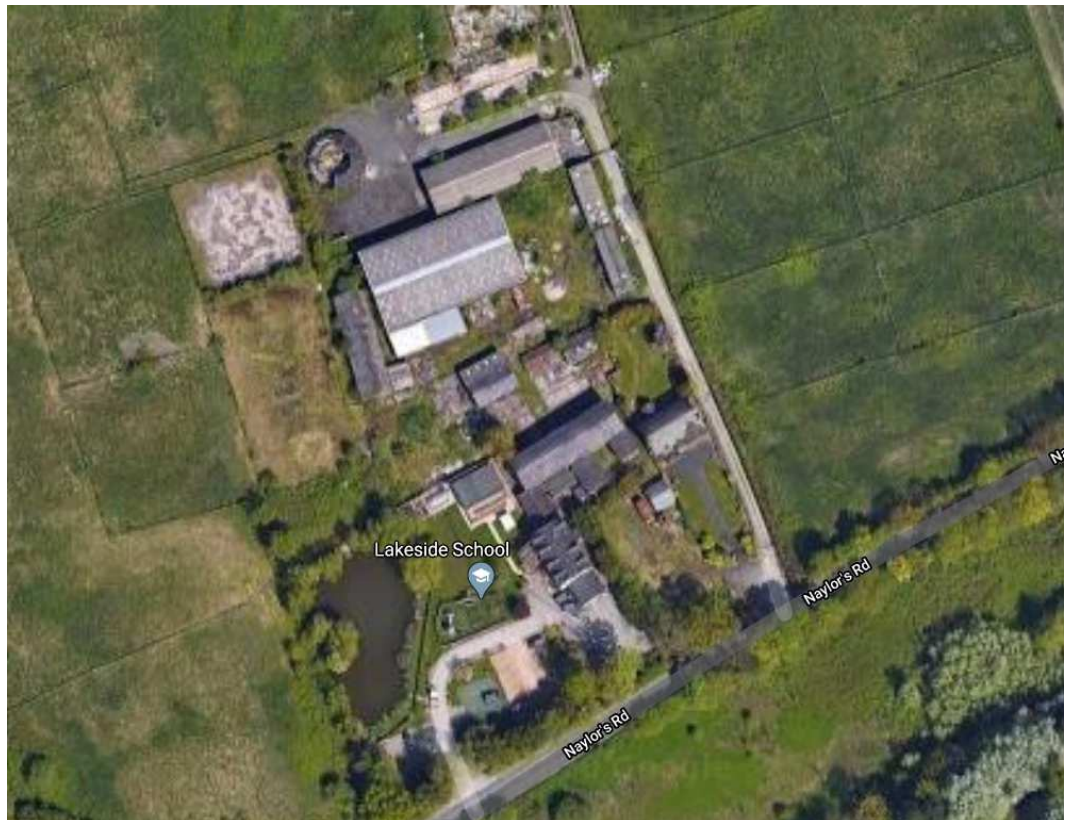


P7715/20/06

DEMOLITION/RETENTION REPORT

AT

LAND ADJACENT TO LAKESIDE SCHOOL, KNOWSLEY, LIVERPOOL



FOR

WITHERSLACK GROUP LIMITED



REPORT VERIFICATION

Site Address	FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL
--------------	---

Document Reference	TC/P7715/20
Version	04
Date released	4 th March 2021
Originator	Kieron Hounslow BEng(Hons) CEng MIStructE
Checked	-

Issue no	Date	Status	Report version	Issued by
01	25/06/2020	Initial Issue	-	KDH
02	29/06/2020	Updated	A	KDH
03	21/07/2020	Modified	B	KDH
04	04/03/2021	Modified	C	KDH

