



**Lambert
Smith
Hampton**

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Essential Repairs Survey

in respect of

Works Required to Stabilise Structural and External Envelope Integrity

prepared for and on behalf of

Upper Heyford GP Limited and Upper
Heyford Nominee Limited for Upper
Heyford LP

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APPENDIX A – STRUCTURAL SURVEY REPORT BY DAVID SMITH ASSOCIATES

APPENDIX B – PORTFOLIO OF PHOTOGRAPHS

APPENDIX C – OXFORD ARCHAEOLOGY GAZETTEER DATED SEPTEMBER 2005

31 March 2014

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Our Ref: 0080629-BC-0000/MGM/cl

Dear Sarah

ESSENTIAL REPAIRS SURVEY – VARIOUS BUILDINGS AT HEYFORD PARK

Further to our recent attendance, I have the pleasure of setting out hereunder our report in respect of the above.

1.0 INTRODUCTION

- 1.1 Our report is prepared following a site meeting attended by representatives of Upper Heyford LP (Ms Sarah McCreedy and Mr Simon Fry), English Heritage (Mr Chris Welch), Cherwell District Council Conservation Department (Ms Claire Sutton), Oxford Archaeology (Ms Jane Phimester), Pegasus Group (Mr Alex Robinson) and Lambert Smith Hampton (Mr George Moss) on 18 December 2013.
- 1.2 The purpose of the meeting held on site on 18 December 2013 was to view a number of buildings of importance, ostensibly within the Northern Bomb Stores and Quick Reaction Alert (QRA) Area as well as selected buildings outside of those locations, to gain an appreciation of the general condition, evolve clarity on the survey methodology to be adopted by Lambert Smith Hampton and exactly define the list of buildings to be surveyed.
- 1.3 It was concluded that the level of inspection and reporting would vary between particular buildings, with an emphasis upon repairs that were essential and economically proportionate/viable to stabilise the structure and external envelope integrity of the subject buildings.
- 1.4 The level of inspection and reporting therefore goes beyond previous 'wind and watertight' surveys, where the shell of buildings was assessed for instances of major weather ingress only (e.g. as caused by a missing window or door).

2.0 BUILDINGS SURVEYED

- 2.1 The buildings listed below were subsequently surveyed by Lambert Smith Hampton during January and February 2014.
- 2.2 Building No's: 126 (Command Centre), 129 (Telephone Exchange), 325 (Nose Dock Shed), 327 (Nose Dock Shed), 328 (Nose Dock Shed), 340 (Control Tower, Flying Field), 370 (Squadron HQ, East of Flying Field), 383 (Squadron HQ, Between Northern Bomb Stores and QRA), 1007 (Trigger Store, within Northern Bomb Stores), 1008 (Ammo Store, within Northern Bomb Stores),

1009 (Boiler House, within Northern Bomb Stores), 1010 (Water Tank, within Northern Bomb Stores), 1011 (Ammo Store, within Northern Bomb Stores), 1023 (metal clad unit, within Northern Bomb Stores), 1050 (Reserved Fire Truck Facility, within Northern Bomb Stores), 1060 (Entry Control Point, within Northern Bomb Stores), 1061 (timber Switch House, adjacent East of Northern Bomb Stores), 1871 (Sentry Box, within Northern Bomb Stores), 2010 (Hardened Crew Quarters, within QRA), 3104 (Reserved Fire Truck Facility, within QRA), UH22 (Observation Tower, within QRA), UH49 (Brunswick Tower, within Northern Bomb Stores), UH50 (Observation Tower, adjacent East of Northern Bomb Stores) and 299 (Avionics – flat roof and sloping elevations only).

- 2.3 Surveys were carried out on 30 and 31 January and 4 and 7 February 2014.
- 2.4 Weather conditions were generally overcast with snow and rain on 30 January 2014, heavy rainfall and high winds on 31 January 2014, intermittent sunshine on 4 February 2014 and generally cold temperatures albeit relatively mild for the season.
- 2.5 Buildings 1011, 1008, 1007, 1009, 1023, 1871, 1050, 1060, 1061, UH50, 383 and 2010 were inspected on 30 January 2014.
- 2.6 Buildings 327, 328, 325, 126, 129, 340 and 3104 were surveyed on 31 January 2014.
- 2.7 Structural Surveys of Buildings 1010, UH49, 1011, 1050, UH50, UH22 and the flat roof and sloping elevations of 299 were carried out on 4 February 2014.
- 2.8 The roofs of the buildings surveyed on 30 and 31 January 2014 were surveyed on 4 February 2014.
- 2.9 Building 370 was surveyed on 7 February 2014.
- 2.10 We have subsequently been provided with photographs of Buildings 1009, 1008 and 1011 by Mr Simon Fry following storm damaged sustained by the buildings during the week commencing 10 February 2014.
- 2.11 The Structural Surveys were carried out by David Smith Associates consulting structural and civil engineers (DSA) by appointment direct with Upper Heyford LP.

