MOTT MACDONALD

Leuchars Station Secure Garaging

Design and Heritage Statement for Building 55

September 2020

Mott MacDonald
St Vincent Plaza
319 St Vincent Street
Glasgow G2 5LD
United Kingdom

T +44 (0)141 222 4500
mottmac.com

DIO

Leuchars Station Secure Garaging

Design and Heritage Statement for Building 55

September 2020

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	17/04/20	IG-D	RC		Early draft - baseline
B	02/06/20	RC	JC	JT	For comment
C	17/09/20	RC	JC	JO	Final incorporating Fife Council and HES responses

Document reference: 400620-MMD-LE-XX-RP-PM-102 – Leuchars Building 55 Heritage Statement

Information class: Standard

Contents

Figures

Photos

Executive summary

Mott MacDonald have been commissioned to support the Defence Infrastructure Organisation (DIO) as part of the proposed redevelopment of the Leuchars Station military base in Fife. Formerly an RAF base, Leuchars Station was known as RAF Leuchars from 1918 to 2015 when it was handed over to the British Army. As part of these proposals, the Army are seeking to reconfigure a First World War era General Service (GS) shed known as Building 55. Built c.1917, Building 55 is protected as a Category A Listed Building and any changes which affect its character will require Listed Building Consent.

This Heritage Statement has been prepared to accompany the application for Listed Building Consent. It follows pre-application advice from Fife Council and Historic Environment Scotland. The Heritage Statement also includes edits and further information as requested by Fife Council following submission of the application, and considers comments made by Historic Environment Scotland through formal consultation.

Leuchars is a unique place in the history of military aviation in Scotland and Building 55 has been an integral part of the military base at Leuchars since 1917. From its development as an air base during the First World War, RAF Leuchars was expanded during the inter-war years, played a role during the Second World War and has continued in use until the present day. While the RAF have withdrawn, the runway remains operational as a relief landing ground.

Building 55 is a rare surviving example of a GS shed, even more so due to the short-lived nature of its design and the fact it retains working sliding doors. Along with neighbouring Building 57, the two are unique in Scotland.

The proposed changes involve the removal of modern internal structures within the north hangar and internal refurbishment of the north and south annexes, including removal and installation of partitions to create offices and an ablutions block. These modern internal structures are not significant. A series of twelve destratification fans will be suspended from the roof trusses. An existing external entrance in the east elevation of the north hangar will be replaced, and a number of louvres placed through the fabric of the east and west gables.

The proposals will mostly have a negligible effect on the significance of the Category A Listed Building 55. The insertion of Louvres into the corrugated iron cladding represents a physical impact to the listed fabric of the building and, although limited in its extent and mitigated through design, harm to the significance of the building.

Potential heritage benefits have been identified by keeping the building in use through sensitive change and adaptation, ensuring its future conservation. This is considered to outweigh the potential harm which will result from the insertion of Louvres into the Building.

1 Introduction

Mott MacDonald have been commissioned by Defence Infrastructure Organisation (DIO) to provide heritage support associated with proposed redevelopment within the Leuchars Station military base in Fife, Scotland.

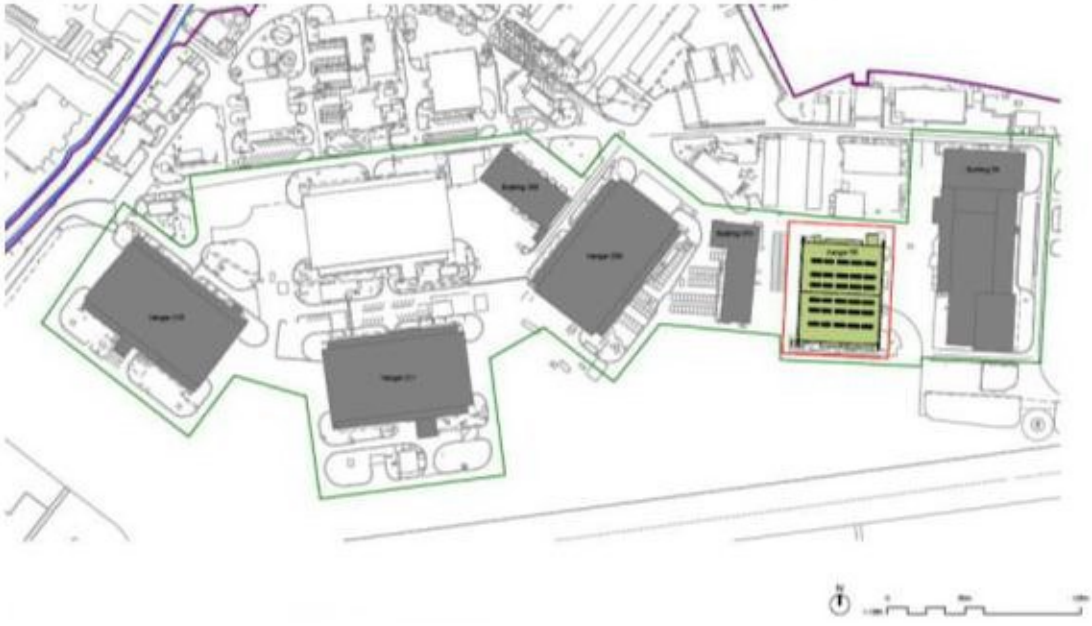
Leuchars Station is located on the east coast of Fife adjacent to the Eden Estuary (centred on NO 46707 20503). The station is around 5 miles north of St Andrews and 7.5 miles south of Dundee and covers an area of 360 hectares. Neighbouring the north-western boundary of the Station is the village of Leuchars itself (Figure 1.1).

Figure 1.1: Leuchars Station Site Location circled in red

Source: Contains Open Street Map data. © OpenStreetMap contributions

Formerly an RAF base, Leuchars Station was known as RAF Leuchars from 1918 until 2015 when it was handed over to the British Army. Following the change in use, wide-ranging proposals to re-purpose Leuchars Station have been advanced to ensure the facilities are better suited to serve the operational needs of the units now based there. As part of these proposals, changes are proposed to a former General Service (GS) shed, or aircraft hangar, known as Building 55 (NO 46011 20801 - Figure 1.2). Protected as a Category A Listed Building, Building 55 (LB51423 - Photo 1.1) dates to c.1917 and any changes which affect its character require Listed Building Consent. The refurbishment would provide sufficient power infrastructure and facilities for use as technical accommodation for the army.

Figure 1.2: Location view of Building 55 as indicated red within Leuchars Station



Source: Mott MacDonald

This design and heritage statement for the proposed works to Building 55 details the relevant planning policy and legislation, history and significance of Building 55, the proposed works and their potential impact on the Category A listed asset. This statement has been produced to support an application for Listed Building Consent by the DIO to undertake the necessary works.

Photo 1.1: Building 55 from the south east

Source: Mott MacDonald 2019

As with Leuchars Station, a number of the airfields discussed in this report pre-date the formation of the Royal Air Force (RAF) in 1918. However, for ease of discussion, the post-1918 names preceded by 'RAF' for these bases are preferred throughout the text.

2 Methodology

2.1 Scope

This statement has been produced to accompany an application for Listed Building Consent for Building 55 , a category A listed building (LB51423) in Leuchars Station, Fife. The statement is focused on the history, significance and potential impact of proposed changes to Building 55.

The Listing for Building 55 also encompasses the contemporary Building 57 to the east, a structure built for the same purpose as Building 55. However, no changes are proposed to Building 57 and this document includes only a heritage impact assessment of Building 55.

2.2 Desk Based Research

The desk-based research in this document is informed by accessing readily available historical, archaeological and architectural records. Resources consulted for this study include:

- The database of Listed Buildings in Scotland as maintained by Historic Environment Scotland (HES);
- The National Record of the Historic Environment (NRHE) as maintained HES;
- Fife Council Historic Environment Record (HER);
- The National Heritage List for England (NHLE);
- Historic mapping available from the National Library of Scotland (NLS);
- Aerial imagery available from online platforms including the National Collection of Aerial Photography (NCAP) as held by HES;
- Historic images available from Scran and other online resources;
- Online resources including the Airfields of Britain Conservation Trust (ABCT); and
- Relevant published and unpublished documentary sources, including Historic Building and Building Condition Reports commissioned by the client.

A full list of sources consulted can be viewed in the Bibliography.

2.3 Consultation

2.3.1 Fife Council

Pre-application advice was sought from Fife Council on 3rd May 2019, with a response provided on 12th June 2019. The response stated that :

'a Listed Building Consent application will be required for any works which may affect the fabric of the building.'[1]

The pre-application response also recommended that a design statement should be produced which should include a section setting out the significance of Building 55, identify impacts from the proposals and how the design minimises impacts. The response further recommended that a pre-application consultation be maintained with HES.

[1] Fife Council, Pre-Application for a mix of new build and refurbishment of existing buildings, 19/01313/PREAPP, p.4

The Fife Council Conservation Officer[2] was consulted about proposals in July 2019 and visited the site with a member of the Mott MacDonald heritage team on 15th August 2019. The Conservation Officer stressed that any changes to the entrance must be sensitive to the design and age of the building. Internal divisions should not be of a height which blocks views of the roof structure and impede the ability to appreciate this in its entirety.

Further informal consultation was held in May 2020 where the Conservation Officer was provided with the final draft plans of the proposals for comment.

The pre-application response from Fife Council can be viewed in Appendix B.

2.3.2 Historic Environment Scotland

Pre-application consultation was held with HES on 28th August 2019, during an early iteration of the design. While proposals have subsequently developed and been refined, the drawings provided showed:

- Internal refurbishment to the annexes along the north and south elevations;
- Minor refurbishment proposed for the interior of Building 55;
- Downtakings including the secondary internal structure within Building 55, access through the secondary partition in the cross wall, and alteration to the secondary entrance on the north-east gable; and
- Erection of cage storage within the interior.

HES provided a formal response on 18th September 2019. In this HES welcomed the proposals to adapt the building, allowing it to remain in use. They did not foresee the changes resulting in significant impacts and noted the roof structure would remain unaltered but emphasised the need to carefully consider proposed changes to the entrance to ensure these matched the existing hangar as much as possible.

The pre-application response from HES can be viewed in Appendix C.

2.4 Site Visit

Leuchars Station was visited by a heritage professional from Mott MacDonald on 30th January and 15th August 2019. During the second visit, access was secured to Building 55, allowing a simple visual survey of the structure and its context within Leuchars Station. For comparison purposes, access was also secured to the contemporary Building 57.

2.5 Assessment of Significance

The Historic Environment Policies for Scotland (HEPS), HEP1 states:

> *Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.*[3]

[2] Matthew Price

[3] Historic Environment Scotland (2019) *Historic Environment Policy Scotland*. Via: www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=1bcfa7b1-28fb-4d4b-b1e6-aa2500f942e7

2.6 Impact Assessment

Impact assessment has been undertaken in accordance with HEPS[4], HEP2, HEP3 and HEP4: Managing Change. HEPS also sets out the steps which should be followed to manage change within the historic environment. These steps have been used to establish the assessment methodology for this scheme:

- Understand the historic environment;
  - Understand and analyse the historic environment, context, asset or place.
  - Understand the cultural significance of any affected assets or places.
- Understand the background for the change;
  - Identify and understand the nature of and reasons for the change.
- Understand the likely impact of proposed actions or decisions;
  - Assess and predict the likely level of the impact of proposals on the historic environment, context, asset or place.
  - Make the level of impact clear so that it can inform decision-making.
- Making decisions about impact;
  - Avoid negative impact where possible.
  - Minimise any impact that cannot be avoided.
  - Keep intervention to a minimum.
  - Ensure changes to a site or place are proportionate to its cultural significance.
  - Consider less detrimental alternatives if they can deliver the same objectives.
  - Identify opportunities for mitigation throughout, and as early as possible.
  - Identify opportunities for furthering our knowledge and understanding where possible.
- Monitoring.

This report allows an understanding of the historic environment by outlining the historic baseline (Section 4) and assessing the significance of Building 55 (Section 4.4). It describes the proposed scheme (Section 5 - including proposed access arrangements) and its context to illustrate the background for the change. The report addresses the likely level of impact of proposed scheme on Building 55 as a heritage asset to allow for informed decision making (Section 6).

2.7 Assumptions and Limitations

Due to restrictions arising from the response to the spread of COVID-19, it was not possible to re-visit Building 55 and undertake a detailed survey of the building's fabric and phasing. However, photos and discussions arising from previous visits by the heritage team proved suitable alongside the records of existing surveys, to allow this report to be completed.

