

MISSION GALLERY SWANSEA
DESIGN AND ACCESS STATEMENT

MISSION GALLERY
Refurbishment and Redevelopment

Employer Mission Gallery

Design and Access Statement 20150731_FINAL

Contents

Introduction

Terms of Reference Technical Consultants Consultations Vision and Objectives

Design and Access Statement

Background Client Brief Approach Context Site Building Analysis

Policy Context

Community Consultation and Involvement

Design Proposals Movement

Access Character

Layout Scale

Appearance

Garden Landscape and Ecology

Design Evolution Community Safety

Public Art

Survey

Daylight and Sunlight Analysis

Procurement

Environmental Sustainability

Heritage Appraisal and Statement of Significance

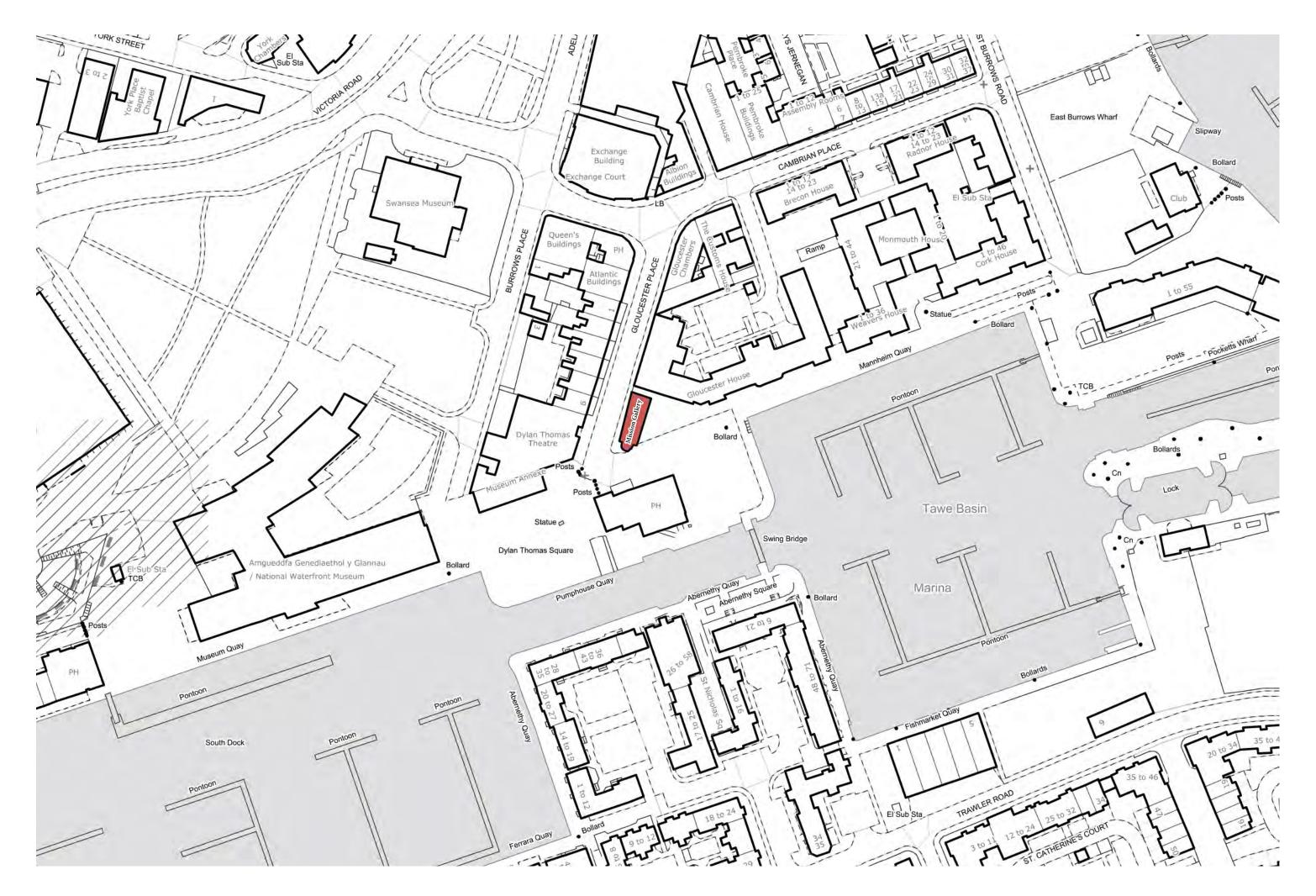
Appendices

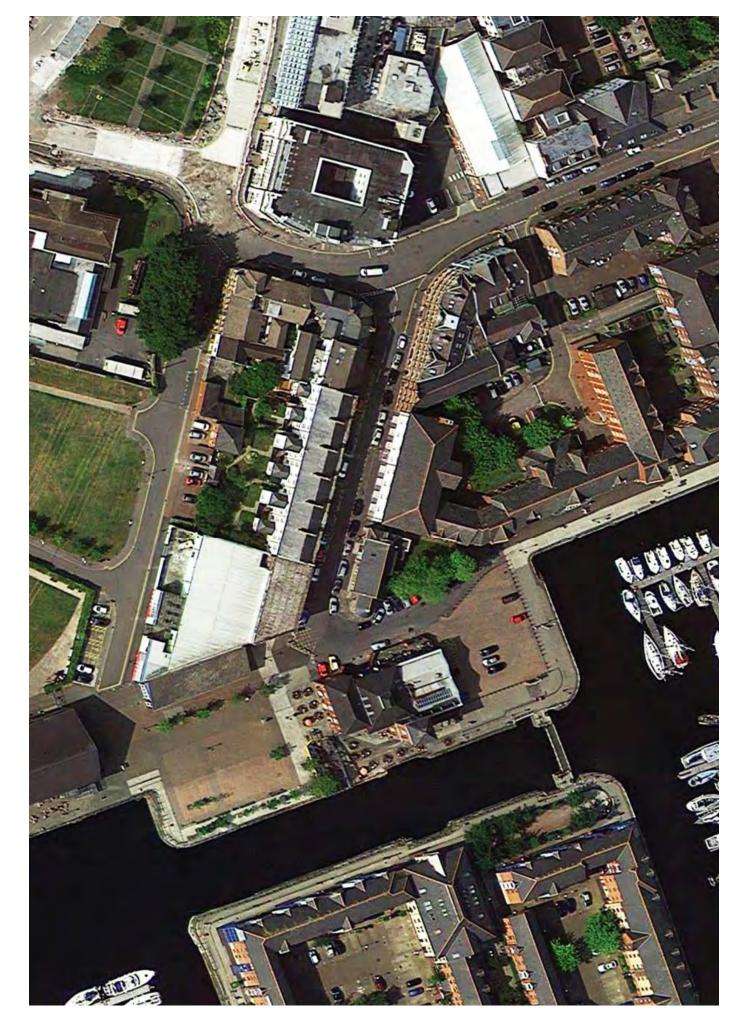
Appendix A Measured Survey Drawings
Appendix B Architectural Drawings
Appendix C Structural Engineers Drawings

Appendix D

Appendix E Daylight and Sunlight Study

Appendix F BREEAM Pre-Assessment Summary Report
Appendix G Secure by Design recommendations









Introduction

Terms of Reference

This design and access statement has been prepared to accompany the full planning and listed building applications by Mission Gallery for the Refurbishment and Redevelopment of Mission Gallery at Gloucester Place, Maritime Quarter, Swansea SA1 1TY.

It should be read in conjunction with the other application documents.

Clash Associates Ltd Architects have been appointed to provide architectural services to support the submission of the planning application.

The scheme has been developed with reference to the following policy documents;

- City and Council of Swansea Unitary Development Plan;
 EV1-Good Design, EV7- Listed Buildings, EV9-Conservation Areas,
- Swansea City Centre Strategic Framework Review 2015 'Framework for Regeneration and Movement.'

Technical Consultants

Clash Associates Ltd Architects

Mann Williams Civil / Structural Engineers

Troup, Bywaters + Anders Mechanical, Electrical and Public Health Engineers

Lee Wakeman Quantity Surveyors
Mach Acoustics Acoustic Consultants

SCS Daylight and Sunlight Analysis

Melin Consultants BREEAM Assessors
City and County of Swansea CDM Coordinator

Assent Approved Building Control / Access

Azimuth Surveyors

Consultations

The scheme has been discussed informally with the following bodies;

- Mission Gallery Steering Committee
- Arts Council of Wales
- City and County of Swansea; Planning and Historic Buildings, Housing, Landscape, Ecology, Highways, CDM
- Gloucester House Residents
- National Waterfront Museum
- Glamorgan and Gwent Archaeological Trust
- Mid and West Wales Fire and Rescue Service
- South Wales Police

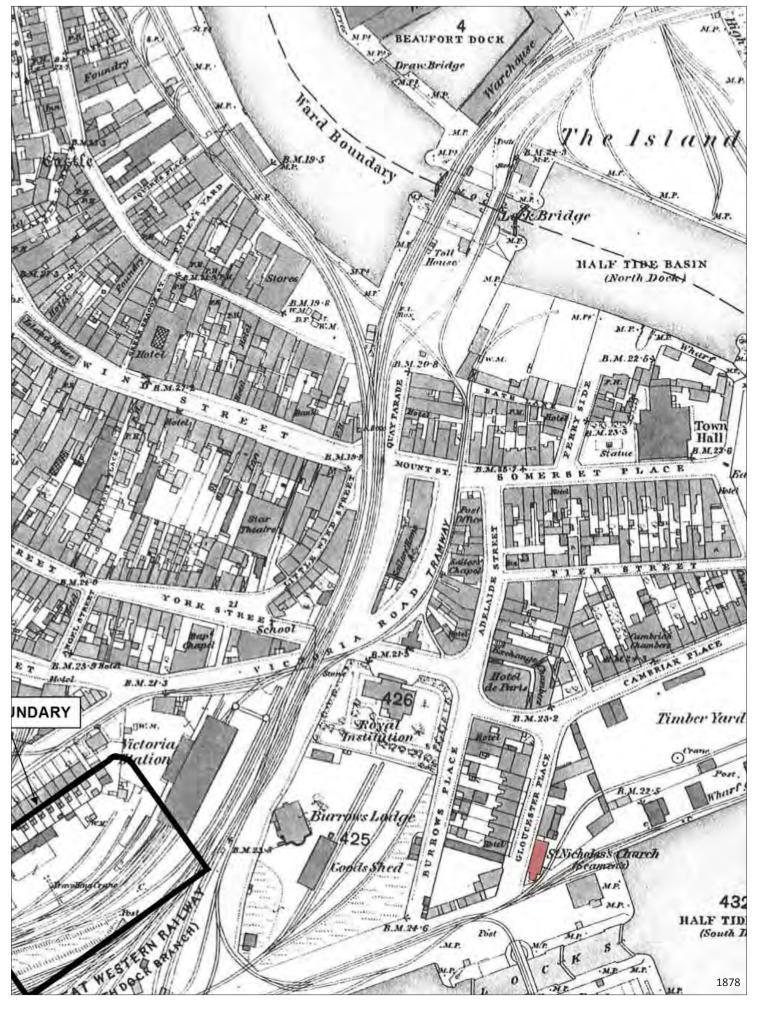
Vision and Objectives

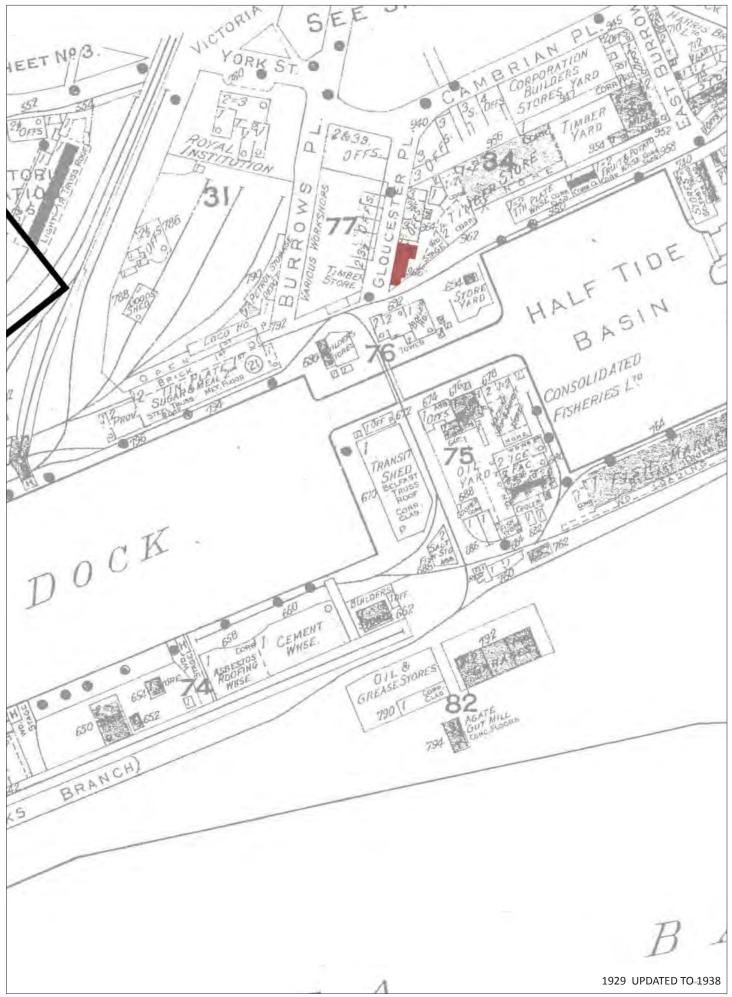
The planning application is for the refurbishment, remodeling and extension of the existing Grade II listed Mission Gallery building with a new lift, staircase, retail and gallery areas and with the addition of accessible disabled toilet accommodation.

The challenge is to design a scheme which respects the integrity of the existing building, whilst allowing universal access to the Gallery and its educational facilities, and to contribute positively to the identity and visibility of the Gallery within the wider context of the conservation area in which it sits.

In accordance with the requirements of the City and County of Swansea, formal applications are being made for Detailed Planning Permission and Listed Building Consent for alterations, extension or demolition of a listed building. An detailed application for Planning Permission and consent to display advertisements, with respect to the proposed entrance signage will be made at a later date. The project submission shows the design intention for the new sign located at the junction between Mission Gallery and Gloucester House.













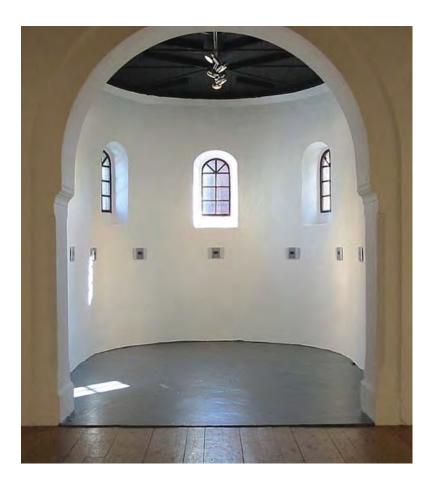


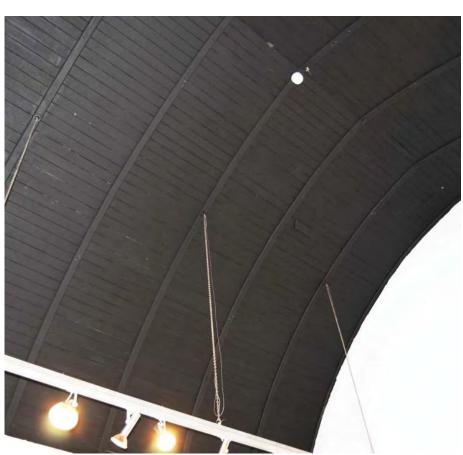


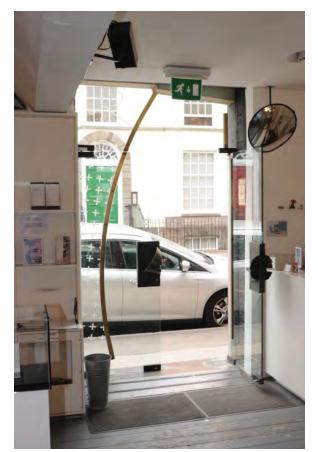














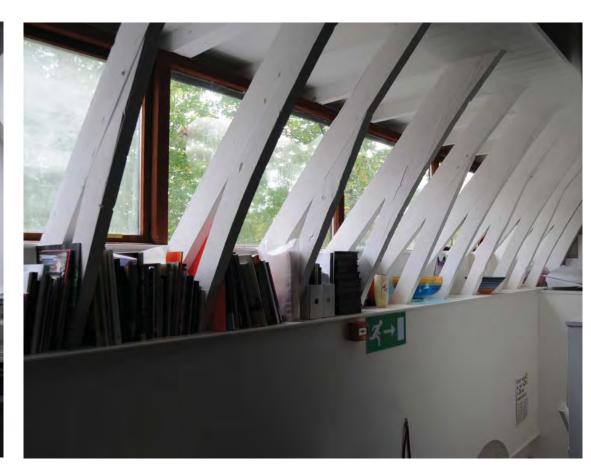






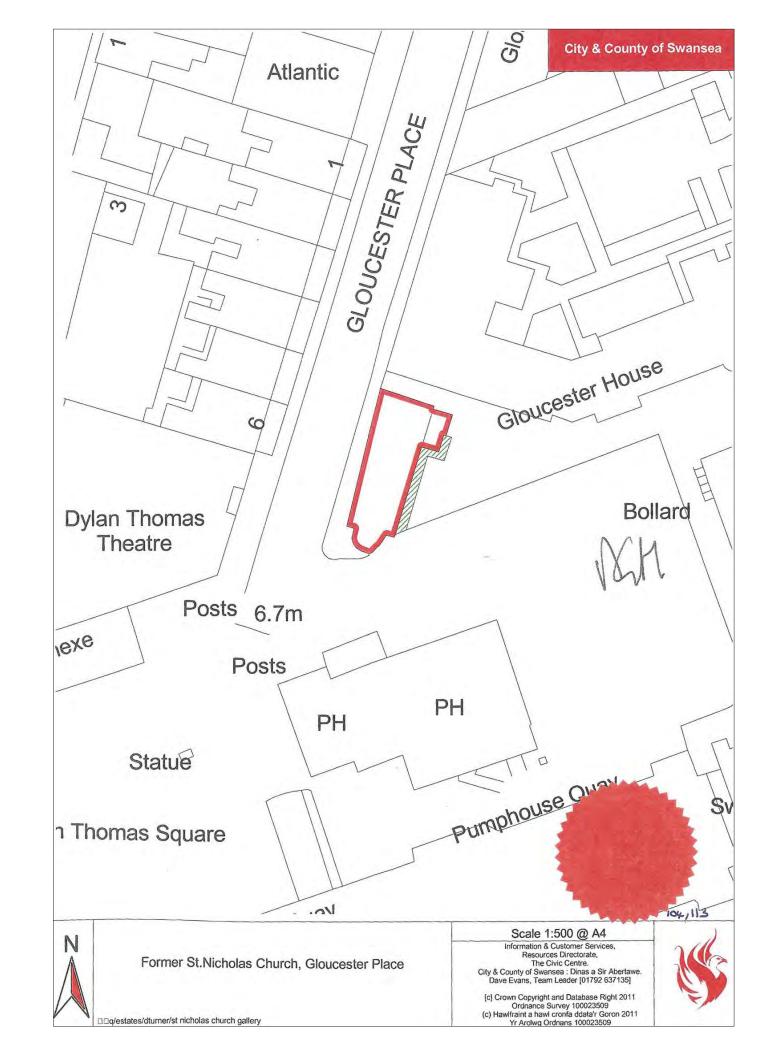












DESIGN AND ACCESS STATEMENT

Background

Mission Gallery is one of the most inspiring spaces in Wales for the contemporary arts. Mission Gallery has developed a reputation for dynamic and distinctive programming, to present excellence across the visual arts, applied arts and craft, from across Wales and beyond. With exhibition space, craft space, learning resources, events, residency opportunities and more, Mission Gallery provides the local and wider community with opportunities to develop their understanding and knowledge of art.

Mission Gallery's exhibitions are renowned for their excellence and quality. Mission Gallery selects exhibitions from both emerging and established artists that will enrich the lives of all, from the established visitor to the first time visitor. An art led environment that captures and nurtures raw creative energy; profiling artists, designers and craftspeople in all the visual arts disciplines (glass, ceramics, jewellery and textile). It is a place where the best of local, national and international artists, makers and designers can be discovered.

Mission Gallery has always recognised Education as part of its core activity and is engaged in community arts, working on innovative and progressive projects with groups and communities across the county in Swansea and surrounding areas. Through education and outreach community projects Mission Gallery seeks to enrich people's lives with a programme that deepens their knowledge, understanding, and love of contemporary visual art and craft, while also challenging received ideas of good practice by selecting artists that are introducing new ideas and new subjects.

The reputation that Mission Gallery has built with artists takes a long time to develop and is testament to the esteem that Mission Gallery is held in by the artistic community in the UK. It is important to Mission Gallery to continue supporting Welsh artists and supporting them into an international career in addition to presenting artists from across the UK.

St Nicholas Church was built in 1868 as a non-denominational Seaman's Mission. It functioned as a seaman's mission throughout the 19th century and into the 20th century. In 1977 Swansea Arts Workshop opened the building to the public as an Art Gallery, including exhibition and workshop space. It was run by volunteers as part of the Association of Artists & Designers (AADW). Mission Gallery is still governed by a voluntary board of directors. The management, programming and running is maintained by a small team of art led staff and a dedicated team of volunteers.

Regeneration

Mission Gallery is in the poorest ward of Swansea, which is in turn one of the poorest wards of any local authority in the UK. Swansea also has a higher than average percentage of employees in the public sector, and with cuts from both the Welsh Government and Westminster unemployment is expected to rise. The other side of this is a local authority that has identified sustainability as a high priority, and sees the arts as part of its sustainable community objectives. Mission Gallery has always had an ambitious and successful education and community programme, and a significant part of this programme is focused on children and disadvantaged groups. The Mission Gallery development has an emphasis on expanding the amount of space devoted to Education and through this being able to expand the educational activity that MG offers.

Design Brief

The Design Brief issued by Mission Gallery in 2014 sets out their aspirations as follows;

Improvements to current facilities including

- Universal Access for visitors and staff
- Exhibition space
- Flexibility of the first floor space

Expansion of current facilities if possible including:

- Staff office space
- Education Room
- Shop

Addition of facilities including;

- Staff/meeting room
- Bookshop
- Lift and staircase to enable access for the disabled
- Storage space
- Screening area for artists films
- Public toilets + a disabled toilet

Mission Gallery would like to ;

- Utilize the external spaces which surround the gallery
- Improve security
- Install networked communications/IT
- Install sound and audio loops
- Create a sustainable and energy efficient building to BREAAM very good.