3.0 SURVEY METHODOLOGY

- 3.1 Our surveys have recorded the condition of the buildings by way of photographs and consideration has been given to the extent of disrepair prevailing to the buildings. For buildings 101, UH49, 101, 1050, UH50, UH22 and 299; our consideration has additionally comprised consultation with David Smith Associates.
- 3.2 It should be noted that Buildings 209 (Thames Valley Police Anti-Terrorism Training Facility – accessed by appointment), 234 (tenanted building with the external envelope appearing to be in satisfactory condition) and 3100 (unable to be located on the site map) have not been surveyed.
- 3.3 Our deliberations with regard to the remedial works necessary to combat the various extents of disrepair observed by our surveys has been with principal regard to the survey brief concluded on 18 December 2013. Namely, to focus upon essential repairs which are economically proportionate/viable to stabilise structural and external envelope integrity.
- 3.4 A copy of the report received from David Smith Associates is comprised with this report at Appendix A.
- 3.5 A Portfolio of Photographs is comprised with this report as Appendix B.

3.6 A copy of the Oxford Archaeology Gazetteer dated September 2005 is comprised with this report as Appendix C.

4.0 SURVEY FINDINGS AND CONCLUSIONS

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
126	Command Centre located near to the Nose Dock Sheds. Single storey hardened concrete structure with a flat roof and blast walls. Comprising two taller sections forming blast proof roof vents for the plant rooms. Constructed in the late 1970s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Debonded failed felt flat roof weatherings to 2 No. taller sections and edge trims thereto missing.	Renew felt weatherings.	£20,000.00
		Localised damage/deterioration to the main flat roof small upstand/plinth section.	Locally repair section of roof.	inc
		Rainwater goods (PVC-U) generally damaged with sections missing.	Overhaul/renew rainwater goods.	inc
		Fascia boards (timber) generally rotten/deteriorated.	Renew fascia boards.	inc
		Isolated spalling of concrete and corroding reinforcement to external walls. (Cross reference with DSA Report, Building 1050.)	Locally treat reinforcement and repair concrete.	inc
		Loose joinery to timber louvered panels to the 2 No. taller sections.	Repair joinery.	inc
		Section missing to lightning conductor.	Repair lightning conductor.	inc
129	Telephone Exchange located near to the Nose Dock Sheds. Hardened concrete single storey structure comprising a taller section housing blast proof roof vents. Constructed in the late 1970s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information. (No access to view the roof.)	Section of roof edge trim missing.	Reinstate edge trim.	£4,500.00
		Vegetation to gutters and sections of rainwater goods (PVC-U) missing.	Clear vegetation from gutter and reinstate missing sections.	inc
		Damp staining to the elevations indicates that the gutters are generally proving ineffective.	Overhaul gutters.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Isolated spalling of concrete and corroding reinforcement to external walls. (Cross reference with DSA Report, Building 1050.)	Locally treat reinforcement and repair concrete.	inc
		Low level vertical damp proofing perished.	Monitor for further deterioration.	inc
325	Nose Dock Shed. Aluminium framed nose dock shed with profiled aluminium cladding to the roof and elevations including felt flat roof rear section. Constructed in the 1950s with later adaptations. Small electrical switch house (rendered) outbuilding appears to be affiliated with the Nose Dock Shed. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Daylight visible internally via localised hole to the end elevation cladding.	Locally repair roof sheeting.	£9,000.00
		Localised area of damaged sheeting apparent to the roof soffit, no daylight visible internally and assumed to have been repaired externally.	No action deemed necessary.	inc
		Localised relatively minor damage noted to the over-sailing edges of the roof sheeting.	Locally repair roof sheeting to worst affected areas only.	inc
		Daylight visible to the over-sailing edges of the roof sheeting where redundant fixing holes are present.	No action deemed necessary.	inc
		Extensive moss and lichen growth to pitched (profiled metal clad) roof coverings.	No action deemed necessary.	inc
		Felt weathering to flat roof section in aged condition.	Monitor for further deterioration.	inc
		Perimeter felt weathering to outbuilding roof deteriorated.	Renew perimeter felt weathering.	inc
		Rainwater goods (PVC-U) to outbuilding damaged and missing.	Overhaul/renew rainwater goods.	inc
		Rainwater ingress to the inner rear left-hand corner likely to be as a result of loose brickwork and mortar forming the external wall stall riser construction (also potentially enabling vermin ingress).	Locally rebuild masonry construction.	inc
		General, relatively minor albeit extensive low level impact damage and puncturing of the cladding to the elevations and main sliding doors.	No action deemed necessary.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Isolated redundant services apertures to external walls generally (main building and outbuilding).	Locally make good external walls.	inc
		Extensively fractured render to the external walls of the outbuilding and localised spalling of the render.	Renew failed render.	inc
		Rotten and damaged timber doors to the electrical switch room outbuilding.	Renew timber doors.	inc
	Tenant notified issues:	Poor security to the front sliding doors (via a single chain lock/restraint).	Improve door security.	inc
		Rear service door very heavy/difficult to operate.	Ease and adjust rear service door.	inc
		Fire exit doors bind in operation and are difficult to open/close.	Ease and adjust fire exit doors.	inc
		Query whether the original services installations within the unit (including carbon dioxide fire suppression tank) are live or redundant.	Upper Heyford LP to investigate and confirm.	excl
327	Nose Dock Shed. Aluminium framed nose dock shed with profiled aluminium cladding to the roof and elevations. Constructed in the 1950s with later adaptations. Small electrical switch house (rendered) and boiler house (brick) outbuildings appear to be affiliated with the Nose Dock Shed. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Extensive moss and lichen growth to pitched (profiled metal clad) roof coverings.	No action deemed necessary.	£6,000.00
		General, relatively minor albeit extensive low level impact damage and puncturing of the cladding to the elevations and main sliding doors.	No action deemed necessary.	inc
		Isolated redundant services apertures to external walls generally (main building and outbuilding).	Locally make good external walls.	inc
		Extensively fractured render to the external walls of the electrical switch house outbuilding and localised spalling of the render.	Renew failed render.	inc
