Proposed Upgrade to Hope Shaft Switch Room & Pump Lodge

Design and Access and Heritage Statement

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Introduction

This Design and Access statement sets out the Design Philosophy and Design Considerations made by the author in producing the Planning Application drawings for the installation of a new pump house and electrical substation.
Guidance for the content of a Design and Access Statement (DAS) is provided on the Planning Portal and states:

A DAS is a concise report accompanying certain applications for planning permission and applications for listed building consent. They provide a framework for applicants to explain how the proposed development is a suitable response to the site and its setting, and demonstrate that it can be adequately accessed by prospective users. DAS's can aid decision making by enabling local planning authorities and third parties to better understand the analysis that has underpinned the design of a development proposal. The level of detail in a DAS should be proportionate to the complexity of the application, but should not be long.

Paragraph: 029 Reference ID: 14-029-20140306

Relevant policies

The relevant Core Strategy Policies are:

SP1 – Presumption in Favour of Sustainable Development.
SP18 – Protecting and Enhancing the Environment.
SP19 – Design Quality.
SP15 – Sustainable Development and Climate Change.

The relevant Wakefield District Local Plan Policies are:

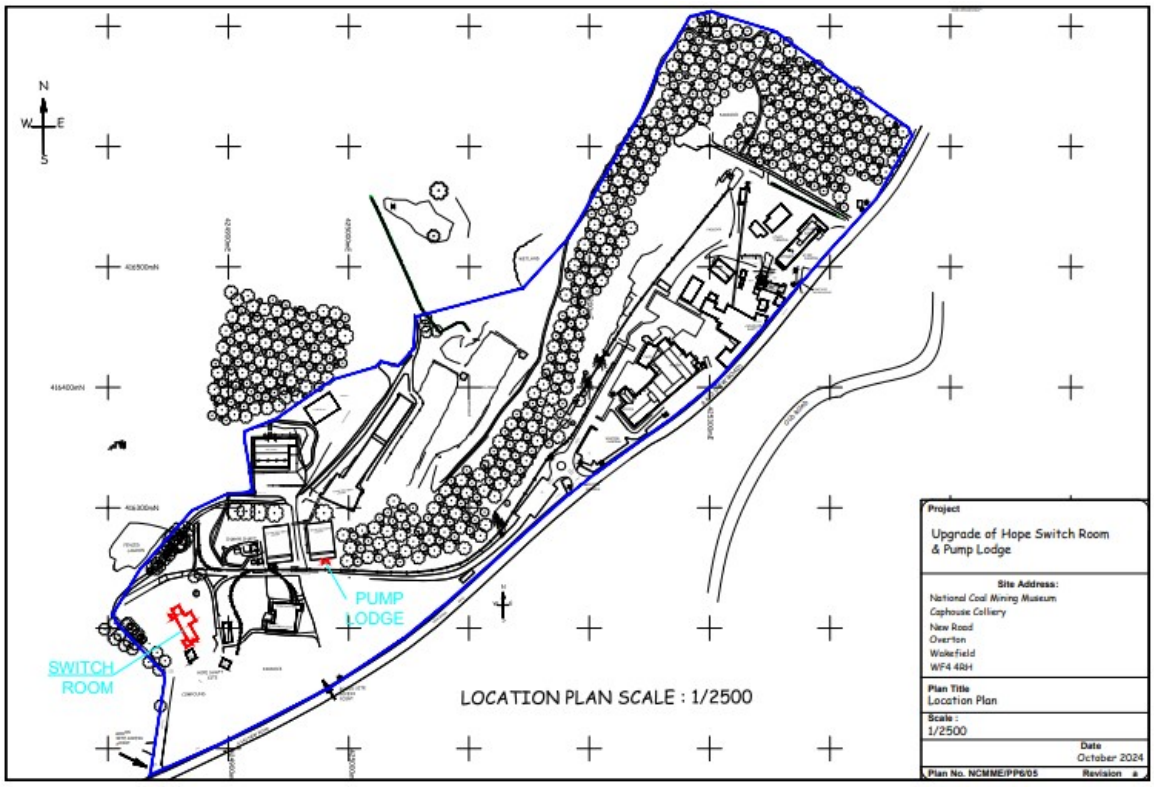
This document is compiled to comply with the current Wakefield District Council planning and development policies.