Mission Gallery has a special place in the history of Swansea. Mission Gallery want to make it a special place for the arts in Swansea and for the whole of Wales, by both preserving and improving an important building, and by making it a place for 21st century art.

Approach

The design approach has been based on the following principles;

- To sustain and enhance the significance of the listed building.
- To extend the current viable use of the building as an art gallery with its strong educational and social programme, to increase its value to the community, and to address the wider social, cultural, economic and environmental benefits that conservation and extension of the building and its facilities can bring.
- To remove insensitive additions and alterations where possible
- To repair and/or restore key features and characteristics of the original building.
- To extend the building in a sensitive way, respecting the integrity of the original building, with sympathetic use of new materials and construction.
- To reinforce the history and significance of the building by the design and construction of high quality new architecture and design, making a positive contribution to the local character and its distinctiveness.

Context

Mission Gallery, formerly St Nicholas Church Mission to Seamen, was constructed in 1868. It is situated on Gloucester Place in the Maritime Quarter conservation area in Swansea Docks. The conservation area contains a number of notable buildings, many of which are listed.

The listed buildings in the immediate context of Mission Gallery include;

- Pumphouse (LB129) grade II
- 1-6 Gloucester Place (LBs 102-107) grade II
- Industrial and Maritime Museum (LB122) grade II

The history of the area is referred to in the Maritime Quarter Conservation Area (CA: 021) designation as follows;

"The Burrows" as the area was known, was an ancient common of the Burgesses of Swansea which was enclosed under the Townhill and Burroughes Enclosures Act of 1762. After the building of Cambrian Place, The Assembly Rooms, Gloucester Place and Adelaide Street in the 1810's and 1820's the area became the genteel district a "gay resort of fashion" noted for its "good air". Lady Beaconsfield, The Mumtzes and other notabilities kept house for the summer season; the annual Regatta was held in Swansea Bay, races were held on the Burrows Race Course and the Assembly Rooms played host to numerous concerts, balls and entertainment of all kinds. It was here on 28th July 1839 that a grand dinner was held in celebration of the coronation of Queen Victoria together with other civic functions including the celebration breakfast on the occasion of the opening of the South Wales Railway to High Street Station in 1850.

The opening of the North Dock and South Dock in 1859 heralded the end of the fashionable Burrows and for many years seriously retarded the growth of the town as a seaside resort. With the coming of the rail system given direct access to the warehouses and coal hoists, Burrow Square was taken up as a timber yard. The late Victorian and Edwardian periods saw the buildings of most of the dignified brick and stone office buildings which characterise the area today.

The South Dock began to decline in the 1920's and was finally closed to shipping activities by the British Transport Act 1969. Although office use of the area is still high the area saw its worst decline in the 1960's. With the implementation of the first stage of the South Dock Redevelopment many buildings have been given a new lease of life, two ships chandleries have recently opened, justifying the revitalisation of the maritime activities in the Burrows.

St Nicholas Church functioned as a Seaman's Mission from its construction in 1868 until 1919. The early history of the church is part of the history of Swansea docks; the congregation would have been involved in the world wide importation in copper ore, to be smelted and processed in works in the Lower Swansea valley, that earned Swansea the nickname of 'Copperopolis' in the mid nineteenth century when this trade was at its height.

In 1920 St Nicholas Church was sold for use as a warehouse. It was used as a photographic processing laboratory during the 1950s. The works employed 25 people and processed films collected from chemists throughout Swansea and the surrounding towns of Llanelli, Carmarthen and Llandeilo. It was also used as a picture framers in the 60's.

In 1977 Swansea Arts Workshop opened the building as an Art Gallery, adopting the name Mission Gallery in 1992.

The character of the area is strongly identified with its former use as a working Dock and its current revitalisation and regeneration. The docks have changed from a busy working port to a regenerated marina with leisure, housing, restaurants and bars, with museums reflecting the history of the area. Mission Gallery reflects the history of the area and is a strong visual reminder of the importance of faith to the former seafarers and dock workers. It remains part of Swansea Docks and its urban and waterside landscape.

Site

The site is prominent within the conservation area and is bounded by Gloucester Place and its historic residential buildings to the west, Gloucester Place and the listed Pump House building to the south, and the 1980s development Gloucester House to the north, which comprises sheltered residential accommodation. The footprint of Mission Gallery is bounded by a fenced grassed area to its eastern side, and a paved alleyway to the north side, both areas being within the demise of Gloucester House, with some shared use allowed to Mission Gallery.

The visibility and identity of the Gallery are affected by its urban setting. There are good views to and from the Gallery site, including a significant view through to the docks from Gloucester Place by means of the alleyway at the northern end of the building. However the building is physically separated from its wider surroundings and appears somewhat isolated because of the vehicle barrier at the southern end of Gloucester Place which separates it from the marina, the quality of the hard landscaping, lack of a pavement along the edge of the garden, and by the cars which surround it on three sides. CCS do have plans for the renewal of the hard landscaping along the south and western sides of the building, and for restrictions to the allowable car parking along the southern edge and against the garden boundary of the site, which will go some way to improve its setting. Removal of the vehicle barrier to the south and investment in good quality landscaping from Mannheim Quay to Dylan Thomas Square would improve the general character of the pedestrian route along this southern edge from South Dock eastwards and would integrate Mission Gallery into the urban scene. A new landscape concept for Dylan Thomas Square would give it a distinctive identity and connect it to the dockside environments beyond.

The Gloucester House sheltered housing development which was built along the northern boundary of the site during the 1980s strongly influences the character and setting of Mission Gallery. The lease demise of Mission Gallery now stops at the outside face of its external walls, and use of the alleyway, pathways and garden areas by Mission Gallery is by permission of Gloucester House. During the preparation of the planning and listed building consent applications, meetings have been held with the owners and operators of Gloucester House (CCS Housing Department), and the residents. The existing lease will be altered to enable the development to take place. An assessment of the effect on daylight and sunlight has been prepared and negotiations held with regard to shared use of the garden. (See Appendix E)

Building Description

The Mission Gallery occupies the former St Nicholas Church Mission to Seamen on Gloucester Place in Swansea Docks, constructed in 1868 and designed by the Architect Benjamin Bucknall. The building is a Grade II listed freestanding building comprising a single nave with a pitched roof and a curved apse to its southern end. A two storey section with a hipped roof and pitched roof dormer is situated at the northern end, abutting the north gable.

The 1987 CADW listing describes it as follows;

"Plan of apsidal chancel with porch and vestry in angles, taller single nave (now subdivided), west bellcote (partly taken down). Rubble facing, freestone dressing, tarred slate roofs, hipped over chancel, gable parapet with kneelers to nave (cut down stack to rear). Corbel table to eaves of chancel and rear roof. Gloucester Place elevation with replaced windows and modern entry. Assorted additions to north end with brick arched doorway, gabled three-light dormer with diamond tympanum under cusped bargeboards, cut-down buttresses to former bellcote. Interior is largely modernised and retains only boarded, pointed nave ceiling and round chancel arch with chamfered imposts. Group value. "

The building has alterations and additions from various periods. The earlier two storey additions to the north side of the building referred to in the listing are in sympathy with the character of the former church building. The more recent additions comprising a kitchen and a conservatory (late 1980/1990s) which wrap around the north-eastern corner are not.

See Heritage Appraisal / Statement of Significance for further detail.

Policy Context

The scheme has been developed with particular reference to the following policy documents;

City and Council of Swansea - Unitary Development Plan;

Policy EV1 - Design

The policy sets out that new development shall accord with various stated objectives of good design. The proposals take particular account of the need for sensitivity to the local context in terms of scale, height, massing, and materials, the protection of the historic and cultural environment, and the potential impact on neighbouring buildings. The proposals foster inclusive design by ensuring the development allows access to the widest range of people possible, and with due regard to the desirability of preserving the character and setting of the listed building to which the scheme relates.

Policy EV7 - Extensions / Alterations to Listed Buildings

The policy seeks to safeguard (i) the character of the listed building in terms of its scale, design, materials and features which it possesses that are of special architectural or historic interest, and (ii) the historic form and structural integrity of the building. The proposals take especial account of these policy objectives, with the refurbishment works and extension building minimising disturbance to the existing historic fabric, whilst seeking to repair and restore where possible.

Policy EV9 - Conservation Areas

The policy states that 'development within or adjacent to a conservation area will only be permitted if it would preserve or enhance the character or appearance of the conservation area or its setting. 'New development in such locations must also be of a high standard of design, respond to the areas special characteristics, and pay particular regard to various criteria including scale, height and massing, architectural design and detailing, and the use of materials. The policy requires that new development in conservation areas should respect important views, vistas, street scenes, roof-scapes, trees and open spaces and other features that contribute to the character or appearance of the conservation area. The boundary of the conservation area runs along the eastern façade of Mission Gallery. The former church is within the conservation area, the proposed new buildings are outside it, although are within the curtilage of the listed building. Sensitivity to context is a key objective of the design proposals.

Swansea City Centre Strategic Framework Review 2015 – 'Framework for Regeneration and Movement.'

The aim of the Swansea City Centre Strategic Framework Review is to make the City Centre an attractive destination for people to live, work, visit and to provide an exemplar of the new approach to regeneration, post-recession. The City Centre must have a vibrant mix of leisure, cultural, retail, office and residential uses; all delivered in a legible way, with high quality buildings and

public spaces with a sense of place, which promotes local culture, and differentiates Swansea from other cities. The Mission Gallery proposals are in accordance with these objectives, contributing to the regeneration of the historic area, delivering distinctiveness and high quality development, and expanding upon their varied programme of exhibition, education and events.

Community Consultation and Involvement

Public meetings have been held with the immediate neighbours residing in Gloucester House. They have had a chance to make their views, opinions and suggestions known. There are no strong opinions about the interior remodeling but some residents have concerns about the extension. We have taken account of those concerns where it has been possible to do so and in order to address their concerns about security the fences will be replaced with a sturdy replacement as will the gates, as they form the secure boundary of the site and act as a means of escape for the Gallery and the residents of Gloucester House. One additional gate will be added. The garden designs remain in negotiation. Discussions with CCS Landscapes agree to one tree being removed with the remaining carefully lopped to avoid vigorous regrowth.

Conversations have also taken place with occupants of the Dylan Thomas studios, and with the operators of the Pump House Further consultation meetings have taken place with the Museums in the area, including the National Waterfront Museum, the Glynn Vivian Art Gallery, and the Tram Museum, with a view to reviewing opportunities for future collaboration and in the case of the National Waterfront Museum, as a possible temporary home during the construction works.

Design Proposals

The following design principles were developed;

- Single staircase building (save space, define circulation, improve fire exit strategy)
- New staircase to ambulant stair regulations /compliant with Part M/BS8300 (bringing building up to current standards)
- New lift (assume platform lift avoiding motor room and lift pit) allowing disabled access throughout
- New disabled toilet and toilets for staff and public use.
- Extensions to the building along the east side (replacing unsympathetic additions to the NE corner)
- Modifications along the north façade + street signage on glazed canopy
- Remodelling of the lower roof along NE side allow headroom for a new staircase.
- Retention of two levels at first floor as existing.
- New passenger lift to serve both levels at first floor.
- Remodelling of existing dormer window.
- New tower structure.
- Internal reorganisation; Create a flexible, spacious and well lit north end entrance and circulation area with separate access to the first floor, GF and 1st floor toilets, and gallery and retail spaces. Maximise gallery space, allow for more flexibility, utilise movable cabinets for craft display, create permanent niches within the extensions for retail, craft, and bookshop. Instigate a more flexible use of daylight within the major spaces with windows opened up but with facilities for boarding up and blacking out throughout to maintain black box / white box exhibition spaces.

The design seeks to enhance the heritage of the listed building by removing insensitive and unsympathetic alterations, and, where possible, replacing authentic elements and materials.

The design proposals have progressed through many studies, discussions and consultations and have been subject to further discussions, consultations and design amendments as the project has proceeded through the preparation of the detailed planning and listed building consent applications.

The final design proposals show what can be summarised as the maximum change envisaged taking into account the ambitions of the brief, the limitations of altering and extending a listed building, the sensitivities of the site and the concerns of the immediate neighbours, and the target costs.

See Heritage Appraisal / Statement of Significance for further detail.

Movement

The central position of Mission Gallery and its proximity to the historic centre of Swansea means that connections to the existing transport infrastructure are readily available. Mission Gallery can be easily reached by walking or cycling, or by public transport. The central railway station is 15 minutes walk, or five minutes by taxi, with various bus services available.

Car parking is available along Gloucester Place, and larger car parks are within walking distance, with one directly opposite east of the Pump House building. There are no car parking spaces dedicated for staff or visitors to Mission Gallery along Gloucester Place or within the adjacent car park. With regards to servicing and deliveries, Mission Gallery currently utilizes space outside the Gallery for short term parking for deliveries and this will be continued.

Access

The project has been designed with the principles of universal access and inclusive design in mind as far as is possible within the constraints of the listed building, ensuring ease of access for all.

The site has three points of access and egress, via gates to the west, east and south. All three have level access directly from the pavement level into the site. The gates also act as security gates for the garden between Mission Gallery and Gloucester House, and as means of escape in case of fire in either building.

The works to the inside the building do not represent a material change of use so do not require the wholesale upgrading of the building to comply with The Building Regulations Approved Document Part M; it was a Church and is now a Gallery with a first floor area for educational use; both the existing and the new use is defined as Assembly and Recreational so no material change of use has occurred. As a result of the exemptions in the application of Approved Document M there is no requirement under the building regulations to provide access to any area other than the extension. A lift therefore is not strictly required under the building regulations, however the Equality Act 2010 and the Equality (Disability) Regulations 2010 requires service providers to make reasonable adjustments to any physical features that might put a person with a disability at a "substantial disadvantage". Additional adjustments therefore are to be made to the building that fall outside and beyond the Approved Documents M guidance envelope including the disabled WC and lift to the first floor.

Retention of the existing entrance on the west façade was considered. The current arrangement includes sharp local raising of the pavement level immediately outside the door threshold. The visitor needs to step over a raised door threshold to the ground floor level on the interior. To seek to comply anywhere near Building Regulations standards, a much longer approach ramp would be required outside the building to reach the door threshold level. Lowering the ground floor to the original level would prevent level access to the apse, which is a solid floor, built originally at the higher level but which is now consistent with the current ground floor level. There would also be water penetration problems within a lowered entrance doorway, as the pavement has been raised above its original level around the west and southern sides of the building, level with or above the slate damp proof course. The design options are summarised on drawings contained within this report.

The new main entrance to Mission Gallery is relocated to the north facade, on the north/south axis of the Church. Access is gained via new entrance gates on the Gloucester Place side of the alleyway between Mission Gallery and Gloucester House. A new ramp provides disabled access and level entry into the building. Review with Building Control has established that the ramp will be required to follow design recommendations under Approved Documents Part M and K of the Building Regulations, but with some accommodation with regard to the setting of the historic listed building setting, and the limited space available. It has been agreed that the ramp will have a balustrade, on one side only, away from the listed façade. A single rail and kickplate is acceptable, the latter forming the string to the stone topped concrete ramp.

The rationale for the repositioning of the entrance is both pragmatic and architectural; to allow a ramp and level entry via automatic doors into the building enabling universal access, to comply with Part M of the Building Regulations and the Disability Discrimination Act; to allow protected fire lobbies and access to a new single ambulant AD Part M staircase in the building and compliance with current fire regulations and Part B of the Building Regulations with regard to Means of Escape; and to recreate a sense of drama as you enter on axis with the former nave with a view towards the chancel / apse.

The current main entrance occupies the large opening to the west facade which was made in 1920 when it was converted to a warehouse. This opening does not have a level entry which complies with Part M but will be kept within the scheme and act as a secondary delivery route for artworks entering the building.

Within the remodelled interior of the building, access is improved by means of a new ambulant staircase (as above) within the new extension, and by the insertion of a new platform lift which will give access to all levels of the building, and the addition of three unisex toilets within the fabric of the existing building, one of which is a fully disabled accessible toilet. Enhanced facilities for the disabled including induction hearing loop systems, disabled call systems, disabled refuge call systems, accessible reception desk and tea point, and so on will be incorporated into the detailed fit out proposals.

The design solution has been arrived at by a rigorous assessment of design options which have been tabled with the client and with CCS and their Historic Buildings Officer, Building Control, and the consultant design team. The priority has been to maximise the opportunity for universal access, and this we believe has been achieved with the minimum of disturbance to the fabric of the existing building. The designs have a robust character which will allow flexibility and a change of use if this is required in the future, whether as an Assembly building other use.

See justification statements and associated diagrams within the Architectural Drawings section - Appendix B

Character

External alterations and additions to the building follow a design strategy which enhances the heritage of the listed building by removing insensitive and unsympathetic alterations, and, where possible, replacing authentic elements and materials. New additions take their cue from the simple forms and restrained colour of the existing building, whilst quietly expressing their identity with the use of new materials.

The designs respond to ;

- The character of the listed church building and its historical importance in the area
- The varied townscape scale and character of the locality
- The proximity of the existing buildings towards the north
- The building line along the street and the opening up of the site and its garden towards the east.

The layout, position and massing of the new extension buildings follows an ecclesiastical model as inspiration by the placement of four 'chapel' buildings along its eastern face, with a new cloister along the existing stone wall. The character suggests reinforcement of its identity as a church. The materials and placement of solid and void confirms its identity as a Gallery.

The garden is developed as a newly landscaped private space shared by the Gallery and by Gloucester House residents. A sturdy new fence and gates allows views through but reinforces the character of a secure place of quiet contemplation.

Layout

The Design Brief issued by Mission Gallery set out the requirement for the expansion of current facilities including office, education and retail; addition of a staff/meeting room, bookshop, storage and toilet facilities; the improvement of facilities such as the exhibition space and the flexibility of the first floor education space; renewal of building services, IT and security (to achieve a sustainable and energy efficient building to BREEAM very good standard), and most importantly, modifications to the building which achieved access for all.

The insertion of an accessible staircase, lift and disabled accessible toilet comprise the fundamental components of the refurbishment, considered necessary to allow universal access and successful funding applications. The first design options looked at inserting these elements into the existing structure with minimal impact on the fabric but the result would be an overall loss of usable floor area which would compromise the function of the Gallery.

To achieve the brief, the Gallery must extend its usable floor area. Mission Gallery's lease perimeter is the outside face of the external wall of the existing building, which abuts the pavement on its southern and western elevations, the alleyway between Mission Gallery and Gloucester House to the north, and the garden towards the east. An extension is proposed towards the east, replacing the existing unsympathetic 1980s extensions with a single storey extension and a staircase which allows access to the first floor, north of the 1868 gable wall.

The extension building line is broken down into curved chapel forms which converge in plan from the largest staircase volume to the smaller exhibition volume in the south. The undulating wall breaks down the mass, defines the separate character and activity within, whilst being sensitive to the context of the existing building.

The remodeling and refurbishment of the interior spaces follows the design principles referred to above; a single disabled accessible staircase and a new entrance at the northern end allowing separate access to the first floor, GF and 1st floor toilets, and gallery and retail spaces. The rationalisation of gallery space, increased flexibility, movable cabinets for craft display, and permanent niches within the extensions for retail, craft, and bookshop. More flexible use of daylight within the major spaces with windows opened up but with facilities for boarding up and blacking out throughout to maintain black box / white box exhibition spaces. The reorganisation of the interior addresses the separate and simultaneous use of the educational, art and staff facilities whilst complying with current fire, means of escape and accessibility standards.

Scale

The proposals are sensitive to the scale of the existing building and its context.

The largest part of the extension contains the new accessible staircase, with the remainder tapering in plan towards the southern chancel end. The enclosure of the staircase is curved on plan and in section, following the optimum setting out, in order to minimise its volume and to alleviate the impact on its neighbours and their outlook and quality of light. The staircase volume connects north of the 1868 gable wall, avoiding any intrusion into the eaves line of the listed building.

The new extension buildings south of the staircase volume abut the eastern façade of the existing building and slope gently towards the garden. The roof of the extension connects underneath the existing stone gutter brackets of the 1868 building, maintaining its quality of expression and the continuity of the existing eaves line.

These setting out principles control the scale and the height of the building relative to the existing listed building.

The proposed tower, a zinc clad steel structure sited on the remnants of the former tower piers on the outer face of the north gable, is proposed as approximately 12metres high. The rationale for the height has been carefully studied and is presented in contextual elevations and sections and long range urban design renderings of the context. The original tower of St Nicholas Church to Mission Seamen was prominent in the locality before the church was damaged in the blitz in WWII, and the tower demolished. New buildings have since been erected which are higher than the church. The proposed new tower is not as high as it was originally but allows the building to reassert itself within the urban scene, its apex marginally higher than the neighbouring Gloucester House, and just visible above the horizon when viewed from the docks to the east.

Appearance

A significant part of the project is concerned with the remodeling and refurbishment of the interior spaces. On the exterior, the strategy is for the existing building to be repaired, features restored where possible, and the stonework cleaned and repointed. The slate roof is to be stripped and renovated. Lead work replaced. The windows to the former church building (replaced during the 1980s) are to be replaced with slim-fit glazed units in painted W20 type galvanized mild steel frames. Existing signage is to be removed.

The new extensions east of the existing building respect the integrity of the main nave and eaves to the main body of the former Church. The new building work is proposed as a timber frame structure clad with dark grey pre-patinated zinc alloy and glass. The colour preference is for an understated dark grey colour which will subtly express its contemporary character in relation to the existing building rather than a strongly assertive expression of its colour and form. The external face of the zinc facades are suggested as decoratively perforated across the windows and single set of double doors which face east towards the garden, ensuring privacy in each direction.

The proposed tower situated to the north, in the same place as the former bell tower, is proposed as a zinc clad spire, making reference to the history of the building as a Church, and its former bell tower demolished after the Swansea blitz in World War II. The cladding of the tower is also proposed as dark grey, matching the zinc cladding elsewhere on the project, providing a strong symbol of the building and its identity as an Art Gallery.

Stainless steel is proposed to the entrance gate signage, with three dimensional back lit letters announcing the Gallery at street level. The finish to this lettering is proposed as satin polished.

External lighting for the project is subtle throughout with generally low level fittings providing safety and security lighting. Scope for occasional celebratory lighting by artists to the tower structure is under consideration.

See Heritage Appraisal / Statement of Significance for further detail.

Garden, Landscape and Ecology

The garden will have a simple landscape scheme, to reflect the potential of its shared use with the residents of Gloucester House. The garden is a private facility with gates and a perimeter fence, but simply designed and not so high as to appear forbidding or inappropriate to its churchyard character, which encourages views into the space and outwards from within the garden and the buildings that enclose it.

