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Upper Square, Hynish, Tiree
Documentary Study, Contour and Building Survey

Tim Holden, Louise Baker & Magnar Dalland

Client: ARP Lorimer

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1.0 BACKGROUND

This report was commissioned by ARP Lorimer Architects on behalf of the Hebridean Trust in advance of the refurbishment of Upper Square, Hynish, Tiree. The buildings of the Upper Square form part of the Shore Station at Hynish which was associated with Skerryvore Lighthouse located some 12 miles offshore to the SSW of Tiree (Figure 1). The Shore Station was built as a work base which was in use during the construction of the lighthouse. Following the completion of the lighthouse the shore establishment functioned as base for the lightkeepers employed at Skerryvore and their families. The Upper Square was constructed in 1841-42 and was occupied for a period of 50 years by the lightkeepers and their families. Since that time some modifications have been made to the building, primarily in the latter part of the 20th century, but many original features still survive.

The work for this report was undertaken by *Headland Archaeology Ltd* between January and June 2001.

This report comprises the results of a study of readily available documentary sources combined with a detailed building and contour survey. It should be read in conjunction with previous CAD drawings produced by ARP Lorimer Architects. The prime objectives of the project were:

a) to provide a detailed record of the historic fabric of the building in advance of renovation;
b) to provide documents and drawings that can be used to inform the process of renovation.

Because of its outstanding design features and links to both the innovative Skerryvore lighthouse and the renowned family of engineers, the Stevensons, the Shore Station has been designated as having special architectural and historic interest. It has therefore been listed by the Scottish Ministers as a Category A complex. The Upper Square comprises a terrace of four individual houses with utility rooms on either end. The houses and utility rooms are in a varied state of preservation. House No. 2 is still occupied although areas of floorboards are in a poor condition. Nos. 1 and 4 have not been lived in for a number of years but ceilings and suspended timber floors survive in most rooms. No. 3 has been largely gutted as a result of previous building work, the timber floor has been removed from one room and many of the walls and ceilings have been stripped back to stone/brick and timber respectively. The laundry rooms, privies and coal sheds are either empty or used for storage.

2.0 METHODS

2.1 Documentary Study

Documentation relevant to the history and development of the Shore Station and Upper Square was present in many forms. There were several publications relating to Scottish lighthouses. Some of these contain material relevant to Skerryvore and Hynish. Maps and plans depict the positions and extents of the buildings within the Shore Station while more detail about the site and its use and construction is available

in other primary documents. The sources consulted comprise all those that were considered to be of high potential but other material may survive elsewhere. Details are presented in Appendix 1.

2.2 Contour survey

The survey was undertaken using a data-logging facility on a Leica EDM with survey points being taken in order to provide a finished product with contour intervals of between 0.5 and 1 m. The data was downloaded into a 'Surfer' contouring program for presentation. The plan of the area is tied to Ordnance Datum and includes all features of potential interpretative value within the site boundary.

2.3 Building survey

Building recording was undertaken through a combination of

a) detailed survey work using a combination of Leica reflectorless EDM linked to TPS-Cad software and hand drawing to record elevations, sections and the building plan.
b) hand recording in the field of features such as mouldings, doors, windows and other architectural features. These were then digitised at a later stage.
c) written descriptions of all identified features made on a room by room basis onto pro-forma recording sheets.
d) photographic recording of all rooms, external elevations and architectural features.

For the purposes of the report the AutoCAD drawings have been printed on A3 paper but the digital files in .dxf format are also provided on CD for printing at A1 size if required.

3.0 RESULTS

3.1 Documentary study

3.1.1 History of the shore station

An Act of Parliament was passed in 1814 authorising the construction of a lighthouse on Skerryvore, a rock located offshore 12 miles SSW from Tiree. However work did not commence on the structure until the 1830s. In 1837 Alan Stevenson was employed by the Northern Lighthouse Board as the engineer on the project. In the same year on the 8th December a sub-committee (Committee on Skerryvore) was appointed to 'superintend the erection of the lighthouse on Skerryvore and everything therewith connected' (SRO, Excerpts of minutes, NLC 2/1/6, p37).

