Road / Cudgen Road intersection;

(n) procedures to protect the retained stone walls on the Site identified in the Historical Heritage Assessment Report prepared by Niche Environment and Heritage dated 23 September 2019;

Refer to 5. Details of actions for dry stone walls

B32. Prior to the commencement of landscape works on the site, the Applicant must submit a Heritage Interpretation Plan to the satisfaction of the Planning Secretary. The plan must be prepared in accordance with the Interpretation Strategy prepared by Niche Environment and Heritage and dated 23 September 2019 and must:

(a) be prepared by a suitably qualified and experienced expert in consultation with the local South Sea Islander Community;

(b) where appropriate include engagement of local South Sea Islander and community artists to assist with development of the interpretation material in a culturally appropriate manner;

(c) outline all interpretation measures to be implemented that acknowledges the Site's heritage; and

(d) provide details of any associated physical works including any relocation of previously removed drystone walls into the landscaping scheme and provide updated landscape plans accordingly.

Heritage Interpretation Plan is to be developed by Niche prior to the commencement of Landscaping works and as such not referenced in this CEMP Sub-Plan. As per the Staging report, these works are not scheduled to occur until Stage 3 of the development. This plan will be be updated prior to stage 3 to accommodate the requirements of the new Heritage Interpretation Plan.

For minor comments on this item, refer to 3, 4, 5, 6, & 7. Details of walls to be removed and storage procedures

C22. For the duration of the construction works:

(a) the dry-stone walls that are not approved for removal must be suitably protected during construction as per the recommendations of the Historic Heritage Assessment prepared

by Niche Environment and Heritage dated 23 September 2019.

Refer to 3, 4, 5, 6 & 7. Details of walls to be removed and storage procedures



C35. In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and the registered Aboriginal representatives must be contacted to determine the significance of the objects. The site is to be registered in the Aboriginal Heritage Information Management

System (AHIMS) which is managed by EES Group and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and EES Group to develop and implement management strategies for all objects/sites. Works must only recommence with the written approval of EES Group.

Refer to 3 and 4.

C36. If any unexpected archaeological relics are uncovered during the work, then all works must cease immediately in that area and the Heritage NSW contacted. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of the Heritage NSW.

Refer to 3, 4, and Appendix 3. Unexpected finds protocol.

D42. All physical works as required by the Heritage Interpretation Plan in this development consent must be completed prior to the commencement of first operation of the Site.

Heritage Interpretation Plan is to be developed by Niche prior to the commencement of Landscaping works and as such not referenced in this CEMP Sub-Plan. As per the Staging report, these works are not scheduled to occur until Stage 3 of the development. This plan will be be updated prior to stage 3 to accommodate the requirements of the new Heritage Interpretation Plan.

E4. The Applicant must implement the requirements of the most recent version of the Heritage Interpretation Plan approved under condition B32.

Heritage Interpretation Plan is to be developed by Niche prior to the commencement of Landscaping works and as such not referenced in this CEMP Sub-Plan. As per the Staging report, these works are not scheduled to occur until Stage 3 of the development. This plan will be be updated prior to stage 3 to accommodate the requirements of the new Heritage Interpretation Plan.

3. SCOPE OF PROJECT AND SUB PLAN

Project Details	Project Details					
Scope of the Sub Plan	This Heritage and Archaeological Management Sub Plan provides strategies and control measures for the protection and management of previously known and unidentified heritage features. It outlines appropriate measures to ensure that identified Heritage and Archaeological items, are managed appropriately during the construction phase and measures that may need to be taken if unexpected fines of items are uncovered. This may include trees, buildings, artefacts, relics, human remains and places, encountered during site establishment and construction of the project. It describes measures to be implemented during relevant construction activities, which enables assessment of the impacts of construction activities on potentially affected relics, items or areas.					