In discussion with the CCS Landscape Design Officer, it has been agreed that one existing maple is to be felled. The other two trees are to be carefully lopped. The existing grassed area is to be developed with a mixture of hard and soft landscaping, low level lighting and seating. The area will be able to be used as a place of quiet contemplation, with the possibility of the periodic display of art and occasional gatherings during the year. The primary use will remain as a private garden for the residents of Gloucester House, and visitors to the Gallery, with permission.

Discussions have taken place with the CCS Ecology Officer. As the roof of the main building will be taken off and refurbished, surveys will be undertaken to ascertain whether bats are occupying the roof. A method statement will be prepared with instructions as to how the slates should be removed in order to avoid damaging the bats if they are there, what will be done if bats or evidence of bat use is found and instructions given to those doing the work.

Design Evolution

The design proposals which concluded the feasibility stage during 2014 were the result of many studies, discussions and consultations. The proposals have been subject to further discussions, consultations and design amendments as the project has proceeded through RIBA Stage D towards a detailed planning and listed building consent application.

The final design proposals show what can be summarised as the maximum change envisaged taking into account the ambitions of the brief, the limitations of altering and extending a listed building, the sensitivities of the site and the concerns of the immediate neighbours, and the target costs.

Justification statements and diagrams with regard to the design and location of principal elements of the proposed extension and refurbishment works are summarised in the Architectural Drawings and related text enclosed (Appendix B.)

Community Safety

Mission Gallery is built up to the edge of the pavement on its west and southern sides, with a private garden toward the east. The garden is not a public facility but occasional use by the Gallery and its visitors is under discussion. The garden is readily supervised from Gloucester House and the Gallery building by means of the screened full height windows and doors which overlook it. Pedestrian circulation by residents of Gloucester House is frequent will continue. Added security including lockable security gates, and low level lighting for safety and security will be incorporated into the proposals.

The fence to the garden is being rebuilt to a higher level (1400mm), but will remain simple and open in character in order to retain a view of the street scene and to maintain its churchyard character. During the design development phase, South Wales Police were consulted with reference to Secure by Design. The recommendations are enclosed in Appendix G. It can be seen that it will be difficult to incorporate all of these recommendations owing to its status as a historic listed building. It does not seem right to build a security fence 2 metres high around the garden, nor does it seem necessary given the low level of crime in this area and the amount of supervision from the two separate buildings which overlook it. The lighting needs to be subtle and not floodlit, commensurate with its context as a residential and gallery environment, and should avoid new fixings for CCTV on the face of the listed structure.

Public Art

An artist will be employed on the project to develop specialist items of furniture and display cases within the building.

Surveys

Measured Survey Drawings of the existing site and Mission Gallery building have been undertaken – (see Appendix A)

Further survey work has been undertaken - preliminary asbestos survey in respect of initial opening up works, and drainage.

Daylight and Sunlight Analysis

A Daylight and Sunlight Simulation Analysis in respect of adjoining buildings was commissioned during preparation of the designs. The purpose of the report was to determine if the proposed extension and new tower at Mission Gallery complied with the planning recommendations for daylight and sunlight availability levels at the critical adjacent residential buildings, namely Gloucester House, and residential buildings on Gloucester Place and the Marina. The study is based on the recommendations set down in the BRE report 209, Site layout planning for daylight and sunlight a guide to good practice.

Overall, the results show that the proposed extension and new church spire satisfies the BRE requirements for daylight and sunlight, and complies with policy EV1 of the City and County of Swansea Unitary Development Plan.

The study found that only one window; W34, was affected in terms of daylight reduction in excess of the allowable standards. Although this window falls slightly short of the recommended BRE targets, it was thought that this was still within acceptable limits given that the predicted vertical sky component for this window is 20.6, which is still a good level of daylight, and the fact that the room function is a kitchen, not a living room, where daylight levels are less critical.

(See Report on Daylight and Sunlight Simulation Analysis - Appendix E)

Procurement

The building project work will be procured by means of a traditional tender, with drawings and specifications and schedules of work. This is important in order to retain control over design quality and to keep an eye on expenditure, especially within the context of work to a listed building.

Environmental Sustainability

The project is being designed and assessed in accordance with BREEAM UK Non-Domestic Refurbishment and Fit Out 2014 standards with a target of a 'Very Good' rating. A pre-assessment has been carried out during Stage D and has surpassed the required threshold to achieve this rating. The design team and the Breeam Assessor will continue to monitor the project through the detail design and construction stage.

The Mission Gallery project is designed to achieve BREEAM 'Very Good' certification, as this is a requirement of the grant funding body. This BREEAM 'Refurbishment and Fit-out' Assessment relates to both the existing building and proposed extension. The assessment process takes an holistic approach to the sustainability issues relating to the development; this includes issues such as the health and wellbeing of building users, water and energy consumption, the environmental impact of construction materials, access to public transport etc. The BREEAM assessment process uses a credits based approach to give a measurement of a development's sustainability, which enables the designers to target those credits that are most suitable to the requirements of this specific development. In this instance, the overall assessment performance will be enhanced by the retention of the existing building structure. Conversely, the development is unlikely to have the available external space to provide the necessary cyclist facilities to enable that specific credit to be awarded. To achieve the 'Very Good' certification, the design team will demonstrate that an overall assessment score of ≥55% will be achieved. The details of the targeted BREEAM credits are provided within the BREEAM Pre-assessment Report, produced by Melin Consultants, dated 16th March 2015.

See the BREEAM Pre-Assessment Summary Report (Appendix F) for further details.



MISSION GALLERY, SWANSEA

Heritage Appraisal and Statement of Significance Proposed refurbishment and redevelopment of Mission Gallery, Swansea

20150731_FINAL

Contents

Introduction

General Description

Heritage Appraisal and Statement of Significance

Design Proposals



Introduction

Purpose and Format

This appraisal has been prepared in connection with the proposed refurbishment and extensions to the former St Nicholas Church Mission to Seamen on Gloucester Place, in Swansea Docks, constructed in 1868. The building has been in use as an Art Gallery since 1977, and known as Mission Gallery since 1992.

The purpose of the appraisal is to assess the significance of the listed building and how this significance might be affected by the planned changes. The document has been prepared in accordance with the general guidelines set out in the CADW publication 'Conservation Principles for the sustainable management of the historic environment in Wales.'

Author

Peter Clash of Clash Associates Ltd Architects is the author of the report, in association with Michael Nixon and Elizabeth Perkins of MN Arts Associates. Clash Associates is the Architect for the proposed works.

Methods of Research and Investigation

Inspections of the site have been carried out during the period from October 2013 until April 2015, in order to ascertain its character and physical nature. Background research has also been conducted in order to ascertain historical / contextual matters with regard to the history of the building and its site.

The scope of the appraisal has been developed in liason with Stephen Smith, Historic Buildings Officer at City and Council of Swansea.



General Description

Site Location

Mission Gallery is situated on Gloucester Place in the Maritime Quarter conservation area in Swansea Docks. The conservation area contains a number of notable buildings, many of which are listed, including the houses along Gloucester Place. The character of the area is strongly identified with its former use as a working Dock and its current revitalisation and regeneration.

Site Description

The site is prominent within the conservation area and is bounded by the road named Gloucester Place and its historic residential buildings to the west, Pump House to the south, and the 1980s development Gloucester House to the north, which comprises sheltered residential accommodation. The footprint of Mission Gallery is bounded by a fenced grassed area to its eastern side, and a paved alleyway to the north side, both areas being within the demise of Gloucester House, with some shared use allowed to Mission Gallery.

Building Description

The building is a freestanding former church building comprising a single nave with a pitched roof and a curved apse to its southern end. A two storey section with a hipped roof and pitched roof dormer is situated at the northern end, abutting the north gable. The building has alterations and additions from various periods. The building is listed Grade II.

Heritage Appraisal and Statement of Significance

Historical value

St Nicholas Church functioned as a Seaman's Mission between 1868 and 1919, although a further Mission building was opened near the New Cut Bridge in 1905.

The early history of the church is part of the history of Swansea docks; the congregation would have been involved in the world wide importation in copper ore, to be smelted and processed in works in the Lower Swansea valley, that earned Swansea the nickname of 'Copperopolis' in the mid nineteenth century when this trade was at its height.

In 1920 St Nicholas Church was sold for use as a warehouse, and the New Cut Bridge building became the principal Seamen's Mission for the Port of Swansea.

Nothing is known of the first thirty years of its use as a warehouse but records exist of St Nicholas Church being used as a photographic processing laboratory during the 1950s, run by the Thompson Brothers, a Cardiff firm. The works employed 25 people and processed films which were collected from chemists throughout Swansea and the surrounding towns of Llanelli, Carmarthen and Llandeilo. Artists working at the Gallery have also identified its use as a picture framers in the 60's.

In 1977 Swansea Arts Workshop opened the building as an Art Gallery, subsequently adopting the name Mission Gallery. A 30 year lease was signed with City and Council of Swansea in 2012. Arts Council Wales funding for the remedial repair and development of the 1st floor into a dedicated exhibition space was granted in the same year.

Alterations and additions to the building were carried out during the 1980-1990 period. Notable additions include the remodelling of the large opening made in 1920 on conversion to a warehouse. These comprise new glazed entrance doors 'with Portland stone and bronze inserts, with bronze cherubs marking the entrance, where an outline of Dibutade emphasises one of the mythological sources of drawing and painting' - by the contemporary local architect Robin Campbell, who played a key role in the regeneration of the dock area during the 1990s.

Evidential value

The Mission Gallery occupies the former St Nicholas Church Mission to Seamen on Gloucester Place in Swansea Docks, constructed in 1868. The building is listed Grade II. The 1987 CADW listing describes it as follows;

"Plan of apsidal chancel with porch and vestry in angles, taller single nave (now subdivided), west bellcote (partly taken down). Rubble facing, freestone dressing, tarred slate roofs, hipped over chancel, gable parapet with kneelers to nave (cut down stack to rear). Corbel table to eaves of chancel and rear roof. Gloucester Place elevation with replaced windows and modern entry. Assorted additions to north end with brick arched doorway, gabled three-light dormer with diamond tympanum under cusped bargeboards, cut-down buttresses to former bellcote. Interior is largely modernised and retains only boarded, pointed nave ceiling and round chancel arch with chamfered imposts. Group value. "

The building was designed by Benjamin Bucknall, in a Late Romanesque style, a style widely in use for Welsh chapels at this time. A reference article from 'The Builder' dated 16th December 1868 describes it as ' of Norman style ... a plain building ...(which) will accommodate 300 people, and the entire cost of erection, including internal fittings, is about £925.00.'.

The building has alterations and additions from various periods. The earlier additions to the north side of the building referred to in the listing are in sympathy with the character of the former church building. The more recent additions comprising a kitchen and a conservatory (late 1980/1990s) which wrap around the north-eastern corner are not.

Exterior

The original slate roof, which was later tarred, was replaced in the 1980/90's refurbishment with new slates (source to be confirmed) matching the original pattern and pitch, with lead flashings and terracotta tiles and vents along the ridge. The addition of a roof light on the western side and a large dormer window to the east side have a negative impact upon the architectural integrity of the building.

The walls of chancel, porch and vestry are as original with the exception of the porch doorway on to Gloucester Place, which has been blocked with matching stone rubble with a small opening. (need to check date of blocking from planning permissions). Modern signage banners for the Gallery have been fixed to the Gloucester-Place elevation of the nave and chancel and around to the eastern side of the nave, which does little to enhance the architectural value of the building.

The nave of the original building had four high arched freestone dressed window openings to each side of the nave. The original window frames and glass (design unknown) have been replaced by crude hardwood frames with single panes of clear glass. Two window openings survive on the west facade towards the chancel but the other two on this side have been removed and the wall taken down between them to create a wide full height entrance with bullnose brick reveals (probably done in 1920 when the building was converted to a warehouse.) The 1980/90s refurbishment added contemporary glazed double doors and modern infill with signage. The brick reveals were probably painted matt black at this time.

On the eastern side three original window surrounds survive and the top of the fourth, which has been opened out below to form an entrance into the new addition. The stone window surrounds from the western facade appear to have been reused in the new addition to the north-east kitchen extension. Any new alterations should endeavour to incorporate these original features.

Original stone gutters and decorative freestone brackets survive around the chancel and along the eastern side of the nave. The stone gutter has been removed from the western side of the nave and replaced by a simple cast iron gutter, although the remnants of the brackets remain, cut flush with the rubble façade. There is an opportunity to restore this important feature during the refurbishment of the building.

The north end of the building is the most altered area of the church. It originally had a buttressed bell tower rising from the nave roof with double arched openings to north and south with a slender central pillar, and single arched openings to west and east. Above the openings was a tall pyramidal slate roof topped with three metal finials, set on a corbelled stone cornice. The bell tower, which was a landmark feature, was apparently damaged during bombing of Swansea Docks in WWII and taken down shortly afterwards, leaving two capped buttresses on the north end of the nave. The gabled parapets were extended up to match the chancel parapets and the roof extended over where the tower had been. The north-eastern gable parapet has an integral stone chimney incorporated within it which (although currently the source of a leak) is a unique feature which should be repaired/restored during the proposed refurbishment works.

The original entrance arrangement to the church is uncertain. The brick arched doorway on the western face of the northern extension appears in the photograph of 1910 so this may have formed the primary entrance for at least 80 years, but the original entrance is likely to have been in dressed stone matching all the other original openings. The north facing rubble stone façade of the addition itself appears to have been altered, evident from detailed photographs showing different stone sizes and coursing indicating the addition of the first floor at a later date. There is no evidence of former entrance doors on axis with the Church.

The rendered extension to the eastern end of the northern extension and the glazed conservatory facing on to the gardens to the east were added in the 1990's and do not add aesthetically to the building or its form.

Interior

The interior has been considerably altered as the building has changed use but the southern end of the nave retains its original volume with its high pointed timber panelled ceiling. The nave walls are permanently lined with plywood up to eaves level covering the nave windows although the painted rubble walls are visible on the gable wall.

The sub-floor of the building is concrete and varies in level. It is not known if this is original or at what time the concrete finish may date from. There may be a stone floor underneath the concrete finish. The chancel has the highest concrete floor level and forms the finished floor level. The level of the concrete sub-floor in the nave is lower than the level of the concrete floor to the chancel. This is likely to reflect the original difference in levels between the nave and the chancel. The difference in level is 155-165mm although inspection hatch No 1 gives a figure of 232mm. The nave has a suspended timber floor with 20mm thick timber floor boards spanning between timber joists which are supported on brick packers. The boards are painted and are in poor condition. The finished floor level is 5-10mm below the level of the finished concrete floor to the chancel. The area to the north of the nave (probably not original but completed prior to 1910) has a concrete sub floor which is at a similar level to that of the nave. The floor finish is carpet on Weyrock boarding on timber floor joists which bear directly onto the concrete slab below. The reduced sub floor level of the nave and the area to the north are similar to the external garden level. The external pavement levels to the west may have been built up to match the raised finished floor level of the nave.

The chancel retains its original volume with rendered walls and its original flat timber panelled ceiling. The original archways through to the vestry and porch remain intact but the inner porch archway has been filled in and a door added to make a store. (The outer porch opening was probably filled in with a rubble wall at the same time.) The porch also has evidence of a door opening which gave access directly into the nave which has been filled in with blockwork.

In the northern half of the nave the space has been divided horizontally and vertically with the enclosure of an expanded mezzanine level. It is probable that a mezzanine level formed part of the original building, acting as an upper gallery, however the extent would have been roughly half of its current footprint, up to the line of the beam situated east/west at this point. The doubling of the mezzanine area with an enclosing wall over two storeys high (probably done during the 1980/90s refurbishment works) bisects the volume of the nave and fundamentally changes the character of the interior. A (recent) horizontal slit window (made of Perspex) has been cut into the upper part of the enclosing wall but does nothing to visually connect the new room to the volume of the original interior space beyond.

On the ground floor the space is used for crafts sales and reception and has few original features. The opening below the fourth window on the eastern facade allows access to the 1990's extension which has a toilet, kitchen and bookshop/retail area. The mezzanine on the upper level is used as an education room. There are two staircases to this level. One is situated adjacent to the north-western entrance porch (this may have been the original way up to this level) and the second stair (which appears much later and was probably constructed during the 1980/90s refurbishment works) gives access directly from the gallery space along the east wall.

The timber ceiling above the mezzanine floor has a white painted boarded ceiling built below it (constructed during the 1980/90s refurbishment works.) The installation of the dormer window (1980/90s) exposes the curved timber knee braces and rafters of the original roof structure. The dormer is single glazed within timber framed windows and is in poor condition.

The gable to the northern wall of the education room has an arched opening which would have formed part of the lower section of the original bell tower structure.—The offices and service areas on the ground and first floors are later additions. Within the office / cupboard / toilet areas on each side of the tower piers there are chamfered stone dressings to the original openings.

Sources of information

- West Glamorgan archive service records for St Nicholas Church 1865 1920
- <u>www.swanseadocks.co.uk</u> Photograph of St Nicholas c 1920 under south dock.
- Peter Clash Feasibility study Architectural report 2014
- Detailed measured survey drawings and site investigation / structural survey work in order to assist in the assessment of the design options and alternatives for restoration, remodelling and extension works.
- The Structural Survey Report and the 2011 Schedule of Condition briefly describe the condition of fabric of the building.
- Hafod-Morfa Copperworks Interpretation plan Professor Huw Bowen for the Cu @ Swansea Project September 2013
- Glamorgan and Gwent Archaeological Trust

- Royal Institute of British Architects Library
- Geological Maps
- Aerial Photographs

Aesthetic value

The aesthetic value of the building lies in its simple strong forms and the use of high quality contrasting building materials. Surrounded by utilitarian brick industrial buildings and a mix of old and new residential properties the form and materials of the Mission Gallery mark it out as a building of architectural significance.

When built the building was part of the dense industrial fabric of Swansea Docks during the second half of the 19th century. Historical reference drawings show the Great Western Railway infrastructure extending through the docks at that time, with goods yards and the now demolished Victoria Station west of the houses on Gloucester Place. Branch lines ran alongside the eastern façade of St Nicholas Church, serving the wharfs on Half Tide Basin and the Ship Building Engineering Works beyond.

Prior to this, (according to the Maritime Quarter Conservation Area No CA:021 reference notes) the area was known as 'The Burrows', an ancient common of the Burgesses of Swansea which was enclosed under the Townhill and Burroughes Enclosures Act of 1762. After the building of Cambrian Place, The Assembly Rooms, Gloucester Place and Adelaide Street in the 1810s and 1820s the areas became the genteel district a 'gay resort of fashion' noted for its 'good air'. The North and South Dock opened in 1859. The late Victorian and Edwardian periods saw the building of most of the brick and stone buildings which characterise the area today. The docks were closed to shipping activities in 1969.

The Mission Gallery building remains a part of Swansea Docks and its urban and waterside landscape. The docks have changed from a busy working port to a regenerated marina with leisure, housing, restaurants and bars, with museums reflecting the history of the area. The Gallery remains as a strong visual reminder of the importance of faith to the former seafarers and dock workers.

The regeneration of the building through new use over the last 150 years parallels the changing nature of the docks during this period and is testament to the flexibility and robustness of historic buildings and their potential to be transformed, whilst retaining their character and importance. Mission Gallery however did lose its bell tower during the blitz in WWII and the building suffers from the lack of its historic vertical emphasis and therefore significance in the street scene

The buildings proximity to the docks is still a key feature of the building and its history, but despite good views to and from the Gallery site the visibility and identity of the building are affected by its urban setting. It appears marooned because of the vehicle barrier at the southern end of Gloucester Place which separates it from the marina, by the hard landscaping and lack of a pavement along the edge of the garden, and by the cars which surround it on three sides. The City Council of Swansea (CCS) have identified the parking as an issue and have indicated that they are considering removing the car parking along the southern edge of the garden to the east of Mission Gallery.

Removal of the vehicle barrier to the south and investment in good quality landscaping from Mannheim Quay to Dylan Thomas Square would improve the general character of the pedestrian route along this southern edge from South Dock eastwards and would integrate Mission Gallery into the urban scene. A new landscape concept for Dylan Thomas Square would give it a distinctive identity and connect it to the dockside environments beyond.

The context of the building has also been affected by the tall housing development built along the northern boundary of the Mission Gallery site during the 1970 or 1980s. This blocks the view of the Gallery from the northern end of Gloucester Place and overshadows the building to the south where the façade of this building faces directly onto Mission Gallery and its immediate site. This combined with the removal of the original tower has reduced the original prominence of the building. In re-establish that importance within the streetscape it is proposed to reintroduce a tower structure.

Communal value

St Nicholas was built to replace a temporary Episcopalian mission which was established in Swansea in the early 1860's. Between 1868 and 1905 St Nicholas Church was the principal Mission in the docks area providing Christian spiritual guidance and comfort for the many seafarers working from the docks of Swansea. It would have been a focal point for thanksgiving for safe passage across the sea to distant parts of the world but it was also a place where weddings and baptisms took place.

After the Mission transferred to New Cut Place the building lost its public use and became a working building for the storage of goods moving in and out of the docks and latterly a photographic workshop and a picture framers.

For a while before its use as a gallery there are records of the building being used as a community space. Old press cuttings indicated that several times a year, people living in the area would meet here and discuss thoughts, ideas, and creative endeavours etc.

In 1977 Swansea Arts Workshop opened the building as an Art Gallery and the building regained its public value as a venue where people can come to be inspired, educated and gather for arts events and activities. The gallery has now 25,000 visitors a year and the proposed works would increase that number to around 37,000 per annum. The Gallery is also important to artists and craftspeople who exhibit and sell their work there as it generates both profile and income for them.

As a venue based in one of the poorest wards in the City the Mission Gallery plays an important role in working with disadvantaged groups of children, young people and adults. Engagement and participation has always been at the core of Mission Gallery's existence. In the early days there are stories of artists invigilating their own exhibitions and inviting the homeless in the area to keep warm by the heaters. The Gallery is determined to build on this type of work in developing the gallery for the future.

Statement of Significance

Built in 1868, the Mission Gallery is a modest church in late Romanesque style, whose character is defined by its strong simple forms and high quality contrasting building materials which contrast with the surrounding utilitarian buildings. The southern end of the nave and the chancel are the best preserved areas of the building, whilst the northern section has been subject to major changes, including the loss of the bell tower, subdivision of the nave into two floors and extension to the north and to the east. The date of the extension to the north is uncertain. The ground floor was built first and may be part of the original fabric from 1868, with the first floor added later, probably before 1910, extending the church northwards the full width of the nave. It is generally in character with the original design, but the later extensions to the north east corner are insensitive to the design of the building.