Due to the very limited extent of suitable working areas on Skerryvore rock a Shore Station was established at Hynish on Tiree. This Shore Station was used as a work yard and also housed workmen during the construction of the lighthouse. Following

completion of the lighthouse it was used as a base for the families of the lightkeepers who worked on Skerryvore.

The land at Hynish was selected by Alan Stevenson as the closest creek to the Skerryvore Rock and a visit by some of the Commissioners in 1836 confirmed this as the location for the Shore Station. The land was leased to the Northern Lighthouse Board by the Duke of Argyll and work on the site commenced in 1838. As well as providing a work yard the rocks at Hynish were also used as a source for the building material of the lighthouse and quarries were opened to extract the gneiss. These were short-lived as the rock proved too hard to quarry and shape at the rate necessary. The softer granite of Mull offered a preferable source and quarries were opened on Mull with the stone transported to Hynish for finishing. This resulted in the first three courses of the lighthouse being constructed of Hynish gneiss while the remainder of the structure comprises granite from Mull.

Buildings to house the workmen, workshops, a magazine, a signal tower and a harbour were amongst the structures constructed at Hynish. The reports written by Alan Stevenson for the Skerryvore Committee detail much of the work carried out at Hynish (NLS Acc 10706/95). His report of 6th December 1841 states that the barracks which had been used to house the workmen at Hynish since construction began were not suitable for the lightkeepers who would be employed to maintain the light at Skerryvore along with their families. The reason for this being; 'part of them having necessarily been built in a hasty manner with clay instead of lime mortar' (NLS, Acc 10706/95, p347). He proposed that new buildings were constructed which were large enough to accommodate four families, following the plans which had originally been laid before the Board. The estimate for the building materials for these houses was £1,371 14s 8d. The proposed houses were constructed and form the Upper Square of the Shore Station. The subsequent report, dated Spring 1842, is slightly at odds with the evidence of the December 1841 report as it states that the principal operations during the last season included the building of the Lightkeepers Houses. The houses were expected to be completed and ready to receive the lightkeepers in June of 1842. This implies that the majority of the construction of the cottages had been carried out in 1841 and only a small amount of work was necessary to complete them in 1842. The reports do however provide a date to within a year or two of the construction of the buildings.

Following the completion of the lighthouse in 1844 the base at Hynish was in use for around 50 years. After this the lightkeepers continued to work on Skerryvore but their families were moved to the Shore Station at Erraid on Mull to join other families already in residence there.

Little information regarding the history of the Shore Station following this move is present in the sources listed above. However all of the buildings have been occupied until the late twentieth century.

3.1.2 Discussion

The earliest plan which shows the location and outline of the Upper Square is the 'Plan of Establishment at Hynish, Island of Tyree. Shewing the Pier, Dock,

Reservoir, Lightkeepers and Seamens Houses', depicted in Alan Stevenson's *Account of the Skerryvore Lighthouse* (1848). The Upper Square is named 'Keepers Houses' and is shown as a solid block of buildings with an area enclosed to the east. A single entrance is located at the centre of the east side of the enclosure and two tracks lead to this, one from the east via the 'Signal Tower' and one from the north which joins to a road further north.

Reports by Alan Stevenson for the NLB give some information about the buildings but it is very limited. The buildings were constructed during the building seasons of 1841 and 1842 and were ready for habitation prior to the completion of Skerryvore Lighthouse.

Few details of their construction are available. One reference to the buildings in Stevenson's report of 1842 states that the 'roofs were nearly covered with lead when I left Tyree in the month of November'. This is one of the only indications of the materials used in their construction. No detailed plans of the interior of the structure are available.