Closure of archives during the COVID-19 restrictions, meant that no archive visit could be undertaken to inform this document and it was not possible to request archive material digitally.[5]

Due to the military history of the site Leuchars Station is omitted from most historic mapping. Therefore, whilst historic mapping was examined to inform this statement the information held within these is limited in its depiction of Building 55.

---

[4] Historic Environment Scotland (2019) *Historic Environment Policy Scotland*. Via: www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=1bcfa7b1-28fb-4d4b-b1e6-aa2500f942e7 (accessed April 2020)

[5] The archives of Fife Council, the RAF Museum and the National Archives (Kew) were all contacted during compilation of the report.

3 Policy, Legislation and Guidance

3.1 National Legislation

The over-arching legislation in relation to listed buildings in Scotland is provided by the Town and Country Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.

This legislation allows Historic Environment Scotland to protect buildings of special architectural or historic interest through listing and advise on any proposed changes that affect these buildings through the process of Listed Building Consent.

3.2 National Planning Policy

3.2.1 National Planning Framework

The National Planning Framework (NPF3) was published in June 2014 and is a strategy for the long-term development of Scotland's towns, cities and countryside, and sets about identifying key strategic infrastructure needs to ensure that each part of the country can develop to its full potential.

3.2.2 Scottish Planning Policy (2014)

The Scottish Planning Policy (SPP) sets out, at a national level, the Scottish Governments' policy on nationally important land use and planning matters. Of particular relevance to this listed building consent application are the following policies:

SPP141: Listed Buildings

Change to a listed building should be managed to protect its special interest while enabling it to remain in active use. Where planning permission and listed building consent are sought for development to, or affecting, a listed building, special regard must be given to the importance of preserving and enhancing the building, its setting and any features of special architectural or historic interest. The layout, design, materials, scale, siting and use of any development which will affect a listed building or its setting should be appropriate to the character and appearance of the building and setting. Listed buildings should be protected from demolition or other work that would adversely affect it or its setting.

3.3 Historic Environment Policy Scotland (2019)

The Historic Environment Policies for Scotland (HEPS) were last updated in 2019. HEPS is a non-statutory policy statement, aimed at directing decision making which affects the historic environment. It contains six policies. Policy HEP1 relates to understanding and recognition of the importance of the historic environment.

Policy HEP1

Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.

Policies HEP2, HEP3 and HEP4 cover managing change within the historic environment.

Policy HEP2

Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations.

Policy HEP3

Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.

Policy HEP4

Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.

Policies HEP5 and HEP6 cover the importance of working together to protect, enhance and understand the historic environment.

Policy: HEP5

Decisions affecting the historic environment should contribute to the sustainable development of communities and places.

Policy: HEP6

Decisions affecting the historic environment should be informed by an inclusive understanding of the potential consequences for people and communities. Decision-making processes should be collaborative, open, transparent and easy to understand.

3.4 Guidance

The Historic Environment Scotland Managing Change in the Historic Environment Guidance Notes are non-statutory guidance documents which explain the best practice for making changes in line with HEPS and how to apply the requirements of the SPP. This report is prepared in cognisance of the following HES guidance notes:

- Guidance on the Principles of Listed Building Consent;
- Managing Change in the Historic Environment: Use and Adaption of Listed Buildings; and
- Managing Change in the Historic Environment: Setting.

3.5 Local Planning Policy - FIFEplan

FIFEplan, the Local Development Plan of Fife Council, was adopted in 2017. Of relevance to the proposed scheme and historic environment are the following policies:

Policy 1: Development Principles

Part B:

Development proposals must address their development impact by complying with the following relevant criteria and supporting policies, where relevant:

10. *Safeguard the characteristics of the historic environment, including archaeology.*

Policy 14 - Built and Historic Environment

The Council will apply the six qualities of successful places when considering development proposals. New development will need to demonstrate how it has taken account of and meets each of the following six qualities:

1. *distinctive;*
2. *welcoming;*
3. *adaptable;*
4. *resource efficient;*
5. *safe and pleasant; and*
6. *easy to move around and beyond.*

Guidance on how these qualities will be interpreted by the Council and addressed by those proposing development will be provided in the Making Fife's Places

Development which protects or enhances buildings or other built heritage of special architectural or historic interest will be supported. Proposals will not be supported where it is considered they will harm or damage:

- listed buildings or their setting, including structures or features of special architectural or historic interest.[6]

For all historic buildings and archaeological sites, whether statutorily protected or not, support will only be given if, allowing for any possible mitigating works, there is no adverse impact on the special architectural or historic interest of the building or character or appearance of the conservation area. Enabling development may be acceptable where it can be clearly shown to be the only means of preventing the loss of the asset and securing its long-term future.

[6] Other examples included by FIFEplan but not relevant to the application are omitted.

4 Historical Background

4.1 Overview

This section is designed to facilitate an understanding of the significance of Building 55, how it has developed and why it is considered important. It outlines the historical development of Building 55 within the context of the wider Leuchars base and the development of military aviation in Scotland and across the UK. It describes the building in detail and explains why it is significant through design, rarity, survival of original fabric, architectural qualities and historical association. The importance of the setting is also discussed.

4.2 Historical Development

The earliest recorded use of Leuchars for flying is in 1911[7], when the Royal Engineers established a site nearby as a launching point for experimental balloon flights. This began the tradition of aviation at Leuchars, but the stimulus for development of the airfield was the First World War. In 1916 work began to level the ground and set out runways for aircraft. Although the airfield was in operation, construction work was still ongoing in 1918 when the war ended.

Initially Leuchars was used primarily by the Royal Naval Air Service before their merger with the Royal Flying Corps and the formation of the Royal Air Force (RAF) in April 1918. In August 1918 Leuchars was recorded in an RAF survey as a Training Depot Station (TDS), one of 63 established during the course of the war.[8] This survey of RAF stations recorded the presence of six aircraft hangars and an Aircraft Repair Shed.[9]

The three coupled General Service (GS) sheds (hangars), of which Building 55 is one coupled pair, were part of this initial phase of construction at Leuchars. The three pairs of coupled GS sheds were complimented by a seventh, stand-alone Aeroplane Repair Section (ARS) shed of similar construction. This arrangement was the standard configuration for a TDS and is replicated at other locations such as Hooton, Chester.[10]

The standard plans for the GS sheds upon which Building 55 was based are held in Royal Air Force Museum Archives and were drawn by Lieutenant-Colonel B. H. O. Armstrong in 1917.[11]The coupled hangars were constructed by Melville, Dundas & Wilson of Glasgow, and the timber truss roof by D Anderson of Belfast.[12] It is likely that Anderson was brought in as a specialist in the construction of Belfast Trusses.

The GS sheds were built using a Belfast truss system to support the roof (Photo 4.1), allowing for a greater span, while using less timber by employing a lattice system.[13] The design allows shorter pieces of timber to cover a large open space and is first evidenced in 1866.[14] The use of

[7] Royal Air Force 2020 Leuchars Station [online], available at: www.raf.mod.uk/our-organisation/stations/leuchars-station/

[8] English Heritage 2014, Hooton Park Aerodrome, Chester and Chester West; An assessment of the General Service Sheds and associated buildings – Research Report Series no. 76-2014, 4

[9] RCAHMS, 2013 World War One audit of surviving remains [online], extract available at https://canmore.org.uk/site/84181/leuchars-airfield

[10] English Heritage 2014, 16

[11] Historic Environment Scotland 2018a RAF Leuchars, Technical Side, General Service Aircraft Sheds, Buildings 55 and 57 [online], available at http://portal.historicenvironment.scot/designation/LB51423

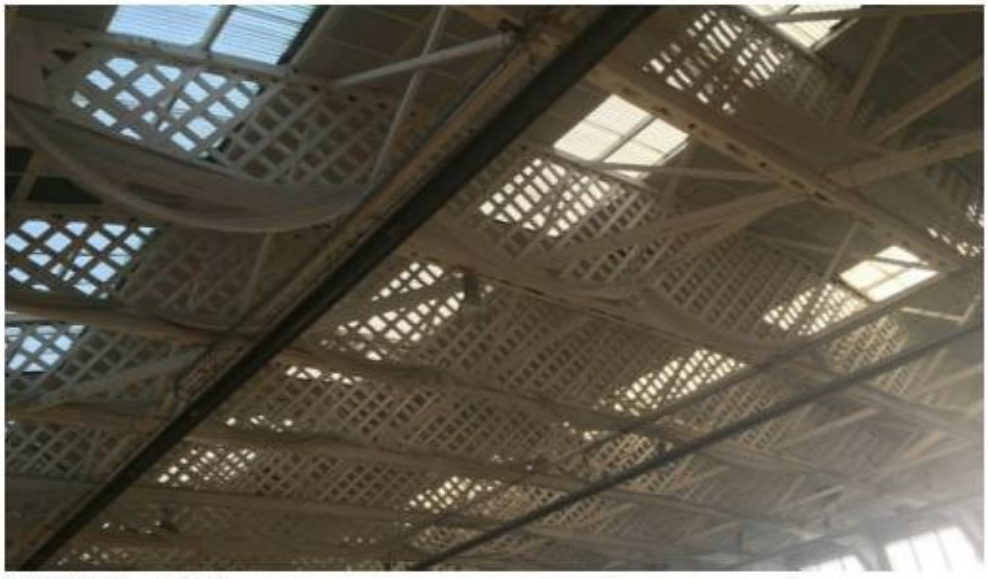
[12] *Ibid.*

[13] JR Gilfillan SG Gilbert (2002) The Historic Belfast Timber Truss - A Way to Promote Sustainable Roof Construction [online]. Faculty of Engineering Queen's University Belfast N Ireland. Via: www.irbnet.de/daten/iconda/CIB9282.pdf

[14] Gould, M. H. (2001) A Historical Perspective on the Belfast Truss Roof. Construction History, 17

shorter planks to span larger gaps suited this system and was the ideal construction method for large buildings when there was a scarcity of suitable timber such as during the First World War. The Belfast system was used to construct a number of similar hangars, larger than previous designs.[15]

Photo 4.1: View of internal roof structure within Building 55



Source: Mott MacDonald 2019

The original cladding of Building 55 was likely timber or asbestos, and early examples of GS sheds were constructed almost entirely of timber, with timber cladding and roof covered by felt as at Montrose Air Station.[16] The 'World War One Audit Project' completed by the Royal Commission on the Ancient and Historic Monuments of Scotland (RCAHMS) in 2013 records the GS sheds as 'two timber-clad hangars'. A photo dated to 1918[17] does not show enough detail to confirm the nature of the cladding however, the GS sheds at Leuchars were clad with corrugated iron in a photo dated to 1936.

Leuchars again appeared in a survey of RAF stations in November 1918, by which time it was operated by the Fleet Gunnery and Fighting School (NW Area). A document in the National Archive records that the six coupled aeroplane sheds along with the other buildings were used as classrooms, stores and accommodation.[18]

By 1920 the airbase was renamed RAF Leuchars and continued to be used for training throughout the decade.[19] In the 1930s the War Office selected RAF Stations to be part of a major expansion project. Investment in the RAF was prioritised aiming for parity with Germany, with several expansion schemes between 1933 and 1939 of which Leuchars was a part.[20] As with other RAF bases at the time, the focus moved from housing bombers to fighter aircraft as

[15] *Ibid.*

[16] An example of one of these early hangars can be viewed at https://canmore.org.uk/collection/373828

[17] Available at https://www.scran.ac.uk/database/image.php?usi=000-000-496-133-R&cusi=000-000-496-133-C&scache=1iq1zb6lp4&searchdb=scran

[18] Public Record Office AIR/453/15/312/26 Vol.III as recorded in https://canmore.org.uk/site/84181/leuchars-airfield. The original could not be viewed due to the COVID-19 restrictions.

[19] Historic Environment Scotland 2018a

[20] *Ibid.*

the political situation moved towards a Second World War. These fighter aircraft were housed in the hangars at Leuchars, likely including Building 55. From 1938-1939 RAF Leuchars substantially expanded, with additional larger hangars and control buildings, fuelled by the impending war.[21]

RAF Leuchars was an important RAF base during the Second World War. Leuchars passed to RAF Coastal Command control during 1938 and had quickly started preparing for the likelihood of war, with several squadrons moving in and commencing anti-shipping patrols.[22] During the Second World War squadrons stationed at RAF Leuchars included 105, 224, 233, 235, 236, 320, 540 and 547. Leuchars was also home to members of the Women's Auxiliary Air Force (WAAF).[23]

RAF Leuchars was one of few RAF airfields which continued to be used in the post-war period, with jet fighters stationed there from 1950.[24] Aerial photography[25] shows that the third coupled GS shed and the ARS were demolished between 1972 and 1974. This left only Building 55 and Building 57 of the original 1917-18 hangars.