The building forms an important part of the history of Swansea docks and is part of a national network of Seamen's Missions that were set up from the 1850's. Its survival has depended on the building being able to adapt to new uses and users. The changes to the building reflect the changing nature of the area from the early days when the docks were thriving, through their decline and subsequent regeneration. Throughout its life the building has been at the heart of its community whether as a place of worship, work or creativity.

Design Proposals

The analysis and understanding of the significance of the building has informed the approach developed in the design proposals in the following ways;

- An intention to avoid harm to the building.
- A strategy to sustain and enhance the significance of the building.
- A strategy to extend the current viable use of the building as an art gallery with a strong educational and social programme, to increase its value to the community, and to address the wider social, cultural, economic and environmental benefits that conservation and extension can bring.
- A strategy to remove insensitive additions and alterations where possible.
- An intention to repair and /or restore key features and characteristics of the original building.
- A strategy to extend the building in a sensitive way, respecting the integrity of the original building, with sympathetic use of new materials and construction.
- A strategy to build upon the history and significance of the building by the design and construction of high quality new architecture and design, making a positive contribution to the local character and distinctiveness.

The Design Brief issued by Mission Gallery set out the requirement for the expansion of current facilities including office, education and retail; addition of a staff/meeting room, bookshop, storage and toilet facilities; the improvement of facilities such as the exhibition space and the flexibility of the first floor education space; renewal of building services, IT and security (to achieve a sustainable and energy efficient building to BREEAM very good standard), and most importantly, modifications to the building which achieved access for all.

The design proposals were developed during 2014 through RIBA Stages C (Feasibility Study and Outline Design), and in 2015 through RIBA Stage D (Design Development), in preparation for detailed planning and listed building consent applications in May 2015.

Design Proposals

The following design principles were developed;

Design Proposals

The following design principles were developed;

- Single staircase building (save space, define circulation, improve fire exit strategy)
- New staircase to ambulant stair regulations /compliant with Part M/BS8300 (bringing building up to current standards)
- · New lift (assume platform lift avoiding motor room and lift pit) allowing disabled access throughout
- New disabled toilet and toilets for staff and public use.
- Extensions to the building along the east side (replacing unsympathetic additions to the NE corner)
- Modifications along the north façade + street signage on glazed canopy
- Remodelling of the lower roof along NE side allow headroom for a new staircase.
- Retention of two levels at first floor as existing.
- New passenger lift to serve both levels at first floor.
- Remodelling of existing dormer window.
- New tower structure.
- Internal reorganisation; Create a flexible, spacious and well lit north end entrance and circulation area with separate access to the first floor, GF and 1st floor toilets, and gallery and retail spaces. Maximise gallery space, allow for more flexibility, utilise movable cabinets for craft display, create permanent niches within the extensions for retail, craft, and bookshop. Instigate a more flexible use of daylight within the major spaces with windows opened up but with facilities for boarding up and blacking out throughout to maintain black box / white box exhibition spaces.

Rationale for changes

The insertion of an accessible staircase, lift and disabled wc comprise the fundamental components of the refurbishment, considered necessary to allow universal access and successful funding applications. The first design option looked at inserting these elements into the existing structure with minimal impact on the fabric but the result would be an overall loss of usable floor area which would compromise the function of the Gallery.

To achieve the brief, the Gallery must be able to extend its usable floor area. In order to minimise the impact on the listed building, this should occur primarily towards the east, replacing the existing unsympathetic extensions, with a lightweight structure towards the north, into the alleyway between the listed building and Gloucester House. There is an opportunity here to reinstate the assumed original entry to the building, working with a part of the facade which has itself been subject to various alterations over time.

Mission Gallery's lease perimeter is the outside face of the external wall of the existing building. Negotiation with CCS (the landowner of MG, and the adjoining Gloucester House) will be necessary to consider this expansion.

The design seeks to enhance the heritage of the listed building by removing insensitive and unsympathetic alterations, and, where possible, replacing authentic elements and materials. For example, consideration will be given to the restoration of stone guttering and brackets to the west facade and if the current slates are found to be of foreign extraction, they will be replaced with Welsh slate, subject to funding.

Preliminary design sketches showed the progression as follows;

Various options were studied for the occupation of the garden towards the east, and the alleyway towards the north, in accordance with the spatial needs of the brief. Expansion into the garden is a sensitive issue, owing to the windows of the residences which have an outlook on to this space. Building into the alleyway with an enclosed entrance space does not have the same constraints but underground services (Virgin Media) were identified in this location during the services searches. Options for a vertical feature to replace the bell tower were tabled. Options for internal reorganisation and the incorporation of new facilities were developed in accordance with the varied external alterations.

The 'final' design option shows what can be summarised as the 'maximum' change envisaged taking into account the ambitions of the brief, the limitations of altering and extending a listed building, the sensitivities of the site and the concerns of the immediate neighbours, and the target costs.

Description of 'Final' Design Proposals

The design proposals which concluded the feasibility stage during 2014 were the result of many studies, discussions and consultations. The proposals have been subject to further discussions, consultations and design amendments as the project has proceeded through RIBA Stage D towards a detailed planning application.

The 'final' design proposals can be summarised as follows;

Interior remodelling

• Generally - A new entrance lobby and circulation area is sited at the north end of the building, with separate access to the ground floor gallery areas, bookshop, craft and retail spaces, ground floor staff offices and reception, ground and 1st floor toilets, and first floor education room. The remodelling of the interior concentrates changes to the northern part of the building, where recent changes are already evident. Opportunities to enhance the heritage of the building include the reinstatement of the porch door, (as part of an updated and compliant fire strategy), the provision of a new central ground floor gallery along the line of the probable original alignment of the central aisle within the nave, with a clear view towards the chancel, the revealing of the original timber panelled ceiling above the Education Room and the removal of the unsympathetic north eastern additions. The principal strategy for the alterations and additions proposed to the building is to improve the utility and accessibility of the Gallery whilst being extremely sensitive to the character of the building, and making changes which refer back to its original form and function as a Church.

- Single staircase building reviewed with Building Control. A revised and improved means of escape strategy is possible with a single staircase which will include the extensions under consideration. A fire exit is required at the SW porch location giving the opportunity to reinstate the original doorway on to the street.
- New staircase design options explored the location of the stair; within the existing building, and as an extension
 to the building. The preferred location is as a new extension to the NE, replacing the existing unsympathetic
 extension. This maximises usable gallery floor area with gains from the deletion of the existing two stairs. The
 new stair position avoids collision with the eaves of the church nave, with the lower roof to the north remodelled
 at this location only. The final setting out allows for 170R/280G with 1200mm width, complying with Part
 M/BS8300.
- New lift a platform lift will avoid the need for a lift pit or a lift motor room. The size of the lift has been minimised as far as possible in consultation with Building Control. The position of the lift was considered centrally within the tower structure but changed following discussions with Swansea's historic buildings officer. A second position east of the tower piers but north of the gable was considered at the conclusion of the Feasibility Study. The current position shown south of the 1868 gable is the result of analysis by architect and engineer which minimises disturbance or removal of any original structure. CCS Historic Buildings officer confirmed a preference at an early stage for the retention of the existing arrangement of a split level at first floor. The lift will have double sided access to serve the two levels. Progress on the final proposed position of the lift has been reviewed with CCS Historic Buildings officer and agreed as the least intrusive.
- New disabled toilet The dimensions of an accessible wc are 2250 x 1500mm. The design options considered various positions within the existing gallery areas. The final option shows the disabled wc underneath the upper flight of the staircase in the new extension.
- Toilets for staff and public use the final option shows three toilets; an accessible toilet on the ground floor, and a two wcs on the first floor. All toilets are unisex, shared by staff and visitors. The first floor toilets are sited off the in the north west corner, in the former staff office, which has partially restricted headroom. Many options have been studied for additional toilets, including a second wc on the ground floor, which was taken out following concerns from the structural engineer about the removal of too much of the existing stonework. The final proposal for three toilets, all sited off general circulation space, is the most usable solution, and the change from two toilets to three increases the capacity of the Gallery to 120.
- Staff offices, kitchenette and meeting rooms staff space is expanded along the western edges of the existing building on the Ground Floor. A staff office and reception area at the NW corner of the building allows staff to greet visitors entering the new entrance lobby, to guide them and then supervise them on their journey through the building. The office connects to a new desk area serving the shop. It was concluded after discussion that the extent and complexity of the enlarged and remodelled building would require more than one member of staff, and enhanced CCTV to make this effective.
- Gallery spaces The main gallery space remains at the southern end of the Church within the full height of the nave, and within the apse. The windows to the nave and apse will be renewed with slimfit double glazing in metal frames. The windows within the nave which are currently boarded over permanently will be fitted with portable deadlights which will allow the space to continue as an artificially lit gallery with uninterrupted wall space for exhibitions, but will also allow the space to be configured as a daylit volume, in the same way as the apse currently operates. (Deadlights are also being considered for the apse windows). This expands the utility and flexibility of the Gallery whilst respecting and restoring the ecclesiastical character of the interior. Repairs to the roof and parapets will prevent further water damage to the plaster above the chancel arch. The shop occupies the central area of the ground floor, utilising mobile glass cabinets, with access through the shop area for large deliveries by means of the opening up of the 1920 opening to the west façade. This replaces the existing main entrance to the gallery. (See above). Additional partitions on the GF enclose a staff office and flexible exhibition / screen room areas to the east, providing extra wall space. The main gallery and apse are visible from the new north entrance lobby with a long gallery established along the axis of the former church. The smaller exhibition, shop, and screening rooms contrast with the larger volumes of the gallery but belong to a hierarchy of gallery spaces. Exhibition, craft and bookshop are sited in the extensions to the east facade of the building.
- First Floor further gallery space is available on the first floor with flexible use of the education room. The first floor is accessible directly from the main entrance lobby, without going through gallery or shop areas by means of the new staircase or lift.
- Education Room the room is remodelled by removal of the staircase, providing additional space, by a reconstruction of the southern 1990's wall incorporating storage cupboards detailed to act as a flush exhibition wall for informal display of children's' work. A full height window at the centre of this wall gives good views of the

main gallery below. The window can be closed off with folding shutters. A pull down blind with projector sited above the entry doors allows use of the room as a private cinema or gallery film room. The dormer window is proposed as rebuilt, with high performance double glazing and capacity for rapid ventilation. The existing store to the NW corner is expanded to provide a new staff office, with a large sink outside for wet play / wash up for education classes. Consideration will be given to the removal of the 1980/90s boarded ceiling in order to reveal the original timber panelled ceiling.

- The first floor lobby may be able to accommodate a small resource area with computers and reference materials; however unimpeded circulation for means of escape, a disabled wheelchair refuge (900x1400mm) and a clear space in front of the platform lift on both sides of 1500x1500mm is needed.
- Internal modifications will recognise the need to justify any taking out of original fabric; for example in order to insulate the roof the original line of the timber ceiling which should be respected and any modification to the 'build up' of the roof will be considered carefully the principle of a 'breathing' building will be maintained. Service routes are critical. Renewables ie solar panels or photovoltaics are ruled out generally as not compatible with the historic building.

Main Entrance

The main entrance is relocated to the north facade, on the north south axis of the Church. Access is gained via new entrance gates on the Gloucester Place side of the alleyway between Mission Gallery and Gloucester House. A new three dimensional curved sign with stainless steel lettering is mounted above a curving frame. A new ramp provides disabled access and level entry into the building.

The rationale for the repositioning of the entrance is both pragmatic and architectural; to allow a ramp and level entry via automatic doors into the building enabling universal access, to comply with Part M of the Building Regulations and the Disability Discrimination Act; to allow protected fire lobbies and a single ambulant Part M staircase in the building and compliance with current fire regulations and Part B of the Building Regulations with regard to Means of Escape; and to recreate a sense of drama as you enter on axis with the former nave with a view towards the chance/apse.

The position of the original entrance is unclear. The portion of the church north of the tower pillars is considered by the listing to be later than 1868, and it can be seen from the change in the stonework that the first floor to this area was added at a later date. It is possible that the entrance to the Church was in this northern portion of the building. Chapel buildings of this period followed generally had entrances on the gable approach opposite the altar and this possibility may add weight to the proposal from a historic viewpoint, although no archival evidence can be found to endorse this observation

The new entrance opening is lined with limestone, matching the adjacent window which is retained, with the section of wall between them rebuilt. A simple stainless steel canopy is proposed to cover the new entrance doors. The sign, which will overhang the pavement, will be visible from both ends of Gloucester Place. The prominence of the signage will obviate the need to attach any signs to the historic fabric of the building.

The current main entrance occupies the large opening to the west facade which was made in 1920 when it was converted to a warehouse. This opening will be kept within the scheme as part of the history of the building's changes, but will act as a secondary delivery route for artworks entering the building, with glazing giving onto to staff areas within, allowing craft items to be exhibited in the window.

Extensions East

The extensions to the building are proposed into the garden towards the east. The garden is outside of Mission Gallery's lease and is overlooked by occupants of Gloucester House. Current use of the garden by Mission Gallery is at the discretion of Gloucester House. Extending the building into this area is under negotiation with joint building owner CCS.

Design studies for the extension of the building respect the integrity of the main nave and eaves of the Church. The massing of the extension divides the overall volume into separate 'chapels' which are centred on the existing windows of the nave. Three of the chapels are single storey. The zinc roof abuts the Church wall with a flashing which tucks underneath the stone gutter brackets. Four steel beams are accommodated in recessed pockets formed between the heads of the round headed windows. The enclosing wall of the 'chapels' is rounded / chamfered in form so that the

scale of the extension to the original building is minimised, with each chapel expressed as a separate shape, diminishing in plan area from north to south.

The fourth chapel at the northern end contains the staircase, which is curved in plan around the landing, and barrel vaulted in section, minimising its volume and respecting the fact of its proximity to Gloucester House. There is some correspondence in form with the main apse of the Church. The enclosure of the new staircase rises to the lower part of the first floor and connects with the lower hipped roof to the north, avoiding disturbance to the eaves and the gable parapet of the main Church. The remodelling of the north-eastern hip is necessary to achieve headroom at the connection and to ensure that the gutter line is maintained around the building as the roof turns around the NE corner into the north facade.

Early massing options looked at extensions which were no deeper than the existing kitchen extension to the building, which is just over 3m deep. The final proposal in this stage sets out the size of the extensions to suit the site and the design constraints; the stair enclosure is larger with the other enclosures tapering towards the Church, minimising the impact towards the road and the southern end of the original building, which has been preserved intact. One plane tree will need to be taken down.

Various materials options have been considered. These have included a heavy masonry cavity wall construction using brickwork or a mixture of brick and stonework, expressed as a contemporary construction with clear differentiation between new and old. A lightweight construction option using zinc cladding was considered to the same shape and form, using pre-patinated finishes to blend in with the colour and tones of the existing stone and lead work. The preference is for an understated dark grey colour which will subtly express its contemporary character in relation to the existing building rather than a strong expression of its colour and form. Pre-patinated zinc cladding is proposed.

The external face of the facades will have decoratively perforated zinc shutters across the windows and door which face east towards the garden, ensuring privacy in each direction. Similarly, the larger areas of glazing which envelop the staircase are carefully oriented in the final design option away from Gloucester House to minimise light spill and to respect the privacy of residents.

The interior of the extension places the cloister like circulation against the existing wall of the Church, emphasising its separateness. Filtered light from the garden enlivens the space. Overhead glazing highlights the rubble stone wall of the Church. Access is possible directly from the street to the shop although this door is currently considered as an escape door only. A sliding fire shutter encloses the stairwell off from the cloister when the alarm goes off, with egress available in two other directions.

Tower

St Nicholas Church was built with a bell tower at approximately twice the height of the main nave roof, now demolished. Design options have been considered for a new tower in the same location. The tower is intended as a contemporary addition to the gallery, restoring the building's vertical emphasis at the north, signifying the rejuvenated Gallery's presence in the Docks.

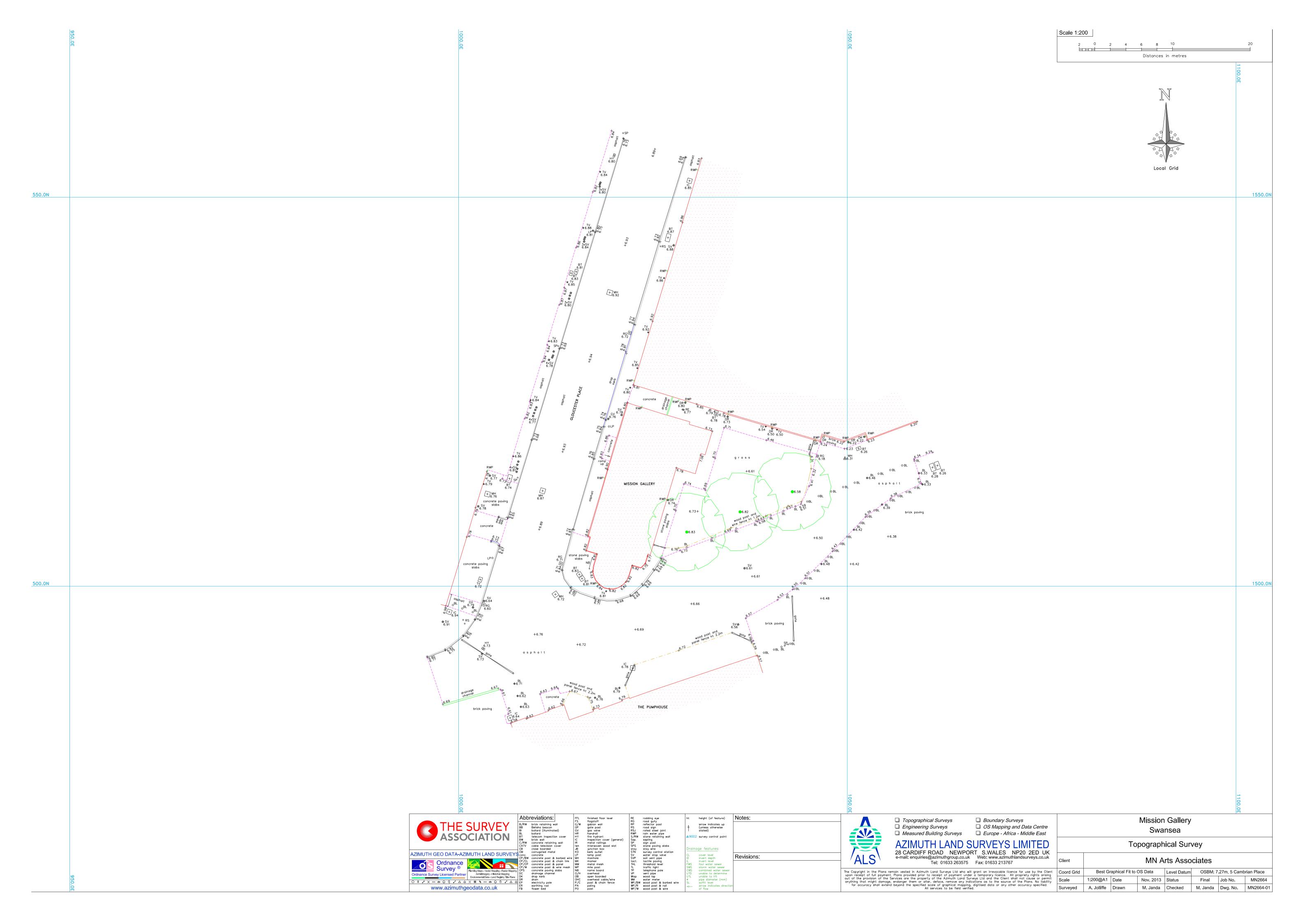
The proposal is a dark grey zinc clad steel framed and boarded structure, founded on the remaining portion of the tower piers and shaped at its lower levels to fit neatly against the gable. The structure could be lit by projection on special occasions from the garden or the street, perhaps with artist involvement and therefore as part of the Gallery's activities.

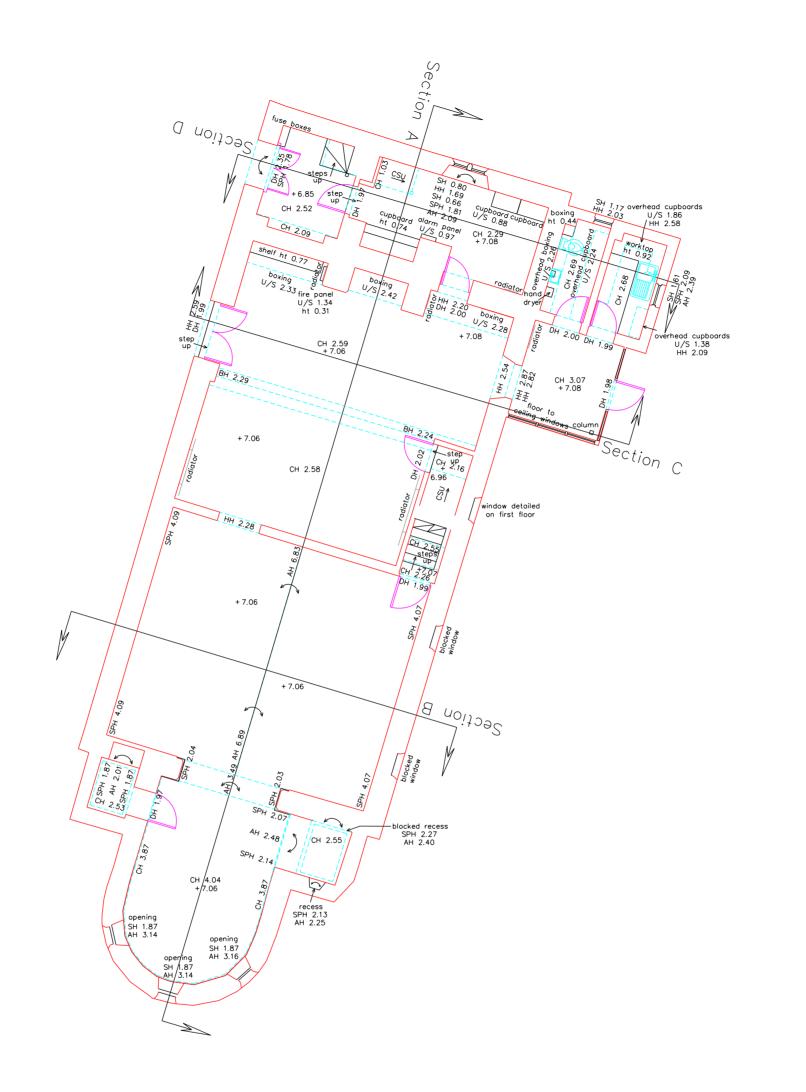
Building Control

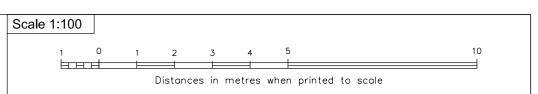
Discussions have been held with Assent Building Control, approved building control consultants. Initial design options for proposed alterations and additions have been reviewed under Part B (Fire and Means of Escape), and Part M (Access for the Disabled). A draft plans check has been undertaken.