Description of Proposal

It is proposed to install a (Pod) modular building, switch room on the site of the now redundant emergency Braithwaite water tank, adjacent to the existing electrical Hope Shaft switch room. In order to achieve this the Braithwaite tank will first need to be dismantled and removed from the site. The reason for the new installation is to satisfy the requirements of the upgraded pumping system which includes the new electrical substation to ensure the safe operation of the underground workings.
In addition, the pump lodge adjacent to a Coal Authority lagoon has now deteriorated to the point of being a safety hazard and needs to be replaced. It is proposed to replace

this with a brick-built structure to better withstand the harsh environmental conditions the pump is required to operate within. This pump lodge houses the pumps which service the underground firefighting system. Without which the safe operation of the museums underground exhibits would not be possible.

Site Location



The site is located at the Hope Shaft south west end of the Caphouse Colliery museum site (NCMME), adjacent to the A642 (New Road) near the village of Overton in Wakefield. This forms part of the more extensive museum site which includes numerous visitor activities and attractions. The installation will take place within a conservation area.

This site for the installations is predetermined by engineering requirements. However all efforts will be made to ensure a minimum impact on the conservation area.

Access

There are numerous entrances to the site. Some dedicated to public visitor access and others maintained for deliveries and site personnel only. Adequate parking is available for all categories.

Existing access arrangements will not be affected or altered by the proposed installation.

Local Character

The site of the switch room installation is at the location of a now redundant Braithwate water tank. This tank was installed by the Coal Authority (CA) to meet an emergency pumping requirement in recent years and was never intended to be a permanent fixture. It does not form a part of the museum's extensive industrial exhibits. The tank is not in keeping with the character of the other buildings within the conservation area. Every effort will be made to ensure the new switch room blends sympathetically with the conservation area.
The pump lodge is adjacent to a CA lagoon and is largely shielded from view by a row of trees and shrubs. It is at a lower level than the surrounding area which serves to hide the installation further. This area is secured against public entry by a locked security gate and mesh fence.

Existing switch room and Braithwate tank.