RAF Leuchars was again expanded in the early 1980s. As a result of the Cold War there was significant addition of NATO structures on the site.[26]

After nearly 100 years continuous use by the RAF, RAF Leuchars was transferred to possession of the British Army in 2015, renamed as Leuchars Station. The last squadrons left in 2014.

4.3 Description of Building 55

Building 55 is a conjoined pair of first world war aircraft hangars (Photo 1.1), known as GS sheds and built 1917-18. Since 8th February 2010, Building 55 along with contemporary GS shed Building 57, have together been protected as Category A Listed Buildings (reference LB 51423).

Aligned roughly north to south, Building 55 consists of two separate hangars, both spanned by a series of 16 timber 'Belfast' roof trusses (Photo 4.2). The trusses are supported on brick piers and further strengthened by the presence of a brace diagonally between the pier and the truss. The brace and ends of the truss are covered by gusset boards, which conceal the fixings (Photo 4.3).

The division between the two conjoined hangars, originally free standing brick piers, has been infilled with brick.

Externally, the two parallel roofs are divided by a valley gutter.

The north and south elevations of the building are constructed from brick, reinforced by a series of 14 raking buttresses which divide the walls into 15 bays above which is an inserted clerestory of windows (Photo 4.4).

---

[21] *Ibid.*

[22] Airfields of Britain Conservation Trust 2020a. *Leuchars* [online], available at: www.abct.org.uk/airfields/airfield-finder/leuchars/

[23] Wartime Memories Project 2020, *RAF Leuchars* [online], available at: https://wartimememoriesproject.com/ww2/airfields/airfield.php?pid=17

[24] Historic Environment Scotland 2018a

[25] Ref 000-000-128-144-R, available at www.scran.ac.uk and Unknown (1974) FSL/7343/22. Via: NCAP, https://ncap.org.uk/frame/8-1-26-1-60-84

[26] Historic Environment Scotland 2018a

The east and west elevations are composed of two sets of six-panelled horizontal, sliding hangar doors which ran on surviving steel rails set into concrete (Photo 4.6). The doors on the eastern gable and the northern gable on the western side are clad in older corrugated iron while the remaining southern gable on the western side is covered by a modern corrugated plastic coated cladding. Segmental pediments are located above the doors sheeted by plastic coated cladding. When open, the sliding doors were housed in surviving brick support gantries on each corner of Building 55 (Photo 4.11 and Photo 4.12).

Photo 4.2: Internal view east across Building 55, North hangar showing the Belfast truss roof structure

Source: Mott MacDonald 2019

Photo 4.3: Detail of the gusset boards covering the brace and fixing details where the trusses meet piers

Source: Mott MacDonald 2019

Photo 4.4: View looking south-east along the north elevation of Building 55. Note the assumed original annex covering seven bays between the buttresses. This is flanked by two later extensions.

Source: Mott MacDonald 2019

While the doors remain in situ only the western gable of the southern hangar has doors which remain operable and in use (Photo 4.5) The eastern gable of the north hangar has had a secondary entrance inserted into the central door with a roller shutter (Photo 4.8).

Photo 4.5: Interior view of the entrance to the southern hangar, western elevation. Note the sliding doors in operation and the modern cladding

Source: Mott MacDonald 2019

Photo 4.6: External view of the runners housing the sliding doors of the southern hangar, eastern elevation. These doors are inoperable.

Source: Mott MacDonald 2019

Photo 4.7: West elevation of Building 55 looking north-east. Note the modern cladding on the South hangar

Source: Mott MacDonald 2019

Photo 4.8: View south-east over eastern elevation of Building 55. Note the secondary opening and the in situ sliding doors secured with concrete at their base

Source: Mott MacDonald 2019

The annexes on the end elevations of Building 55 are likely part of the original fabric (Photo 4.4 and Photo 4.9:).[27] These would have contained stores, workshops, and officer's dressing rooms, but have been modified, with additions and extensions added. On the north elevation the annexes are flanked by more recent additions in the corners, and on the south elevation the range appears to have been extended across an additional three bays, while other lean-to structures occupy the south west corner. However, the additions and later annexes are readily identifiable and do not mask or change the fabric of the original structure which can still be readily appreciated.

[27] Inability to undertake a detailed survey of the building's fabric means this cannot be stated as fact, but all the evidence indicates the low, lean-to, seven bay annexes are original and essentially unaltered externally.

Photo 4.9: View of the south elevation looking north-west. Note the original annex conjoined to the east by a secondary addition with a cement render. There are also assumed secondary annexes on the south western corner (background)

Source: Mott MacDonald

The original roofing is unclear, whether this was Anderson ROK roofing (diagonal boarding covered in roofing felt) or asbestos sheeting which became the standard on GS sheds. It is notable that at Duxford, the roof was replaced with corrugated iron in 1925, and this may have occurred at Leuchars in a similar timeframe.

4.4 Significance

Building 55 is of high national and UK wide significance. Building 55 is in excellent condition and is still in use for military purpose. Until 2015, the building was still occupied by the RAF.

Along with Building 57, Building 55 is one of the best preserved First World War buildings in Scotland, and second only to the sheds at the former Montrose Air Station as the oldest military aircraft hangars in Scotland. The two at Leuchars are unique as the only surviving examples in Scotland of the once common GS sheds, and are part of only a handful that survive in the UK. GS Sheds were designed by B.H.O. Armstrong, widely considered to be the most important War Office architect of the First World War.[28]

A 'Survey of Military Aviation Sites and Structures' undertaken by English Heritage identified only eight surviving groups of GS Sheds.[29]

As a design, the examples at Leuchars were relatively short lived, increasing their rarity and significance. Leuchars conforms to the plan dated 1917 and has steel framed sliding doors, probably clad with timber and potentially asbestos. However, it was found that the heavy sliding doors and mechanisms often failed. By February 1918, the Air Ministry altered the design of the GS sheds during construction at Duxford, Cambridgeshire, introducing concertina folding doors. This design change became the standard for all GS sheds and made the striking and distinctive

[28] Historic Environment Scotland 2018a and https://www.airfieldresearchgroup.org.uk/

[29] English Heritage 2014, 37

brick door gantries (Photo 4.11 and Photo 4.12) obsolete. Many of these were demolished (as at Hucknall, Nottinghamshire), while on later GS sheds they were not constructed.[30]

Photo 4.10: Interior of Building 55, south hangar looking north-east. Note the infilling of the arches between the hangars (left) and in situ sliding doors and early corrugated iron cladding (right)

Source: Mott MacDonald

While many early hangars retained beaten earth floors, the reinforced concrete floors were part of the original specification for Building 55[31] and a concrete floor remains in place throughout.

Building 55 retains its original lean-to annexes on the north and south elevation. These are not masked by the later alterations, which in themselves are an important part of the building's history given the continued use by the RAF until 2015.

In comparison to surviving contemporary sites, the GS sheds at Leuchars have been little altered and buildings 55 and 57 at Leuchars are arguably the best surviving examples of this specific type of GS shed.

The rarity of the design of the GS sheds at Leuchars, their uniqueness in a Scottish context and the excellent preservation of Building 55 lend it a particular significance which is reflected in the Listing of Buildings 55 and 57 together as Category A.

[30] Historic England 1973, Listed Building Entry for Duxford: Building 79 (Hangar 4), List Entry Number 1128126, available at https://historicengland.org.uk/listing/the-list/list-entry/1128126

Photo 4.11: View of the brick gantry on the north-west corner of Building 55

Source: Mott MacDonald 2019

Photo 4.12: View of the east gable of Building 55, note the distinctive brick gantries at each corner

Source: Mott MacDonald 2019

The GS sheds were constructed as a practical and semi-temporary reaction to the developing military situation and increasing importance of the embryonic RNAS and RFC in the conflict. There was no consideration given to longevity or aesthetics, yet conversely, Building 55 remained in near constant use for its original purpose for nearly 100 years and retains a strong, aesthetic appeal, particularly in comparison to the later 20th century aircraft hangars around it. The use of brick is not common in a Scottish setting, yet the multi-buttressed elevations, supporting the elegant twin curves of the roof, along with the iconic brick gantries are visually appealing. The long brick outer walls divided into bays by sloping buttresses and clerestorey appear both contemporary with their construction, but also stylish in a modern setting.

While it is unknown if the corrugated metal cladding is original, and most likely is not, this material is typical of this structure type. The ability to understand the materials employed in its construction, and the relationship they have, the original materials used, are of historic interest. Equally, the care-work appearance of the corrugated metal cladding displays the patina of age which contributes to the appreciation of the buildings provenance and also contributes to its aesthetic value.

The use of the Belfast trusses was the result of the need to roof a wide space economically, and exemplifies the high standard of design achieved under significant pressure with few direct precedents. The whitewashed lattice-work and trusses are the most architecturally striking feature of Building 55. The openness of the lattice-work allows the light from the roof windows to spread unimpeded throughout the open space of the hangar (Photo 4.13), which, along with the large multi-pane windows, creates a bright, open and airy space uncluttered by internal development.

While the arches of the central arcade bisecting the interior of Building 55 have been infilled (Photo 4.10), reducing the ability to view the interior and the roof structure in its entirety, the internal space of both hangars remains essentially open, particularly the south hangar where no internal structures have been built (the north hangar has a low office block - Photo 5.1). This allows the full impact of the construction to be appreciated both on an aesthetic and functional level. This contrasts sharply with neighbouring Building 57 where the interior is filled with low

structures and partitions, giving a cluttered feel and limiting the ability to appreciate the trusses and open space in its entirety.

Photo 4.13: The Belfast truss roof of Building 55, north hangar looking north-west

Source: Mott MacDonald 2019

The origins of aviation at Leuchars dates to 1911, with the air base constructed from 1916. RAF Leuchars is a key part in the history of military aviation in Scotland, unique in its longevity of continual use for military aircraft from the First World War to the present day. Building 55 was part of this initial airfield construction and has been central to the history of Leuchars as an RAF base. While the base is now operated by the army, it remains the home of several RAF units.

Leuchars Station is the only surviving TDS in Scotland, and one of a handful that survive across the UK. Building 55 forms an important part of this. The TDS scheme was an extensive and significant construction programme at a time when military aviation was in its infancy, influencing the geographical pattern of RAF bases throughout the 20th century. The survival of recognisable elements in a military setting at Leuchars is significant.

4.4.1 Setting

The GS sheds at Leuchars Station are a prominent part of the base, but given their location on the northern side of the Eden estuary, are also the most visible and instantly recognisable part of the base in the wider landscape, particularly from the A91 to the south.

The standard layout of a TDS required three coupled GS sheds and self-contained ARS shed, set within a wider base of ancillary buildings. However, there are no examples where all elements survive.

Building 57 is contemporary with Building 55 and this remains in situ. While, the relationship between the two buildings is not readily apparent on the ground due to interceding buildings, Building 57 contributes to the setting of Building 55 and to the ability to understand its significance (Photo 4.14).

Other elements of the TDS remain at Leuchars. A First World War flight office is located adjacent to Building 57 and an archaeological and heritage appraisal[32] of Leuchars Station identified that a number of the small buildings around Building 57 originated during the First World War. It is also significant that three buildings in the accommodation area to the west (Buildings 25, 26 and 27, LB51418) date from the First World War, providing a rare example of a TDS where elements survive from both the technical and domestic areas, creating a strong group value.

Leuchars Station has changed significantly since its inception, however the relationship between the asset and the airfield, runway and its associated buildings has not been diminished. This setting of the wider airfield contributes strongly to the ability to understand the significance of Building 55.

Photo 4.14: Looking north-west from the runway south of Building 57 past Building 56 to Building 55 in the background

Source: Mott MacDonald 2019

Photo 4.15: View from the north-west edge of Building 56 towards Building55 with the runway and Eden estuary beyond

Source: Mott MacDonald 2019

[32] WYG Management Services Limited 2018, Defence Estate Optimisation Programme: Phase 1 Archaeological and Heritage Appraisal, Leuchars Station

5 Scheme Description

5.1 Overview

This section establishes the proposed changes to Building 55 and outlines the reasons these are considered necessary. This facilitates an understanding of the background to the application.