		Structurally fractured/damaged brickwork to the external walls of the boiler house outbuilding.	Locally rebuild masonry construction.	inc
		Rotten and damaged timber doors to the outbuildings.	Renew timber doors.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
328	Nose Dock Shed. Aluminium framed nose dock shed with profiled aluminium cladding to the roof and elevations including felt flat roof rear section. Constructed in the 1950s with later adaptations. Small electrical switch house and office (rendered) outbuildings appear to be affiliated with the Nose Dock Shed. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Loose fixing to roof ridge capping.	Locally re-secure ridge capping.	£10,000.00
		Daylight visible to the over-sailing edges of the roof sheeting where redundant fixing holes are present.	Locally repair roof sheeting.	inc
		Extensive moss and lichen growth to pitched (profiled metal clad) roof coverings.	No action deemed necessary.	inc
		Felt weathering to flat roof section in poor condition - aged and extensively ponded.	Renew felt weathering.	inc
		Deteriorated felt weathering to office outbuilding roof.	Renew felt weathering.	inc
		Rainwater goods (PVC-U) to outbuildings generally damaged and missing.	Overhaul/renew rainwater goods.	inc
		General, relatively minor albeit extensive low level impact damage and puncturing of the cladding to the elevations and main sliding doors.	No action deemed necessary.	inc
		Isolated redundant services apertures to external walls generally (main building and outbuilding).	Locally make good external walls.	inc
		Extensively fractured and debonding/spalled render to the external walls of the outbuildings.	Renew failed render.	inc
		Rotten and damaged timber doors to outbuildings.	Renew timber doors.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
340	Control Tower located on the Flying Field. Art deco style red brick two storey structure with critical windows comprising central bay and adjoining single storey wings with upper level glazed viewing globe over the two storey section and surrounding flat roof/balcony, with similar flat roofs/balconies over the single storey wings. Constructed in the 1950s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Splits with vegetation growth therein present to the asphalt flat roof/balcony weatherings and slumping of the asphalt noted to perimeter upstands (entirely pulled out from chases in areas), splits also present to perimeter upstands.	Comprehensively repair the asphalt weatherings and consider the use of a liquid applied or felt overlay system.	£50,000.00
		Vegetation growth variously present to the flat roofs/balconies.	Action removal of vegetation within comprehensive roof repairs recommended above.	inc
		Perished felt roof weathering to the rear timber feature projecting section.	Renew felt weathering.	inc
		Cast iron downpipes cracked and in poor condition. Sections missing throughout.	Renew downpipes.	inc
		Extensive fracturing and spalling to the outer edges of the concrete roof decks assumed to be connected with the corrosion of reinforcement.	Treat reinforcement and repair concrete.	inc
		Areas of heavily perished concrete to the outer over-sailing edges of the concrete flat roof decks.	Repair concrete.	inc
		Spalled concrete and corroded reinforcement evident in localised areas to the soffit of over-sailing edges to the concrete roof decks.	Locally treat reinforcement and repair concrete.	inc
		Perished concrete typically present around rainwater downpipe penetrations through the over sailing edges of the concrete roof decks.	Repair concrete.	inc
		Extensively spalled concrete and corroded reinforcement evident to the soffit of the concrete deck over the entrance porch.	Treat reinforcement and repair concrete.	inc
		Extensive fracturing, debonding and spalling of render from external walls at high level below the glazed viewing globe.	Renew failed render.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Localised spalling of brick faces/perishing to areas suffering sustained saturation as a result of leaking/failed downpipes.	Renew/re-face bricks.	inc
		Isolated low level perished bricks/spalled brick faces.	Renew/re-face bricks.	inc
		Torn and lifted fatigued lead dressings to projecting concrete feature corncicing to the rear elevation.	Renew/re-dress leadwork.	inc
		Timber doors in poor condition, extensively deteriorated, boarded and with sections missing.	Renew timber doors.	inc
		Windows variously boarded.	Remove boarding to repair windows as below.	inc
		Windows in poor condition with damaged glazing, failed window putties and corroded framing variously apparent.	Renew damaged glazing, putties and treat casements and framing.	inc
		Window security bars removed from windows resulting in holes to the brickwork adjacent the windows where bricks have been locally chopped out.	Make good external walls.	inc
		Window cill and other joinery to the rear upper projecting timber clad feature section in very poor deteriorated condition with decayed exterior joinery present throughout.	Renew joinery.	inc
		Decayed timber to inset louvered vent.	Renew joinery.	inc
		Localised damage apparent to the flat roof/balcony guard railings.	Locally repair guard railings.	inc
		Failed decorations to windows, doors, downpipes, roof/balcony guard railings and the over sailing edges of the concrete offering no protection against the weather for the elements concerned thereby enabling accelerated rates of deterioration.	Following repairs, fully prepare and redecorate all previously decorated surfaces to afford adequate weathering protection.	inc
		Drainage gulleys to rainwater downpipes heavily choked with vegetation, root growth and debris.	Clear all blockages from drainage and repair.	inc
		Query the adequacy of the lightning conductor.	Test and repair the lightning conductor as necessary.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
370	Squadron HQ located to the East of the Flying Field. The building comprises a 'soft' front section constructed during the 1950s and a later 1970s 'hardened' section to the rear. The 'soft' area of the building is single storey with foam backed pebbledash cladding overlying red brickwork beneath (added to the external elevations in the 1970s to insulate the building). The 'hardened' area is located to the rear constructed with concrete comprising a single storey structure with a rear heightened area forming a blast proof inlet for fans. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Although roof access was not available at the time of our survey, previous surveys most recently carried out in January 2011 confirm that the flat roof weatherings are in generally poor condition and extensively defective causing prolonged rainwater ingress to be suffered by the concrete roof deck resulting in deterioration of the concrete.	Renew roof weatherings, repairing concrete deck as necessary.	£65,500.00
		Fracturing and spalling of concrete/masonry apparent to the flat roof perimeter which may potentially be related to the disturbance of roof level paving slabs observed by previous surveys.	Repair masonry roof perimeter.	inc