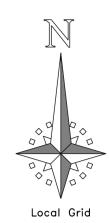
Construction Design and Management Regulations

A CDM-Coordinator has been appointed by Mission Gallery for work during the design development stage.











Abbreviations: AH arch apex height
B blank socket
BH beam height
CH ceiling height
CL cover level
CSU ceiling slopes up

DH door height
FCH folse ceiling height
HH head height
ht height
IC inspection cover
IL invert level

SPH arch spring height SVP soil vent pipe U/S underside UTL unable to lift RWP rainwater pipe ht underside height K key operated switch
MH manhole
OH overhead
RA roof access
S/L skylight
SH sill height

Notes:

ALS

Topographical Surveys Engineering Surveys

Measured Building Surveys

Boundary Surveys ☐ OS Mapping and Data Centre ☐ Europe - Africa - Middle East

AZIMUTH LAND SURVEYS LIMITED 28 CARDIFF ROAD NEWPORT S.WALES NP20 2ED UK e-mail: enquiries@azimuthgroup.co.uk Tel: 01633 263575 Fax: 01633 213767

The Copyright in the Plans remain vested in Azimuth Land Surveys Ltd who will grant an irrevocable licence for use by the Client upon receipt of full payment. Plans provided prior to receipt of payment under a temporary licence. All propriety rights arising out of the provision of the Services are the property of the Azimuth Land Surveys Ltd and the Client shall not cause or permit anything that might damage, endanger them or alter, deface, remove any indications as to the source of the Plans. No liability for accuracy shall extend beyond the specified scale of graphical mapping, digitised data or any other accuracy specified.

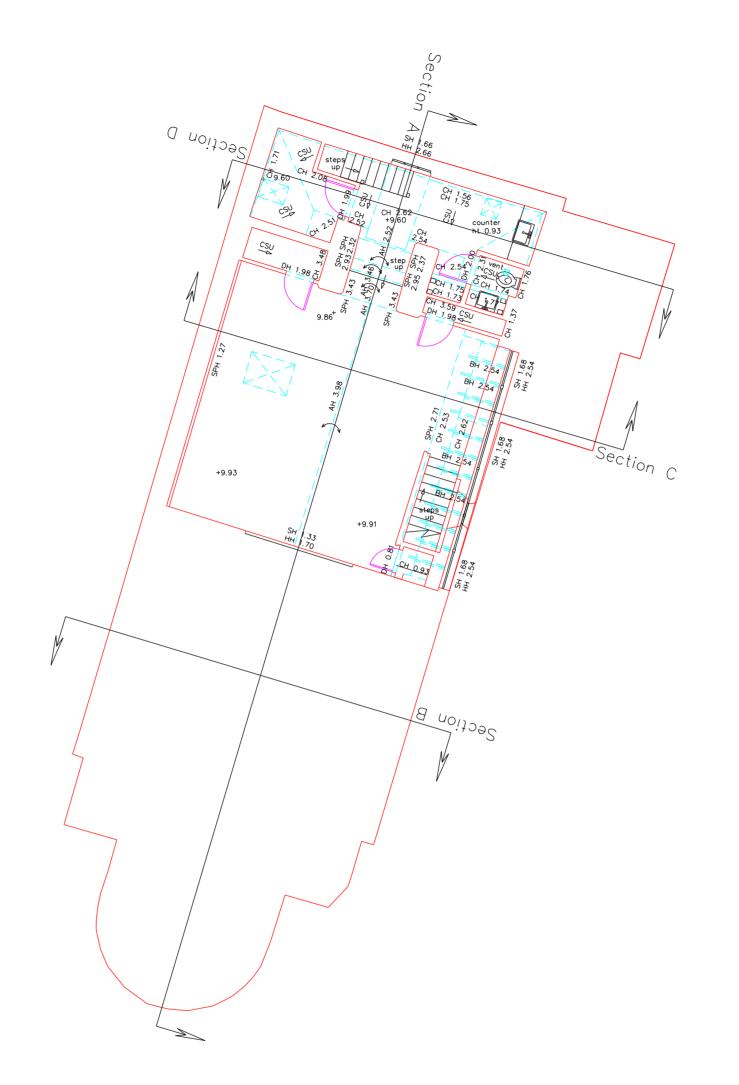
All services to be field verified.

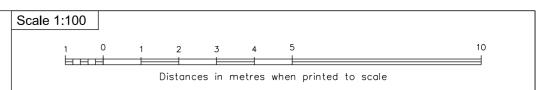
Mission Gallery
Swansea

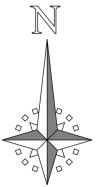
Ground Floor Plan

Client	MN Arts Associates								
Coord Grid	Best Gr	aphical Fit to	OS Data	Level Datum	OSBM: 7	.276, 5 Camb	rian Place		
Scale	1:100@A2	Date	Nov. 2013	Status	Final	Job No.	MN2664		
Surveyed	M. Janda	Drawn	M. Janda	Checked	R. Williams	Dwg. No.	MN2664-02		











Abbreviations:

AH arch apex height
B blank socket
BH beam height
CH ceiling height
CL cover level
CSU ceiling slopes up

DH door height
FCH false ceiling height
HH head height
ht height
IC inspection cover
IL invert level

K key operated switch
MH manhole
OH overhead
RA roof access
S/L skylight
SH sill height

SPH arch spring height SVP soil vent pipe U/S underside UTL unable to lift RWP rainwater pipe ht underside height

Notes:



☐ Topographical Surveys

☐ Engineering Surveys

☐ Boundary Surveys ☐ OS Mapping and Data Centre ☐ Measured Building Surveys ☐ Europe - Africa - Middle East

AZIMUTH LAND SURVEYS LIMITED 28 CARDIFF ROAD NEWPORT S.WALES NP20 2ED UK e-mail: enquiries@azimuthgroup.co.uk Web: www.azimuthlandsurveys.co.uk Tel: 01633 263575 Fax: 01633 213767

The Copyright in the Plans remain vested in Azimuth Land Surveys Ltd who will grant an irrevocable licence for use by the Client upon receipt of full payment. Plans provided prior to receipt of payment under a temporary licence. All propriety rights arising out of the provision of the Services are the property of the Azimuth Land Surveys Ltd and the Client shall not cause or permit anything that might damage, endanger them or alter, deface, remove any indications as to the source of the Plans. No liability for accuracy shall extend beyond the specified scale of graphical mapping, digitised data or any other accuracy specified.

All services to be field verified.

Mission Gallery	
Swansea	

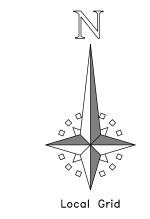
First Floor Plan

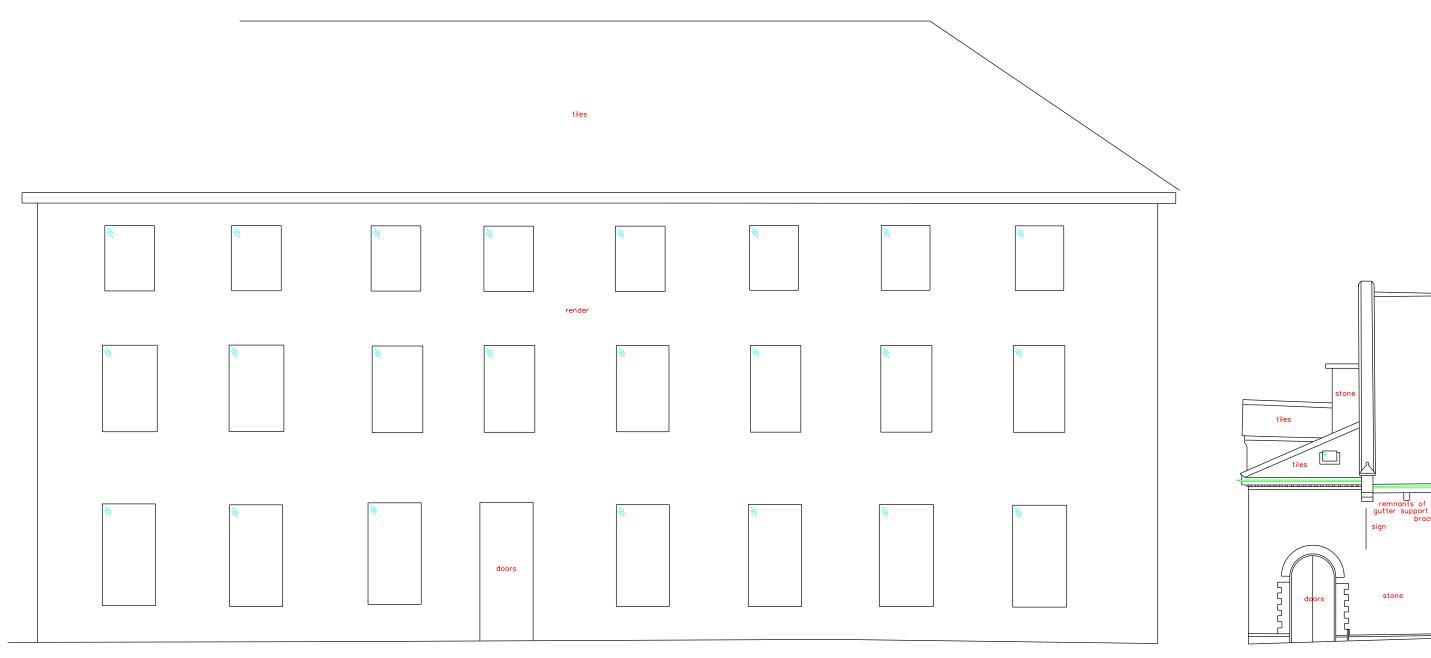
Client		MN Arts Associates									
Coord Grid	Best Gr	aphical Fit to	OS Data	Level Datum	OSBM: 7	.276, 5 Camb	rian Place				
Scale	1:100@A2 Date		Nov. 2013	Status	Final	Job No.	MN2664				
Surveyed	M. Janda	nda Drawn M. Janda		Checked	R. Williams	Dwg. No.	MN2664-03				

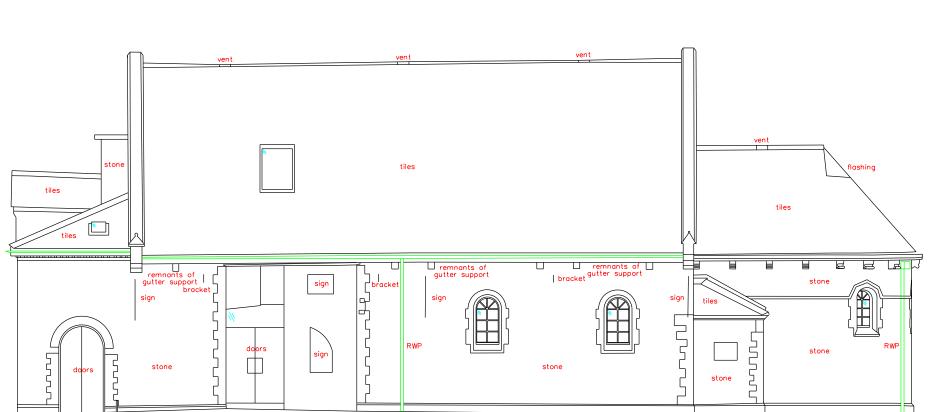
\ZIMUTH GEO DATA-AZIMUTH LAND SURVEY\$ Revisions:

Ordnance Survey Licensed Partner

Ordnan www.azimuthgeodata.co.uk





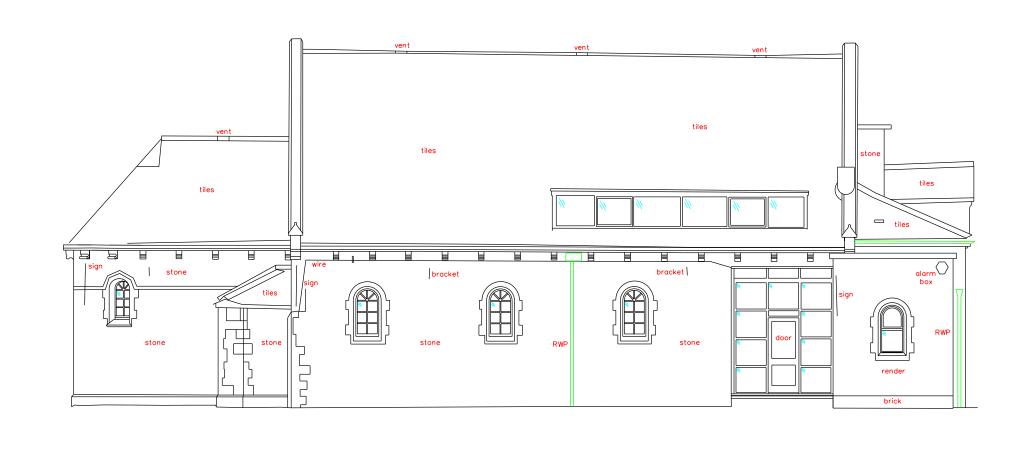


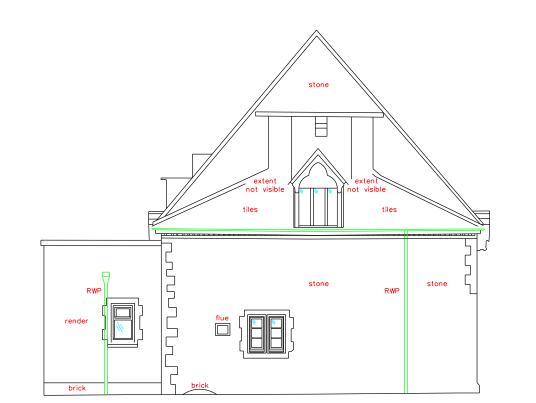


V Datum 0.00m

W E S T E L E V A T I O N

S O U T H E L E V A T I O N

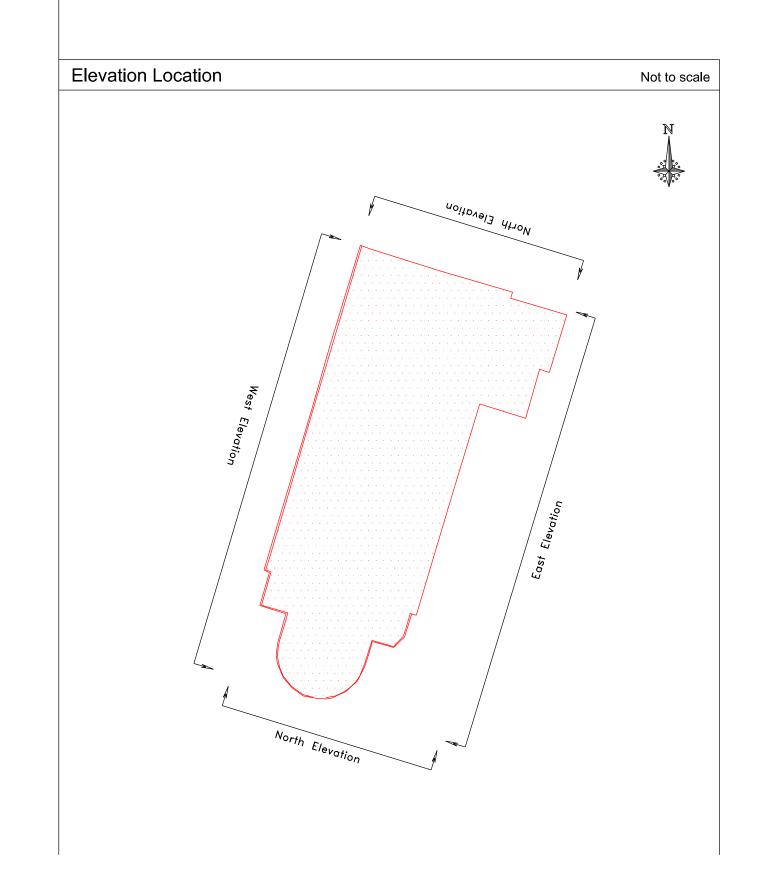


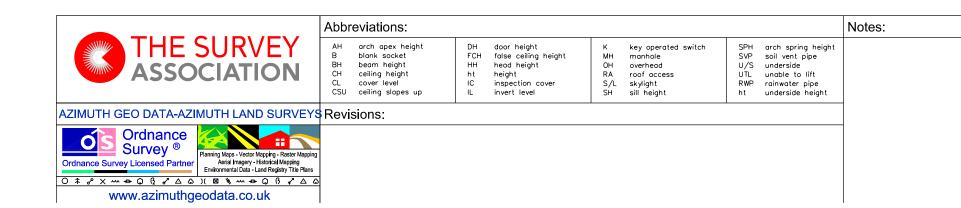


V Datum 0.00m

E A S T E L E V A T I O N

NORTH ELEVATION

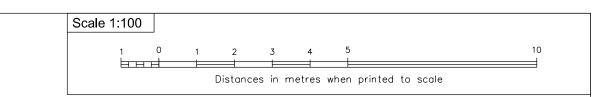


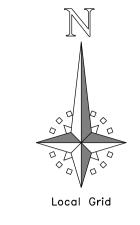




Centre e East	Swansea										
TED ED UK eys.co.uk		Elevations									
	Client	MN Arts Associates									
by the Client ights arising se or permit . No liability specified.	Coord Grid	Best Gr	aphical Fit to	OS Data	Level Datum	OSBM: 7	.276, 5 Camb	rian Place			
	Scale	1:100@A0	Date	Nov. 2013	Status	Final	Job No.	MN26			
	Surveyed	M. Janda	Drawn	M. Janda	Checked	R. Williams	Dwg. No.	MN266			

Mission Gallery



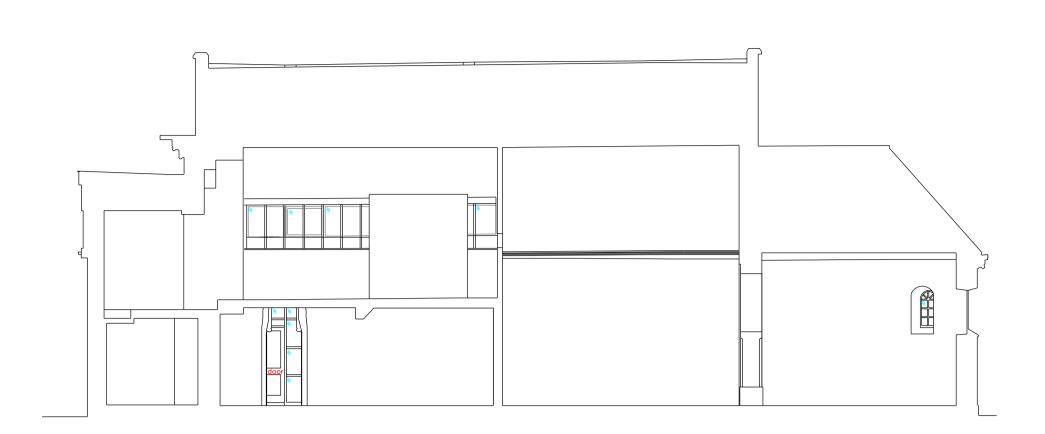


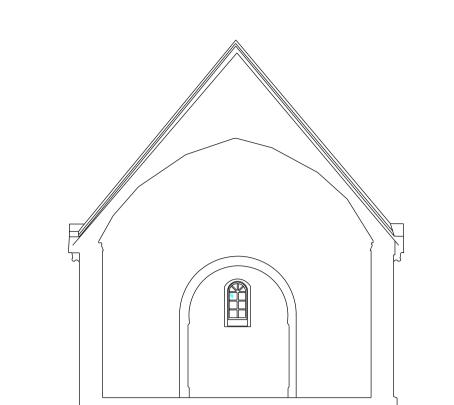
Mission Gallery Swansea

Sectional Elevations

MN Arts Associates

M. Janda Checked R. Williams Dwg. No. MN2664-05

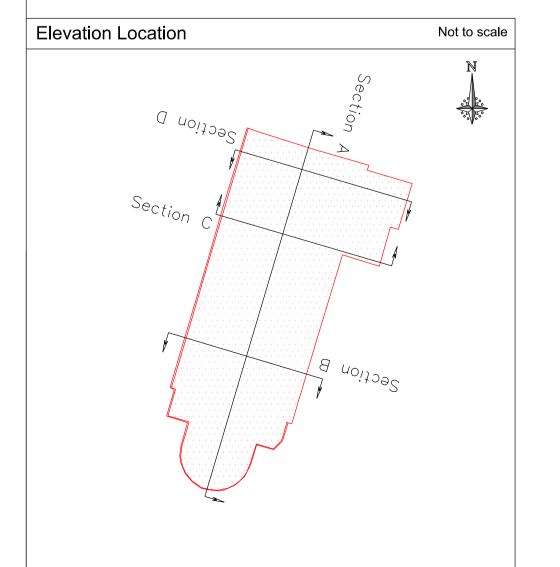




Datum 0.00m

SE C T I O N A





V Datum 0.00m

SE C T I O N C

V Datum 0.00m

SE C T I O N B



V Datum 0.00m

SE C T I O N D

	Abbreviations:			Notes:						
THE SURVEY ASSOCIATION	AH arch apex height B blank socket BH beam height CH ceiling height	DH door height FCH false ceiling height HH head height ht height	K key operated switch MH manhole OH overhead RA roof access	SPH arch spring height SVP soil vent pipe U/S underside UTL unable to lift	Notes.		☐ Topographical Surveys ☐ Engineering Surveys ☐ Measured Building Surveys	☐ Boundary Surveys☐ OS Mapping and Data Centre☐ Europe - Africa - Middle East		
	CL cover level CSU ceiling slopes up	IC inspection cover IL invert level	S/L skylight SH sill height	RWP rainwater pipe ht underside height				SURVEYS LIMITED PRT S.WALES NP20 2ED UK		
AZIMUTH GEO DATA-AZIMUTH LAND SURVEYS Ordnance Survey®	Revisions:					[/] ALS\	e-mail: enquiries@azimuthgroup.co.uk	Web: www.azimuthlandsurveys.co.uk Fax: 01633 213767	Client	
Survey Survey Ordnance Survey Licensed Partner Braining Maps - Vector Mapping - Raster Mapping Aerial Imagery - Historical Mapping	1					The Copyright in the Plans	remain vested in Azimuth Land Surveys Ltd who went. Plans provided prior to receipt of payment and	ill grant an irrevocable licence for use by the Client er a temporary licence. All propriety rights arising	Coord Grid	Best Graph
Environmental Data - Land Registry Title Plans O A P X M A Q Q A A A) (X M A A Q B A A A A A A A A A A A A A A A A	2					out of the provision of the anything that might damag	e Services are the property of the Azimuth Land Si ge, endanger them or alter, deface, remove any inc	urveys Ltd and the Client shall not cause or permit dications as to the source of the Plans. No liability	Scale	1:100@A1 Da
www.azimuthgeodata.co.uk						for accuracy shall exte	end beyond the specified scale of graphical mappin All services to be field verif	g, digitised data or any other accuracy specified. ied.	Surveyed	M. Janda Dra