5.2 Context

Proposals to renovate Building 55 at Leuchars Station are advanced as part of the redevelopment of the former RAF base to make it suitable for the use of the army. The RAF transferred ownership of RAF Leuchars to the army in 2015. While the runway remains operational as a relief landing ground for RAF Lossiemouth, the requirements of the army are different from the RAF, with less need for large, open buildings on this scale in which to house equipment.

As part of this project, proposals are to refurbish and reconfigure Building 55 to provide sufficient electrical power infrastructure and facilities for use as technical accommodation, with replacement of an existing vehicular opening.

Proposals at Leuchars Station will make the base more suitable for the units stationed there, providing a secure future for re-purposed structures such as Building 55.

5.3 Proposed works to Building 55

The proposed works to Building 55 are detailed across a suite of architects' drawings and site and location plans prepared as part of this application. Where relevant, these are cross-referenced in the text and highlighted bold for ease of recognition.

5.3.1 Design approach

The design approach required that Building 55 remain useful and useable on an operational Army base, while being sensitive to the history and existing fabric of the building. This balance is important to ensure the Building 55 retains an importance and is well maintained, but its historic significance is protected. The approach was to ensure as little work was required as possible to ensure the future use of Building 55, and where practical ensure the changes were minimal in nature and reversible. Where new development or installations were proposed, these sought where possible to replicate the existing design, colour and internal arrangements of Building 55.

5.3.2 Downtakings

Proposed downtakings in Building 55 involve the removal of secondary internal structures (Photo 5.1) and internal alterations to remove partitions and doorways in the suite of offices and workshops contained in the annexes at the northern and southern sides of Building 55. This includes the removal of a toilet block in the annex of the north-eastern corner of the building. Access will be restored between the north and south hangars by the creation of an opening through the secondary brick walling of the central arcade (Photo 4.10). The cladding to the building will be impacted by the removal of eight areas measuring 745mm by 745mm for the installation of louvres on the east elevation, and a further six on the west elevation (see 5.3.3.5

below). The secondary entrance with the roller shutter in the east gable of the north hangar (Photo 4.7) will also be removed and replaced (see 5.3.3.4 below).

Proposed downtakings in Building 55 are detailed in plan **400620-MMD-12-GF-DR-A–1100** with the locations of the new openings shown in profile on **400620-MMD-12-XX-DR-A–1200** and **400620-MMD-12-XX-DR-A-1201**.

The black radiant heating tubes (visible in Photo 4.10 and Photo 4.13) suspended from the roof trusses will be removed and where possible services and cable trays suspended from the roof will be removed, consolidated or re-routed.

No changes are proposed to the building superstructure, frames of the sliding doors or to the fabric of the roof structure.

Photo 5.1: The internal structure in the north-west corner, which will be removed

Source: Mott MacDonald 2019

5.3.3 Construction and installation

Drawing **400620-MMD-12-GF-DR-A-2000** shows a detailed plan of the proposed installations, with drawings **400620-MMD-12-GF-DR-A-2600** and **400620-MMD-12-GF-DR-A-2601** showing the elevations of Building 55.

5.3.3.1 Internal construction

Following the removal of the internal structures, a smaller block work walled office space with additional plant areas will be built, predominantly within the footprint of the removed office (Photo 5.1) in the north-west corner of the north hangar, and of a similar height. Block work walls have been selected due to their robust properties as well as to match the existing internal fabric of the building. Proposed blockwork will be painted (externally) as per existing blockwork within the main fabric of Building 55, with painted plasterboard within the internal rooms.

Changes will be made internally to the north and south annexes, notably in the north-east corner of the north hangar, where the secondary annex will be reconfigured into a sanitary and

ablutions block, extending southwards slightly into the footprint of the hangar itself, allowing for new lobbies and a store to be formed.

Internal metal mesh cages have been included within the design, both in the North and South Hangar, to allow the space to be appropriately used. In designing storage solutions, cages were preferred to block or timber framed partitions, to allow for a flexible storage solution while minimising potential impact on the existing building. The aim was for the storage impact to be minimal on the existing fabric, exploiting a material with high visual permability. The cages can subsequently be removed in future with little to no impact on the existing fabric of the building.

5.3.3.2 Central arcade

Double doors will be inserted into the new opening through the blocked central arcade, restoring the link between the north and south hangars. Along either side of the central arcade, a series of storage cages are proposed, 14 in the north hangar, and 10 in the south hangar. These will be 3050mm high as shown in drawing **400620-MMD-12-XX-DR-A–2200**.

5.3.3.3 Destratification Fans and cable trays

Twelve destratification fans will be installed, six in each hangar supported from the roof structure. Typically these measure 600mm by 600m with a depth of 300mm and weigh 20kg. These will take warm air from roof level and push this back down to occupation level, reducing the possibility of high temperature around the trusses.

The fans will be suspended from the roof trusses. These can be attached by laying the unistrut across the top of the bottom chord, and clamping it down, ensuring there is no damage to the timber struts themselves. Structural assessment will be undertaken to ensure the fans will not damage the struts.

The development of the heating strategy has been driven by an aspiration to remove the intrusive gas fired radiant panels from the roof structure. These existing radiant panels currently present an increased fire risk to the timber framework. To replace these, we have selected free standing floor mounted air heaters that will blow warm air into the space as they can be installed totally separate from, and will not impact upon, the building structure. Unfortunately, warm air will always rise and so we have specified a number of destratification fans to push this warm air back down to the working area. This will both save energy and help to reduce the risk of high air temperatures surrounding the timber roof trusses.

It is also proposed to install four pipes and four cable trays from the trusses between the north and south hangars, although it is proposed these will be placed around the perimeter where practical.

5.3.3.4 External doorway

A new roller shutter door will be inserted into the east elevation of the north hangar following removal of the existing secondary roller shutter. The size of this will match the existing opening.

This door has been replaced on a like for like basis. The existing opening size is limited, yet suitable for purpose. The proposals sought to use the existing opening, and ensure there was no further impact on the superstructure or fabric or Building 55.

During the design process, consideration was given to alternatives to the existing roller shutter. The research and design found that horizontal doors would require stacking space at one (or either side of the opening depending upon the design), further restricting the space available in the opening. This would be the case unless additional configuration changes were made to

allow the stacking system to sit beyond the opening, but such design would potentially impact upon the existing historic building fabric.

Given the new use of Building 55, it is proposed that the door will be used on a frequent basis, forming the sole vehicular access to the North Hangar/new garage. From a maintenance and functional perspective, the roller shutter door is more beneficial, allowing the building to be appropriately utilised. Roller shutter doors are fixed to vertical rails which tend to gather less dirt than the equivalent folding or sliding doors, which would be fixed to horizontal rails, potentially requiring frequent cleaning of the threshold rail to maintain function. Failure of the mechanisms on the original sliding doors on GS sheds are one of the reasons these were systematically replaced or permanently closed over in surviving GS sheds, including the non-functioning doors in the south-east, north-west and north-east (see Photo 4.8) elevations at Building 55.

The proposed roller shutter doors are consistent with all the other new vehicle doors being installed across Leuchars Station, providing a degree of consistency across the estate. The newly proposed shutter will be RAL matched to the existing predominant colour scheme of Building 55.

5.3.3.5 Louvres

A series of louvres will be installed into the fabric of east and west gables to facilitate cross ventilation in the hangars. Smaller louvres will be installed in the annexes.

The installation of the louvres is necessary to allow Building 55 to be appropriately re-purposed and remain in use as a garage. When constructed, Building 55 would have had four louvres, with each one high in the curved gables above the four entrance openings on the east and west elevations. In proposing new louvres for Building 55, consideration was given to reinstating these, but this proved to be impractical and potentially unsafe for the proposed use of the building.

The primary objective of the louvres is to clear vehicle exhaust fumes, most of which are heavier than air, from the working area. This ensures the occupants' safety and as a result the air inlets require to be at low level within the building volume along the east elevation. Along the western elevation the louvres have fans mounted to the rear, and it was necessary to locate these higher to take them out of reach of the building users and to reduce the potential noise impact. However, they still ventilate the occupied zone, and it was necessary to keep them as low as possible within the constraints described above.

The newly proposed louvres will be RAL matched to the existing predominant colour scheme of Building 55 and have been designed with a vertical emphasis, allowing these to be better integrated into the vertical ridged cladding of Building 55.

5.3.4 Access

It is not anticipated that there will be any change to the access arrangements for people with disabilities in Building 55. The pedestrian entrances to the building will remain unchanged, while the changes proposed to the entrance in the eastern gable of the north hangar, will be a like for like replacement as shown in drawing **400620-MMD-12-XX-DR-A–2433**.

6 Impact Assessment

6.1 Overview

In line with the methodology (see Section 2.6) this section outlines the potential impact of the proposed works on Building 55.

6.2 Significance and impact of changes

6.2.1 Internal construction and installation

The existing internal offices in the north-west corner of the north hangar are secondary structures and of different construction and appearance to the historic core of Building 55. They impact negatively on the open feel within the inside of the hangar. These internal structures are of no value and their removal will have no impact on the significance of Building 55. The replacement by new office structures on the same footprint and of a similar scale will not further open up the expanse of the interior. However, the proposed internal offices will be better integrated into Building 55 by replicating the construction of the annexes and colour scheme in the north elevation and represent a positive intervention into the building.

Changes to the internal layout of the north and south annexes do not affect the feel or layout of the building, keeping this area of the building functional. None of these changes are of significance or affect the character of Building 55.

The installation of storage areas facilitates the new function of Building 55 as a garage. Designing this storage as cages ensures these can be removed without impacting the fabric of the building and maintains a degree of openness in the Hangars which a series of wooden partitions would inhibit.

These changes are not significant and do not negatively affect the character of Building 55. More appropriate internal structure within Building 55 which is responsive to the character and appearance of the asset also represents a heritage benefit.

6.2.2 Central arcade

Removal of the secondary brick walling in the central arcade impacts upon secondary fabric which. This secondary blocking has been installed between the north and south hangar and the building material used does not integrate with the existing fabric of Building 55. Removal of an area of this secondary fabric will have no negative impact, while providing beneficial elements through restoring a degree of the historic access between the north and south hangars.

These changes are not significant and do not negatively affect the character of Building 55.

6.2.3 Destratification fans and cable trays

Twelve destratification fans will be hung from the roof trusses, six in the north hangar and six in the south. These will present a degree of visual intrusion on the open aspect within Building 55, and will be a visual presence when viewing the trusses and roof structure as a whole. However, during the design process, the size of the fans was kept to a minimum while allowing them to maintain their function. These measure 600mm by 600mm, with a depth of 300mm and while visible, the destratification fans will not significantly impact on the ability to appreciate the roof structure as a whole.

The fans will be fitted to the roof structure in a manner that ensures there is no damage to the fabric of the trusses. Structural assessment will be necessary to ensure that the installation of these will have no impact upon the integrity of the trusses. The destratification fans will replace the existing black radiant heating tubes and will reduce the possibility of the high temperatures associated with these affecting the trusses.

New services will replace existing cable trays, consolidating these together. Where possible, these will be less obtrusive, colour matched to the trusses and follow the perimeter of the building.

The proposed destratification fans and services which will be suspended from the trusses will have a negligible impact on the ability to appreciate the roof structure and will not have a significant impact on the character of Building 55.

6.2.4 External doorway

The existing roller shutter on the north eastern side of Building 55 is of no historic value and detracts from the character of the building. The proposed replacement roller shutter will be a like for like replacement of the existing roller shutter. Other options of door were explored during the design process, but were found to be impractical, either limiting the frequent usage of the doorway or increasing the impact upon the surviving historic fabric of Building 55 either side of the existing opening.

The existing roller door is secondary and does not contribute to the significance of Building 55. Replacement with a similar roller door will not result in any additional negative impact upon the current character of Building 55, while matching the colour of the door with the existing cladding is beneficial in helping to integrate this into the wider fabric. This will therefore result in a minor improvement to the character and appearance of the asset.