Project Details	
	Refer to Section 1.1 and 3.1 of the Project EHS Management Plan for clarification on how the EHS Sub Plans form part of the Lendlease Building (LLB) EHS management system.
	If works causing ground disturbance are planned within the vegetated section of the Project Site (i.e. the section along the water and in the north), consultation with the RAPs and a further cultural heritage survey with representatives of the RAPs will be required.
Objectives of	To protect or conserve known heritage, culturally significant and archaeological items on and adjacent to the site.
the Sub Plan	To establish procedures for the identification, protection and management of previously undiscovered heritage, culturally significant and archaeological items.
	To preserve items that are of significances to the earliest history of the site.
	To align the work activities with the feasible recommendations raised in Niche's TVH Historical Heritage Assessment
Scope of	This Sub Plan has been prepared based on consideration of the following scope of works:
Works	Site establishment including ATF, fixed temporary fence and hoarding installation, office and compound setup;
	Civil Works, including carparks and roads to Stage 2;
	Monitoring and maintenance of existing Sedimentation Basins;
	Construction of the multi-level Main Works Stage. This new build will include a new emergency department, helipad, IPUs, ICU, MAU, expanded rehab and ambulatory care facilities and operating theatres
	Landscaping
	Main Road Entry
	HV Feeder works (tunnelling boring, open excavation)
Key Issues and Risks	The heritage and archaeological assessment, for the site indicates that the following items/features are potentially or known to exist within or are adjacent to the site:
	 A detailed investigation to assess the potential for Aboriginal archaeological resources and consultation with the Registered Aboriginal Parties (RAPs) did not identify sites of Aboriginal cultural heritage on the surface and noted the subject area has extremely low potential to contain intact archaeological deposits.
	• Five historical dry-stone walls were identified during a heritage survey of the site. The walls were likely constructed by South Sea Islander workers, principally from the Solomon Islands and Vanuatu, and may be represent a significant connection of South Sea



Project Details

Islanders to the Tweed district. The stone walls were partially relocated in accordance with this management plan and SSD1 conditions. The re-installation of the walls is subject to interpretation options that are currently under development in consultation with Council and the South Sea Islander community. This is in accordance with the Conditions of Consent, and will be included in the Interpretation Plan as part of the Stage 2 SSD works.

- Within the immediate house grounds there are three mature trees two figs and one Poinciana. The mature trees on the Project Site have individual aesthetic value and contribute to the Project Site's overall aesthetic qualities. The Poinciana has been removed and the western fig will need to be removed for a carpark road. The east fig will be retained and incorporated in the new design
- Across the site three rubbish deposits were identified, two rubbish deposits contained a range of material including evidence of the old tramway in the form of rail track. Should such relics be located during ground disturbance works, that they be managed appropriately.
- Refer to Appendix 1 for location of walls, trees and rubbish deposits.

The following activities will be monitored to reduce impact:

- Material storage resulting in spills or ground compaction near heritage landscape features (trees and gardens); and
- Physical damage by machinery.

The implementation of the control measures identified in the EHS Plan and this Sub Plan are intended to mitigate the risks and impacts associated with these activities.

Legislation and Guidelines

Federal/National:

- Environment Protection and Biodiversity Conservation Act 1999
- Aboriginal and Torres Strait Islander Heritage Protection Act
- Ask First: A Guide to Respecting Indigenous Places and Values (Australian Heritage Commission)

State:

- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW
- Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks & Wildlife Act 1974.

Local:

- NSW Police
- Tweed Byron Local Aboriginal Land Council

Lendlease Requirements:

• GMR: 4.13 Degradation or Pollution of the Environment



Project Details	
	GMR: 4.15 Uncontrolled Release of Stored Energy (non-electrical))
	Lendlease Building Workplace Delivery Code (WDC)
Retention / Protection / Disassembly	Procedures for the Retention, Protection or Disassembly of the walls are to be generally in accordance with Niche Environment and Heritage's Historical Heritage Assessment Report.
of Dry Stone Walls	Storage of rocks that were within the footprint of construction is in line with the recommendation made by Niche within EIS report.
Summary of Site Controls	Works must be undertaken in accordance with the Lendlease GMRs, the Project EHS Plan, this Sub Plan and the Lendlease Building WDC. These documents detail Lendlease's approach and commitment to pro-active and responsible site management.
	Site specific controls, monitoring, reporting and performance measurements have been identified in this Sub Plan to prevent or minimise the impacts of construction on previously known and unidentified heritage and archaeological features. These include but are not limited to:
	The installation of protective fencing and signage around known sites, items or buildings;
	The establishment of 'buffer zones' around known sites and items, for vibration and access control;
	The appropriate selection of plant and equipment working close to heritage items and buildings;
	The implementation of an Unexpected Find Protocol for previously unidentified items (refer below).
	A Heritage/Archaeological assessment/survey must be available (Niche Report) prior to any works commencing including site establishment. The requirements of the assessment/survey must be incorporated into this Sub Plan and detailed on the Environmental Management Diagram (EMD) included in Appendix 1.
	Construction stage heritage and archaeological excavation and protection measures must be included in relevant specifications, contract agreements, quality assurance documents, and subcontractor work method statements.
	Site inspections, monitoring and reporting will be undertaken by Lendlease and subcontractors as detailed in the EHS Plan and the following implementation table.
Unexpected Find Protocol	Cease work, turn off machines and clear the area immediately if a potential burial site or item of heritage or archaeological significance has been discovered or is suspected.
(Refer to	2. Contact the EHS Coordinator, Site Manager or Construction Manager immediately.
Appendix 3)	3. Erect barricades to isolate the immediate area and prevent entry. Establish a buffer of 10m between the potential heritage/ archaeological item and the barrier (as a minimum where possible).



