

Consulting Engineers LLP
Multi Discipline Consultancy

McNulty Site Summary

for

Meeting 21st December 2012

Prepared for: Port of Tyne
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Date: 20th December 2012

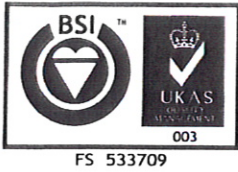
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INTRODUCTION

This document gives only a broad overview of the McNulty Site and is intended to assist with discussion at the meeting to be held on 21st December 2012; for detailed information reference should be made to the individual reports and the overall report.

The White House (Building No. 16) has not been included as it is already proposed to demolish this building.

The Rubb Tents (Buildings No. 5, 15 and 21) have not been included as they are to be sold off as an asset. See attached drawings for building locations.



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BUILDINGS



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BUILDING No. 01 - PIPE SHOP



Description

- Large fabrication shed in two sections with offices at the East end and on North side. Masonry and framed construction with a double span duo-pitched roof with metal cladding. The building has overhead cranes.

Comments

- May be considered as a building of historic interest.
- A number of structural defects noted, some of which will need further investigation.
- Nesting Kittiwakes would present a problem if demolition were considered without providing alternative nesting area.

Proposal

- Retain.
- Investigate defects and establish cost for remedial works.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 02 - GATEHOUSE



Description

- Recent porta-cabin type construction.

Comments

- In good condition.

Proposal

- Retain.

BUILDING No. 03 - STORES



Description

- Modern portal frame building with metal cladding.

Comments

- In reasonable condition but some remedials required.

Proposal

- Retain.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to be upgraded to meet current standards
- Asbestos Survey

BUILDING No. 04 - WORKSHOP, STORES & OFFICES



Description

- A collection of masonry buildings with duo-pitched and flat roofing, with some internal offices.

Comments

- In poor condition with some remedials required (reroofing in particular).
- Parts of the buildings appear to be in poor condition and care is needed to access them.

Proposal

- Could retain some of the parts, such as the main building.
- Option would be to demolish which would allow better access to Building No. 1 - Pipe shop.

BUILDING No. 06 – Shot blast enclosure



Description

- A steel framed clad building on an elevated crane track, mounted on flanged wheels so it can potentially be moved; it is not known whether this has ever actually been undertaken.

Comments

- Poor condition.

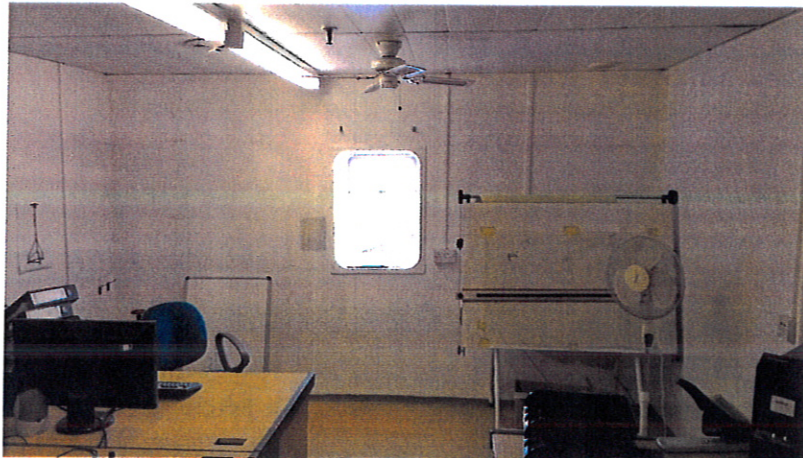
Proposal

- Demolish.

If parts retained then

- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 07 – BLUE SUBMARINE



Description

- A steel modular container type construction, salvaged from a rig.

Comments

- Although some defects are present the building is in reasonable condition

Proposal

- Retain at this time - could be used as site offices.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to be upgraded to meet current standards
- Asbestos Survey

BUILDING No. 08 – MAIN OFFICE BUILDING



Description

- Masonry buildings generally with timber floors and a slated pitched roof.
- Contains the main toilet block on site.

Comments

- Generally in reasonable conditions but some defects which will require further investigation and probably with some remedials required.

Proposal

- Retain and refurbish
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 09 – SAFETY OFFICES



Description

- Lower section is the original timber framed building, however a steel framework was constructed over onto which are positioned two steel container type modules were installed

Comments

- Steel frame structure is suspect.