		Failed debonded felt roof weatherings to the heightened hardened section.	Renew felt weatherings.	inc
		Flat roof edge trims extensively missing.	Reinstate edge trims.	inc
		Cut edge corrosion to plastisol coated profiled metal roof sheeting.	No action deemed necessary.	inc
		Rainwater goods (PVC-U) extensively damaged and missing.	Overhaul/renew rainwater goods.	inc
		Extensive decay and failure of timber fascia boards (entirely collapsed in areas).	Renew fascia boards.	inc
		Low level vertical fracture noted to the masonry adjacent to a rainwater downpipe shoe.	Monitor for further deterioration.	inc
		Decayed timber external doors.	Renew timber doors.	inc
		Damaged glazing to door vision panels.	Renew vision panel.	inc
		Extensive failure of exterior joinery forming the timber louvered shutters to the heightened section.	Renew joinery.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Extensive unchecked vegetation growth (including mature tall conifers) directly adjacent the building encroaching upon the elevations and potentially undermining foundations.	Prune/pollard/remove as necessary taking the advice of a tree surgeon and structural engineer.	inc
383	Squadron HQ located between the Northern Bomb Stores and QRA. Fully hardened concrete structure constructed in 1984 with a flat roof. There is a blockwork extension forming a 'soft' area. There are flat roofs throughout, weathered with asphalt and chippings. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Extensive slumping of the asphalt flat roof weathering to upstands.	Comprehensively repair the asphalt upstands and consider the use of a liquid applied or felt overlay system.	£60,000.00
		Extensive splitting of the asphalt to the flat roofs.	Comprehensively repair the asphalt weatherings and consider the use of a liquid applied or felt overlay system.	inc
		Vegetation growth variously present to the asphalt flat roof weathering.	Action removal of vegetation within comprehensive roof repairs recommended above.	inc
		Raised detailing to flat roof abutment/movement joints have large gaps present enabling rainwater and vermin ingress.	Comprehensively repair the joints and consider the use of a liquid applied or felt overlay system.	inc
		Raised/dislodged profiled metal cappings nearest to the flat roof upstands where thermal movement is likely to have occurred in conjunction with slumping/debonding and general associated movement of the asphalt.	Action re-securing of the cappings within comprehensive roof repairs recommended above.	inc
		Localised spalling of the concrete and corroded reinforcement to external walls. (Cross reference with DSA Report, Building 1050.)	Locally treat reinforcement and repair concrete.	inc
		Timber fascia boarding and rainwater goods (PVC-U) extensively failed and missing/collapsed from the elevations.	Renew rainwater goods and fascia boards.	inc
		Extensive deterioration/decay to timber external doors.	Renew timber doors.	inc
		Exterior joinery extensively decayed to boarded doors and windows.	Renew joinery.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Decayed perished timber surround framing to 'soft' section windows.	Renew timber surround framing.	inc
		Glazing extensively damaged to the windows of the 'soft' section and a number of windows and doors are boarded.	Remove boarding and repair windows including re-glazing.	inc
		It was noted on 18 December 2013 that rainwater ingress to the interior of the 'soft' section was apparent, whilst the interior of the 'hard' section was noted to be dry and not yet suffering rainwater ingress.	See recommendations above.	inc
1007	Trigger Store formed in reinforced concrete comprising single storey entrance section and adjoining two storey height structure with flat roofs, located within the Northern Bomb Stores. Constructed during the 1950s. It would appear from our brief viewing and discussions on 18 December 2013 that the building may comprise only one small ground floor room encased by the hardened structure. Certainly the critical windows to the elevations are blocked internally with masonry/concrete construction and are false windows designed to create the impression of an administration building. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	The roof weathering (which appears to be felt) is very heavily perished and failed.	Renew roof weathering.	£10,000.00
		It is noted that storm damage occurring during the week commencing 10 February 2014 has caused wind damage to the already failed roof coverings, blowing the roof coverings from the roof deck. The resulting debris is strewn across land in the vicinity of the building. It is noted that the storm damage has also dislodged part of the lightning conductor installation. We would in any event have queried the adequacy of the lightning conductor installation.	As above.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		The rainwater downpipes (cast iron) are extensively absent/missing.	Renew downpipes.	inc
		There is localised spalling/opening of the insitu casting joints to the concrete external walls.	Locally make good failed joints to the external walls.	inc
		Windows are in extremely poor condition with extensively damaged glazing, corroded framing and associated outward bowing/movement of the framing and casements. The corrosion includes extensive delamination of the metal forming the windows. Certain of the windows are entirely missing and in certain instances have been replaced by a further skin of blockwork infill against the existing masonry infill to present a flush external wall surface.	Comprehensively repair the windows, re-shaping/renewing as necessary, treating the casements and framing, and re-glazing. Fully prepare and decorate casements and framing upon completion of repairs.	inc
		There is extensive spalling and corrosion of the reinforcement to the concrete window cills.	Treat reinforcement and repair concrete.	inc
		Complete sections of the concrete window cills have collapsed and are missing.	Renew sections of concrete.	inc
		Extensive spalling of the concrete and corroded reinforcement is also apparent to the projecting in situ cast concrete cornicing bands directly to the window heads.	Treat reinforcement and repair concrete.	inc
		As a precursor to spalling sections of the concrete window cill are noted to be pulling away from the elevation.	As above.	inc
		Extensive lichen growth to the windows/window cills.	Action removal of lichen within the repairs recommended above.	inc
1008	Ammo Store located within the Northern Bomb Stores. Single storey rendered brick building with pitched roofs weathered with asbestos cement roof sheeting. Metal crittal windows to the elevations. Asbestos cement rainwater goods. Constructed during the 1950s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Localised damage to asbestos cement roof sheeting.	Locally repair roof sheeting utilising an approved repair system.	£21,000.00