They are shown on the OS first and second edition maps and few changes appear to have taken place. The detail shown on the east side of the buildings on the OS maps is less than that shown on the Stevenson plan (Figures 2, 3 & 4). Stevenson shows projected doorways while OS shows a flat wall to the east side. Two pumps, one at either end of the building, are noted on the OS maps and an additional area has been enclosed to the west of the buildings.

A survey carried out in 2000 by ARP Lorimer of the buildings and enclosure to the east shows them to have changed very little in outline since they were constructed.

3.2 **Contour survey** (Drawing 1)

The building stands on a relatively flat 'platform' within what is otherwise an area of undulating rocky outcrops. The vegetation is primarily short-cropped grass although there are a number of larger shrubs within the walled garden directly to the east of the building. The area to the east of the walled garden between the houses and signal station is flat. The ground then slopes down to the east and south towards the houses of the Stevenson centre and the coast. To the west, or rear, is a drying green bounded by small crags which drop abruptly downwards to the surrounding fields to the west and north.

3.3 **Building recording**

3.3.1 General description (Drawings 2a, 2b, 3a, 3b & 3c, Plates 1a, 1b, 1c, 1d, 2a, 2b & 2d)

The building comprises a range of four, terraced, single-storey, stone-built houses with a series of slightly lower utility rooms on either end. The external fabric of the walls consists of smooth-dressed, pink Mull granite blocks along the façade with local grey gneiss blocks to the sides and rear except around the window margins. The

building has a flat roof with a low parapet wall and tall, repeating units of two and three octagonal chimneys. Externally the building was designed along strict symmetrical lines with regularly spaced doors, windows and chimneys and a laundry block on each end. Internally, however, the building is sub-divided to provide different forms of accommodation, undoubtedly a reflection of the status of the occupants and the sizes of their families.

3.3.2 Construction details

3.3.2.1 *Walls* (Drawing 4b, Plates 2c, 3b, 6a & 6d)

The external walls of all of the houses, front and back, are cavity walls constructed of an external skin of granite blocks with an inner skin of red brick. At the front (east) wallhead the arrangement of timberwork is complicated by the presence of a deep gutter or gully at this side of the building for the collection of rainwater. Lintels to the door window recesses are formed of a granite block externally with timber internally. Directly above the wooden lintels is a trough formed of a lead sheet that is similar to another trough located just below floor level. The trough at floor level undoubtedly acts as a damp-proof course which also allows ventilation of the wall cavity. Its primary function, however, would appear to be as a drain designed to direct any water entering via mortar or joints in extreme weather conditions away from the wall foundations and out through a series of lead–lined ducts. These drain out through brass vents/drain covers (Type 07) which are present on the exterior of both the east and west sides of the building.

The internal space is divided longitudinally by the central supporting wall. This is constructed of large, roughly-dressed, grey granite blocks and supports, directly above, the weight of the chimneys. The flues for the fireplaces are located with within this wall, and lintels spanning the main corridor comprise large timbers. These walls were lined with strapping held in the mortar between blocks and support a lath and plaster finish.

The internal partition walls were all originally of brick finished with plaster. More recent partitions are of stud and plasterboard.

3.3.2.2 *Roof* (Plates 2a, 2c, 4a, 4b, 4c & 4d)

The roof, although appearing flat from the ground, slopes downwards from west with a step at approximately the mid-point. The surface is formed of lead sheets with rolled joints supported on timber sarking and roof joists. The sloping arrangement is designed to direct rainwater towards a lead-lined gutter which runs the full length of the front of the building. This gutter is constructed so that it sheds water towards one of four deeper lead-lined sumps which in turn direct the water into lead down-pipes or an overflow which run down the front of the building.

The areas over the laundry are provided with two swan-neck lead vents, one leading from the privy below and one from the laundry above the boiler. A pitched roof light illuminates the laundry corridor below.

3.3.2.3 *Drains, cisterns and water pumps* (Drawings 2a, 2b, 5a & 5b, Plates 3b, 3c & 3d)

The lead down pipes run directly from the roof into a lead sump covered by a stone slab with iron ring handle. From this the water is directed into a system of underground cisterns, a pair at each end of the building each covered with a large metal cover. The two tanks in each pair are connected by a vertical overflow with a further connection, fed from the bottom of the tank, supplying the water pumps against the wall.