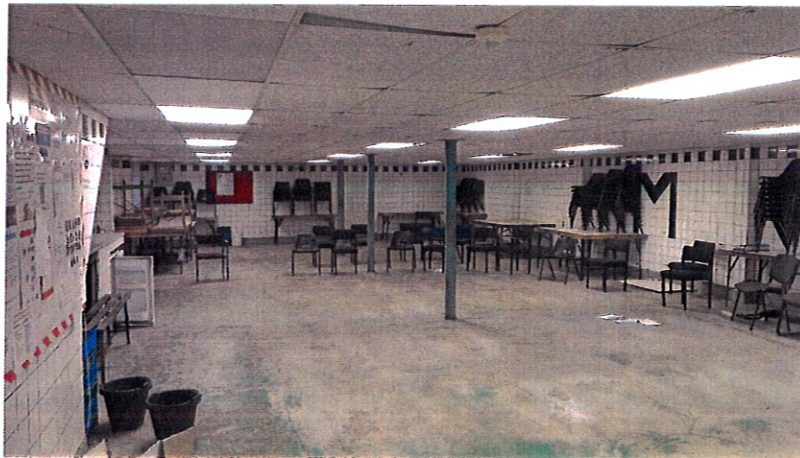
Proposal

- Remove upper containers and steel frame.
- Lower timber framed construction could be retained but will need remedial works.

If lower section retained

- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 10 - CANTEEN



Description

- A masonry buildings with pitched roof. It seems as though it has had a floor introduced at some time. In the past

Comments

- In poor condition and investigations are required relating to the floor; and modification to the roof structure. It is anticipated that some remedials required.

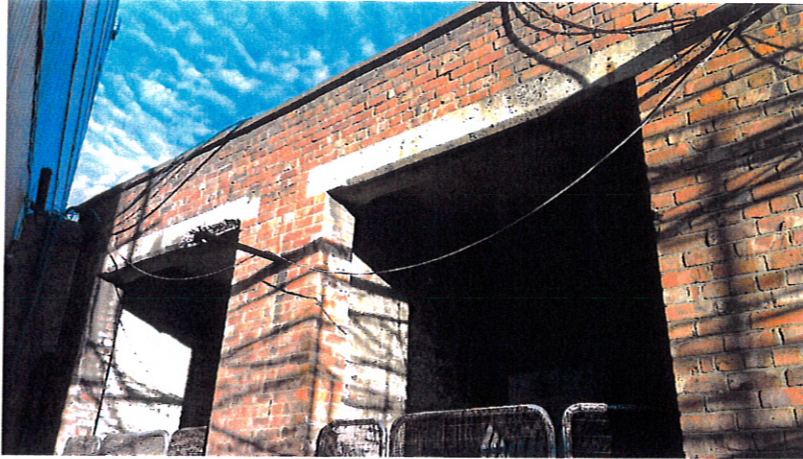
Proposal

- Could be retained depending on the outcome of investigations.

If retained then

- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 11 – SUB-STATION



Description

- A masonry building with flat roof.

Comments

- In reasonable condition but some remedial works required.

Proposal

- Needs to be retained therefore - undertake remedial works.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 12 – ELECTRICAL STORE



Description

- Lower section is the original timber framed building over which a steel framework has been position and used for storage and currently one porta-cabin type module.

Comments

- Steel frame structure is suspect and settlement to parts of the timber framed building is evident.

Proposal

- Demolish.

BUILDING No. 13 - FABRICATION SHOP AND LOFT OFFICES



Description

- Large steel framed duo-pitch industrial structure used for the steel fabrication of module elements, housing cutting and forming machines as well as welding facilities.
- Loft offices are located within the central portion of the building at high level.

Comments

- Access to the upper floor is via external staircases some of which are still the original scaffolding construction built as a temporary measure over 25 years ago.

Proposal

- Retain and refurbish.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to be upgraded to meet current standards
- Asbestos Survey

BUILDING No. 14 – RIGGING STORE



Description

- Two storey steel framed metal clad structure with duo-pitch roof and mono-pitch lean-to on North gable. The building abuts the North-Eastern corner of the Fabrication shop.
- Formerly used to store rigging equipment.

Comments

- Modifications have been undertaken adjacent to the Fabrication shop; Building No. 14 used to penetrate into Building No. 13 – investigations required.
- Problems with corrosion throughout, in particular within the ground floor maintenance area.