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Extensive moss growth to roof sheeting.	Investigate vegetation removal and action as appropriate.	TBC
		Timber fascia boards and rainwater goods extensively decayed and missing. At the time of our survey, there was an area of fascia boarding and guttering to the rear elevation which was detached and suspended ready to collapse.	Renew rainwater goods and fascia boards.	inc
		Extensive failure of the rendering to the elevations with widespread spalling/crazing and debonding throughout presenting inherent 'eggshell' fragility. (Cross reference with DSA report, building 1011.)	Renew failed render.	inc
		Timber external doors extensively decayed/missing/boarded.	Renew timber doors.	inc
		Windows corroding and glazing putties failed.	Renew damaged glazing, putties and treat casements and framing. Fully prepare and decorate casements and framing upon completion of repairs.	inc
		Damaged glazing to windows.	Included within recommendation above.	inc
		Drainage gulleys to rainwater downpipes are choked with debris and vegetation root growth, also damaged by vegetation root growth.	Clear all blockages from drainage and repair.	inc
1009	Single storey brick built Boiler House outbuilding with asphalt covered flat roof (assumed concrete deck), located within the Northern Bomb Stores. Constructed during the 1950s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Localised spalling of the concrete and corrosion of the reinforcement noted to the high level concrete fascia to the roof deck. (Cross reference with DSA report, building 1050.)	Locally treat reinforcement and repair concrete.	£4,000.00
		Extensively damaged and missing rainwater goods.	Overhaul/renew rainwater goods.	inc
		Extensive perishing of the brickwork.	Renew/re-face worst affected bricks and treat with a clear stabilising solution.	inc
		Isolated redundant services apertures/chopped out brickwork to the external walls.	Make good external walls.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Extensively deteriorated/decayed timber external doors with boarding panel missing enabling rainwater and vermin ingress.	Renew timber doors.	inc
		Failed window putties and corrosion to metal crittal windows.	Renew damaged glazing, putties and treat casements and framing. Fully prepare and decorate casements and framing upon completion of repairs.	inc
		Damaged glazing to windows.	Included within recommendation above.	inc
1010	Water Tank located within the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Refer to DSA report.	Refer to DSA report.	£10,000.00
1011	Ammo Store located within the Northern Bomb Stores. Single storey rendered brick building with pitched roofs weathered with asbestos cement roof sheeting. Metal crittal windows to the elevations. Asbestos cement and PVC-U rainwater goods. Constructed during the 1950s. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Localised damage to asbestos cement roof verge capping/roof sheeting.	Locally repair roof sheeting utilising an approved repair system.	£15,000.00
		Extensive moss growth to roof sheeting.	Investigate vegetation removal and action as appropriate.	TBC
		Timber fascia boards and rainwater goods extensively decayed and missing.	Renew rainwater goods and fascia boards.	inc
		Extensive failure of the rendering to the elevations with widespread spalling/crazing and debonding throughout presenting inherent 'eggshell' fragility. (Cross reference with DSA report, building 1011.)	Renew failed render.	inc
		Timber external doors extensively decayed.	Renew timber doors.	inc
		Windows corroding and glazing putties failed.	Renew damaged glazing, putties and treat casements and framing. Fully prepare and decorate casements and framing upon completion of repairs.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Damaged glazing to windows.	Included within recommendation above.	inc
		Fractured and spalled pre-cast concrete window cills.	Repair concrete.	inc
1023	Single storey Industrial Storage Unit clad with profiled metal sheeting to the roof and elevations, located within the Northern Bomb Stores. Small blockwork outbuilding affiliated. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Cut edge corrosion to plastisol coated roof sheeting.	No action deemed necessary.	£3,000.00
		Isolated spot corrosion to profiled metal roof sheeting.	No action deemed necessary.	inc
		Extensively damaged and missing rainwater goods (PVC-U).	Overhaul/renew rainwater goods.	inc
		Extensively damaged glazing to metal crittal windows.	Re-glaze windows.	inc
		Damaged and decayed timber external doors to blockwork outbuilding.	Renew timber doors.	inc
		Decayed timber fascia boarding to blockwork outbuilding.	Renew fascia boards.	inc
1050	Hardened flat roofed concrete structure with blast wall and gun turrets designed for use as a 'Reserved Fire Truck Facility', located within the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Flat roof felt weathering aged and perished/embrittled.	Renew felt weathering.	£10,500.00