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

CONTENTS

1	INTRODUCTION	1
2	GENERAL	1
3	OBSERVATIONS	2
	3.1: Building F3: Main Riding School Building	2
	3.4: Building F4: Long Storage Barn	2
	3.5: Building F5: Stable Block	3
	3.6: Building F6: Storage Barn	3
	3.7: Building F7: Barn & Kennels	4
	3.8: Building F8: Main Double Height Barn	4
	3.9: Building F9: Residential Property & Garage	6
4	APPRAISAL	7
	4.1: Building F3: Main Riding School Building	7
	4.2: Building F4: Long Storage Barn	7
	4.3: Building F5: Stable Block	7
	4.4: Building F6: Storage Barn	8
	4.5: Building F7: Barn & Kennels	8
	4.6: Building F8: Main Double Height Barn	9
	4.7: Building F9: Residential Property & Garage	9
	4.8: Hard-standings & Slabs	10
5	CONCLUSIONS	10

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



APPENDICES

APPENDIX A: SURVEY PHOTOGRAPHS

APPENDIX B: BUILDING REFERENCE PLAN

APPENDIX C: CONDITIONS OF INSPECTION

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

1 INTRODUCTION

Thomas Consulting has been commissioned by The Witherslack Group, to carry out a structural inspection, and review, of the buildings which occupy the land adjacent to Lakeside School at Knowsley, Liverpool. The aim of the inspection is to review the buildings for deconstruction. Some of the buildings will be retained, for which a structural review for repair has been undertaken.

We have confined this inspection to the structural condition of the site buildings, for which removal has been confirmed. Are inspection is limited to elements that are visible only. We have not inspected parts of the structure which are covered, unexposed or inaccessible. We are therefore unable to report that any such part is free from defect.

We have reviewed the form of construction to buildings scheduled for deconstruction. We have also reviewed the condition of these structures to highlight any issues that may arise from their removal.

Please note the appended Conditions of Inspection (Appendix C).

2 GENERAL

The existing buildings are a mixture of new and old buildings, and of varying types of construction. Many of the older buildings have evidence of modifications having been undertaken at some time during their lifetime. The earliest buildings are expected to date back by between 150-200 years, with the more modern buildings of between 30-40 years old.

The buildings surveyed are identified on the plan contained within Appendix B.

Building F3: Main Riding School Building

Building F4: Long Storage Barn

Building F5: Stable Block

Building F6: Storage Barn

Building F7: Barn & Kennels?

Building F8: Main Double Height Barn

Building F9: Residential Property and Garage

The structural inspections have been carried out on foot, or by ladder. No opening up work has been undertaken as part of the inspection.

The structural inspection took place on Friday 12th June 2020.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

3 OBSERVATIONS

3.1 Building F3: Main Riding School Building

Steel portal framed structure with lean to extension at South West. Steel frames are spaced at 5m centres with 8No. bays, approximately 5m to eaves and 6m to apex. Building is clad with concrete fibre corrugated panels to roof and steel profiled cladding sheets to walls. Cladding is carried back to main structural framing elements by pressed steel sheeting rails and purlins. There is CHS bracing members to lower roof and walls at each corner of the building. Floor is earth,



Fig.03 – Min Portal Seen from South East

The lean-to extension is formed from 178x102UB beams and rafters, supporting steel angle purlins and rafters, which carry the roof and wall sheeting. Floor is reinforced concrete.

There is minor fire damage along the South side of the main building where it intersects with the lean-to section of building,

All columns were found to be reasonably vertical, and no significant structural main frames was observed.

3.2 Building F4: Long Storage Barn

Single storey brick-built structure with steel and truss rafter roof. Trusses support timber purlins and rafters which are over-clad with concrete fibre corrugated sheets. Building has stone piers to East elevation which have been infilled with concrete blockwork, above the block are large circular timber eaves beams. Floor is concrete.



Fig.04 – Building Viewed from South West

There is some minor fire damage at South East corner, where a mobile building has been burnt out

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

3.3 Building F5: Stable Block

Lightweight steel framed structure to South with more modern steel portal framed stable building to the North. Building at south has corrugated concrete fibre boarding to roof, supported by purlins. Walls are steel profiled cladding sheets supported on sheeting rails to Front and rear walls, with Corrugated cement fibre boarding to the South gable and partition between the stable block and South store. Building at North has profiled sheet cladding to roof and walls, supported by purlins and sheeting rails.