Entrance to CA lagoon area

Heritage Statement

The Nature of the Asset

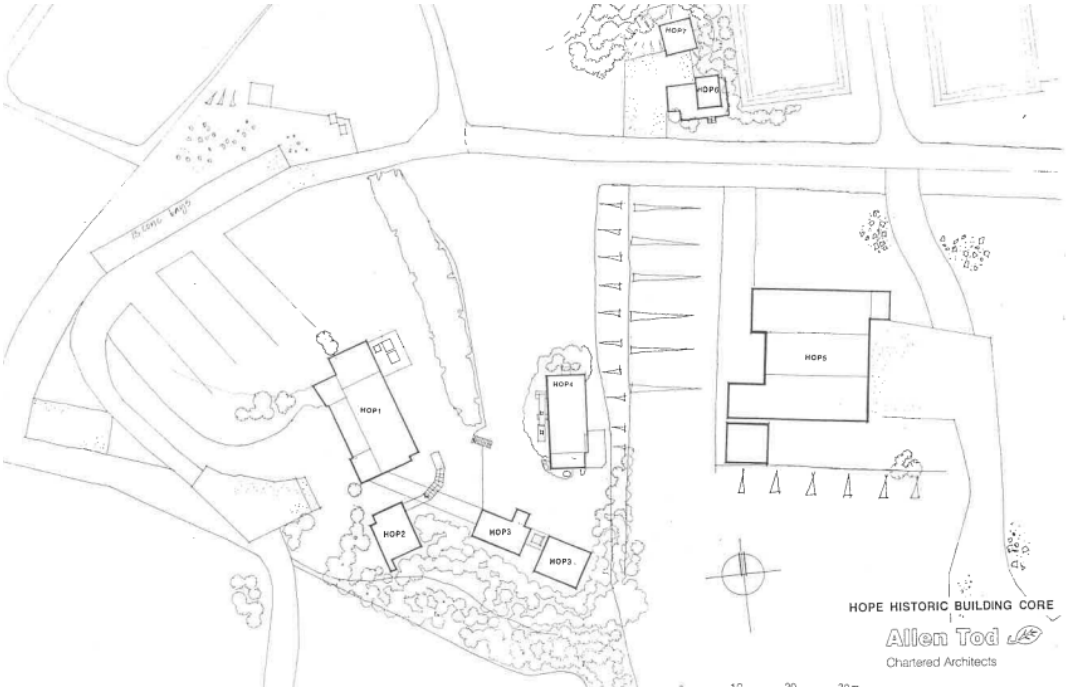
HOPE PIT END

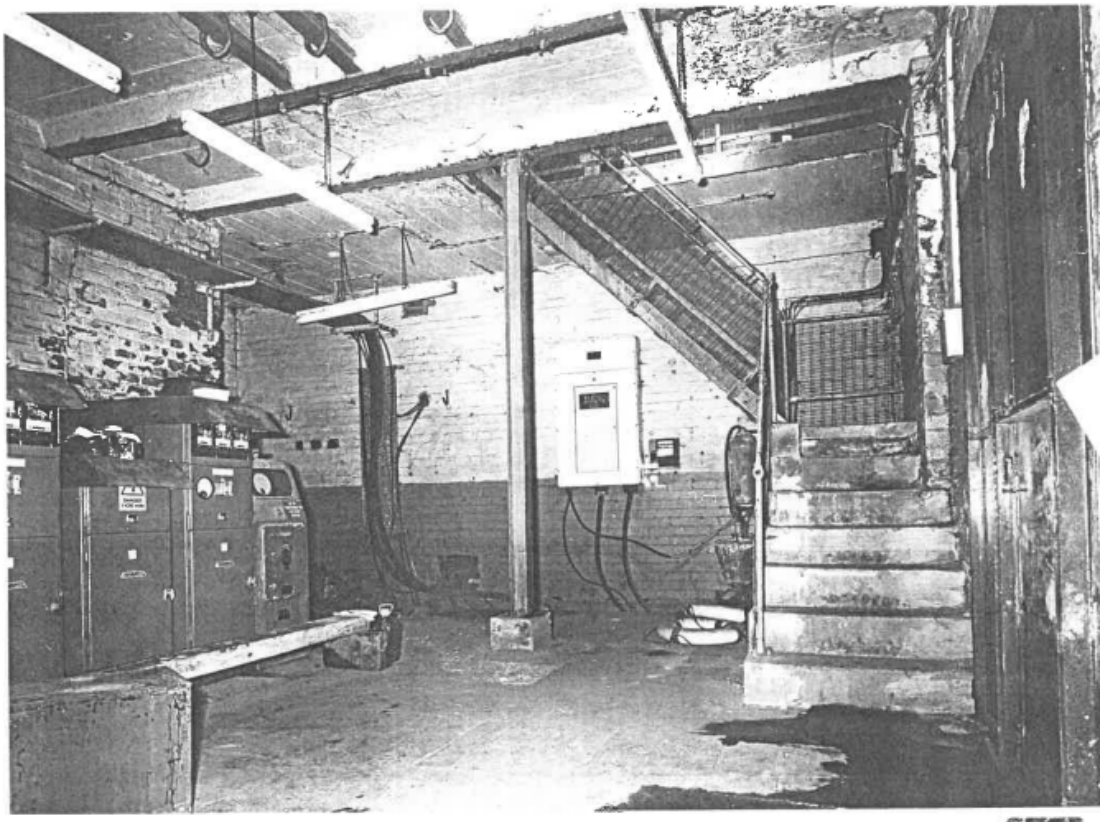
The conservation area constitutes a typical nineteenth century industrial mining environment. This has been supplemented in the twentieth century by additional buildings and infrastructure.

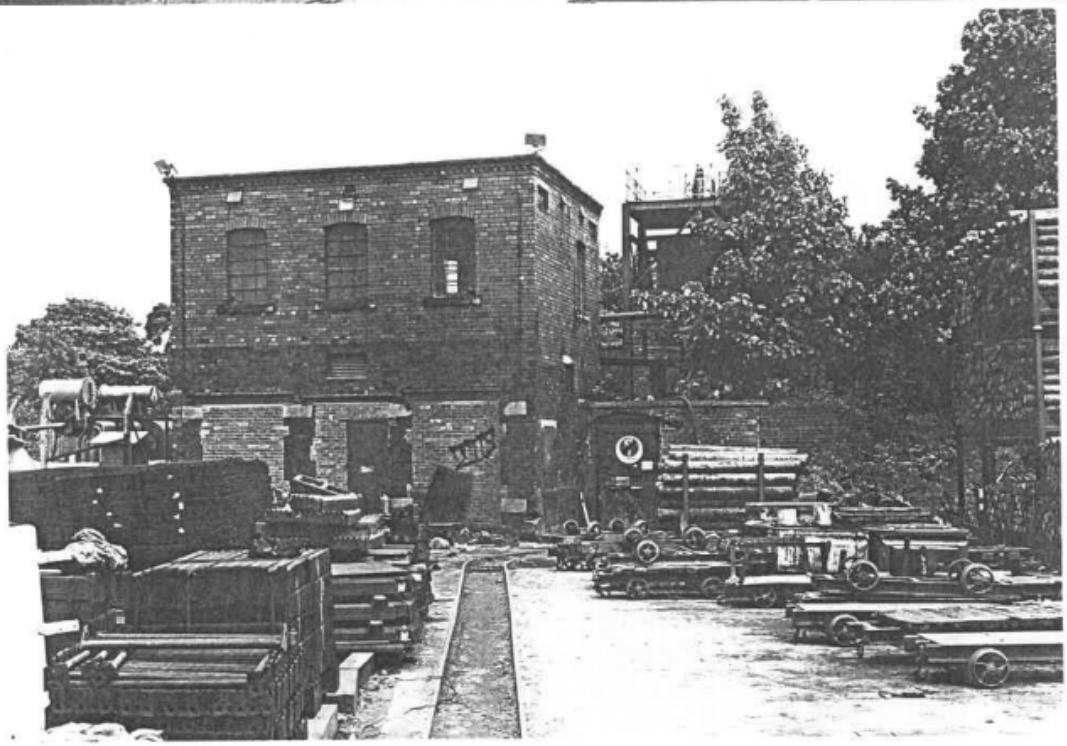
The protected assets include; shaft, heapstead, fan house and fan drift, air lock, headgear, passage, electricity substation, electric winding engine house, new fan house and fan drift, compressor house, garages, treatment house, Inman shaft, the original beam engine house and related structures, alterations to the beam engine house etc, after 1942, demolished buildings, storage and service buildings, cottages. Further items are held within the conservation area but are a significant distance from the proposed works.