		Vegetation growth generally across the flat roof felt weathering.	Action removal of vegetation within the repair recommended above.	inc
		Perimeter flat roof cappings missing in areas.	Reinstate roof cappings.	inc
		Extensive localised spalling of the concrete and corrosion of the reinforcement to external walls. (Refer to DSA report.)	Refer to DSA report.	inc
		Extensive calcification of the concrete. (Refer to DSA report.)	Refer to DSA report.	inc
		Surface of the concrete extensively crazed and debonding in areas associated with the spalling of concrete and corrosion of reinforcement. (Refer to DSA report.)	Refer to DSA report.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Extensive fracturing also present to the surface of the concrete. (Refer to DSA report.)	Refer to DSA report.	inc
		Up and over service door in permanently open position enabling rainwater and vermin ingress.	Ease and adjust door and leave closed.	inc
		Gun turrets in the open position enabling rainwater and vermin ingress.	Ease and adjust gun turrets and leave closed.	inc
1060	Entry Control Point located within the Northern Bomb Stores. Single storey hardened concrete flat roofed structure with raised gun turret walls. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Flat roof felt weathering aged, perished/embrittled and debonding/lifting generally and rotten/torn at perimeters/upstands.	Renew felt weathering.	£11,000.00
		Vegetation growth generally across the flat roof felt weathering.	Action removal of vegetation within the repair recommended above.	inc
		The paved deck to the raised gun turret is heavily moss vegetated.	Remove vegetation from paved deck.	inc
		Fibre glass profiled roof sheeting to entrance canopy perished and holed.	Renew fibre glass roof sheeting.	inc
		Rainwater goods (cast iron) extensively damaged and missing.	Overhaul/renew rainwater goods.	inc
		Rainwater gullies choked with debris.	Clear out rainwater gullies.	inc
		Timber fascia boarding extensively decayed, collapsed and missing.	Renew fascia boards.	inc
		Extensive localised spalling of the concrete and corrosion of the reinforcement to external walls. (Cross reference with DSA report, building 1050.)	Locally treat reinforcement and repair concrete.	inc
		Extensive calcification of the concrete. (Cross reference with DSA report, building 1050.)	Scrape calcification from the concrete.	inc
		Surface of the concrete extensively crazed and debonding in areas associated with the spalling of concrete and corrosion of reinforcement. (Cross reference with DSA report, building 1050.)	Locally repair concrete.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
		Extensive fracturing also present to the surface of the concrete. (Cross reference with DSA report, building 1050.)	Locally repair concrete and coat all concrete with anti-carbonation paint.	inc
		Pipe penetrations without covers enabling rainwater and vermin ingress.	Provide covers to penetrations.	inc
		Calcification stalactites evident internally to the roof soffit.	Scrape calcification from the roof soffit.	inc
1061	Timber Switch House adjacent East of the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Timber cladding decayed at low level.	Fully prepare and redecorate timber cladding and renew sections as necessary.	£500.00
		Timber surrounding framing to window decayed and sections missing.	Overhaul/renew timber surround framing.	inc
1871	Large concrete Retaining Wall comprising concrete Sentry Box at each end of the wall, located within the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Corrosion and delamination to the steel stanchions and doors to the sentry boxes (decorations failed).	Treat, fully prepare and redecorate steel stanchions and doors.	£1,500.00
		Open abutment joints and spalled concrete to the abutment of the sentry box walls with the retaining wall.	Rake out, make good concrete and re-seal abutment joints.	inc
		Localised spalled concrete to the retaining wall.	Locally repair concrete.	inc
		Movement joints to the retaining wall are open at the top and permitting rainwater ingress.	Rake out and re-seal abutment joints.	inc
2010	Hardened Crew Quarters located within the QRA. Single storey concrete structure with flat roof including two taller sections which are blast proof roof vents for the plant rooms. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Rainwater goods (PVC-U) generally damaged with sections missing.	Overhaul/renew rainwater goods.	£10,000.00
		Fascia boards (timber) generally rotten/deteriorated.	Renew fascia boards.	inc
		Isolated spalling of concrete and corroding reinforcement to external walls. (Cross reference with DSA Report, Building 1050.)	Locally treat reinforcement and repair concrete.	inc
		Timber doors rotten.	Renew timber doors.	inc
		Louvered shutter missing.	Reinstate shutter.	inc