6.2.5 Louvres

Externally, the main structure of Building 55 remains largely unaltered and the survival of historic fabric and cladding contributes to the significance and character of the building. Even where this has been replaced with cladding of a different profile, the east and west gables of Building 55 remain generally unimpeded by any alterations such as inserted openings or modern features. The proposed installation of louvres on the eastern side of the hangar will affect only a limited area of historic cladding, which although not original fabric, was in place by 1936. However, the run of eight louvres along each elevation will be a visual intrusion into the wider expanse of each elevation and will affect the character of the asset, by interrupting the large plain surface of the cladding, particularly along the west side where these will be located conspicuously at a high level, and will result in the loss of small localised areas of the cladding

Louvres will also be installed along the brick north and south elevations. All of the louvres represent a physical impact to the listed fabric of the building and, although limited in its extent, harm to the significance of the building.

The louvres will however be matched to the colour of the existing cladding on Building 55, and to the brickwork on the north and south elevations. They have been designed with a vertical emphasis to ensure the visual impact is reduced and they are better integrated with the historic fabric of the building. The louvres have also been specifically placed to avoid physical impact upon the primary metal superstructure of Building 55.

6.3 Summary

None of the proposed changes to Building 55 will impact significantly on the important architectural features the building possesses and overall will have a negligible impact on the ability to understand the significance of Building 55. The proposed entrance to the east elevation of the north hangar will be a like for like replacement and will not impact upon the surviving sliding door mechanisms. This will be colour matched to the existing cladding. Installation of louvres along the east and west elevations will impact on the character of Building 55, but these will be integrated through design and colour and this impact is considered negligible.

The Belfast truss roof is an important architectural feature adapted for a specific purpose at a time when materials were in short supply and military aviation was emerging. Internal alterations are sufficiently limited that they will not result in any loss to the ability to understand the significance of the roof structures. The same is also true of the destratification fans. These will be visible, but will not impact upon the wider ability to appreciate the roof trusses.

While the withdrawal of the RAF from Leuchars means it is unlikely that Building 55 will ever be used for its original intended purpose, nor has it been for some time. Continued use of the building in a military environment is the next best option. Use by the army within a military setting will form another important part of the building's history at Leuchars Station. Reconfiguration of Building 55 will allow it to better remain an integral and functional part of the military base. The internal offices in the north-west corner of the north hangar will be replaced, but the function and nature of the replacement structure will remain the same. The same is true for the internal alterations to the rooms within the annexes. The internal space of the hangars will remain open and airy, with the new cage storage or destratification fans not impacting upon this feeling. The creation of an opening between the north and south hangars will recreate movement between the two. The proposals will preserve the Building's historic association with a military function and provide a heritage benefit by keeping the building in use through sensitive change and adaptation, ensuring its future conservation.

The setting of Building 55 will be unaltered by the proposed works. The primary importance of the setting is the functioning military base itself and the position of the hangar in proximity to the runway to the south. This link will remain unaltered allowing it to be understood and appreciated.

Overall the proposals are considered to result in limited harm to the fabric of the building, however this is outweighed by the potential heritage benefits of the scheme, both in the replacement of insensitive modern internal insertions and in allowing the continued use and conservation of the building.

7 Conclusions

The proposed works to Building 55 at Leuchars Station are required as part of proposals to re-purpose the base to make it more suitable for use by the army. This follows the withdrawal of the RAF in 2015. Building 55 operated as an aircraft hangar from 1917 until 2015, but given the change in use of the base, it is necessary to reconfigure the structure in order to provide it with a secure future as an important, maintained and utilised part of Leuchars Station.

Building 55 is Category A Listed and the proposals require Listed Building Consent. This report has been produced to accompany an application for Listed Building Consent.

The proposed changes involve internal alterations to the annexes on the northern and southern sides of the building as well as the removal and replacement of internal secondary structures with structures more responsive to the heritage character of the building. Internal reconfiguration to the office spaces in the annexes will make these more suitable for purpose, while offering a minor improvement to the character of the building. A new entrance will be created through the secondary blocking of the central arcade restoring access between the north and south hangars, while the existing secondary shutter door in the east elevation of the north hangar will be replaced. Externally a number of louvres will be created through the existing cladding on Building 55. Twelve destratification fans will be suspended from the roof structure to facilitate the movement of warm air.

The proposals will mostly have a negligible effect on the significance of the Category A Listed Building 55. The destratification fans will be visible, but will not impede upon the ability to appreciate the roof trusses as a whole. The insertion of louvres into the corrugated iron cladding represents a physical impact to the listed fabric of the building and, although limited in its extent, harm to the significance of the building.

Potential heritage benefits have been identified by keeping the building in use through sensitive change and adaptation, ensuring its future conservation. This is considered to outweigh the potential harm which will result from the insertion of Louvres into the Building.

There will be no impact on the setting of Building 55.

The proposed changes continue to allow Building 55 to be appreciated and understood. They are in keeping with the recommendation to 'alter as much as necessary but as little as possible' as outlined in the pre-application response from Fife Council.[33] The changes have only a limited effect on the overall character of the building and brings wider benefits by keeping Building 55 in use, ensuring the structure remains relevant to the military use of the base.

[33] Fife Council 2019, 19/01313/PREAPP Pre-application for a mix of new build and refurbishment of existing buildings

8 Acknowledgements

The project team would like to extend their thanks to the Fife Council Conservation Officer, Matthew Price for his time, opinions and consideration during the planning and compilation of this application.

Douglas Speirs, the Fife Council Archaeology Officer and Steve Liscoe, the Fife Council Historic Environment Officer, were also generous with their time, knowledge and provided invaluable information on comparable sites in England.

The DIO staff at Leuchars Station facilitated access to Building 55 and Building 57 and were understanding throughout the visit by the heritage team.

9 Bibliography

9.1 Digital

www.abct.org.uk – accessed 14/05/20

www.ncap.org.uk – accessed 14/05/20

www.nls.uk - accessed 14/05/20

www.scran.ac.uk – accessed 14/05/20

9.2 Documentary and online articles

Airfields of Britain Conservation Trust 2020a, Leuchars [online]. Via: www.abct.org.uk/airfields/airfield-finder/leuchars/

Airfields of Britain Conservation Trust 2020b, Ayr I [online], available at: https://www.abct.org.uk/airfields/airfield-finder/ayr-i/

English Heritage 2014, Hooton Park Aerodrome, Chester and Chester West; An assessment of the General Service Sheds and associated buildings – Research Report Series no. 76-2014

Fife Council 2019, 19/01313/PREAPP Pre-application for a mix of new build and refurbishment of existing buildings

Gilfinnan, J.R and Gilbert, SG The Historic Timber Truss – A Way to promote sustainable roof construction, available at https://www.irbnet.de/daten/iconda/CIB9282.pdf (accessed 18/05/20)

Historic England 1973, Listed Building Entry for Duxford: Building 79 (Hangar 4), List Entry Number 1128126, available at https://historicengland.org.uk/listing/the-list/list-entry/1128126 (accessed 18/05/20)

Historic England 1988, Listed Building Entry for Hangars 3 and 4 at K and M Hauliers, List Entry Number 1275906, available at https://historicengland.org.uk/listing/the-list/list-entry/1275906 (accessed 18/05/20)

Historic England 1989, Listed Building Entry for 3 Former World War 1 Aircraft Hangars at Old Sarum Airfield, List Entry Number 1355710, available at https://historicengland.org.uk/listing/the-list/list-entry/1355710 (accessed 18/05/20)

Historic Environment Scotland 2018a, Listed Building Entry for 'RAF Leuchars, Technical Side, General Service Aircraft Sheds, Buildings 55 and 57', Listed Building Reference LB51423, available at http://portal.historicenvironment.scot/designation/LB51423 (accessed 18/05/20)

Historic Environment Scotland 2018b, Listed Building Entry for 'Montrose (Broomfield) Air Station, Buildings 46, 47 and 48, excluding timber extension to south, Montrose', Listed Building Reference LB38228, http://portal.historicenvironment.scot/designation/LB38228 (accessed 18/05/20)

Historic Environment Scotland 2019, Pre-Application Consultation, Leuchars Station Development, Statutory Designation: RAF LEUCHARS, TECHNICAL SIDE, GENERAL SERVICE AIRCRAFT SHEDS, BUILDINGS 55 AND 57

Historic Environment Scotland, National Record of the Historic Environment Entry, CANMORE ID202702, Leuchars Airfield, Technical Site, Coupled General Service Sheds, available at https://canmore.org.uk/site/202702/leuchars-airfield-technical-site-coupled-general-service-sheds (accessed 18/05/20)

Lutyens, M. (2020). Lutyens and the Expansion of RAF Airfields in the 1930s [online]. Via: www.lutyenstrust.org.uk/portfolio-item/lutyens-expansion-raf-airfields-1930s/ (accessed April 2020)

Pollock Hammond Limited 2018, Leuchars Station (LEUC0000055) Building 55: Historic Building Quadrennial Inspection

Royal Air Force 2020 Leuchars Station [online]. Available at: www.raf.mod.uk/our-organisation/stations/leuchars-station/ (accessed April 2020)

Royal HaskoningDHV 2017a, Leuchars Station: Widespan Structural Appraisal - Building No. 55

Royal HaskoningDHV 2017b, Leuchars Station: Widespan Building Condition Inspection - Building Number. 55

Royal HaskoningDHV 2019, Leuchars Station Hangar 55 Condition Inspection Report

Royle, T 2011 The Flowers of the Forest: Scotland and the First World War

Wartime Memories Project (2020) RAF Leuchars [online]. Via: https://wartimememoriesproject.com/ww2/airfields/airfield.php?pid=17 (accessed April 2020)

WYG Management Services Limited 2018, Defence Estate Optimisation Programme; Phase 1 Archaeological and Heritage Appraisal, Leuchars Station

9.3 Legislation, Policy and Guidance

Fife Council 2017, FIFEplan; Fife Local Development Plan

Historic Environment Scotland 2019a, Historic Environment Policy Scotland.

Historic Environment Scotland 2019b, Interim Guidance on the Principles of Listed Building Consent

Historic Environment Scotland 2019c, Managing Change in the Historic Environment: Use and Adaption of Listed Buildings

Historic Environment Scotland 2020, Managing Change in the Historic Environment: Setting

The Scottish Government 2014a, National Planning Framework 3

The Scottish Government 2014b, Scottish Planning Policy

Proposed downtakings in Building 55 involve the removal of secondary internal structures (Photo 5.1) and internal alterations to remove partitions and doorways in the suite of offices and workshops contained in the annexes at the northern and southern sides of Building 55. This includes the removal of a toilet block in the annex of the north-eastern corner of the building. Access will be restored between the north and south hangars by the creation of an opening through the secondary brick walling of the central arcade (Photo 4.10). The secondary entrance with the roller shutter in the east gable of

Appendices

A. Historic Building - Listing for Building 55

Listed Building Entry for 'RAF Leuchars, Technical Side, General Service Aircraft Sheds, Buildings 55 and 57', Listed Building Reference LB51423

- RAF LEUCHARS, TECHNICAL SIDE, GENERAL SERVICE AIRCRAFT SHEDS, BUILDINGS 55 AND 57
- LB51423

Summary

Category
A

Date Added
08/02/2010

Supplementary Information Updated
07/08/2018

Local Authority
Fife

Planning Authority
Fife

Parish
Leuchars

NGR
NO 46014 20792

Coordinates
346014, 720792

A.1 Description

Designed by Lieutenant-Colonel BHO Armstrong, constructed by Melville, Dundas & Wilson of Glasgow, 1917-18. Timber truss roofs by D Anderson of Belfast. Rare survival of pair of 100ft wide by 15 bays General Service Aircraft Sheds (formerly group of 3; see Notes) with coupled very flat segmental arched corrugated metal roofs. Later alterations. Long brick outer walls with piers dividing bays, clerestorey with non-traditional replacement windows. Various low lean-to annexes. Later corrugated metal entrance doors with flanking taller brick gantries. One set of entrance doors on building 55 have been re-clad. All entrance doors on building 57 have been re-clad. INTERIOR: dominated by close-spaced whitewashed timber Belfast roof trusses with diagonal grid infill. Later concrete floor.