Fig.05 – Shed at South End of Block, From West

Floor to south is formed with concrete flags on unknown subbase. Floor to North building is reinforced concrete.

The steel frame to the south building has extensive surface corrosion to members. No significant defects were noted to the Northern building.

Existing timber framed stable blocks are still in-situ within the Northern building

3.4 Building F6: Storage Barn

Brick masonry structure to the south, appears to have been extended to the north side with a masonry lean to structure. Original building has slate roof, supported on timber purlins and rafters, carried by internal masonry walling or feature timber trusses. North extension has a concrete fibre corrugated roof supported on timber rafters. Floor to main building is oversite concrete, the extension is concrete.



Fig.06 – Barn Viewed from South East

There are no major structural defects evident.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

3.5 Building F7: Barn & Kennels

To the East is a single storey brick-built structure with concrete fibre corrugated roof structure supported by timber purlins. Purlins are carried by feature timber trusses and the brick gable walls. Concrete oversite to form floor.

The masonry gable pike to left elevation wall of the East building leans out by up to 1 in 15 at the top.

Heavy vegetation growth towards the East end of the Eastern building.

At the West there is single storey brick-built building with timber framed upper walls and roof. Unusual layout suggests that this structure was originally used as a kennel building. The roof covering is slates over timber boarding, carried by timber purlins. There is a masonry spine wall internally with arched openings. Concrete oversite forms the floor.

The Western building is somewhat dilapidated but has no obvious structural defects.



Fig.07 – Barn viewed from South West



Fig.08 – Western Kennel Building Viewed from South

3.6 Building F8: Main Double Height Barn

Brick built double height barn, with slate covered roof supported by timber rafters and purlins. Roof is supported by brick 215mm thick partition walls and feature trusses to central and Western sections of the building.

There are two outriggers to the south side of the building, which are of the same construction but single storey height only.

Main barn has oversite concrete floors, with the exception of the central area of the central room, which is earth. The outrigger to the south East has an oversite concrete floor, and the outrigger at the centre of the South elevation has a floor which could not be confirmed, as access was not possible.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

There is also a single storey extension to the North West of the building. This is also of brick construction, with a slated roof supported by timber purlins and rafters. The purlins are supported of internal partition walls, and the floor is oversite concrete.

Trusses, purlins and rafters to all areas of the main building and to the outriggers to the south are in reasonably good condition, with no significant defects noted, There is some deflection noted to the outrigger roof to the North West.

Walls to the external elevations of the main barn are 325mm thick and were found to be reasonably vertical, however; localised areas of the North facing wall lean out by up to 1 in 175. The West elevation wall of the outrigger to the South East leans out by up to 1 in 30, locally to the pier adjacent to the access door. There are no major cracks evident within external walls.

There are a number of areas where brick units are perished due to frost damage. This is predominantly located to the North elevation wall around the access to the Eastern room; wall at base is damaged to right side of door, and feature brickwork above is distorted.



Fig.09 - Barn Viewed from North West

There are several large cracks to East gable wall, within the Eastern main room. These cracks are situated around infilled arches to the wall, the cracks are up to 3mm wide.

The partition wall at the centre of the East room has openings at ground floor level which have been propped for stability. Diagonal cracks exist at both ends of the wall where it intersects the external wall. These cracks are estimated to be up to 10mm thick. There is minor vertical cracking evident in the partition wall to the central room.

There are vertical cracks of up to 5mm width to the partition wall between the central and western rooms. Cracks are predominantly at the base at mid-point of the wall. There is also a 10mm separation crack between this partition wall and the North elevation wall. It is evident from the west room that arched openings have been infilled to the base of the wall. Similar infilling is also evident in the west gable wall, with similar vertical cracking evident.