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
3104	Hardened flat roofed concrete structure with blast wall and gun turrets, designed for use as a 'Reserved Fire Truck Facility', located within the QRA. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Flat roof felt weathering aged and perished/embrittled/split/rotten.	Renew felt weathering.	£10,500.00
		Vegetation growth generally across the flat roof felt weathering.	Action removal of vegetation within the repair recommended above.	inc
		Perimeter flat roof cappings missing in areas.	Reinstate roof cappings.	inc
		Extensive localised spalling of the concrete and corrosion of the reinforcement to external walls. (Refer to DSA report as building 1050.)	Refer to DSA report.	inc
		Extensive calcification of the concrete. (Refer to DSA report as building 1050.)	Refer to DSA report.	inc
		Surface of the concrete extensively crazed and debonding in areas associated with the spalling of concrete and corrosion of reinforcement. (Refer to DSA report as building 1050.)	Refer to DSA report.	inc
		Extensive fracturing also present to the surface of the concrete. (Refer to DSA report as building 1050.)	Refer to DSA report.	inc
		Up and over service door in permanently open position enabling rainwater and vermin ingress.	Ease and adjust door and leave closed.	inc
		Gun turrets in the open position enabling rainwater and vermin ingress.	Ease and adjust gun turrets and leave closed.	inc
UH22	Steel Observation Tower located within the QRA. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Refer to DSA report.	Refer to DSA report.	£10,000.00
UH49	Steel Observation Tower (Brunswick Tower) located within the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Refer to DSA report.	Refer to DSA report.	£13,500.00