Proposal

- Could be retained depending on outcome of investigations/full understanding of extent of corrosion.

If retained then

- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 17 – OFFICE SPACE



Description

- Single storey flat roofed prefabricated offshore module co-opted by McNulty Offshore for use as an office space.
- Supported on a steel grillage of UCs beneath the module; 6No. SHS stub columns bear directly onto a raised area of hard standing.

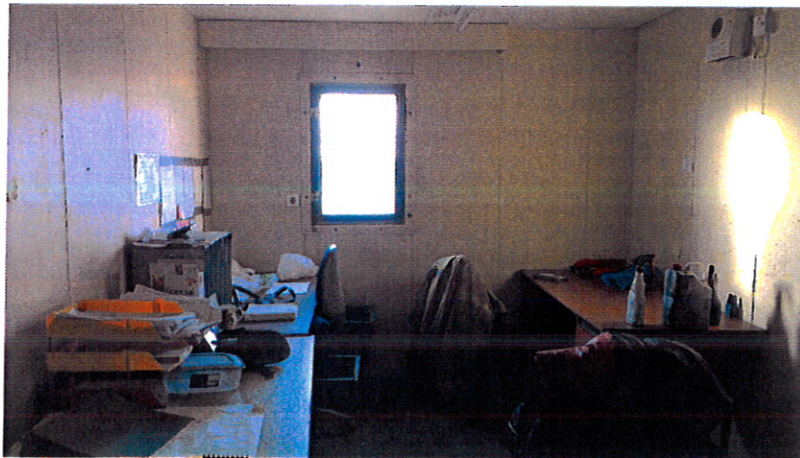
Comments

- In reasonable condition with localised concerns regarding corrosion to the supporting grillage.

Proposal

- Retain at present but might be worth considering its scrap value.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to be upgraded to meet current standards
- Asbestos Survey

BUILDING No. 18 – MANDELA HOUSE



Description

- Three storey steel container constructions salvaged from a rig, now used as office space.
- Granted temporary planning permission which has long since expired but no action has been taken by Planning Authority to DTA's knowledge.

Comments

- In reasonable condition.

Proposal

- Retain at present but might be worth considering its scrap value.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 19 - SUBSTATION



Description

- Complex of Substation buildings.

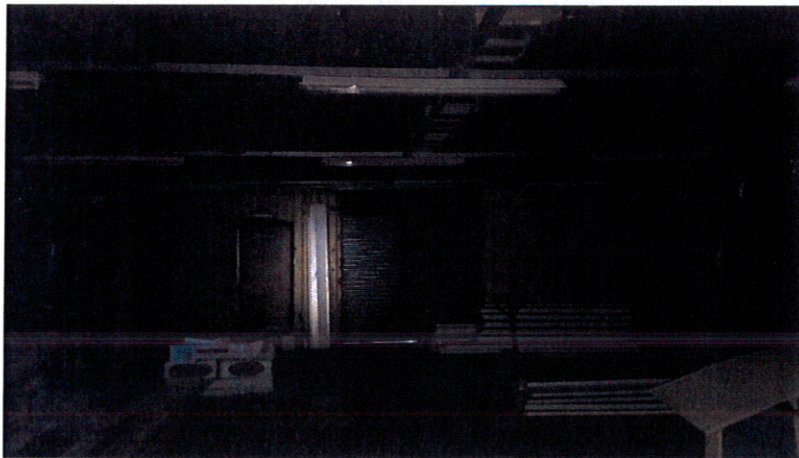
Comments

- In reasonable condition.

Proposal

- Need to be retained for site supply reasons.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
- Asbestos Survey

BUILDING No. 20 – STORE AND OFFICES



Description

- Substantial steel container building used as a store and office.

Comments

- In reasonable condition.

Proposal

- Retain at present.
- Electrical circuits to have periodic inspection and testing undertaken and upgraded as necessary
- General Lighting, emergency lighting, earthing and Fire Alarms to upgraded to meet current standards
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SITE WIDE FEATURES

WEST HOLBORN BOUNDARY WALL



Condition

- Masonry wall is visible out of plumb

Proposal

- Agreed that remedial works are required.

ELEVATED CRANE TRACK IN SOUTH YARD.