WATERFRONT MUSEUM:

- GABLE FRONTAGE
- LANDSCAPE CONCEPT
- LIGHTING
- ARRIVAL

DYLAN THOMAS SQUARE:

- NEW MARKET BUILDING
- TREES
- HARD/SOFT LANDSCAPE CONCEPT
- LIGHTING/ SEATING

SWING BRIDGE:

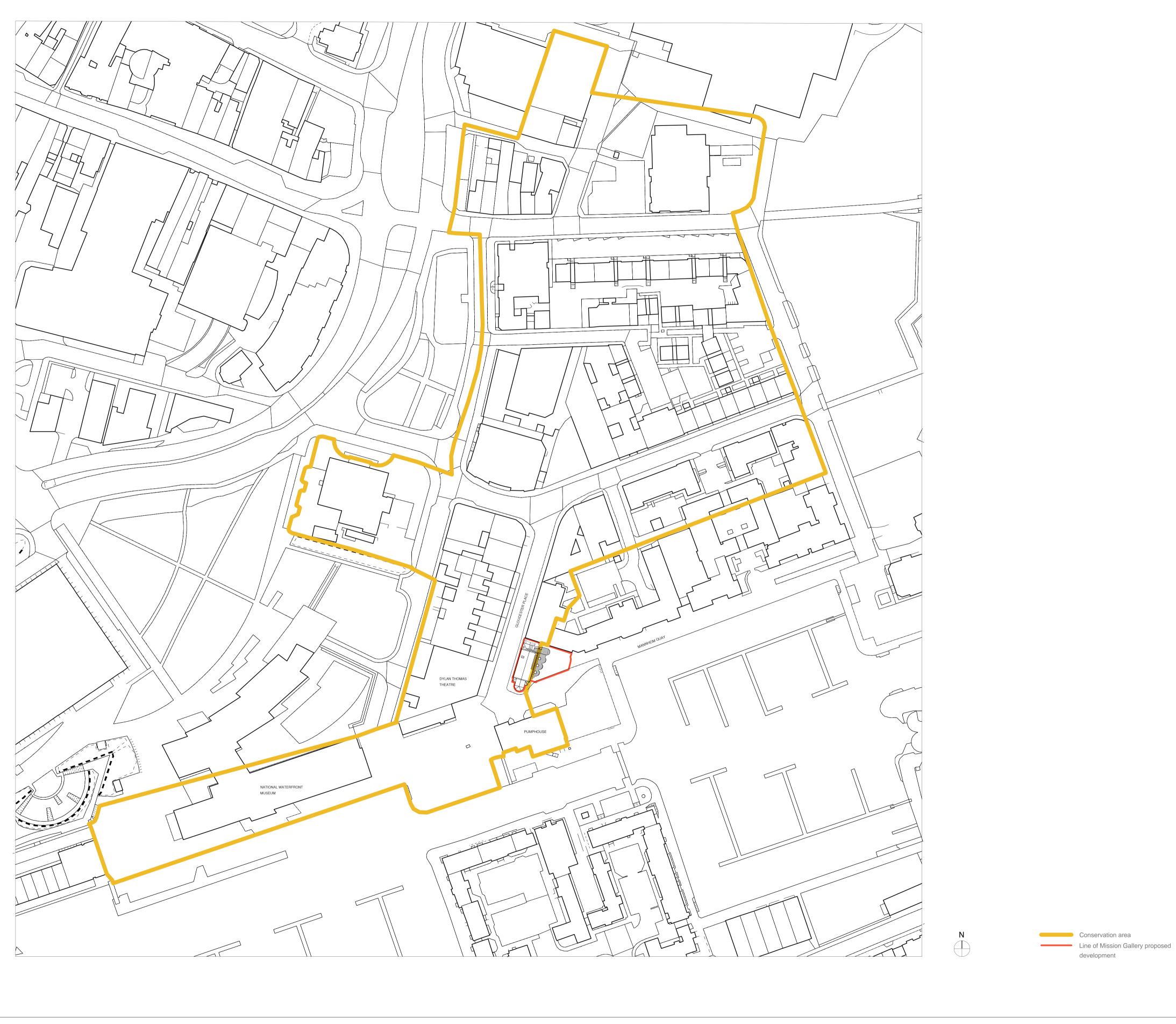
RENOVATE AS VIEWING DECK

PUMP HOUSE/ MISSION GALLERY PLACE:

- LANDSCAPE CONCEPT
- REMOVE CARS (STREET)
- LIGHTING/ PAVING
- BORDERS/ PAVEMENTS
- TREES

PROMENADE/ DOCKS:

- REINFORCE ROUTE
- TREES
- LIGHTING/ PAVING



development

ARCHITECTS

136 Southwark Street London SE1 0SW T 020 7928 8948 F 020 7928 7864 info@clasharchitects.co.uk

©Clash Associates Ltd 2015

Client
MISSION GALLERY MISSION GALLERY SWANSEA Drawing Title LOCATION PLAN

drawing no. revision P2

Scale @ A1 Scale @ A3 stat. 1:1250 1:2500 D

01.05.15

DO NOT SCALE FROM DRAWING.

Use figured dimensions only. All dimensions to be verified on site before proceeding with works. All levels are nominal; detailed site survey to be carried out to verify positions and level relationships with site features and ordnance survey. This drawing is for design intent only. This drawing is to be read in conjunction with other documentation from the architect, design team, main contractor and employer's agent. The Architect must be notified of any discrepancies.

P1 01.05.15 PLANNING ISSUE DRAFT

P2 01.07.15 PLANNING ISSUE DRAFT



REV	DATE	DESCRIPTION	CKD	REV DATE	DESCRIPTION	CKD	REV DATE	DESCRIPTION	CKD	REV DATE	DESCRIPTION	CKD	
P1	01.05.15	PLANNING ISSUE DRAFT											DO NOT SCALE FROM Use figured dimensions
P2	01.07.15	PLANNING ISSUE DRAFT											Use figured dimensions
													detailed site survey to be
													level relationships with
													This drawing is for desi
													on site before proceedidetailed site survey to be level relationships with This drawing is for desiread in conjunction with architect, design team, The Architect must be a
													The Architect must be

E FROM DRAWING.
ensions only. All dimensions to be verified oceeding with works. All levels are nominal; vey to be carried out to verify positions and os with site features and ordnance survey. For design intent only. This drawing is to be on with other documentation from the team, main contractor and employer's agent. Just be notified of any discrepancies.

CLASH ARCHITECTS T 020 7928 8948

136 Southwark Street London SE1 0SW F 020 7928 7864 info@clasharchitects.co.uk

©Clash Associates Ltd 2015

Project
MISSION GALLERY SWANSEA Drawing Title
SITE PLAN

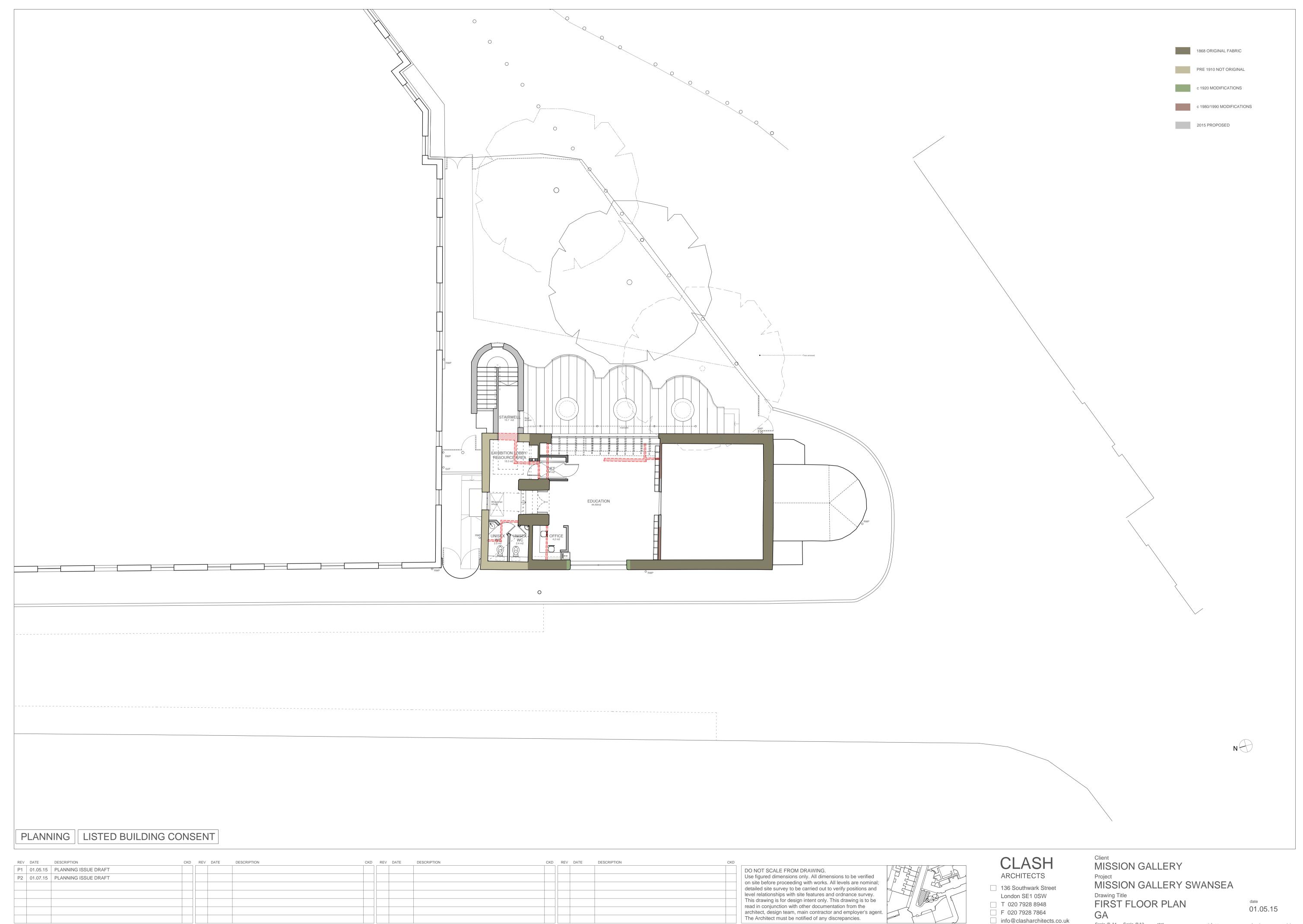
Scale @ A1 Scale @ A3 stat.
1:200 1:400 D

date 01.05.15



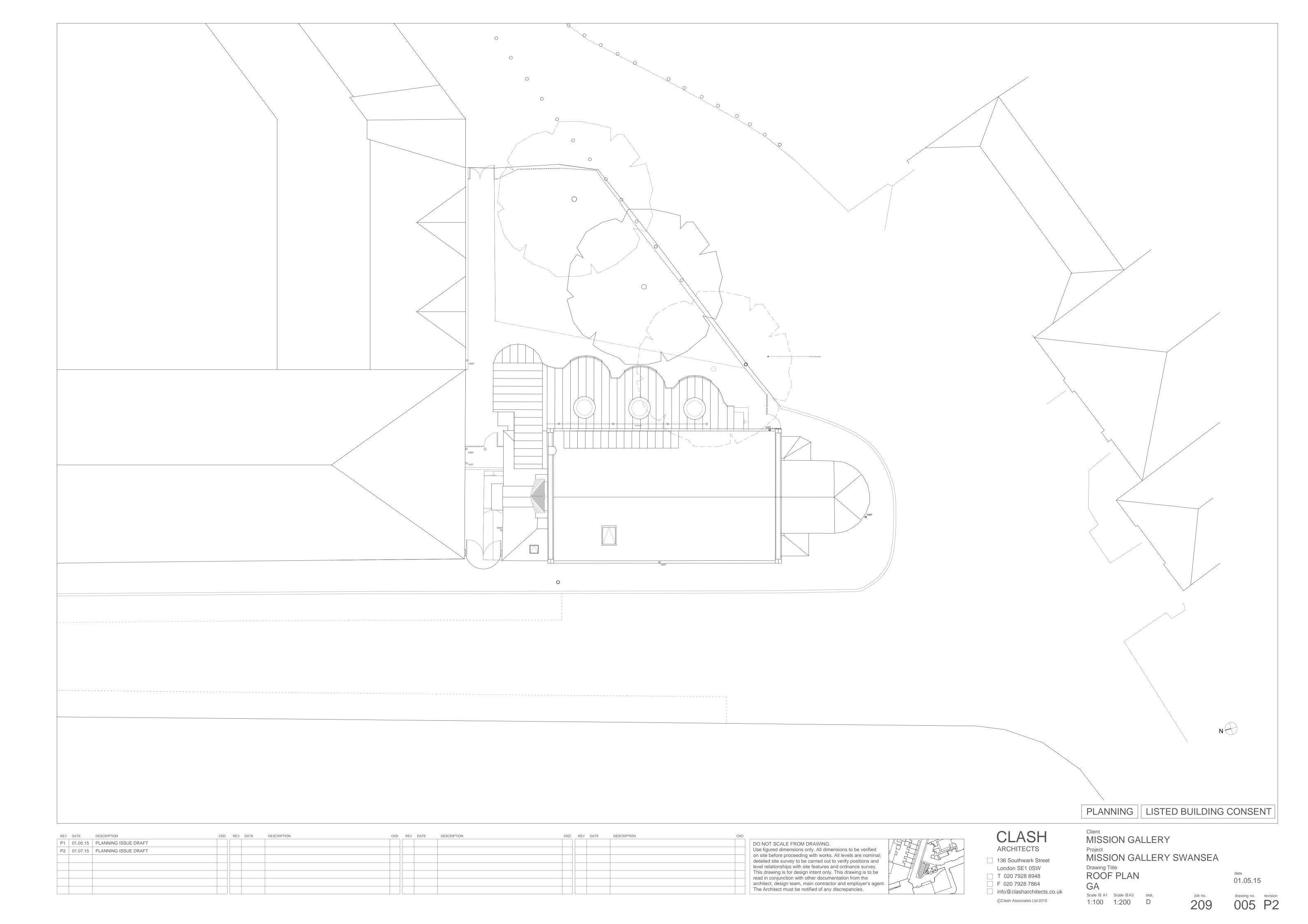
ob no. drawing no. revision P2

Scale @ A1 Scale @ A3 stat.
1:100 1:200 D



job no. drawing no 004

Scale @ A1 Scale @ A3 stat. 1:100 1:200 D





drawing no. revision P2 job no.

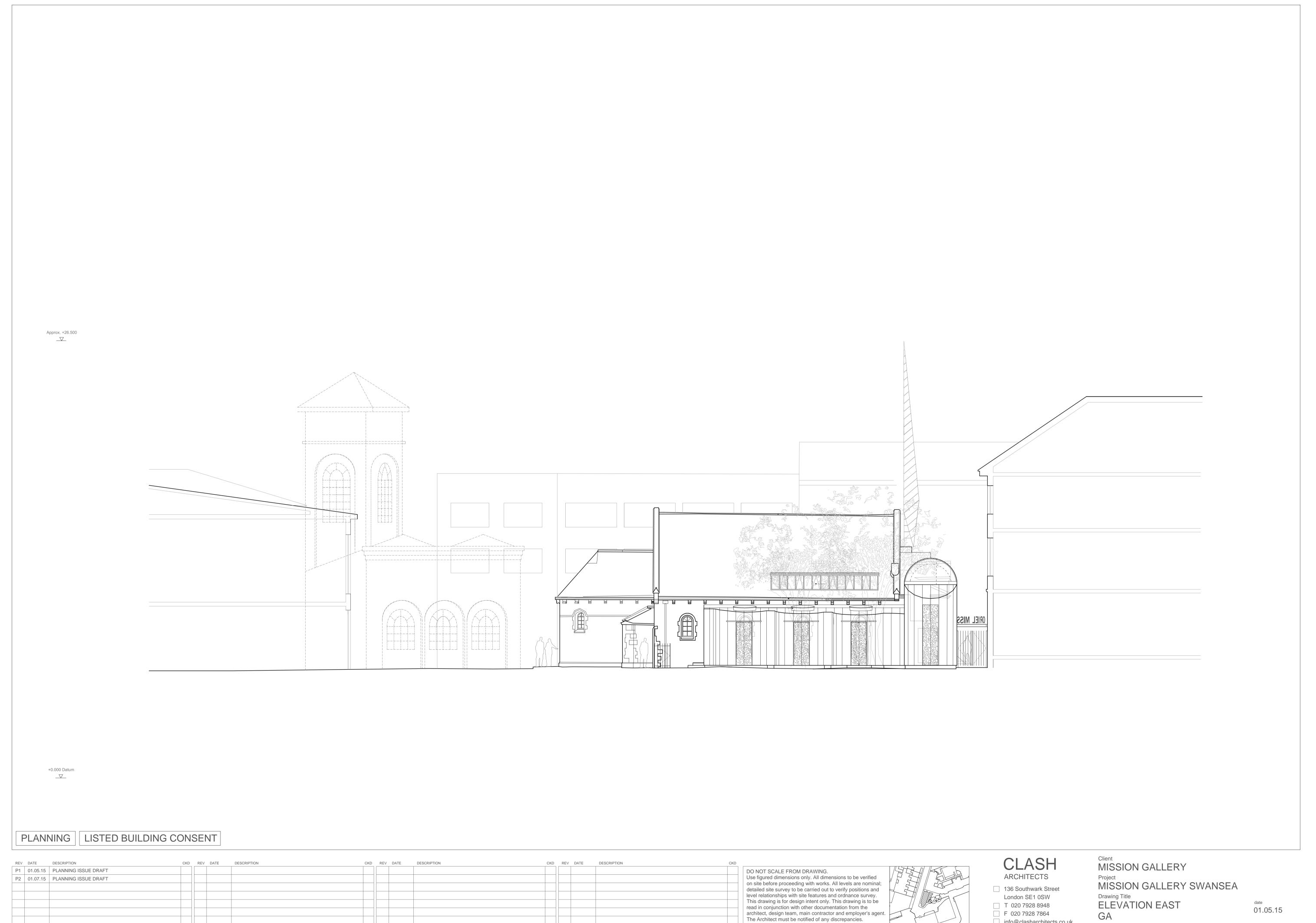
Scale @ A1 Scale @ A3 stat.

1:100 1:200 D



drawing no. revision P2

Scale @ A1 Scale @ A3 stat. 1:100 1:200 D



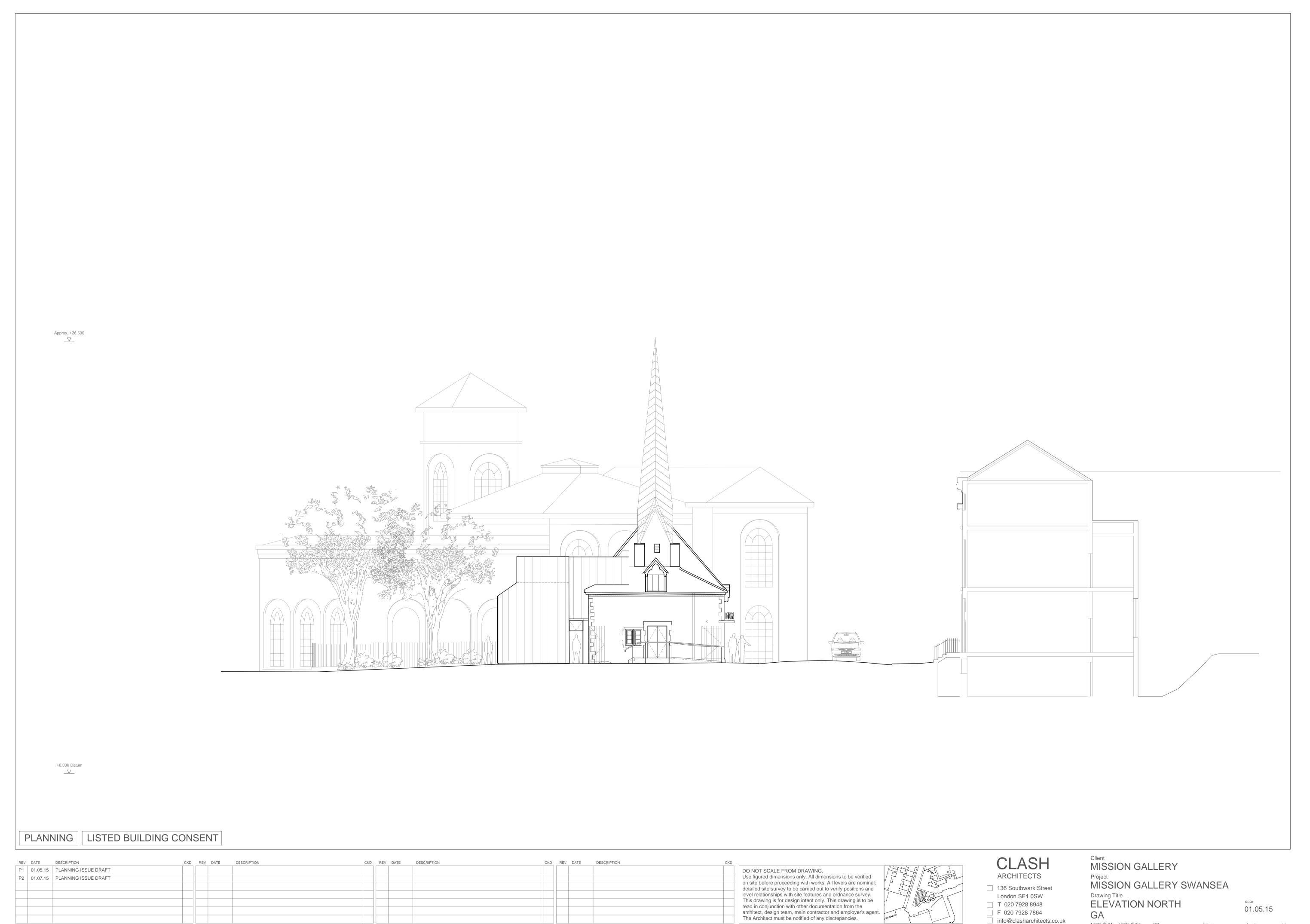
drawing no. revision P2 job no.