A.2 Statement of Special Interest

The only surviving examples of their type in Scotland and one of only a handful remaining in the United Kingdom. Constructed for the Royal Naval Air Service, these are the oldest hangars in use in Scotland and they have been in continuous use since before the formation of the Royal Air Force on 1st April 1918. Surviving airfield buildings from the First World War period are extremely rare as most were expected to be temporary and built for the duration of the conflict only. This surviving pair are an important part of aviation and military history. Originally part of a group of three paired sheds, only two now remain. They are a highly significant part of RAF Leuchars and form a distinctive landscape feature. The sheds are of standard War Office design and correspond to drawing number 332/17 in the Royal Air Force Museum (RAFM) archive, which is dated 1917. The original specification for the flooring was re-inforced concrete and it is probable that they would have been constructed with timber doors with asbestos cladding. The Belfast truss roof design originated from the Ulster flax industry as a way of creating a very economical wide span roof. The sheds were originally built to accommodate the training of Royal Flying Corps and Royal Naval Air Station pilots for campaigns in Europe during the First World War. Adjacent to the Eastern most shed is a WWI flight office, and the original plan form for the sheds incorporated a single storey suite to the centre 7 bays, which would have housed workshops on the technical side and offices and dressing rooms on the domestic side. The standard design of the sheds for the Directorate of Fortifications and Works at the War Office was by Lieutenant-Colonel BHO Armstrong, considered by AiX to be the

most important War Office architect of WWI. He was also responsible for the design of the Armstrong Hut, a collapsible timber and canvas hut used on operations by the British Army and at RAF bases for temporary accommodation. RAF Leuchars is remarkable for its collection of airfield structures detailing aviation and military history from the First World War until the Cold War period and beyond. Within Scotland it is one of the best-preserved airfields and in UK terms it is considered to be within the ten most important sites. It is one of the earliest aerodromes in Scotland with balloon flights taking place from a nearby site in 1911 and the airfield itself became a permanent establishment by 1918. It was used as a training base in the 1920s and the site was chosen by the War Office for its major expansion of RAF Stations in the 1930s. A number of hangars and other buildings were added in 1938-9 and World War II acted as a catalyst for yet more development. Unusually, the airfield continued in use after the the Second World War and jet fighters were introduced in 1950. The construction of NATO Cold War defences in the early 1980s was further significant addition to the structures on the site. Buildings dating from all major stages of the airfield s development remain at Leuchars. It is currently the Royal Air Force s principal operational fighter station. The site covers 371 hectares and has an east-west and northeast-southwest runway layout with perimeter taxiways and the typical arrangement of a domestic side and a technical side separated by a road.

The description in the listed building record of 2010 noted that there was a clerestorey with multi-pane fixed pane glazing and Later corrugated metal entrance doors . Following information received from the owners (2018) this has been changed to clerestorey with non-traditional replacement windows and Later corrugated metal entrance doors with flanking taller brick gantries. One set of entrance doors on building 55 have been re-clad. All entrance doors on building 57 have been re-clad .

Listed building record revised in 2018.

A.3 References

Bibliography

Canmore: http://canmore.org.uk/ CANMORE ID 202702

Printed Sources

Francis, P. (1996) *British Military Airfield Architecture,* Somerset: Patrick Stephens, pp. 84-89.

Royal Commission on the Ancient and Historical Monuments of Scotland, RAF Leuchars, unpublished report (2006).

Other Information

Information from English Heritage (2008).

Information from of AiX-ARG Archive Limited (2009).

Information from the Ministry of Defence (2018).

B. Fife Council Pre-Application Response

Laura Mair
Mott MacDonald
Ground Floor West
19A Canning Street
Edinburgh
EH3 8EG

Economy, Planning and Employability Services

Martin Patrick
03451 55 11 22
development.central@fife.gov.uk

Your Ref:
Our Ref: 19/01313/PREAPP

Date 12th June 2019

Dear Ms Mair

Application No: **19/01313/PREAPP**
Proposal: **Pre-application for a mix of new build and refurbishment of existing buildings**
Address: **Leuchars Station Army Base Innes Road Leuchars St Andrews**

I refer to your enquiry which was received by the planning authority on 3rd May 2019. This pre-application advice is based on the submitted information, including Project Summaries, and on-site discussions.

Background

The proposal submitted for pre-application advice represents Phase 5 of the redevelopment of the former RAF Air Base, Leuchars Station in to an army base. Leuchars Station is the new base for the Royal Scots Dragoon Guards, the Royal Engineers and a Military Police Unit. The Station also retains some Royal Air Force squadrons. The proposals presented in this pre-application enquiry relate to the transform the former RAF Station in to a fitting home for the Army Units that are now stationed there.

Phase 5 comprises a number of distinct projects across the base. These are detailed below:

2.1 Sports Pitches – (1) upgrade of existing sports pitch incorporating relaying of grass surface, (2) installation of 3m high open mesh security fencing; (3) provision of gated vehicular access from Wessex Avenue via Adam Close and formation of gravel car park for 40 vehicles. Site Area: 100m x 64m (grass pitch); 40m x 31.9m (car park). The refurbishment of existing MUGA will be considered under project 2.11: Obstacle Course.

2.2 Central Servicing – Refurbishment of Building 200 incorporating a (1) replacement roof (cladding) and new vehicle access openings; (2) reconfiguration of existing building providing servicing infrastructure and equipment such as rolling road and vehicle inspection pits with lifts. Site Area: c.1,370sqm.

2.3 Bespoke Store – (1) Demolition of Building 202; (2) Erection of building for use as a workshop and welfare facilities and stores, erection of external waiting area. New build to be bespoke masonry with brick cladding. Site Area c.1,000sqm.

2.4 Central Vehicle Washdown – (1) refurbishment of existing vehicle wash facility, including installation of vehicle wash facilities and associated drainage infrastructure

2.5 Packed Fuel Store – (1) erection of covered area over existing store containing fuel, oils, lubricant and hazard materials and fire safety equipment store. Site Area: 25.5m x 23m

2.6A REME Workshop – (1) Reconfiguration of aircraft hangar to provide comprehensive workshop and associated operational space for the REME Squadron; (2) formation of vehicular opening. Site Area: c.4,400sqm

2.6B REME Technical Accommodation – (1) refurbishment of existing building (Building 55 – Category A Listed) to provide sufficient electrical power infrastructure and facilities for use as technical accommodation; (2) formation of vehicular opening. Site Area: c.3,150sqm.

2.7A SDG Technical Accommodation - (1) refurbishment of existing buildings (Buildings 211 and 215) including (1) secure technical storage; (2) fume extractions (3) lift facilities (4) upgrade of electric power infrastructure; (5) formation of entry doors; (6) upgrade of welfare facilities. Site Area: c.1,000sqm

2.7B SDG Stores Option Two – refurbishment and extension of existing building (Building 193). Site Area: c.1,025sqm.

2.7B SDG Stores Option Four – (1) Demolition of building (either Building 193 or Building 56); (2) Erection of single storey, double height building (storage use). Site Area: 4,800sqm.

2.7C SDG Pipes and Drums – (1) refurbishment of Building 420 including upgrade of roof and rainwater goods; (2) demolition of Building 198; (3) erection of building (c.670sqm) for use as store and practice facility for regiment pipes and drums.

2.8 REME Squad office –reconfiguration of existing building (Building 374). Site Area: c,1290sqm

2.9 Central Store Option 1 – refurbishment of existing Building 56 for use as central logistics hub with welfare and storage facilities. Site Area: c.4,250sqm

2.9 Central Store Option 2 – (1) demolition of Building 56 (2) erection of building (c.2,800sqm) for use as central logistics hub with welfare and storage facilities.

2.10 SDG Stables – Erection of stables and support facilities (Veterinary/ Animal Welfare services) and formation of paddock with enclosures. Site Area: c.385sqm

2.11 Obstacle Course – (1) Replacement of existing obstacle course (military use); (2) refurbishment of existing MUGA,

The proposal may also include measures to improve pedestrian circulation around the base, although the details of these are known to date.

Works not considered to be development
Section 26 of the Town and Country Planning (Scotland) Act 1997 (as amended) defines the meaning of development as:

The carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land or the operation of a marine fish farm.

What is not considered development includes:

(2)(a) the carrying out of works for the maintenance, improvement or other alteration of any building being works which (i) affect only the interior of the building, or (ii) do not materially affect the external appearance of the building;
(b) road works by a local roads authority;
(c) works to repair sewers etc;
(d) works incidental to the enjoyment of a dwellinghouse;
(e) agriculture or forestry;
(f) changes of use within the same use class;
(g) demolition of a building specified in a direction given by the Secretary of State to planning authorities.

Building operations include: demolition; rebuilding; structural alterations of or additions to buildings; and, other operations undertaken by persons carry on business as a builder.

The following works listed below are not considered by the planning authority to be development which would require consent, either as deemed consent (permitted development) or express consent via planning permission from the local authority.

- 2.1 Sports Pitches (1);

- 2.2 Central Servicing (2)
- 2.4 Central Vehicle Washdown (1)
- 2.6A REME Workshop (1)
- 2.6B REME Technical Accommodation (1)
- 2.7A SDG Technical Accommodation (1); (3); (4); (6).
- 2.8 REME Squad Office
- 2.9 Central Store Option 1
- 2.11 Obstacle Course and MUGA

It is the applicant's responsibility to ensure that the scope of the above works does not change to the extent that it could then be classed as "development".

Listed Building Consent
The Planning (Listed Buildings and Conservation Areas (Scotland) Act 1997 establishes controls over works to listed buildings, for which express consent is required. These works as defined by Section 6 which states:

No person shall execute or cause to be executed any works for the demolition of a listed building or for its alteration or extension in any manner which would affects its character as a building of special architectural or historic interest, unless the works are authorised.

2.6B REME Technical Accommodation (1) is not considered development which requires express consent from the planning authority. However, as Building 55 is a Category A Listed Building, a Listed Building Consent application will be required for any works which may affect the fabric of the building.

Permitted Development
The General Permitted Development Order 1992 (as amended) grants deemed consent to certain types of development, or development undertaken by specific parties on specific areas of land. If a development complies with the description of the type of development within the Schedule to the Order and complies with the conditions of that Class of Permitted Development, then express consent from the planning authority (granted via planning permission) is not required.

The following Classes of Developments may be applicable to the development types proposed in the pre-application enquiry. They include:

- Class 7 – The erection, construction, maintenance, improvement or alteration of a gate, fence, wall or other means of enclosure;

- Class 8 – The formation, layout out and construction of a means of access to a road which is not a trunk road or a classified road, where that access is required in connection with development permitted by any class in this Schedule other than Class 3E (Class 7 within the curtilage of a dwellinghouse) or Class 7;

- Class 70 – Demolition of Buildings, (subject to prior approval procedures set out therein)

The works listed below are considered to benefit from deemed consent granted by the General Permitted Development Order 1992 (as amended):

- 2.3 Bespoke Store (1) – NB: if planning permission is sought for the erection of a new building, then prior approval of demolition is not required;

- 27B SDG Stores Option Four (1) – NB: if planning permission is sought for the erection of a new building, then prior approval of demolition is not required;

- 27C SDG Pipes and Drums (2); and,

- 2.9 Central Store Option 2 – (1) – NB: if planning permission is sought for the erection of a new building, then prior approval of demolition is not required.

Hierarchy of Developments
The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 determine the designation of certain types of development. This has a bearing on what information must be submitted with applications for a Major or National Development.

The proposals in this pre-application enquiry would fall within Class 9: Other Development. The two criteria for a Major Development would be a) gross floorspace created in greater than 5,000sqm or b) the site area is greater than 2 hectares.

It does not appear that any individual project breaches these criteria. Therefore, any planning application for these works would be a Local Development. The Council has 8 weeks to determine an application for a Local Development.

Decisions on Local Developments are delegated to officers to determine, subject to certain criteria set out in the Council's Scheme of Delegation (List of Officer Powers).

If the applicant considers it appropriate to "package" a group of projects within one proposal for planning permission, then they should satisfy themselves that this proposal would remain a Local Development in terms of the 2009 Regulations. Further advice can be obtained from the planning authority if required.

Development Plan Policy
The Development Plan relative to the site comprises the Tay City Region Strategic Development Plan 2017 (TAYplan) and the Adopted Fife Local Development Plan 2017 (FIFEplan).

TAYplan:
The proposals in this pre-application enquiry are not considered to be of a scale or nature that is strategic in nature. It is considered that the Strategic Development Plan provides general support for the proposals in this pre-application enquiry.

FIFEplan:

Policy 1: Development Principles
FIFEplan requires all development to comply with the development principles set out in Policy 1. For this proposal the following sections specifically apply:

Part A:
1 The principle of development will be supported if it is either:
A within a defined settlement boundary and compliant with the policies for the location; or
B in a location where the proposed use is supported by the Local Development Plan.