Description

- Reinforced concrete construction.
- Part of which was demolished by McNulty recently.
- DTA inspected the section near the river in 2011 and this revealed it to be in poor condition with spalling concrete and exposed corroding reinforcement. This resulted in significant load reduction in the allowable load on the structure

Proposal

- Suggest demolition and backfill most of the area apart from the tidal section as this avoids the cost at this stage of a quay wall construction
- This would provide more site area.



SITE WIDE ELECTRICAL INSTALLATION

The vast majority of the Electrical Infrastructure to both the South and North Yards is circa 45-50 years old with the high voltage switchgear is oil insulated, at the time of the survey there was no indication of any recent servicing of the switchgear having been undertaken.

Similarly the three transformers in the South yard are circa 50 years old, these are also oil insulated and show no signs of recent servicing or that they have been tested for P.C.B's.

Much of the main L.V. Switchgear is not fitted with mechanical interlocks to prevent access to live parts of the switchgear without isolation of the circuit.

The main South yard L.V switchboard is provided with a buscoupler which is not interlocked (other than via an external padlock) with either of the incoming switches which could permit the two transformers to be connected in parallel and exceed the fault rating of the switchboard.

Sub mains cabling across the site is either buried or in the many cases laid across the ground or fixed between buildings. These cables tend to be large as the site distribution is at a low voltage and in many instances the cables are insufficiently supported putting undue strain on cable conductors and terminations.

It is clear that the vast majority of the Electrical infrastructure across both the North and South Yards is beyond its life expectancy and no longer suitable for the possible range of activities across the site. Given the area of the site a H.V. network supplied from a single infeed location should be provided with 'local' transformers positioned at specific load centres. This will reduce the need to have large L.V. cables running across the site and also negate the risk of having L.V. supplies from the South Yard feeding services within the North Yard and vice versa and the associated risk to personnel this carries.

EXTERNAL LIGHTING

This will need to be improved as there are areas which are well below the required standard.

EXTERNAL LIGHTNING AND SURGE PROTECTION

This should be considered and implemented on a site wide basis

MECHANICAL SERVICES AND SUPPLIES

Need to be tested and rationalised.



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QUAY FRONTAGE

SOUTH SIDE FACING GUT



Description

- Part concrete construction and part steel sheet pile wall

Condition

- Steel sheet pile wall is in extremely poor condition with many holes due to ALWC
- Holes in wall a number of years ago allowed a large void to be created consequently this area of quay is out of bounds.
- Quotes for radar scans being obtained

Proposal

- Revetment to be constructed but needs to be coordinated with Riverside quay extension

SHEET PILE WALL TO SOUTH YARD



Description

- Steel sheet pile wall with variations due to old slipways

Condition

- Steel sheet pile wall is suffering from ALWC and therefore its strength must be considered suspect.

Proposal

- Detailed survey of pile wall thicknesses required to an appraisal can be undertaken and appropriate action considered.

SOUTH LOAD OUT QUAY



Description

- Constructed over a backfilled slip way, with some exposed piles at quay edge.

Condition

- Reasonable but is suffering corrosion

Proposal

- The exposed steel work columns need protection against ALWC - possible CP or applied finish.

TIMBER STRUCTURE IN FRONT OF FAB SHOP



Description

- Timber quay faced with steel sheet piles.

Condition

- Deck timbers unsafe
- Timber quay condition unknown
- Steel sheet piles suffering from ALWC

Proposal

- Timber retaining structure needs more detailed intrusive investigations to determine its strength.

NORTH LOAD OUT QUAY



Description

- Reinforced concrete slab supported on tubular piles

Condition

- Suffering very badly from ALWC with a number of repairs undertaken in recent years

Proposal

- Repair and apply CP added and possibly with some other protective measures as major asset to site

ORIGINAL MASS CONCRETE WALLS AROUND DOCK



Description

- Original mass concrete walls around old dry docks

Condition

- Seem in reasonable condition for age.