info@clasharchitects.co.uk

©Clash Associates Ltd 2015

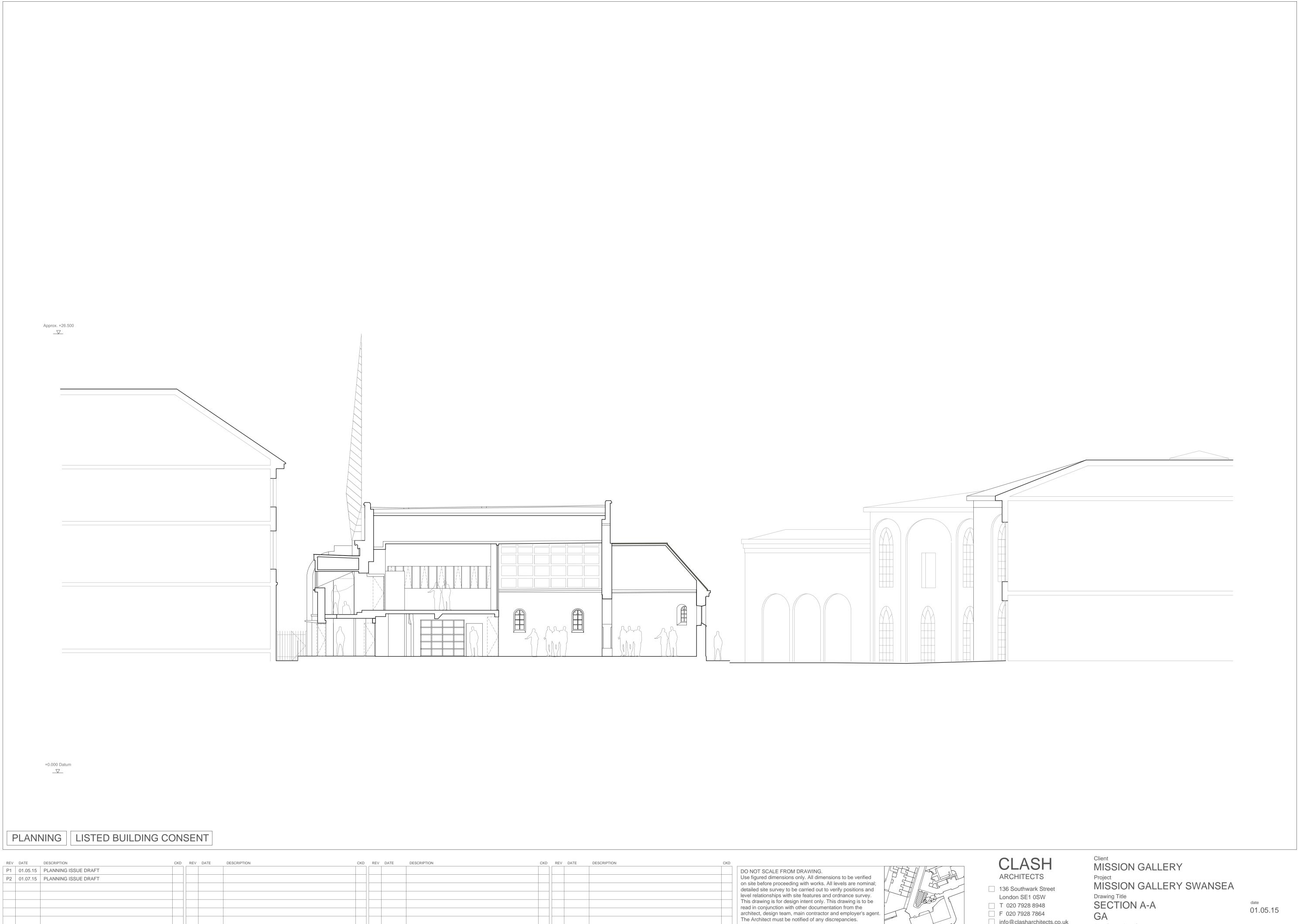
Scale @ A1 Scale @ A3 stat.

1:100 1:200 D



drawing no. revision P2

Scale @ A1 Scale @ A3 stat. 1:100 1:200 D



job no. 209 drawing no. revision P2

info@clasharchitects.co.uk

©Clash Associates Ltd 2015

Scale @ A1 Scale @ A3 stat. 1:100 1:200 D





This drawing is for design intent only. This drawing is to be read in conjunction with other documentation from the architect, design team, main contractor and employer's agent. The Architect must be notified of any discrepancies.



T 020 7928 8948 F 020 7928 7864 info@clasharchitects.co.uk

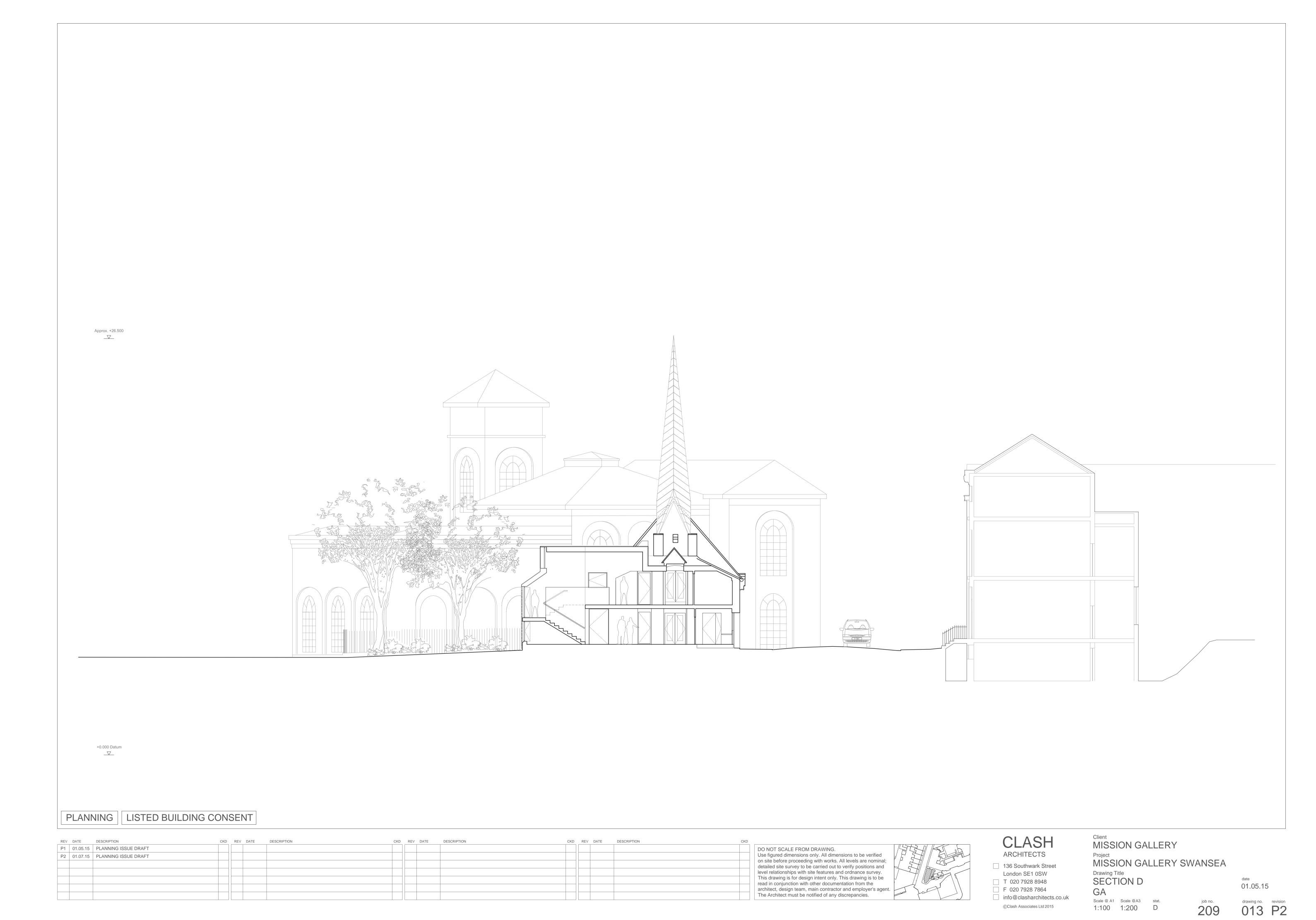
©Clash Associates Ltd 2015

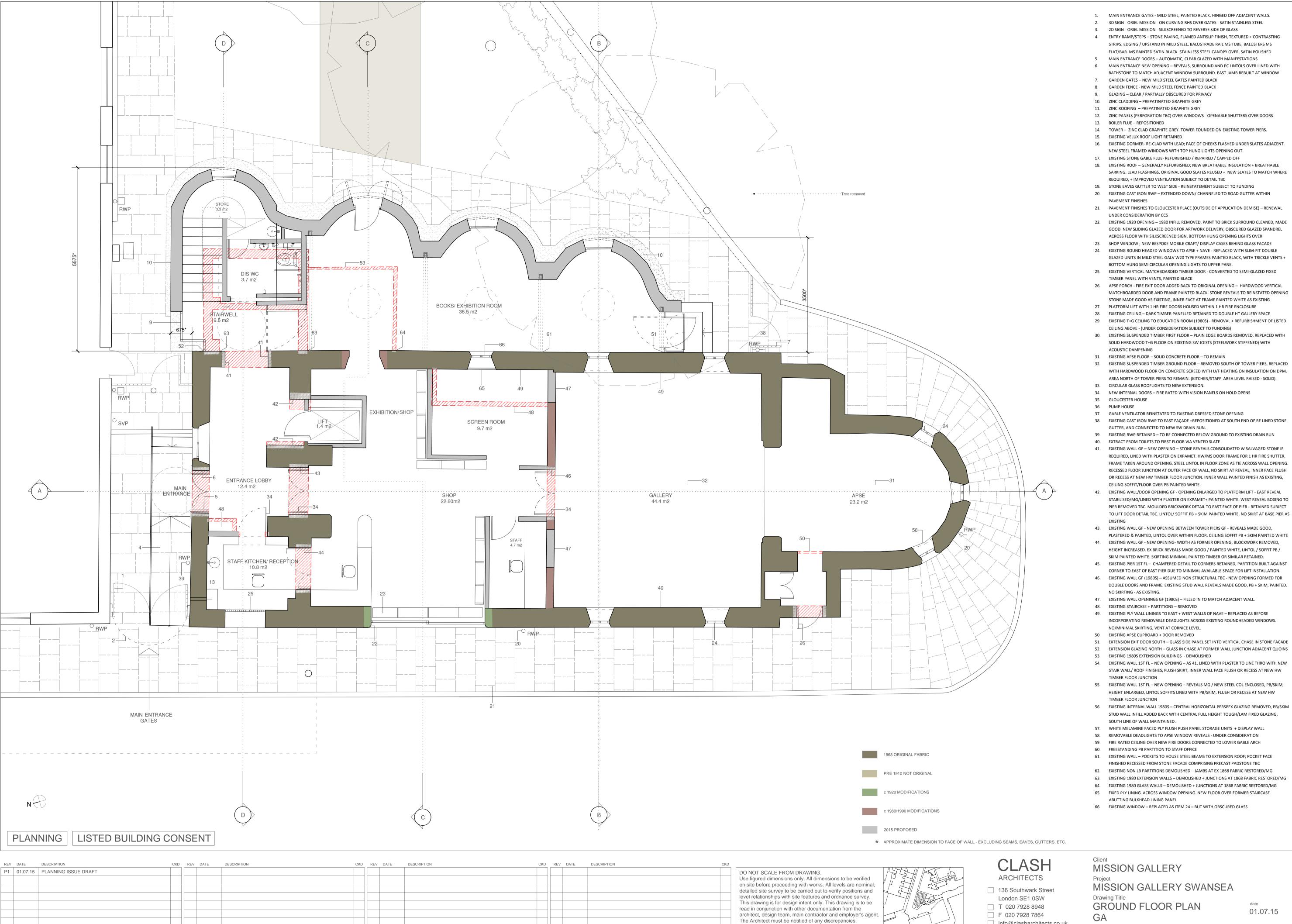
Drawing Title
SECTION C-C

1:100 1:200 D

01.05.15 Scale @ A1 Scale @ A3 stat.

drawing no. revision P2





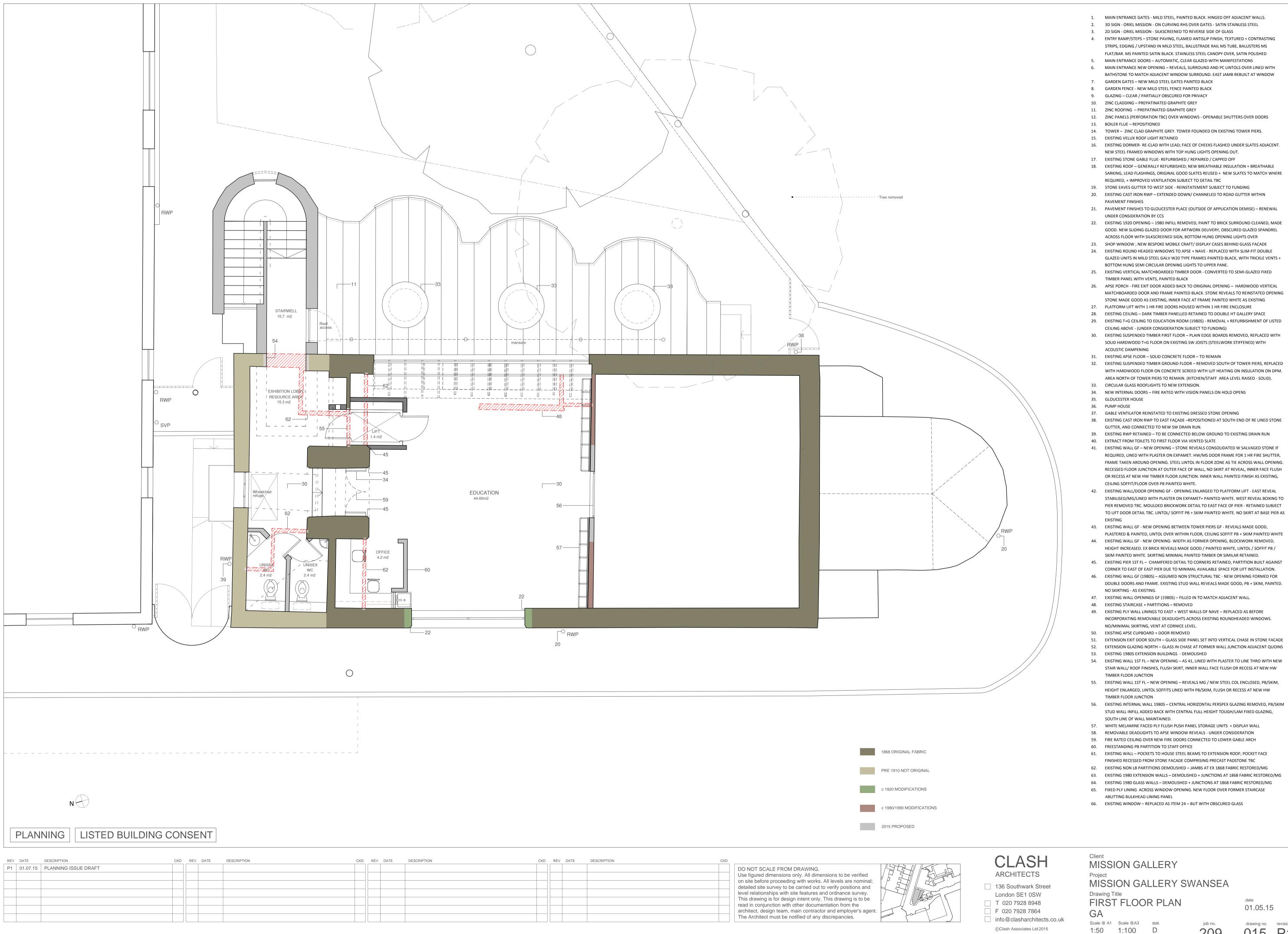
MATCHBOARDED DOOR AND FRAME PAINTED BLACK. STONE REVEALS TO REINSTATED OPENING

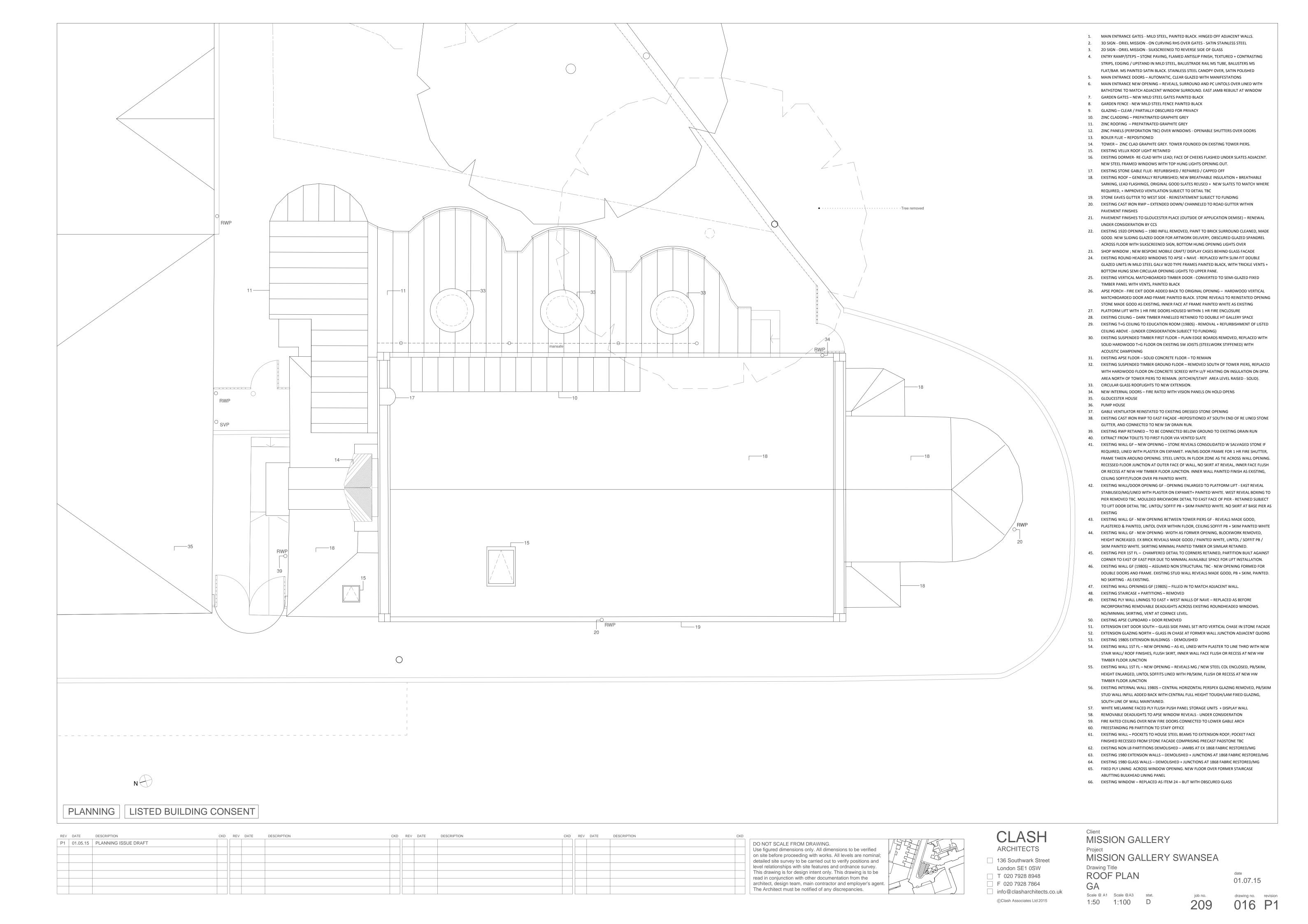
TO LIFT DOOR DETAIL TBC. LINTOL/ SOFFIT PB + SKIM PAINTED WHITE. NO SKIRT AT BASE PIER AS

Scale @ A1 Scale @ A3 stat.