Part B:
Development proposals must address their development impact by complying with the following relevant criteria and supporting policies, where relevant:

1. mitigate against the loss in infrastructure capacity, by providing additional capacity or improve existing capacity;
5. In the case of proposals in the countryside, be a use appropriate for this location;
6. Protect the amenity of the local community and businesses;
8. Avoid flooding and impacts on the water environment;
9. Safeguard the loss of natural resources, including effects on internationally designated nature conservation sites;
10. Safeguard the characteristics of the historic environment, including archaeology.

Part C:
A proposal must be supported by the following information to demonstrate compliance with the terms of the development plan and other material considerations.

2. Provide required on site infrastructure or facilities including transport measures;
3. Provide measures that implement the waste management hierarchy;
4. Provide green infrastructure as required;
5. Provide sustainable urban drainage system;
7. Provide a design that adheres to the 6 qualities of successful places;
8. Provide for energy conservation and generation in the layout and design; and,
9. Contribute to achieving the area' full potential for electricity and heat from renewable sources, in line with national climate change targets.

The FIFEplan Proposals Map defines the settlement extent of all towns and villages in Fife. Leuchars Airfield is located predominantly out with the settlement extent of Leuchars and in the countryside. However, in applying the relevant policies to development in the countryside, regard will be had to the context of the site as a military facility.

The exception to this is the location of a) 2.1 Sports Pitches and, b) 2.10 SDG Stables. Both of these sites are within the settlement extent of Leuchars.

For those proposals in the "countryside" the principle of development will be assessed against FIFEplan Policy 1 B(5) and Policy 7. Policy 7 allows certain types of development in the countryside, typically those which require a countryside location or are consistent with a rural character. The criteria which supports the principle of developments on the airfield would be 6, other development which demonstrates a proven need for a countryside location. On this basis, it is considered that the projects located within Leuchars Airfield would be able to demonstrate a need to be located in this location.

For those projects within the settlement extent of Leuchars, there is a general support for development within settlement boundaries under FIFEplan Policy 1 Part A 1(a).

Overall, the principle of development for all projects could be supported by the development plan. This support is dependent on the satisfactory demonstration of compliance with the impact policies of the development plan. These are set out in the rest of this letter.

Design, Siting, Layout and Visual Impact
FIFEplan Policy 1 Part C criterion 7 requires new development to provide a layout and design that demonstrates adherence to the six qualities of successful place as set out in the Government's Creating Places policy, Designing Streets and Scottish Planning Policy.

FIFEplan Policy 14: Built and Historic Environment supports development that has a positive impact on its surroundings and incorporates the six qualities of a successful place. Scottish Planning Policy paragraph 56 underlines the importance placed on design in the determination of planning applications. It too supports the six qualities of a successful place as a way to evaluate the design of a proposal.

The six qualities of a successful place are:

- Distinctive;
- Welcoming;
- Adaptable;
- Safe and Pleasant;
- Resource Efficient; and,

- Easy to Move Around and Beyond.

Details on how these qualities will be used to assess the design quality of a development are set out in detail in Making Fife's Places, Supplementary Guidance. This contains a site appraisal matrix and its use is encouraged to assist in evaluating the design of the proposal and secure a positive contribution to the quality the built environment in Fife. Making Fife's Places has been formally adopted by the Council as statutory supplementary guidance.

FIFEplan Policy 10: Amenity ensures new development does not have an unacceptable impact on a range of amenity considerations including visual amenity.

For developments in the "countryside" Policy 7 requires them to be of a scale and nature compatible with surrounding uses; be well-located in respect of available infrastructure and contribute to the need for any improved infrastructure; and, be located and designed to protect the overall landscape and environmental quality of the area.

Policy 11: Low Carbon Fife requires new buildings to ensure they comply with appropriate standards relating to energy conservation, waste reduction and recycling. It is expected that the Design Statement will address matters of compliance with these requirements. Supplementary Guidance on Policy 11: Low Carbon Fife has recently been adopted by the Council as statutory guidance.

Each application for the projects listed above will need to demonstrate compliance with these policies. It is not expected that the proposals would conflict with Policy 10: Amenity or the qualifying criteria of Policy 7, given the separation of the proposals to existing residential areas or other sensitive receptors.

The Council will expect the proposals to be supported with information to assess compliance with Policy 11: Low Carbon Fife in relation to building performance.

For Project 2.10, SDG Stables, particular care on the design of development within the Earlshall GDL will need to be taken to ensure the proposal contributes positively to the design qualities of this historic area. The design should also consider any boundary treatments to this site, particularly if high security fencing is required to secure the new perimeter of Leuchars Station in this location.

Transportation

FIFEplan Policy 1 Part B criterion 1 requires new development to address its local impact and Policy 3: Infrastructure and Services requires a proposal to be designed and implemented in a manner that ensures delivery of the required level of infrastructure in a sustainable way. This includes the delivery of local transport and access routes which connect the proposal to existing networks.

Policy 14: Built and Historic Environment also reinforces the principles of successful places which encourages, through good street design, road safety for all users which encourages active travel movement and social interaction.

Fife Council's Transportation Development Guidelines, as an Appendix to Making Fife's Places, provide technical requirements of new developments to achieve in order to ensure road safety is built into the design of new transport infrastructure.

The list of proposals considered in this pre-application letter are not expected to generate additional traffic on the surrounding road network. However, the applicant may wish to ensure that this is the case through their own transport study. If additional traffic is expected, then the need for a Transport Statement can be discussed with the Transportation Development Management team prior to the submission of any planning application.

Consideration should be given to the impact of construction traffic on the surrounding road network, as required by FIFEplan Policy 10: Amenity. A Construction Traffic Management Plan will be required to ensure that any disruption resulting from construction traffic is minimised. The Traffic Management Plan must include detail of proposed routes taken to the site, anticipated number of construction vehicles, impact on key junctions and roads in the surrounding area.

Natural Heritage

FIFEplan Policy 13: Natural Environment and Access supports developments where they protect or enhance natural heritage and access assets, such as biodiversity, protected or priority habitats and species. This policy also promotes green networks and greenspaces and protects Core Paths and other infrastructure which supports access to natural heritage assets.

Making Fife's Places Supplementary Guidance supersedes similar guidance on Green Infrastructure and includes the appraisal criteria required to be undertaken to ensure any impacts on green infrastructure/ natural heritage assets is appropriately managed and what provisions are made for their enhancement. This appraisal will form the basis of the planning assessment against the policy framework set out above.

Making Fife's Places Supplementary Guidance provides information on the site assessment for natural heritage and biodiversity which must be submitted with planning applications.

Most of the area is part of Leuchars Airfield Wildlife Site and is identified as existing green network asset in FIFEplan.

Making Fife's Places Supplementary Guidance provides information on the site assessment which should be submitted. Any Protected Species (European and UK) found to be present should be assessed with appropriate surveys undertaken and

impacts and mitigation identified. All surveys should be carried out by suitably qualified professionals following recognised guidelines and methodologies. Surveys should be reported in full, with mapping provided as appropriate.

The potential for protected species including bats to be using buildings to be refurbished should be considered.

Documents and plans should clearly identify existing natural heritage assets. These should be retained and protected. If any trees are proposed for removal they should be shown on plans, details provided and checks for potential to support protected species undertaken.

Project 2.10: SDG Stables is proposed on an undeveloped area of amenity grassland which has overgrown. Development in this area is likely to result in an adverse impact on natural heritage assets which will require detailed study to support any application.

It is also noted that the creation of an access road in to this area from the existing base may require the removal of trees. The trees bordering this site are protected by a Tree Preservation Order (E0023) which provides a statutory level of protection for these trees. The design of the access road and stables proposals must demonstrate that all options to mitigate impacts on TPO trees through avoidance have been fully explored and discounted before their loss can be considered acceptable. In instances where the loss of trees is considered acceptable, the Council will expect full landscaping plans to show the extent of compensatory planting as mitigation to the scale of three new trees for each existing tree lost. Native species of native provenance should be used in all new planting to maximise biodiversity gains.

Any potential impact on trees for any proposals should be fully investigated in an arboricultural impact assessment undertaken by a suitably qualified tree specialist. It should include the following items:

- A Tree Protection Plan;
- Protection plan should be superimposed on the design and layout of the site;
- Root Protection Areas;
- Location of root protection barriers, in relation to other construction operations;
- Arboricultural Method Statement, how the site will be developed and how tree protection plan will be monitored;
- A Landscape Plan, showing areas of replacement planting required to mitigate against the effects of tree removal, where this has been robustly justified.

The recommendations of BS5837 2012: Design, Demolition and Construction Recommendations should be followed where appropriate.

Failure to undertake an Arboricultural Impact Assessment and demonstrate its findings have been incorporated into the design of new development will result in planning permission being refused.

Biodiversity enhancement should be considered throughout the design process. Details of biodiversity enhancement must be provided with the application as required by policy.

To maximise biodiversity native species of native origin should be used for landscaping. Also expected would be use of some of the following: native species-rich hedgerows, plot rain gardens, green roofs, street trees, integrated bat roost boxes and integrated bird nesting boxes, and a native wildflower grassland mix instead of amenity grassland. Making Fife's Places Supplementary Guidance covers the integration of biodiversity enhancement into design.

In terms of access, Core Path P042/01 runs through the middle of land proposed in 2.10 SDG Stables. If this proposal includes fencing which restricts public access along this route, then this would be the subject of a Diversion Order, to be submitted to the planning authority for consideration. This would be applied as a condition to any consent granted.

Amenity
FIFEplan Policy 10 sets out the range of considerations that are incorporated into amenity concerns. These include: air quality, noise, light, odour pollution and other nuisances, traffic movements, privacy, daylight and sunlight, construction impacts, visual impacts and the impacts on existing businesses and commercial operations. The assessment of these features will be a key consideration in the determination of any planning application.

This pre-application enquiry has been assessed by Fife Council's Environmental Health/ Public Protection team. No specific concerns have been identified that would require additional study at this stage.

As the proposed development sites are within the extent of Leuchars Airfield and remote from any areas of non-military residential areas or other sensitive receptors, it is not expected that any of the proposals would result in any significant detrimental impacts on the amenity of the general public. The exception to this would be construction impacts which, through vehicle movements during construction phases of development, have the potential to impact on a wider area. These are discussed in the Transportation section above.

Ground Conditions
Policy 10: Amenity requires development to ensure it would not result in any unacceptable impacts in relation to land contamination. PAN33: Development of Contaminated Land sets out national policy guidance on this issue.

Given the long-term use of the site as an RAF Station, it is advised that any application for development which requires groundworks should be supported by an appropriate contaminated land site specific risk assessment. This assessment should be undertaken in accordance with Fife Council's "Advice for Developing Brownfield Sites in Fife which is available online at www.fifedirect.org.uk/contamintedland. These assessments may include the relevant testing of soils, waters, gases and vapours in order to adequately characterise the potential type(s), nature and scale of contamination associated with the site. The outcomes of such investigations will determine the remedial measures which may be required, details of which should be submitted to the planning authority for comment.

It is possible that the building fabric of some of the structures to be refurbished/ demolished may include Asbestos Containing Materials. It was confirmed during an on-site meeting that the project team is aware of this risk. Any such materials encountered during development works should be the subject of appropriate removal and disposal arrangements. SEPA and the Health & Safety Executive (HSE) should be consulted regarding asbestos removal companies, licensed by the Asbestos Licensing Unit (ALU). Further details, and the list of registered companies, can be accessed on the HSE website: www.hse.gov.uk.

Flooding and Drainage

FIFEplan Policy 3: Infrastructure and Services expects developers to provide on-site infrastructure to serve the needs of the development in relation to both foul water drainage and surface water drainage. Policy 12: Flooding and the Water Environment sets a requirement for proposals to demonstrate that development is not at risk from flooding and will not result in an increase of flood risk elsewhere. Policy 12 also seeks to ensure that new development will not have a significant detrimental impact on the ecological value of the water environment including its natural characteristics. A Flood Risk Assessment may be required in certain circumstances to ascertain the extent of flood risk and identify appropriate mitigation.

Flooding and Flood Risk Management is a subject that all developers and individuals must take into consideration when proposing to develop a site. This is in line with current legislation, guidance documents and good practice. It is a legal requirement to provide Sustainable Drainage for any development greater than a single dwelling house as well as a requirement to consider flood risk for all development proposals. This is required under the Flood Risk Management (Scotland) Act 2009, the Sewerage (Scotland) Act 1968 and the Water Environment Water Services (Controlled Activity) (Scotland) Regulations 2011.