Within the area of the walled garden are several other drains and drain covers for the disposal of kitchen water. These were investigated but it was not possible to determine the ultimate destination of these drains. Information from one of the present residents suggests these lead to a sea outfall to the south. Iron drain covers were observed in the centre of the lawns in front of Houses 2 and 4. The area around the cover in front of House 4 was cleared to expose granite blocks and the brick drain structure below. All four of the houses would originally have had a drain of this type but the accumulation of windblown sand and growth of vegetation has completely obscured two of them and covered the granite part of the drain in front of House 2.

3.3.2.4 *Floors* (Drawings 2a & 2b)

The floors in the houses were either stone flags or suspended tongue-and-groove timber. The latter were supported on low rubble-built sleeper walls as seen exposed in room R17. The flag flooring is seen only in the kitchen, some store rooms and in the privies and laundries at either end of the building. Smaller stone setts were used to floor the coal sheds.

3.3.2.5 *Ceilings* (Drawing 4a, Plate 6b)

Throughout the houses ceilings were hanging lath and plaster fixed to ceiling joists. The ceiling joists were suspended from the sloping roof joists by a repeating series of vertical timbers. This allowed the ceilings to be level despite the slope on the sarking above. Over the utility rooms at either end of the terraced houses the ceiling was lath and plaster fixed directly to roof joists.

3.3.2.6 *Doors* (Drawing 8, Plates 2a, 2b & 5a)

Two different styles of external door were used, a double door to each house and a more simple single door to each of the three entrances into the utility rooms. Those in the houses had a grating just inside the door and a slot for a vertical weather-board at the threshold to protect against ingress of wind-blown rainwater. All surviving examples appear to be original.

There are several different styles of original door in the interior. The main type (Type 18) is a four panel door which has beading on both sides and a large iron and brass locking mechanism and handle. The other original doors are of a similar style with varying dimensions, decoration and locking mechanisms. These are described in detail in Appendix 3. Some doors have been modified with the insertion of glass in place of wood in some of the panels and one example had been altered and relocated.

3.3.2.7 *Windows* (Drawing 9, Plates 2c, 2d & 5c)

Several different types of window are evident in the Upper Square building, some openings, however, have been boarded up. Only two examples of the original sash windows survive with astragals intact. The majority of the others relate to refurbishments of the late 20th century.

3.3.2.8 *Fireplaces* (Drawing 9, Plates 5d & 6c)

Three different types of original fireplace could be identified. These comprised a large fireplace recess in the kitchens and two other smaller fireplaces present in public rooms and bedrooms.

The large recesses in the kitchens presumably originally housed ranges although none was present at the time of the survey. All of them had been altered, sometimes with the insertion of a smaller more modern fireplace.

The other two types of original fireplace were used in the other public rooms and the bedrooms. These were of similar form and dimensions but had different decoration. Alterations to some of the fireplaces had taken place with some being blocked up and others replaced with modern fire surrounds.

3.3.2.9 *Finishes* (Drawings 6 & 7)

It is clear from the forms and locations of the different types of skirtings and cornices that they were to some extent determined by status. The thicker skirtings (Type 22) and ornate ceiling details (Types 39 & 40) were, for example, only seen in what is thought to be the head keepers house – No. 1. Elsewhere a repeating series of patterns for bedrooms and living areas were used and much of the present variation relates to later modifications.

Much of the door furniture is of brass and is stamped with an ownership mark ‘ NL’.

3.3.3 Internal units

3.3.3.1 *Houses* (Drawings 2a, 2b, 5b & 10a to 13f)

From the outside the building is very clearly designed with symmetry in mind. Internally there are repeating themes in the room layout but they are not all the same and evidently take into account the different status of the keepers and their families.