Building No.	Description	Condition (Structural/External Envelope Deficiencies)	Recommended Remedial Works (Subject to Agreement with English Heritage and Cherwell District Council)	Budget Cost
UH50	Small concrete Observation Tower located adjacent east of the Northern Bomb Stores. Refer to Oxford Archaeology Gazetteer dated September 2005 as Appendix C for further information.	Refer to DSA report.	Refer to DSA report.	£5,500.00
299	Hardened concrete semi-sunken structure (Avionics), constructed in 1980 with an extension in 1982/3. Flat roof and sloping elevations inspected only.	Refer to DSA report.	Refer to DSA report.	£11,500.00
		Fibre glass profiled roof sheeting to entrance canopy damaged and missing.	Renew/reinstate fibre glass roof sheeting.	inc
TOTAL BUDGET COST				£372,500.00

4.1 Costs are summarised as follows:

Building No. and Name	Budget Cost
126 - Command Centre	£20,000.00
129 - Telephone Exchange	£4,500.00
325 - Nose Dock Shed	£9,000.00
327 - Nose Dock Shed	£6,000.00
328 - Nose Dock Shed	£10,000.00
340 - Control Tower	£50,000.00
370 - Squadron HQ	£65,500.00
383 - Squadron HQ	£60,000.00
1007 - Trigger Store	£10,000.00
1008 - Ammo Store	£21,000.00
1009 - Boiler House	£4,000.00
1010 - Water Tank	£10,000.00
1011 - Ammo Store	£15,000.00
1023 - Industrial Storage Unit	£3,000.00
1050 - Reserved Fire Truck Facility	£10,500.00
1060 - Entry Control Point	£11,000.00
1061 - Timber Switch House	£500.00
1871 - Retaining Wall and Sentry Boxes	£1,500.00
2010 - Crew Quarters	£10,000.00
3104 - Reserved Fire Truck Facility	£10,500.00
UH22 - Observation Tower	£10,000.00
UH49 - Observation Tower (Brunswick)	£13,500.00
UH50 - Observation Tower	£5,500.00
299 - Avionics (flat roof and sloping sections only)	£11,500.00
TOTAL BUDGET COST	£372,500.00

- 4.2 The budget costs quoted above are ball-park estimates of current price without adjustment for future inflation.
- 4.3 All estimates are quoted as budget ball-park estimates only and are not to be thought of as a substitute for obtaining competitive quotations from reputable contractors.
- 4.4 No costs have been included for any investigative works (unless expressly stated).
- 4.5 Estimates do not include VAT, professional fees (unless expressly stated) or statutory charges.
- 4.6 No allowance has been made for adverse working or any associated charges likely to be incurred.
- 4.7 No costs have been included regarding above and below ground drainage or other services within the building including heating, ventilation, mechanical and electrical, plant and equipment.
- 4.8 We have not included costs associated with the discovery, removal or consequential delays in connection with asbestos or other deleterious materials.
- 4.9 It should be noted in particular that the level of backlog maintenance and general condition of the buildings is such that the full extent of the works needed can only truly be determined by systematic and detailed building-by-building focus to carry out further investigations, specify repairs in consultation with stakeholders, obtain tenders from suitable contractors and execute the works.

5.0 PROGRAMME

- 5.1 Works are proposed to the buildings, in order of priority as follows:

Priority	Building No. and Name	Budget Cost
1	1007 - Trigger Store	£10,000.00
1	1008 - Ammo Store	£21,000.00
1	1009 - Boiler House	£4,000.00
1	1010 - Water Tank	£10,000.00
1	1011 - Ammo Store	£15,000.00
1	1023 - Industrial Storage Unit	£3,000.00
1	1050 - Reserved Fire Truck Facility	£10,500.00
1	1060 - Entry Control Point	£11,000.00
1	1061 - Timber Switch House	£500.00
1	1871 - Retaining Wall and Sentry Boxes	£1,500.00
1	UH49 - Observation Tower (Brunswick)	£13,500.00
1	UH50 - Observation Tower	£5,500.00
2	340 - Control Tower	£50,000.00
3	383 - Squadron HQ	£60,000.00
4	325 - Nose Dock Shed	£9,000.00
4	327 - Nose Dock Shed	£6,000.00
4	328 - Nose Dock Shed	£10,000.00

Priority	Building No. and Name	Budget Cost
5	2010 - Crew Quarters	£10,000.00
5	3104 - Reserved Fire Truck Facility	£10,500.00
5	UH22 - Observation Tower	£10,000.00
6	370 - Squadron HQ	£65,500.00
6	299 - Avionics (flat roof and sloping sections only)	£11,500.00
7	126 - Command Centre	£20,000.00
7	129 - Telephone Exchange	£4,500.00
	TOTAL BUDGET COST	£372,500.00

We trust this Report is satisfactory for your present requirements. Should you wish to discuss matters further then please do not hesitate to contact:

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