As this is a requirement for all developments, Fife Council consider that all developers should have considered Flood Risk to a detailed level prior to submission of their planning application. Sustainable Drainage Systems have been a legal requirement since 2007 and it is well established that the best designs for a SuDS will manage

surface water above ground level. The detailed design of the drainage system should be considered at the planning application stage to ensure best practice in design by demonstrating that adequate land is provided for the SuDS and that it is designed to blend in with the proposed development while delivering a drainage solution to the agreed treatment volumes.

For this reason, since 1 February 2017 Fife Council has required detailed information (where applicable) on flood risk/SUDS to be submitted as part of all planning applications. This information includes the provision of certification and check certificates for flood risk and Drainage/ SuDS design by suitably qualified engineers.

If the information and the design and check certificates (Appendices 1 and 2 for SuDS design and Appendices 3 and 4 for Flood Risk Assessments) are not submitted with the application then the application will not be validated.

The detailed guidance on our website outlines the level of information we need. This is in line with the requirements of many other Local Authorities in Scotland.

http://publications.1fife.org.uk/uploadfiles/publications/c64_SuDSGuidanceFinalNov2016.pdf

If the information and the design and check certificates are not submitted with the application then the application will not be validated.

Fife Council have no records of incidents of flooding on this site, but the SEPA Flood Maps show areas of localised potential surface water flood risk across the base. It is recommended that the Applicant carries out a review of the detailed SEPA Flood Maps to determine if there is a potential surface water flood risk to any of the proposed developments.

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) requires that a Sustainable Drainage System (SuDS) is installed for all new developments, with the exception of runoff from a single dwelling or discharge direct to coastal waters. The new build elements of the proposals will require attenuation of storm water, a SuDS, and forward flow restriction.

SPP paragraph 257 explains that alterations and small-scale extensions to existing buildings are out with the scope of SPP Managing Flood Risk and Drainage policy. However, some of the refurbishments may also require attenuation of storm water, a SuDS, and forward flow restriction if they significantly change the area of roof or hardstanding. Refurbishments that don't change the footprint of an existing facility will not require any SuDS installations.

In this regard, if a surface water drainage discharge to the Scottish Water system is intended, it is recommended that an application is made as soon as possible so the

Applicant can demonstrate written Scottish Water acceptance of a surface water discharge with their planning application submission.

Historic Built Environment
Policy 14: Built and Historic Environment sets a requirement for proposals to protect and enhance the historic environmental assets of Fife.

Regard should also be had to the Scottish Government's Historic Environment Scotland HEPS 2019 for those projects within or near to historic assets in the area.

There are a number of listed buildings within the area which are so designated for their architectural and/ or historic importance. In general, the preservation and refurbishment of these buildings in keeping with their original design would be supported. Where alteration is proposed, it should be justified on the basis of changing operational needs or other functional requirements including health and safety and performance of the building. It is recommended that proposals should alter as much as necessary but as little as possible to achieve the improvements required.

Proposals should:

- Retain the mass and scale of existing buildings, repairing or upgrading them like for like as far as possible, protecting internal and external features that are important.
- Where new build and refurbishment would introduce new designs or materials, they should respect the listed buildings in layout, mass, scale and in external design and finishes.
- That is not to say that new buildings need be replicas of existing, a contemporary response that is based on a contextual response may be supported. It can be helpful to make 'honest' modern additions so that the original authentic buildings and layout remains legible.

Please note that Historic Environment Scotland are not consulted as part of this pre-application letter. The applicant is advised to make direct approach to HES to discuss their proposals. Applications relating to Category A and B Listed Buildings will be referred to HES for consultation.

In general, retention of listed and historic buildings is supported and where necessary their sensitive conversion or adaptation to meet changing circumstances. It is recommended that new designs and layout should be based on a sound understanding of the architectural and historical importance of the site. In any future application it is recommended that a design statement should include a conservation statement or section, setting out the significance of the listed buildings and their settings and identifying impacts of the proposals and appropriate design and mitigation to minimise any impacts on the built heritage. There are a number of useful guidance notes

produced by Historic Environment Scotland and Fife Council, including:

- Historic Environment Scotland – Managing Change in the Historic Environment (New design in a historic setting)
- Historic Environment Scotland – Managing Change in the Historic Environment (Adaptation to New Use)
- Conservation Areas Materials and Maintenance - http://publications.1fife.org.uk/uploadfiles/publications/c64_MaterialsandMaintenance.pdf (which also informs the settings of listed buildings)

It is understood that detailed advice is being sought by the project team from Fife Council heritage officers in relation to Project 2.6B REME Technical Accommodation and the Category A listed Building 55. Historic Environment Scotland will be consulted on any application for planning permission and listed building consent. The project team may wish to approach HES for pre-application consultation prior to the submission of any application(s).

In terms of archaeology, the army base occupies an area considered to be exceptionally rich in Mesolithic archaeological deposits (The Mesolithic is the earliest period of human occupation and covers the period of Scotland's first hunter-gatherers c.10,000BC – 6,000BC). In the post-glacial period, Leuchars was directly on the coast and is known to have been a key focus of Fife's tiny Mesolithic population who settled along the coast in temporary summer camps to gather shellfish.

Therefore, there is a risk that any new subsurface ground works would have a significant adverse impact on any buried archaeological deposits. Therefore, it is likely a condition would be applied to any planning consent which would require a scheme of archaeological investigations in agreement with the planning authority to be undertaken prior to works on site.

Sustainable Development

Scottish Planning Policy introduces a presumption in favour of sustainable development which must form part of the determination of any application, particularly where proposals do not accord with up-to-date plans. Paragraph 32 maintains the primacy of the development plan as the main decision-making document for any application. However, SPP and its presumption in favour of sustainable development is still a material consideration against which the proposal should be assessed. FIFEplan Policy 1 states that the assessment of the principle of development will be undertaken in the context of the presumption provided by SPP.

SPP paragraph 29 sets out a series of principles which guides the assessment of sustainable development. These are:

a. giving due weight to net economic benefit;
b. responding to economic issues, challenges and opportunities, as outlined in local economic strategies;
c. supporting good design and the six qualities of successful places;
d. making efficient use of existing capacities of land, buildings and infrastructure including supporting town centre and regeneration priorities;
e. supporting delivery of accessible housing, business, retailing and leisure development;
f. supporting delivery of infrastructure, for example transport, education, energy, digital and water;
g. supporting climate change mitigation and adaptation including taking account of flood risk;
h. improving health and well-being by offering opportunities for social interaction and physical activity, including sport and recreation;
i. having regard to the principles for sustainable land use set out in the Land Use Strategy;
j. protecting, enhancing and promoting access to cultural heritage, including the historic environment;
k. protecting, enhancing and promoting access to natural heritage, including green infrastructure, landscape and the wider environment;
l. reducing waste, facilitating its management and promoting resource recovery; and,
m. avoiding over-development, protecting the amenity of new and existing development and considering the implications of development for water, air and soil quality.

The assessment of the proposal will be guided by the above criteria, as well as Parts B & C of FIFEplan Policy 1. These criteria will be used to determine if the development is sustainable, and therefore enjoys a presumption in favour.

Application Submission Documents

Plans
It is expected that the application be accompanied by the usual suite of drawings (location plan; block/ site plan; elevations; floor plans; roof plan) as well as specific drawings showing existing and proposed site levels in section, indicative landscaping plan, tree protection plan, access details and drainage details. If these drawings can include materials to be used, then this will negate the need to condition these prior to commencement of development if consent were granted.

All plans should be to a recognised metric scale. If a drawing says "do not scale" this disclaimer can be removed by our technicians before the drawings are considered valid. Location plans and site plans must show the application site boundary edged red

and all works proposed must be within this red line. They must also show a north point and have an OS licence.

Further information requirements may be required once a valid application for detailed proposals is submitted and reviewed by internal and external consultees.

Likely timescales & decision making
The planning authority has 8 weeks from the date of validation to determine an application. It is expected that the decision on the application will be made by an appointed officer under the Council's Scheme of Delegation.

Administration of your application
When contacting the Council to submit correspondence or other documents you can use development.central@fife.gov.uk. This email address takes you direct to the Council's digital mail system. We now encourage all applicants to use this mailing address rather than any case officer's email address. You can still make your application by submitting the paper application forms and documents, but the Council is able to accept online applications submitted through the planning portal at https://eplanning.scotland.gov.uk/WAM/.

Application fees
Your application will require a fee before it can be processed. These will be dependent on the precise scale and scope of developments applied for within that application. Further advice can be provided when the exact scale of development is known.

How to Pay
Fife Council does not accept cash or cheques as payment methods. Your client can pay the application fee and any applicable advert fees by the following methods:

- The Scottish Government eplanning portal;
- Fife Council Online Payments; - Telephone payments; - Bank Transfer.

We would recommend you only use the bank transfer option (also known as BACS) as a last resort as this payment method can delay the validation of your client's application. Please ensure that your payment reaches us within 5 days of submitting your application.

For further guidance on how to pay, please visit www.fifedirect.org.uk/planning and select the "completing your application" tab from the left-hand side of the webpage.

Environmental Impact Assessment
The scale and nature of the proposal could fall under category 10. Infrastructure Projects; (a) Industrial Estate Development Projects of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. The qualifying criterion for this type of development is where the site area exceeds

0.5ha in size. The Council is obliged to screen any proposals under the 2017 Regulations. However, to avoid any project delays, it is recommended the applicant considers the proposal under the criteria set out in Schedule 3 of the Regs. If there is any doubt about whether a single project or the proposals in cumulation would be considered EIA Development, then the applicant can submit an EIA Screening Request to Council.

Ordnance Survey Licence
All plans that use the Ordnance Survey map as a base map must be appropriately licensed and details of the date and licence number added to each plan. Please ensure this is addressed in all your documents including any plans inserted within reports and other supporting documents.

Land Ownership and access rights
If you are not the land owner, please note that this advice or any subsequent planning permission does not supersede any requirement for you to gain the appropriate legal control over the land to carry out the development. That being said, it is acknowledged that land ownership questions are unlikely to present a problem to the applicant in this case.

Please note that this information is given at officer level only and is made strictly without prejudice to the eventual decision of Fife Council as Planning Authority. Please also note that this advice does not take into account land ownership and extra information may be required for any application. Please refer to our Validation Standards at www.fifedirect.org.uk/planning to confirm the exact details required.

Yours sincerely,

[redacted]

Martin Patrick
Planner

C. Historic Environment Scotland Pre-application Response

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to: Matthew.Price@fife.gov.uk

Mr Matthew Price
Fife Council

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our case ID: 300038380

18 September 2019

Dear Matthew

Leuchars Station Development
Statutory Designation: RAF LEUCHARS, TECHNICAL SIDE, GENERAL SERVICE AIRCRAFT SHEDS, BUILDINGS 55 AND 57
Designation Reference: LB51423

Thank you for your pre-application consultation which we received on 28 August 2019.

We have the following comments to make on the proposals.

The coupled aircraft hangars known as Building 55 and 57 at Leuchars form part of the former Royal Air Force airfield and date to 1918, the earliest phase of construction on this site. Also known as general service sheds, the hangars are listed at category A and are significant for being the only surviving examples of this building type in Scotland. Internally there is a timber Belfast truss roof, constructed of a curved bow, tie-beam, and close-mesh lattice bars forming a criss-cross pattern. This pre-application consultation is concerned with changes proposed for Building 55.

We accept the principle of change to this building and welcome the proposals to adapt it to a new use. From the information we have seen, it appears unlikely the scope of works envisaged would result in any significant impacts, and nothing suggests the roof structure will be altered. The proposals do include changing the entrance doors to the hangar. Whilst we understand that some changes to the existing external doors have taken place, including moving away from their original timber to metal-clad concertina style doors, we would advise that any further new doors replicate the vertical emphasis of the original cladding material. The opening mechanism, material and colour should also be considered (ideally so that these details match the existing hangar as much as possible) in order that the impacts are reduced.

We have also received some basic information (a location plan and brief description of the overall project) on the wider plans for the base. There doesn't appear to be any significant changes proposed and we of course welcome the commitment to the continued use, or reuse, of listed buildings. We would be happy to be involved in any future discussions once the plans progress.

We look forward to receiving your statutory consultation if an application comes forward on Building 55.

Detailed guidance on the application of national policy is set out in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/. Technical advice is available through our Technical Conservation website at www.engineshed.org.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Devon DeCelles and they can be contacted by phone on 0131 668 8075 or by email on Devon.DeCelles@hes.scot.

Yours faithfully

Historic Environment Scotland

Cc Ross Cameron
ross.cameron@mottmac.com