The Extent of the Asset

The plan below shows the historic building at the Hope end of the site. These are what now constitute the conservation area.







The Significance of the Asset

Caphouse Colliery opened as the Yorkshire Mining museum in 1988 and was designated the National Coal Mining Museum for England in 1995. It incorporates three sites, Caphouse Pit, Hope Pit and Inman Shaft. Caphouse Pit was sunk in the late 1770's or 1780's by James Milnes who, in the customary manner of the time, sank a series of individual shafts down to the coal, then abandoned them when the accessible coal was exhausted. In 1827 the lease of the coal was taken by Sir John

Lister Kaye of Denby Grange, the neighbouring estate on which coal was already exploited. Its individual pits were known collectively as the Denby Grange Colliery. Sir John inherited four working pits in 1827 but by 1851 he had sunk or reopened a further 14, few of them having long lives. Caphouse Pit and Hope Pit were among the coal pits which were sunk and then reopened, Caphouse Pit from 1828-33 and again from 1851, Hope Pit from 1832-3 and again from 1841 when the Inman Shaft was opened to pump water from its workings with steam-powered beam engine augmented by a horse gin. Inman Shaft may have originated as two coal pits.

The 1840-1 beam engine house at Inman Shaft survives, its lower half hidden by a raised ground surface, but the associated boiler house and chimney, and the horse gin and horse engine, have gone. Little trace remains of the colliery railway, part locomotive hauled, part rope hauled, built in 1853-4 to link Caphouse, Hope and the other pits with the Calder and Hebble Navigation and the Lancashire and Yorkshire Railway at Calder Grove, five miles away. Intended to provide more convenient and ultimately cheaper transport for the coal mined by the Denby Grange Colliery, the railway as not finally closed by the colliery until 1942. None of the mid 19th century buildings at Hope or Caphouse Pits survives – the latter included a heapstead, steam winding engine house and boilers built in the mid 1850's – but at Caphouse the steam winding engine house, boiler yard, chimney and stone heapstead at the top of the main shaft, together with a second ventilation shaft, all evidently completed in 1876 for Emma Lister Kaye, survive as does a small store built shortly afterwards. A further phase on investment is reflected in work undertaken in the period 1905-11. At Caphouse Pit the timber headgear of the main shaft was renewed and a substantial timber-framed screens building erected nearby, whilst the shaft at Hope Pit became the air shaft to both pits, with new surface buildings which included a fan house and electric winding engine house. Denby Grange Colliery was sold in 1907 and over the next 25 years the new owners built coal drops and doubled the number of sidings at Caphouse, erected an administration block at the same time, 1937-8, as the pithead baths funded by the Miners' Welfare Fund, and erected a substation at Hope Pit. The sited was reorganised by Lockwood & Elliott between 1943 and 1946, with buildings and plant upgraded. This work was continued after Nationalisation, a major development being the opening of a drift mine in 1974. The colliery closed in 1985.

Sir John Lister Kaye commenced sinking Hope Pit in 1827, the pit opening in 1832 but closing in 1833. A deeper sinking was started in 1839, the pit reopening in 1841, its workings drained by a steam engine installed in the nearby Inman Shaft. The 1850-1 map shows two coal pits at Hope Pit, both of which are also shown and identified as 'Shafts' on the 1892 and 1904 maps. The 1914 map, however, identifies the northern shaft as 'Old Shaft' but identifies the southern shaft as an 'Air Shaft' and shows it as part of a newly-built complex of buildings. The buildings were a U-shaped cluster which included the shaft and the heapstead over it, the associated fan house and air lock, and a structure later modelled as an electricity substation, with a winding engine house freestanding to the south. The 1932 map repeats much of the cartography.