Project Details

- 4. The appropriate regulatory authorities should be notified as soon as possible if applicable. Contact the nominated appropriately qualified Heritage or archaeological specialist.
- 5. No person shall enter the barricaded area unless expressly permitted by the qualified Heritage /Archaeological specialist. A clearance certificate or approval should be given in writing prior to entry.
- 6. Sampling / inspection of the fine is to be carried out by the Heritage /Archaeological specialist as advised by the LLB construction manager.
- 7. The nominated Heritage /Archaeological Specialist (in liaison with LLB senior site personnel and/or relevant authorities) will determine if further management actions are necessary based on an available information.
- 8. All permits to carry out additional actions are to be obtained prior to the commencement of any new works and the nominated Environmental Specialist must provide written clearance approval.
- 9. The barricade may then be removed and work activities may resume under the direction of the LLB Construction Manager.

Note: For unexpected finds involving human skeletal remains, contact must be made with local Police. The area must be secured immediately.



4. IMPLEMENTATION OF THE SUB PLAN

Control Measure Timing		Methodology	Responsibility	Monitoring and Reporting	Performance Measurement	
Planning and Site Establishment						
Obtain a heritage/archaeological survey/report to identify the significance of the site and any surrounding areas/ features/buildings/trees (if necessary).		In consultation with a heritage specialist prepare: *a list of items and areas of significance; *an Environmental Management Diagram (EMD – Appendix 1) showing the location of <i>known</i> heritage items areas; *a heritage zoning plan showing areas with high, medium and/or low heritage 'potential'.		List of items and areas of significance prepared. Diagram prepared and reviewed. Heritage zoning plan prepared (if required).	List and diagram prepared containing all relevant details and communicated prior to commencing any works.	
construction activities on known and previously unidentified heritage/		Revise Lendlease standard induction package to include site specific information. Deliver induction material.	CM/SM	WMSs prepared by subcontractor's address heritage issues.	Site induction delivered to all workers on site.	
Install barriers/protective fencing and clear signage to control access to known heritage areas until approval to		Install access controls in accordance with heritage consultant recommendations. Do not permit access without CM approval.	SM	Daily surveillance to assess integrity of barriers/fencing. Weekly/monthly inspection checklist.	No access into significant areas. Barriers/fencing not removed until a clearance certificate is provided by heritage consultant.	
Monitor ground stripping/disturbance and spoil handling activities in actual and potential heritage areas (where works have been approved to proceed for site establishment or clearing).	Areas of potential impact identified prior	Obtain approval to commence works in heritage areas within the project footprint. (Early excavation of potential	CM/SM External reps	Surveillance during earthworks. WMS	No unnecessary land disturbance. No disturbance of identified areas without approval.	



commencing ma		archaeological deposits (PAD) may be required). Establish a protocol and work method for ground disturbance works. May involve visual monitoring of surface disturbance and spoil by specialist consultant or external representatives (eg LALC). Ensure appropriate external representatives are involved as required.			Protective fencing and signage maintained until a clearance certificate has been issued.
During Construction					
Maintain fences/barriers/signage around heritage items/buildings etc that are	At all times	Check the condition and integrity of controls. Address the importance of	SM	Daily surveillance. Weekly inspection	No breach of fence line.
required to be retained and protected.		controls and access restrictions in a toolbox.		checklist.	
Minimise the potential for damage to heritage structures through the appropriate selection of work methods, plant and equipment, and the establishment of buffer zones.		Prepare WMS for all works affecting or close to heritage items/structures. Use appropriately sized plant and equipment to minimise ground vibration and reduce the potential for damage to relics. Establish safe use buffer zones.	CM/SM	WMS for works near heritage structures/items.	No damage to existing structures or items. Compliance with WMS.
All permits to carry out archaeological investigations or excavations are to be obtained prior to the commencement of any new works.	After discovery of relic	In accordance Heritage & Archaeological Management Plan.	СМ	Monitor compliance.	Sighting permit.