There is distortion to the masonry above the access door in the South elevation wall of the Western room, internally.

There are separation cracks evident, internally, to the South East outrigger. The crack is up to 10mm wide between the Eastern elevation wall and the partition wall between the main barn and extension.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

3.7 Building F9: Residential Property and Garage

Traditional brick-built structure with slate covered attic truss rafter roof. 1st & 2nd floor construction could not be determined, as building was not accessible, but it is expected that these are of timber construction with a concrete ground floor slab.

Building has suffered extensive fire damage, particularly at second floor level. Part of the roof has collapsed and been burnt out. Remaining roof structural integrity may be compromised.

All walls were found to be reasonably vertical at ground floor level, and there was no significant structural cracking observed to external walls.

Roof to the single storey outrigger at rear has been lost to fire damage.

It is evident that there are stud walls present at the second-floor level, many damaged by vandalism and fire.

Garage has brick walling and originally had a slate covered roof.

Garage has been extensively damaged by fire. Roof has been lost and there has been partial collapse of the North masonry gable wall.

Garage is single storey, with a concrete floor slab (covered with rubble)



Fig.10 – Dwelling House Viewed from South



Fig.11 – Remains of Garage, Viewed from East

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

4 APPRAISAL

4.1 Building F3: Main Riding School Building.

This building is proposed for deconstruction.

The steel frame to main portion of building is in good condition and will not pose any difficulties for a competent demolition contractor. The existing roof covering will require assessment for asbestos content, prior to any deconstruction commencing.

The portal frame has bracing members concentrated to the roof and walls at each corner of the building, only.

There is no floor slab within the main building. Foundations are expected to be simple strip footings and concrete pad bases, which will require removal as part of the works.

The lean-to frame at the South West is lightweight in nature and relies on the main portal frame for stability. Again, the cladding, particularly to the roof must be assessed for asbestos content, prior to deconstruction works commencing.

The floor slab to the lean-to building is concrete, which is expected to be reinforced and may be formed as a raft to support the lightweight steel frame.

4.2 Building F4: Long Storage Barn.

This building is proposed for deconstruction.

The roof to the building is formed from trusses that have timber rafter sections and light steel internals and bottom chords. The removal of the trusses should not form difficulties for a competent demolition contractor. Roof coverings will need assessment for asbestos, prior to deconstruction commencing.

Walls are solid masonry and are reasonably vertical, which will be no issue for a competent demolition contractor. There is, however; large diameter timber eaves members of up to 300mm diameter to the East elevation, which may be reclaimed for later usage.

The foundations to the building could not be determined. It is expected that the bases of the walls will have a simple foundation or that the stone masonry is constructed directly on earth. The floor is oversite concrete. All substructure materials will require removal.

4.3 Building F5: Stable Block.

This building is proposed for deconstruction.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

The Northern half of the building is formed from a relatively modern small span portal frame structure. Structure will be simple to deconstruct, however; the roof coverings will require appraisal for asbestos. This section of building as a concrete floor slab, and is expected to have pad bases, which will require removal.

Framed structure to southern half of the building is a lightweight steel structure, which will also be simple to deconstruct for a competent demolition contractor. Roof cladding will again require appraisal for asbestos content, as will the South facing gable wall and the partition wall to the stables. All foundations and flagged floor to be removed as part of the deconstruction.

4.4 Building F6: Storage Barn.

This building is proposed for deconstruction.

The original barn structure sits to the south side of the building, and is formed with timber trusses on masonry walling, and has slates to the roof. The building will not pose issues for a competent demolition contractor.

The lean-to extension to the North has a roof covering which will require assessment for asbestos. The structure below will not pose difficulties for a competent demolition contractor.

The foundations to the building could not be determined. It is expected that the bases of the walls will have a simple foundation or that the stone masonry is constructed directly on earth. The floor is oversite concrete to the original section of the building, but likely to be reinforced concrete to the Northern lean-to extension. All substructure materials will require removal.