The electricity substation at the north end of the range which includes the fan house probably dates from the 1930's and, as noted above, incorporates substantial lengths of walling from the original building constructed between 1904 and 1914. The substation is built of a brick which is more orange than the brickwork of the earlier building, and which is laid to a different bond with five stretcher courses alternating

with one of alternate headers and stretchers. The wider and deeper north end of the substation is of two storeys, the narrower wing to the south being only single storeyed. All walls have stepped eaves courses whose middle row is of cogged bricks, and both blocks have flat concrete roofs.

The ground floor of the substation retains the original openings from the earlier building in its north and west walls but otherwise the openings are mainly of the 1930's and are distinctive in having rounded corners and segmental brick heads which are of three header courses on the ground floor and of stretchers on end on the first floor. All windows have projecting stone sills and steel frames. A feature of all parts and floors of the building was the provision of natural ventilation: louvred rectangular vents serve the ground floor of the storeyed block, being set just below ceiling level in the north, east and west walls, and smaller vents are set in the other walls. The function of the building is indicated by the four panels set just below the eaves at either end of the east and west elevations of the storeyed block. The panels, set between stone sills and lintel, have three insulated holes through with electricity wires passed.

Inside the building all floors have ceilings with I-section girder supports and reinforced concrete. A flight of concrete steps, continued by a steel flight, rises up to the first floor close the south-east corner of the storeyed block. Balustrades of tubular steel run up the stairs and along the void at first floor. The switchgear inside is modern.

The Inman Shaft, named after Jack Inman who was for 80 years an employee of the colliery, and who worked the pumping engine here, is the northernmost of two shafts which may have originated as coal pits in the late 18th century. No documentary evidence has survived for them at this date, and nor was there mention, when one was used for the pumping engine, that it was utilising a deepened, existing shaft. Nevertheless there is every reason, given the number of old coal workings in the area, to suspect on earlier origin of these shafts/

Between 1839 and 1841, when nearby Hope Pit was deepened to the Old Hards Seam, the Inman Shaft was sunk down to a dip in the new seam in order to drain water away. The water was lifted by means of a beam engine housed in a stone-built engine house, erected immediately east of the shaft. Drawings and old photographs show that the boiler house and chimney were attached to the east side of the engine house, with a horse gin and horse wheel immediately west of the shaft. The 1850-1 map shows the engine house, boiler house and chimney as an L-shaped building and although it is at too small a scale to show the two shaft, the larger scale maps of 1892 to 1930 show greater detail.

The Museum was established with funding from West Yorkshire and South Yorkshire Metropolitan County Councils, Wakefield and Kirklees Metropolitan District Councils and technical support and assistance from British Coal. Following this the Department for Culture, Media and Sport carried out a detailed study into the Museum, and in 1998 provided funding which secured its long-term future. In 2001 the Museum received a Heritage Lottery Fund Grant of just over £4.5 million. The

Museum raised just under £2 million to complement this grant. Work carried out using this money included restoring buildings, new gallery areas and the store for large machinery.