The largest house, No. 1, is thought to be the head-keepers house and is the only house to have both a parlour (Room R4) and what is thought to be a study (Room R5). These are the only rooms within the complex that have ornate ceiling mouldings and deep skirtings which reflect the relative importance of the occupant. These rooms aside, all the houses have a kitchen with adjoining pantry and bed press, one or two bedrooms, a larder and a store room.

Each house is entered by a set of double doors leading into a corridor. This gives access to the kitchen, parlour (if present) and the rooms at the back of the house. The kitchens (Rooms R2, R11, R19 & R25) are all at the front of the building with their doors directly adjacent to the front door. They can be identified by the presence of the stone flag floor, large fireplace recess and by the presence of two small adjoining rooms; one with a door – the pantry, and the other with a wider open entrance – the bed press. Each kitchen has a large stone hearth and shelved cupboard set into the central structural wall. There is also often evidence for further shelving against the partition walls which has since been removed. It is this room which would have functioned as a living room for the keepers and their families, where they would have cooked and eaten.

The bedrooms are generally restricted to the rear of the building, each having an ornate cast iron fireplace and sometimes a shelved cupboard. One possible exception to this is House 3 which has a front room (R17) that could act as either a bedroom or parlour. If the latter, then the house would, however, only have one bedroom.

Accessed via a N-S corridor at the back of the house and adjacent to the bedrooms are, in all cases, two small rooms. Both show the evidence of original shelving and were clearly for storage. One always has a stone flagged floor with no window. This is undoubtedly the larder. The others have a window but only No. 1 and No.3 have flagged floors. These are interpreted as general store rooms, possibly for the light keepers equipment. These two rooms have been converted into use as bathrooms in more recent years.

3.3.3.2 *Wash-houses* (Drawings 14a, 14c, 15b & 15c, Plates 8a & 8d)

The laundries form part of the wash-houses at either end of the Upper Square (Rooms R34 & R38). These were floored with stone flags with a grating leading to a drain under the floor. In the NW and SW corners respectively is a large metal boiler set in a brick and concrete stance with a hearth below and lead drain to one side. This was the boiler for the laundry in which clothes were washed. The surrounding space undoubtedly comprised a drying area and some of the wooden racking in the S laundry may be original. The ceiling is fitted with a vent over the boiler for added ventilation.

3.3.3.3 *Privies* (Drawings 14d & 15d, Plates 8b & 8c)

Two privies were provided, one within each of the wash-houses at the N and S ends of the terrace. Each room was provided with a double commode-type toilet with individual lids and surrounding wooden panelling. These survive in good condition.

A simple hinged casement window (Type 15) provided light to the west and a vent in the ceiling provided ventilation.

3.3.3.4 *Coal sheds* (Drawings 14b & 15a)

The coal sheds are simple rooms with no distinguishing features other than a rough floor comprising stone setts. They also had internal walls of rubble construction in contrast to the large blocks used throughout the rest of the building. There was clearly one shed per household. One of these coal sheds is still in use by the present occupant.

ACKNOWLEDGEMENTS

We would like to thank Ian Rees of the Hebridean Trust for his help with reference material for this report; Monica Smith and Kim Dalland for their assistance on Tiree and Christine and Iain MacFarlane for access to their home and hospitality during fieldwork. Illustrations were by Louise Baker, Mike Middleton and Laura Speed. The project was managed for ARP Lorimer by Jim Grant.

APPENDIX 1 – DOCUMENTARY SOURCES

National Monuments Record for Scotland (NMRS)
The Shore Station has been recorded as a site of interest in the NMRS.

NL93NE 8 Tiree, Hynish, Lighthouse Shore Establishment, Signal Tower

A collection of 13 photographs and 1 other item are held for this site. The photographs can be split into three groups:

a. a selection of photographs of the buildings and other structures within the Shore Station
b. a photographic reproduction of a postcard showing a general view of the Shore Station
c. photographic reproductions of a plan of the Shore Station. Eight of these items show the buildings of the Upper Square.