4.5 Building F7: Barn & Kennels.

This building is proposed for deconstruction.

The barn structure sits to the East side of the building, and is formed with timber trusses on masonry walling, and has fibre concrete board to the roof. The building will not pose issues for a competent demolition contractor, however; an asbestos appraisal of the roof covering will be required.

The foundations to the building could not be determined. It is expected that the bases of the walls will have a simple foundation or that the stone masonry is constructed directly on earth. The floor is oversite concrete. All substructure materials will require removal.

The kennel structures are somewhat dilapidated but pose no evident issues for a competent demolition contractor. All substructure elements must be removed as part of the deconstruction works.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

4.6 Building F8: Main Double Height Barn.

It was originally proposed that the barn was to be retained. This building is now proposed for deconstruction.

The main building is a masonry structure with a timber truss, with slate covered purlin rafter roofing. The internal areas of the main building have masonry partition walling which support the roof. The roof also serves to restrain the head of these walls.

There are areas of minor damage to brickwork within the existing external walls. These localised areas will require remediation with some possible reconstruction required.

The cross walls internally, to the double height wall will require removal. The wall in the East end section of the building is in poor condition, so will require temporary support during deconstruction. The cross walls also serve as support to the roof purlins, so the roof will require removal prior to removal of cross walls. The cross walls also provide lateral support to the external perimeter walls, scaffolding to restrain the external walls is recommended during the removal of the internal walls. External walls can then be taken down as scaffolding is removed.

There are brick-built outriggers at the North West, South East and midway along the South elevation. These are all of single height construction and should pose no difficulty to remove for a competent demolition contractor.

Foundations are expected to be corbelled brick to the base of the walls, founded on earth. The slabs (where extent) are largely oversite concrete. All foundations and floor slabs must be removed to facilitate the installation of the new building foundations.

4.7 Building F9: Residential Property and Garage.

This building and associated garage are proposed for deconstruction.

The residential property is a three-storey brick-built building. It is believed that the top floor is formed using attic trusses. The building has suffered from extensive fire damage and is likely to be unstable. Despite the condition of the building, a competent demolition contractor should not encounter difficulty in deconstruction works.

The building is relatively modern, with a slate roof covering. It is, however; possible that there may be asbestos type materials within the structure. A specialist asbestos review is recommended prior to deconstruction works commencing.

All foundations to the main house are expected to be concrete strip footings, with a reinforced concrete ground floor slab. Similar foundations are expected to the detached garage. All foundations and slabs must be removed as part of the demolition works.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

The garage structure has been extensively damaged by fire, such that the roof has been lost. The remaining walls are currently unstable. A competent demolition contractor will have no trouble removing this building.

4.8 Hard-standings & Slabs.

There are numerous areas of hard-standings and localised slabs across the site. The construction of these slabs is not known but expected to be little more than 150mm concrete with light reinforcement. These slabs must be removed as part of the demolition works.

5 CONCLUSIONS

None of the buildings within the site boundary are considered to pose risks for which a competent demolition contractor will not be able to address.

Consideration for the adjoining school will be required for the deconstruction of the double height barn will be needed, in respect of safety. Scaffolding may be required to restrain the external walls, to facilitate the refurbishment works. Localised hand demolition of the South and Western walls, locally, will be required.

A number of buildings have fibre concrete corrugated roof coverings. These coverings will need to be assessed for asbestos content, prior to any demolition works commencing.