The Proposed Works

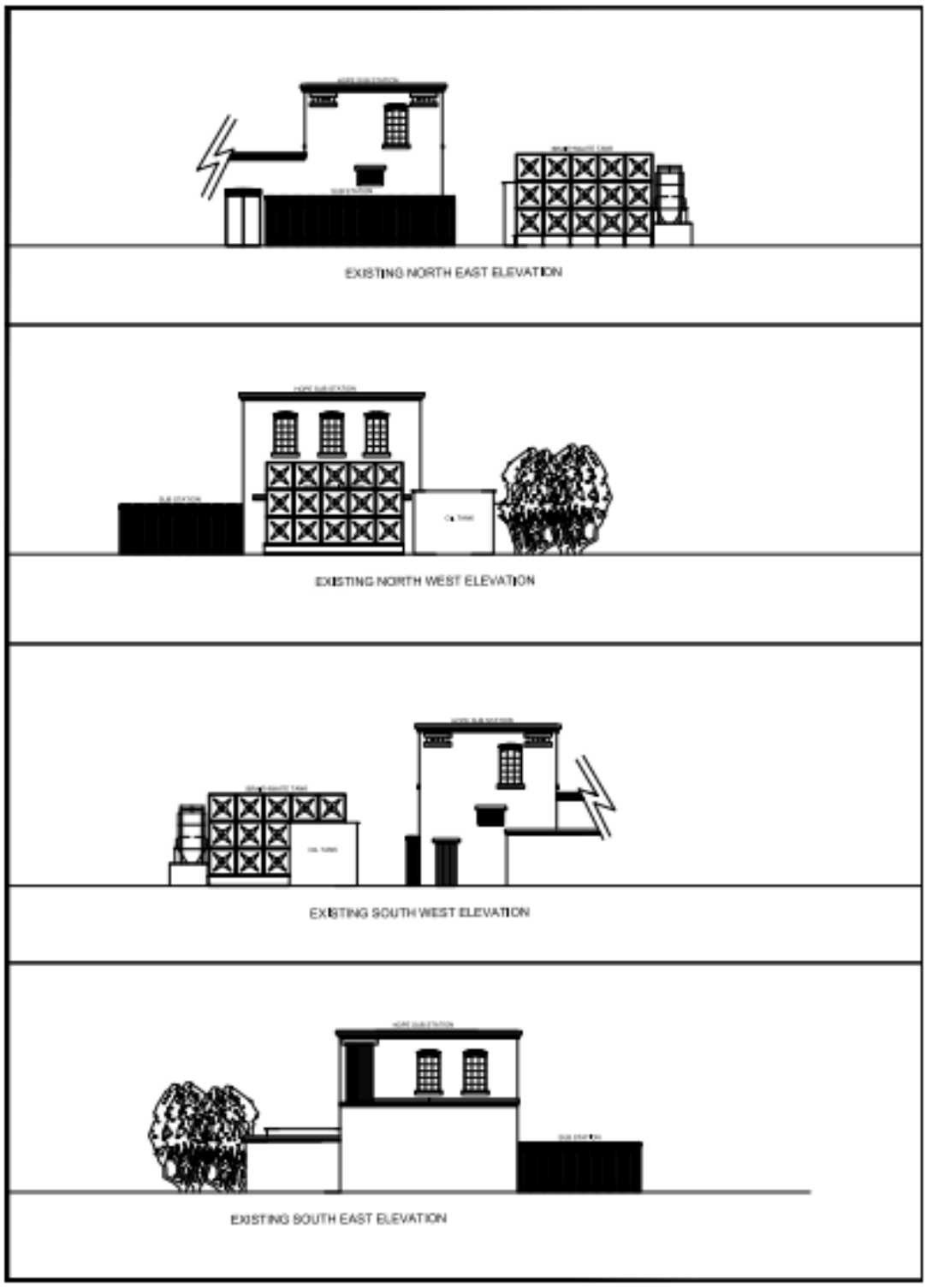
The new modular switch room will allow essential pumping to be carried out at Hope shaft site, without disturbing the now obsolete switchgear which have been relied on to carry out these tasks until now.
The new pump lodge will replace the dilapidated existing pump lodge which is no longer in a safe condition with a more robust item to withstand the harsh environment the pumps are required to operate within.

The Impact on the Asset

The chosen location for the switch room installation is forced by engineering requirements. However, has been selected to have the minimum impact on the existing asset. It will have very little effect if any on the ability of the asset to continue to function as an industrial and social development museum.
The switch room is of modular design but can be constructed in a way to blend sympathetically with the surrounding buildings.
Every effort will be made to ensure the building does not impact significantly on the asset by employing the use of sympathetic age-related colourings where possible and screening where appropriate. The only item which will be directly affected is the recently constructed Braithwaite tank which is not a protected structure.

The pump lodge is not a protected asset and is largely invisible from outside the locked compound due to a substantial screen of well-established trees and shrubs. Replacing the existing item will have no effect on any protected assets close by.