QUAY FOR REST OF NORTH YARD





NWL outfall

Description

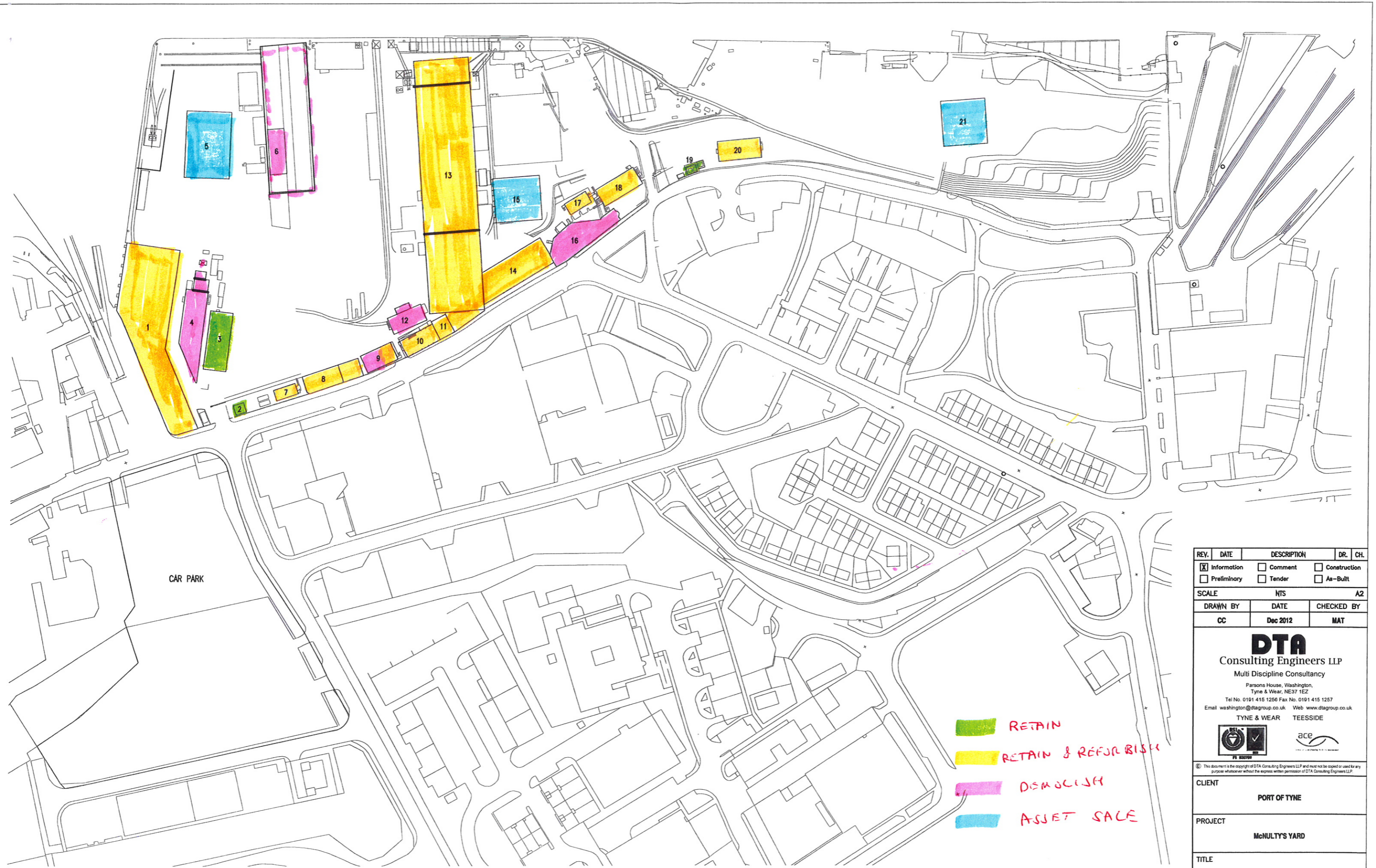
- A variety of types of construction, mass masonry walls and timber piling.
- Also a section has a major NWL Outfall

Condition

- In a poor or very poor conditions and risk of further slippage of some slopes into the river


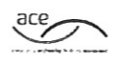
Proposals

- If no short term plans to develop this length of quay then investigation into ways of stabilising the situation in the short term should be considered also the possible removal of the remnants of the timber structures



SITE PLAN
NTS

- RETAIN
- RETAIN & REFORBISH
- DEMOLISH
- ASSET SALE

REV.	DATE	DESCRIPTION	DR.	CH.
<input checked="" type="checkbox"/>		Information	<input type="checkbox"/>	Comment
<input type="checkbox"/>		Preliminary	<input type="checkbox"/>	Tender
			<input type="checkbox"/>	Construction
			<input type="checkbox"/>	As-Built
SCALE		NTS	A2	
DRAWN BY		DATE	CHECKED BY	
CC		Dec 2012	MAT	
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CLIENT				
PORT OF TYNE				
PROJECT				
MCNULTY'S YARD				
TITLE				
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