Other associated entries concern Skerryvore Lighthouse and the harbour at Hynish.

NL82NW 1 Skerryvore Lighthouse
NL93NE 9 Hynish Harbour, Tiree

These sites contain no information directly relating to the buildings of the Upper Square.

*Historic Scotland, Edinb*urgh
The buildings of the Shore Station are listed and information about them in respect of this is held by Historic Scotland. They were first listed on 20 July 1970 as category B and were subsequently upgraded to category A on 15 August 1989. The listing reference is noted below and the extract relevant to the Upper Square is reproduced.

HBNUM: 17848 ITEM NO: 15

'KEEPER'S HOUSES (Upper Square): distinctive and solid looking, like other lighthouse keeper's housing by Stevenson, and with Egyptianised detail; single storey, flat roofed, ashlar faced, massive doorways, ranks of stacks at wallhead, small walled garden.'

The general notes state;

'A group of buildings unique in Scotland and surviving in near unaltered condition.'

National Library of Scotland, George IV Bridge, Edinburgh
The National Library of Scotland holds records deposited by the Stevenson family which include information relating to the work carried out by their family firm in the capacity of engineers to the Commissioners of Northern Lighthouses. Documents with extracts relevant to Hynish have the reference Acc 10706 and include letters, business records and reports.

National Library of Scotland, Map Library, Edinburgh
Relevant maps are listed below in chronological order.
1801 Langlands, G *This map of Argyllshire…*
1878 Ordnance Survey *Argyllshire* 1:2,500 map, sheet 78.15 (surveyed 1878)
1880 Ordnance Survey *Argyllshire* 1:2,500 map, sheet 78.2 (surveyed 1878)
1882 Ordnance Survey *Argyllshire* 1:10,560 map, sheet 78 (surveyed 1878)
1899 Ordnance Survey *Argyllshire* 1:2,500 map, sheet 78.2 (revised 1898)
1899 Ordnance Survey *Argyllshire* 1:2,500 map, sheet 78.14 & 15 (revised 1898)
1976 Ordnance Survey NL93NE 1:10,000 (surveyed 1974, revised 1975)

West Register House, The Scottish Record Office, Edinburgh
The records created by the Commissioners of the Northern Lighthouses (NLC) are held in the Scottish Record Office. These include records created at their headquarters in Edinburgh and the records of individual lighthouses. While some information associated with Skerryvore lighthouse is present there is very little relating to Hynish and even less to the Upper Square. Some relevant documents are;

RHP 22815 Photostat copy of plan of Hynish Point showing the land proposed to be acquired for the use of Skerryvore Lighthouse.
NLC 1-2 Board records: annual reports (1848-1937), minute Books (1786-1984), schedules of meetings (from 1901-1989) and meeting papers (1892-1900)
NLC 3-6 Secretary's Department records (1844-1987)
NLC 11 Engineer's Department records (1838-1956)
NLC 97 Records for Skerryvore Lighthouse (1968-1991)

Other Published/Archive Reports
Allerdyce, K & Hood, E 1986 *At Scotland's Edge*.
Bathurst, B 1999 *The Lighthouse Stevensons.*
Hume, J 1997 *Harbour Lights.*
Leslie, J & Paxton, R 1999 *Bright Lights: The Stevenson Family of Engineers 1752-1971*.
Munro, RW 1979 *Scottish Lighthouses.*
RCAHMS 1980 *The Royal Commission on the Ancient and Historical Monuments of Scotland. Argyll: an inventory of the monuments volume 3: Mull, Tiree, Coll and Northern Argyll (excluding the early medieval and later monuments of Iona).*
Remigio, C 2000 *Mechanical Innovation used in the Construction of Skerryvore Lighthouse*. (University of Glasgow, Department of Mechanical Engineering)
Stanfield, M 1985 *The Skerryvore Story*. (unpublished report)
Stevenson, A 1848 *Account of the Building of Skerryvore Lighthouse*.