Drawings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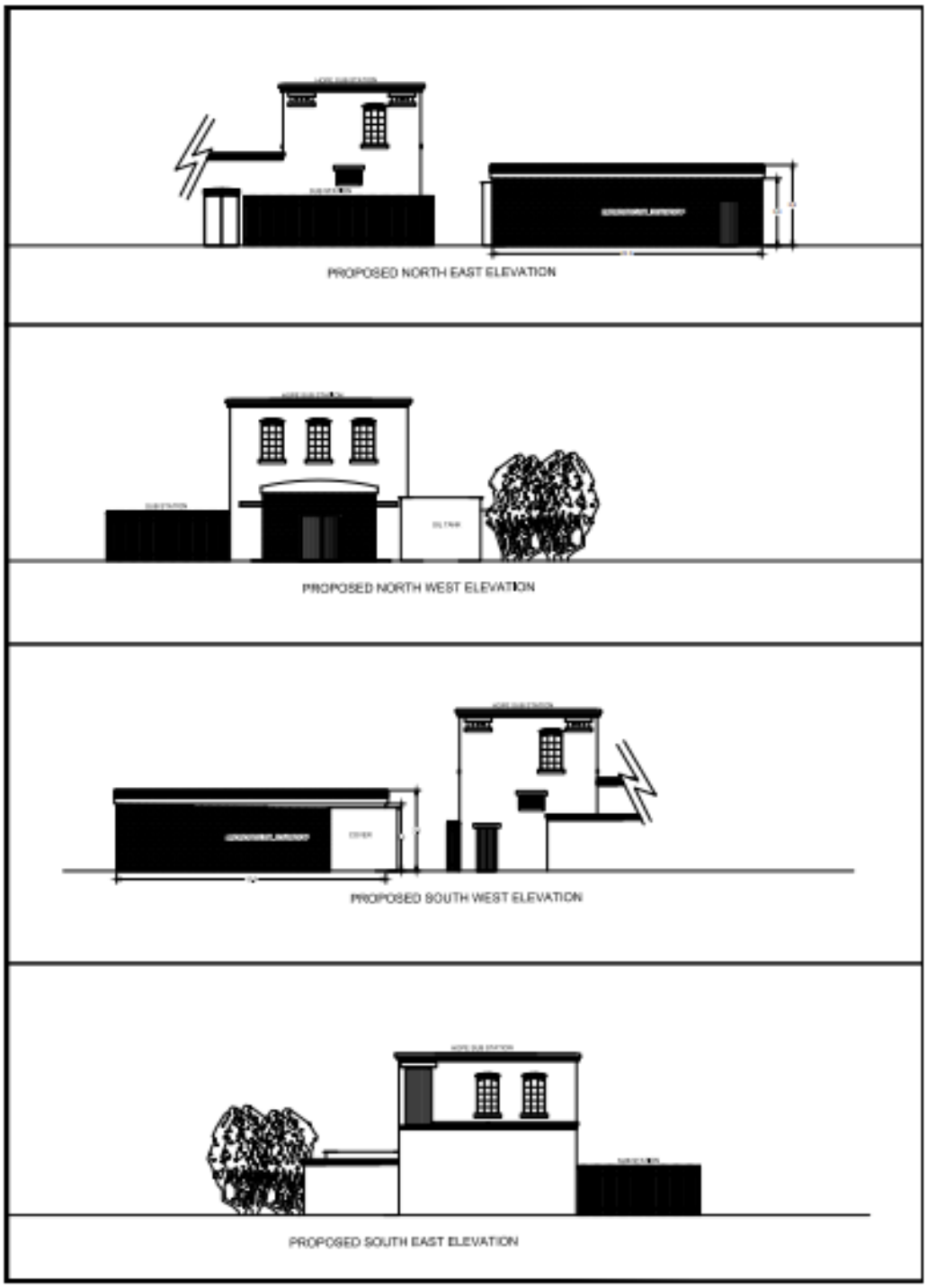
EXISTING NORTH WEST ELEVATION
EXISTING SOUTH WEST ELEVATION
EXISTING SOUTH EAST ELEVATION