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



APPENDIX A

Inspection Photographs

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Internal View of Building F3 – Main Portal Frame Building



Building F3 – Typical Bracing at Corner of Building & Earth Floor

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F3 – Frame to Lean-To Section



Building F4 – Detail of Truss & Large Eaves Timber Member

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F5 – Framework Within North Stable Shed



Building F5 – Detail of Framework to South (dilapidated) Storage Shed

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F8 – Detail of Main Roof Structure



Building F8 – Propping to Partition Wall at East End

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F8 – Cracking to Propped Partition Wall at East End



Building F8 – Damage to External Masonry at Eastern End of North Elevation

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F8 –Masonry Damage Above Lintel to South Wall in Western Room



Building F8 – Outrigger Required for Removal at North West

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL

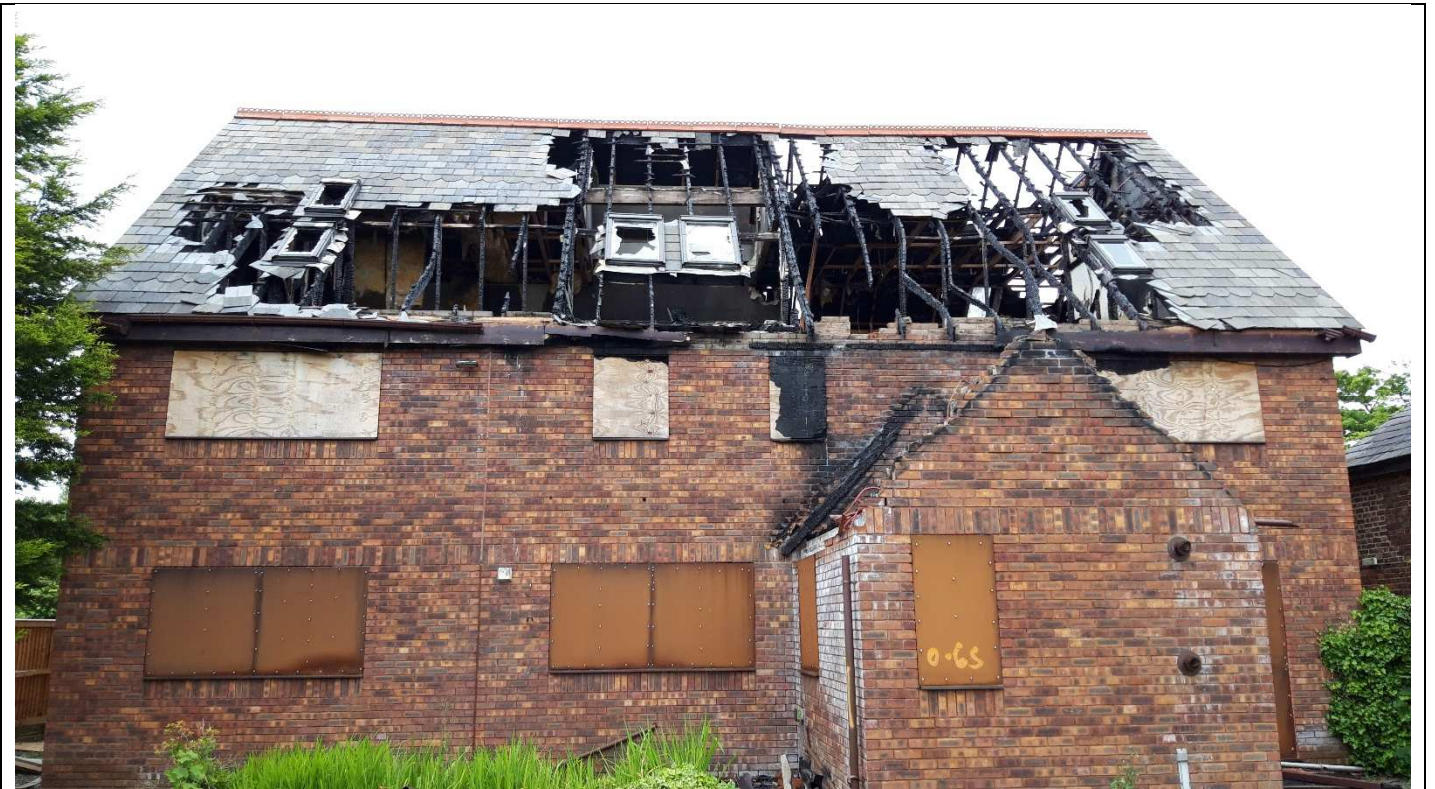


Building F8 – Outrigger Building to South East



Building F8 – Outrigger Building to Midpoint of South Elevation

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



Building F9 - Significant Fire Damage to Rear Roof



Building F9 – Severe Fire Damage to Garage

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



APPENDIX B

Existing Site Layout Plan

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



BUILDING DEMOLITION/RETENTION APPRAISAL REPORT
FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



APPENDIX C

CONDITIONS OF INSPECTION

BUILDING DEMOLITION/RETENTION APPRAISAL REPORT

FORMER RIDING SCHOOL ADJACENT LAKESIDE SCHOOL, LIVERPOOL



CONDITIONS OF INSPECTION

Instructions are in all cases (unless any variation is agreed in writing by the Company) accepted on the basis of the following conditions which shall govern the inspection and report, and any related matters.

The object of this Report is to assess the effect of the reported defect on the structural integrity of the property. No assurances can be given or can be implied as to the effect that the reported defect may have on the market value or saleability of the property.

- i) The Report is confined to an inspection of the clients specified structural elements of the property alone, i.e. foundations (if exposed), walls, floors, roof members (if accessible), and other such members providing structural support to the property, that may be deemed necessary for inspection by the Company. The report will not cover such items as damp proofing, heating and ventilation, plumbing and electrical circuits, doors, window frames, plasterwork, fitted furniture, decoration or items of general serviceability, unless expressly agreed with the Company before the inspection is undertaken.
- ii) We shall not investigate woodwork, or other parts of the structure, which are covered, unexposed or inaccessible. We are therefore unable to report that any such part is free from defects.