Enact the Unexpected Find Protocol in the event that a potential heritage item, artefact or relic is discovered.	At any time	time Cease work immediately.		Monitor earthworks. Maintain site records of any findings.	No construction impact to unexpected finds Protocols followed Sighting permit
Human remains identified – Stop work provision	Human remains are encountered	Cease work immediately. Baricate 20m around area NSW Police contacted immediately and no further action until NSW provide written notification.	SM/ Contractor	Monitor earthworks. Maintain site records of any findings.	No construction impact to unexpected finds Protocols followed Sighting permit
Protcol for unexpected finds when working within identified rubbish deposits	At all times	Workers are to be briefed prior to working within rubbish deposits of unexpected finds protocol. Establish signage around area.	SM/ Contractor	Prestart Minutes SWMS Maintain site records of any findings.	No construction impact to unexpected finds Protocols followed
Ground disturbances within Northern Wetland area	As required	consultation with the RAPs and a further cultural heritage survey with representatives of the RAPs	CM, SPE and SE	Consultation with Heritage Consultant	No harm caused by unexpected aboringal finds.

Heritage Stone Walls							
Archival process to be incorporated during the disassembly of the heritage walls.			SM / Heritage Consultant	Report or letter.	Detailed summary of existing wall for record for either rebuild or reuse of stones.		
Location of disassembled stones to be protected.	After disassembly of wall.	Prepare WMS for all works affecting or close to heritage items/structures.	SM/F	Weekly inspection checklist.	No damage to existing stones.		
Avoid removing trees and vegetation which may be supporting the walls.	During bush regeneration.	Coordination between heritage consultant and ecological	SM/ Heritage &	Site Inspection Report	Minimise damage to walls.		



consultant on vegetation to be removed.	Ecological Consultant	

5. DETAILS OF ACTIONS FOR DRY STONE WALLS

All of the work for the heritage stone walls will follow the procedures outlined in the Niche's TVH Historical Heritage Assessment.

Heritage Stone Wa	Heritage Stone Walls						
Wall Number	Location (Appendix 2)	Description Measure					
1	Located on the southern perimeter of site, along Cudgen Road footpath. Will interefer with new Slip Lane.	Part retention of wall 1, archival recordings of the demolished section and reconstruction of the remaining section of the wall to ensure its stabilisation. Rocks affected to be stored as per Appendix 2 until used for re-interpretation (Stage 1 and 2 Works)					
2	Located within the retained undisturbed forest.	Protection of wall 2, exclusion zone established.					
3	Located internal to site, within the windrows. Location of wall will interfere with the retaining wall batter during construction.	Removal of wall 3, archival recordings of wall prior to disassembly. (Stage 1 Works) Rocks stored as per Appendix 2 until used for re-interpretation (Stage 1 and 2 Works)					
4	Located internal to site, within the windrow. Will interfere with the green spine of the carpark.	Removal of wall 4, archival recordings of wall prior to disassembly. Rocks stored as per Appendix 2 until used for re-interpretation (Stage 1 and 2 Works)					
5	Located on the eastern perimeter of the site.	Protection of wall 5, exclusion zone established.					

6. METHODOLOGY FOR DRY STONE WALL REMOVAL AND STORAGE FOR WALLS 3 & 4 AND PORTION OF WALL 1

The following are the steps for the removal and storage of the existing dry-stone walls that are approved for removal.

Item	Description	Subcontractor and Consultant	Comment
1.	Complete a full dilapidation and survey of the walls	Niche	Completed April 2019.