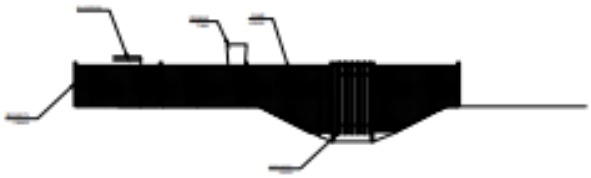


PROPOSED NORTH EAST ELEVATION

PROPOSED NORTH WEST ELEVATION

PROPOSED SOUTH WEST ELEVATION

PROPOSED SOUTH EAST ELEVATION



EXISTING SOUTH ELEVATION

EXISTING NORTH ELEVATION

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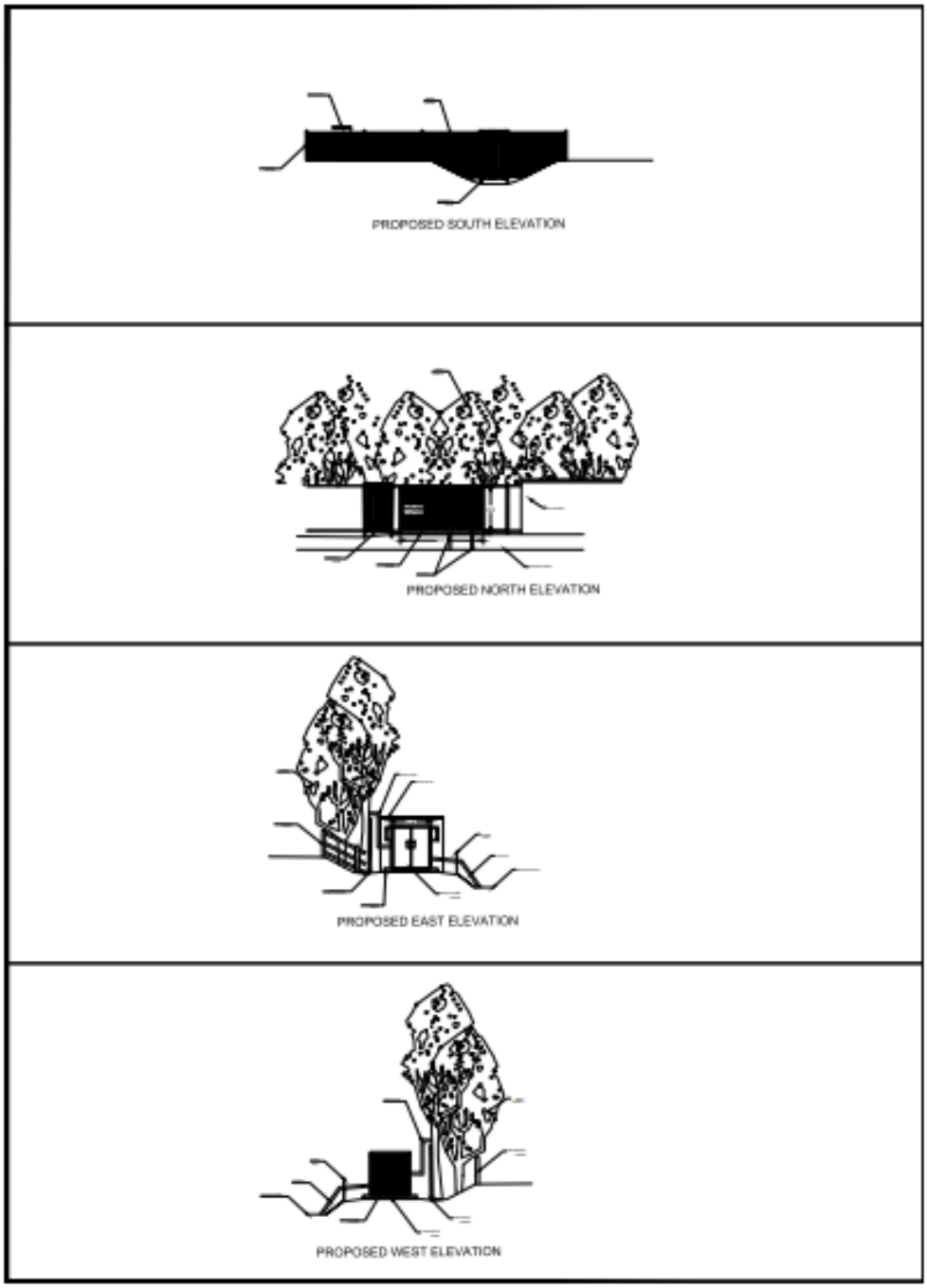

Application of Relevant Policies

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Sustainable Development and Climate Change

Energy efficiencies gained by the installation of a new electrical substation, and variable speed lower voltage pumps will ensure the sustainability of this development.

Protecting and Enhancing the Environment
This proposal will not significantly impact on the local characteristics of the site or affect the enjoyment of the current asset. Sympathetic shielding and colouring will reduce any visual impact.

Design Quality
Design quality has been shown to be of paramount importance in maintaining and enhancing the listed asset.

Control of Development
This proposal meets all relevant aspects of ENV1 ie character, infrastructure, design and materials, impact and energy conservation.

Development within Conservation Area
This proposal is essential to the continued safe operation of the mining museum. However, every effort has been made to reduce the impact on the museum and its operation.

Conclusion

The aim in producing this design is to allow for the continued safe operation of the mining museum, while minimising the impact The unique and distinctive character of this conservation area has been of the foremost importance when developing the installation.

The existing switch room is no longer capable of carrying out the operational requirements and needs to be updated to meet modern standards. The only asset directly affected is a none listed water tank which was only installed as an emergency measure and was never intended to be a permanent feature.

The pump lodge has deteriorated to a dangerous condition and needs to be replaced as these pumps support the fire fighting system for the safe operation of the underground exhibits.

These proposals will not impact on the development of future exhibits at the museum and will have no significant effect on the access arrangements for the enjoyment of current exhibits.

It is the feeling of the author that the design and access objectives have been met in this case.