- iii) It must be clearly understood by the client that the degree of inspection referred to in (i) above will not reveal all defects. Defects in concealed parts such as foundations, under floor areas, and areas covered by wall coverings, plaster or render, will not be revealed. It is, of course, possible to make more detailed investigations and where there is evidence to warrant this, recommendations for further investigations will of course incur further costs and may require the lifting of floor boards, breaking out brick work or digging trial holes. When such detailed investigations is required, it is the responsibility of the client to:
 - a) give specific written instruction to this effect to the Company and
 - b) obtain the necessary permission of the owner and to indemnify the Company against liability for damage caused or rectification costs.
- iv) Externally the building will be inspected from ground level only, ladders will not be used to inspect roofs.
- v) Internally, where appropriate, exposed surfaces of rooms will be inspected as far as reasonably possible. The engineer will not move or disturb furnishings, fittings, fitted carpets or furniture, and no responsibility will be accepted for defects which are concealed.
- vi) If requested by the client or judged necessary by the Company and a trap door access exists, the roof spaces will be inspected so long as it is considered safe to do so and crawler boards, ladders etc, are available. Note that high or low confined parts of the roof space will not be inspected.
- vii) Readily visible parts of the drainage installations will be inspected, if requested by the client or judged necessary by the Company.
- viii) No inspection will be made of services such as gas, electricity and central heating. The client is advised to engage the services of a competent electrician and/or plumber if inspection is required.
- ix) Outbuildings, including detached garages, sheds, greenhouses and similar structures will not be inspected, unless expressly requested prior to the inspection.
- x) Easements, planning and other proposals by statutory authorities are outside the scope of this structural survey.
- xi) Should the client require advice upon any matter other than the structural survey, e.g. proposed additions and alterations, this must be subject of a further separate instruction.
- xii) The report is provided for the sole use of the named client and is confidential to the client and professional advisors. The Company accepts responsibility to the client alone and accepts no responsibility whatsoever to any person other than the client himself.

Thomas Consulting will consider re-issuing the report in its original format to a named third party within 3 months of the original report date provided:

 - a) We have the written permission of our original client to do so and
 - b) Upon payment of an administrative fee, currently set at 50% of the cost of the original report fee.

In any event the condition of the property is to be taken as that at the time of the inspection.