2.	Prepare an area for storage in accordance with the advice provided by Niche	Delta	A geofabric layer will be placed on the ground at the nominated stockpile location set up specifically for the walls. Signage will be installed to indicate this is for "Dry Stone Walls Only". The individual walls will be segregated from each other. Information regarding the storage location and procedures will be communicated to workers in the Builders Brief and in the Site Inductions.
3.	Heritage Consultant review the process	Niche	A section of wall will be deconstructed as per the below methodology as a trial, the Heritage Consultant will determine if the methodology yields acceptable results prior to proceeding with the full length of wall.
4.	Removal of walls in accordance with the advice provided by Niche	Delta	Using a "soft" bucket attachment for an excavator (likely 6 – 8 tonne) remove rocks from top down. Each bucket will be then unloaded carefully into tipper. Rock walls will be removed to the toe level of the wall.
5.	Storage of dry stones in accordance with the advice provided by Niche	Delta	The tipper will unload the rocks onto the geofabric layer at the storage area. Where practical, the rocks will be deposited in mounds at the storage area based on the following identified course in the wall as they are unloaded: • Coping rocks (outside of walls); • Base course (larger rocks which provide the foundation of the walls); and • Rubble for packing (fill to be used in the centre of the wall). No lining/protection is required between layers of rocks. Dry stones will be mounded up
			to 1.5m high. Shade cloth will be used to cover the dry stones in the storage location.
6.	Re-installation	TBC	Interpretation options are currently under development in consultation with Council and the South Sea Islander community, in accordance with the Conditions of Consent, and will be included in the Interpretation Plan as part of the Stage 2 SSD application.

The storage location is shown in Appendix 6.

7. METHODOLOGY FOR EARTHWORKS IN THE VICINITY OF WALL 3 AND 4

To confirm the location of any burial grounds in the vicinity of Wall 3 and 4 a Ground Penetration Radar(GPR) survey was undertaken. The Executive Summary of the GPR report detailing the findings is in Appendix 7. Following the removal of the walls as per the methodology detailed in section 5, the following table details the steps for earthworks near wall 3 and 4.

Heritage Stone Walls			
Wall Number	Scope of earthworks	Description Measure	
3	The earthworks near wall 3 will result in excavation below the existing ground level.	The GPR report concluded that the lower side of Wall 3 ground conditions are very complex and as such it is not possible to be definitive with regard to the presence, or absence, of burials at this location. Given this, excavation on the low side of Wall 3 will be undertaken with the following controls:	



		 Excavation will be in 100m layers from the existing ground level to the final design level (approximately 3m at the deepest section of excavation) A spotter will be in place to observe the excavation activity and monitor for any disturbed burial sites or archaeological artefacts. A qualified anthropologist/archaeologist will be present during the removal of the top 1.8m of soil and rock. Should any burial site or archaeological artefacts be uncovered the Unexpected Find Protocol will be implemented (refer to Appendix 3).
4	The earthworks near wall 4 will result in filling above the existing ground level.	The GPR report concluded that the ground conditions were not consistent with burial sites. Given this, earthwork filling activities will be undertaken once the rock wall has been removed to the toe level of the wall.



Appendix 1 – Site Layout





Survey Results

Tweed Valley Hospital - Historical Heritage

FIGURE 12

Imagery: (c) SixMaps 2018



Appendix 2 – Location of Stockpile for storing of Rocks from Walls 1, 3 and 4

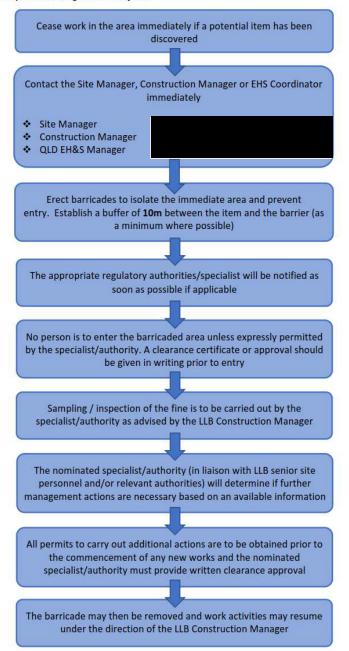


Appendix 3 – Unexpected Finds Protocol



UNEXPECTED FINDS PROTOCOL

Unexpected Find items can include, but are not limited to, hazardous building material, potential burial site or item of heritage or archaeological significance, medical paraphernalia, illicit items including weapons and drugs related objects



Appendix 4 - Reference Photos (Walls, Tree and Rubbish Deposit)



Plate 2. Wall 1, view northeast.



Plate 13. Spreading fig tree on northeast side of house, view east.



Plate 22. Rubbish dump including rail track and machinery

Appendix 5 - Niche Archiving Report

Appendix 6 – Executive Summary from Ground Penetrating Radar Report	