1:50 1:100 D

info@clasharchitects.co.uk





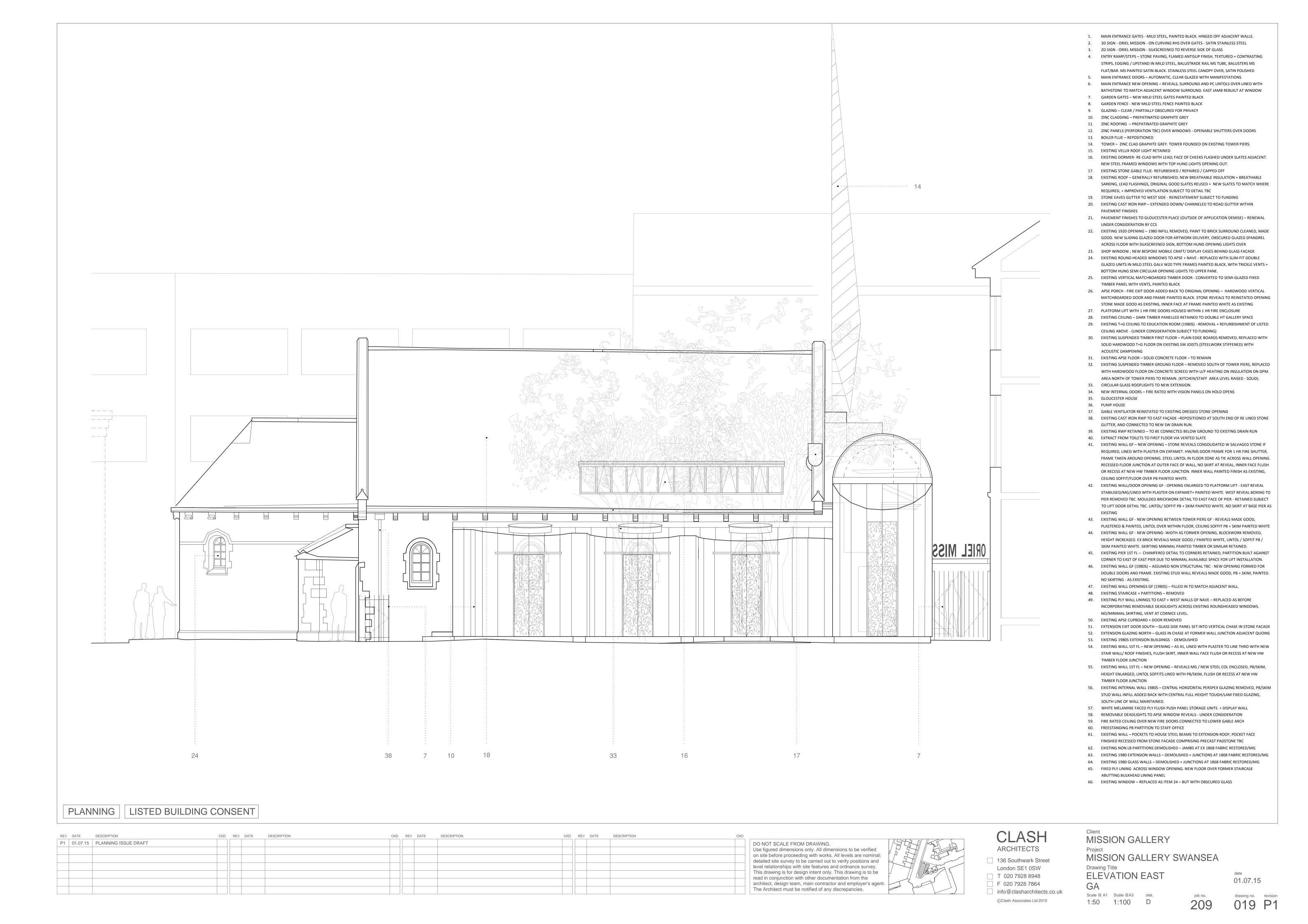


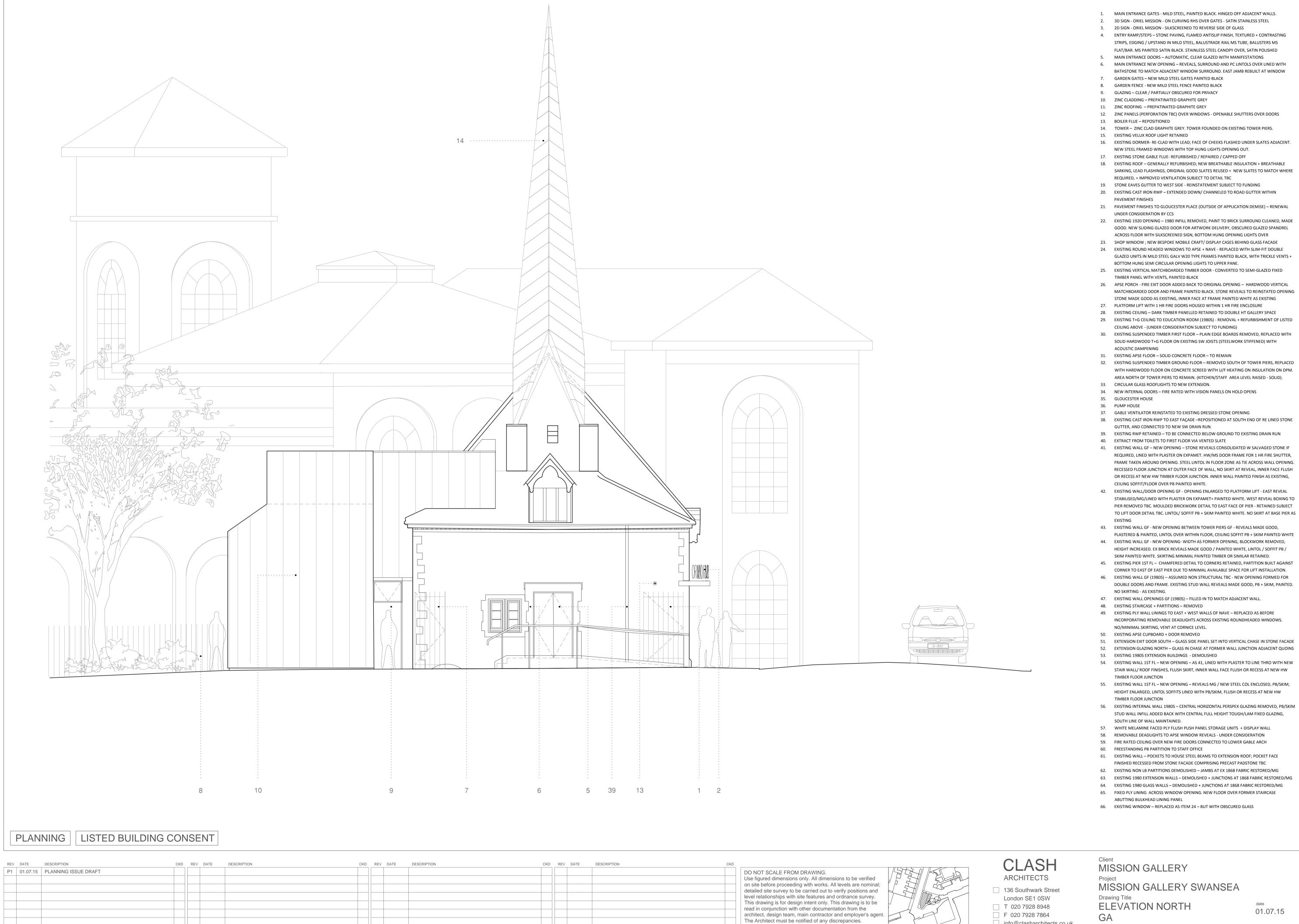


FRAME TAKEN AROUND OPENING. STEEL LINTOL IN FLOOR ZONE AS TIE ACROSS WALL OPENING.

Scale @ A1 Scale @ A3 stat.

1:50 1:100 D





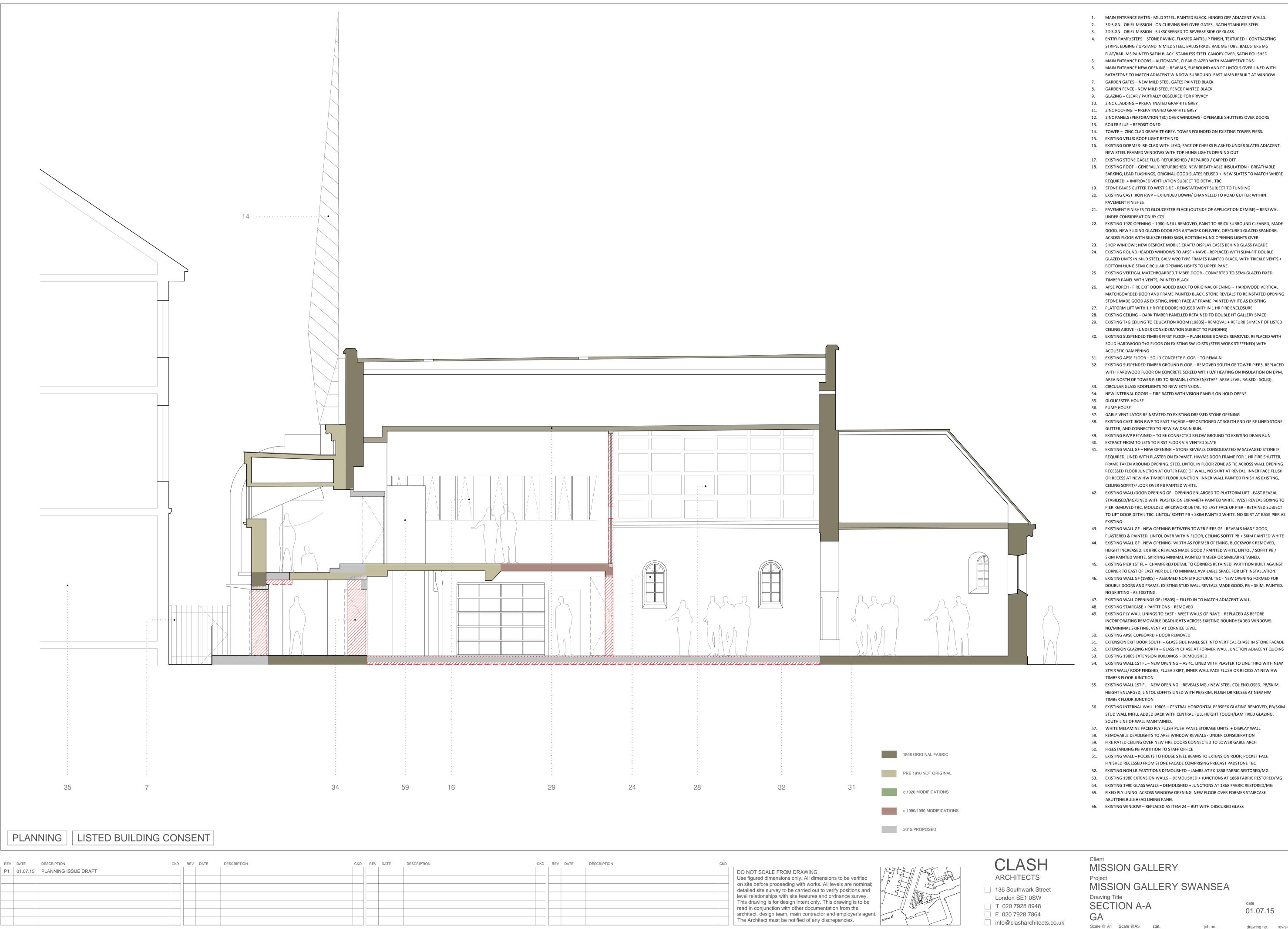
info@clasharchitects.co.uk

©Clash Associates Ltd 2015

Scale @ A1 Scale @ A3 stat.

1:50 1:100 D





drawing no 021

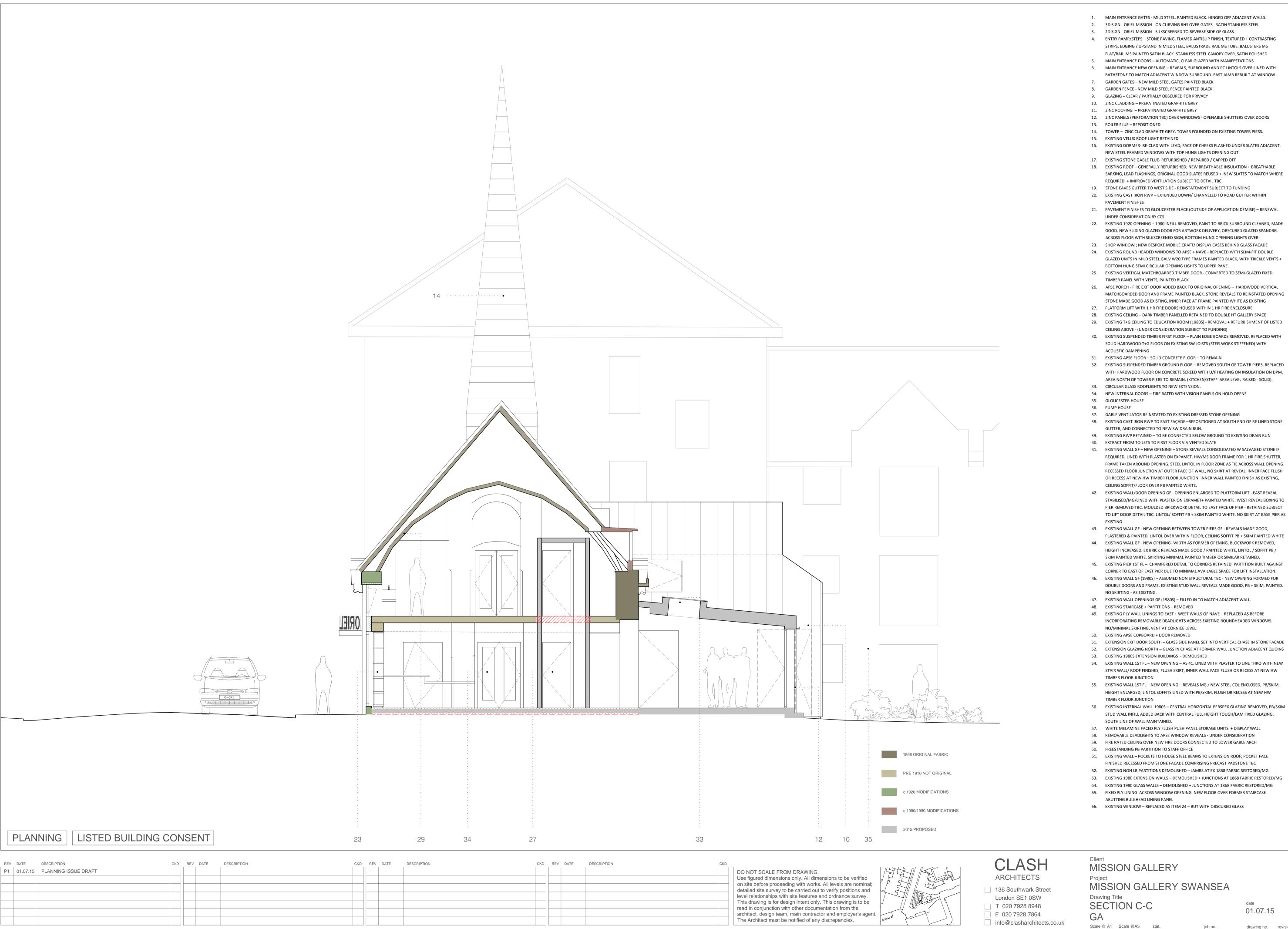
©Clash Associates Ltd 2015

1:50 1:100 D



Scale @ A1 Scale @ A3 stat.

1:50 1:100 D

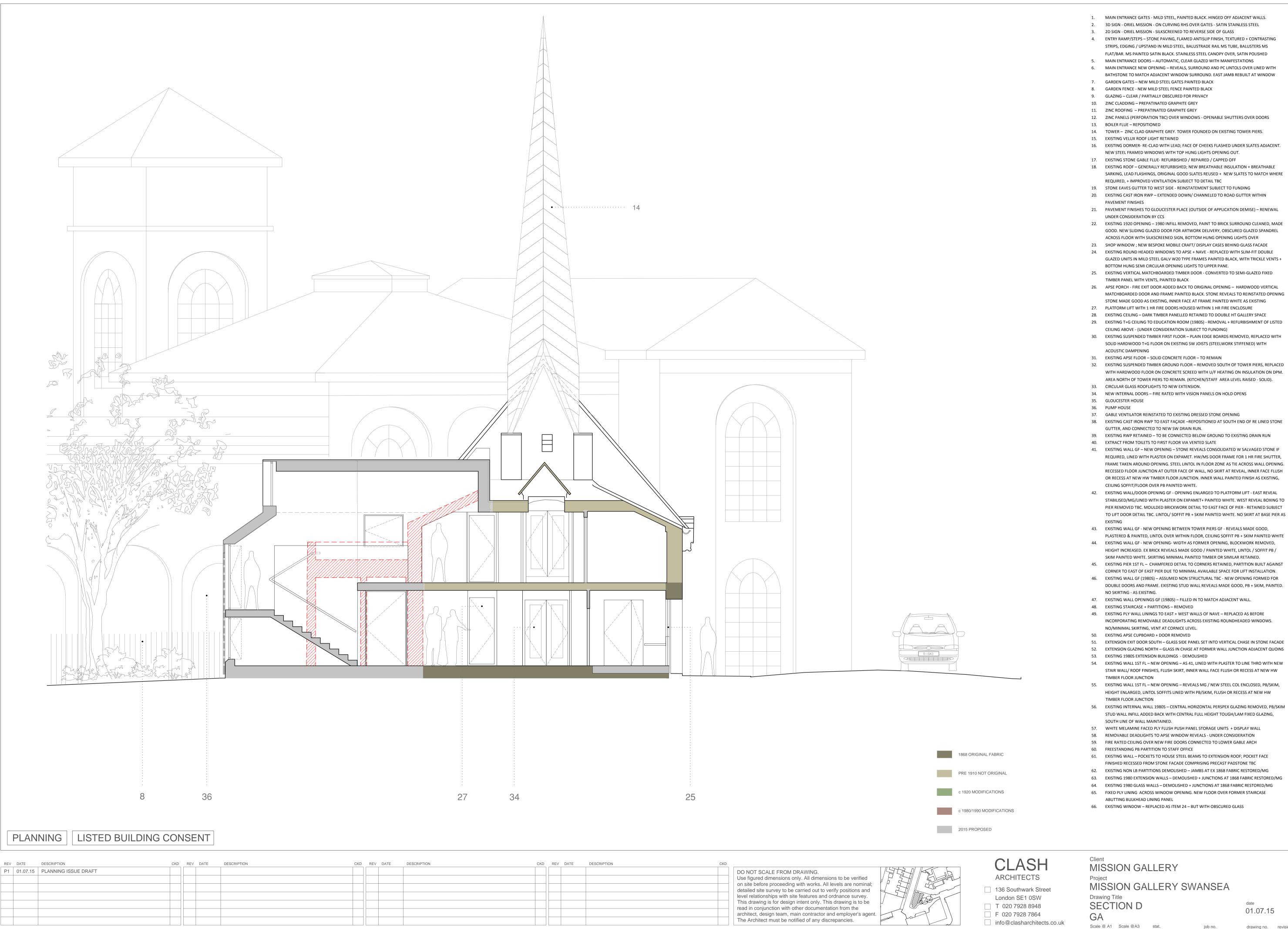


job no. **209**

1:50 1:100 D

©Clash Associates Ltd 2015

drawing no.



. drawing 9 02

©Clash Associates Ltd 2015

1:50 1:100 D



Design Notes / Justifications

ENTRANCE

Objective; to provide universal access at the entrance to Mission Gallery. To comply with AD Part M 2014. Options considered;

- 1. Existing entrance at 1920 opening on Gloucester Place; currently not compliant (local change in level, then a step over threshold of door). Changes to existing arrangements considered; (raising the pavement, lowering the entire timber ground floor, localised lowering with ramp inside the entrance). All disruptive to interior layout and levels, compliance difficult to pavement levels.
- 2. Former entrance at Apse Porch; ramp required along pavement, opening up/enlargement of former opening, enlargement of inner opening. Not practical, would not comply with AD Part M unless two openings enlarged.
- 3. Extension South; 300mm difference in levels insufficient room for ramp.
- 4. Existing façade North; Ramp up from street to new door opening sited to north wall of building facing Gloucester House. Ramp, gradient, single balustrade, width, finish and associated steps to east acceptable in principle to Building Control. New opening on axis with existing Mission Church building, opening up between tower piers allows view south to apse. Compliance with AD Part B Means of Escape achievable.

NEW STAIRCASE



Objective; To replace two existing non-compliant staircases, and to comply with current AD Part B Means of Escape + AD Part M Disabled Access. Options considered;

- 1. NW corner; not compliant due to space available, takes up existing space of Gallery.
- 2. East façade; possible to achieve space standards but would break through eaves of listed 1868 nave.
- 3. NE façade; compliant with B Regulations. Connects to existing north of 1868 gable at later 1st fl addition.

NEW LIFT



Objective; to install a platform lift for universal/disabled access to serve all levels of the building (the first floor is on two separate levels). Options considered;

- 1. Between the Tower piers; would require demolition of existing arched opening below gable at first floor.
- 2. External position outside footprint of existing and proposed extension; blocks alleyway and means of escape for residents.
- 3. NE corner outside footprint of existing building; does not serve upper and lower levels of first floor.
- 4. East façade outside footprint of existing building; does not serve upper and lower levels of first floor, interferes with circulation.
- 5. NE corner of existing building; overrun penetrates existing roof, needs opening up/rebuilding of 1868 gable wall to serve upper level 1st floor.
- 6. South of 1868 gable, within Education Room; overrun can be accommodated within existing space, reduced opening up required to 1868 gable wall to serve lower level 1st floor, improved circulation to lobby area.

EXTENSION BUILDINGS

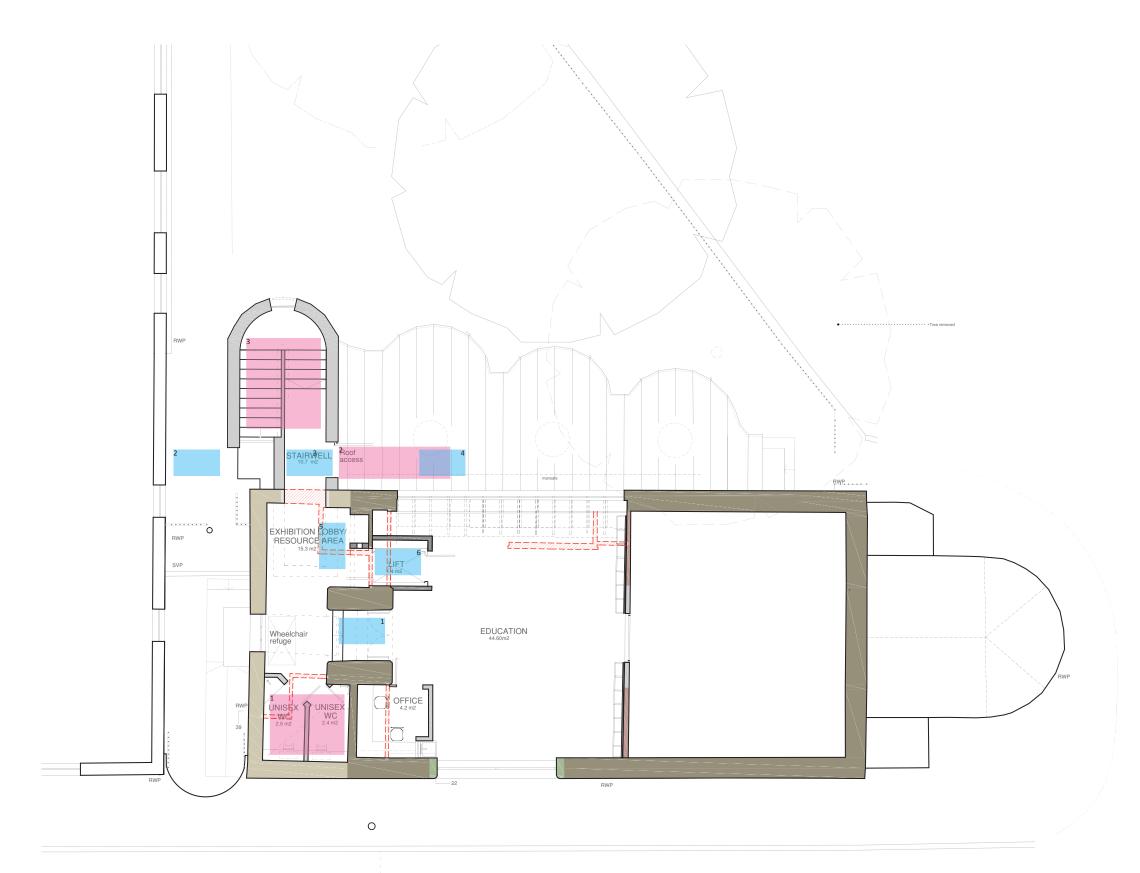
Objective; - to extend the existing building and the facilities of Mission Gallery, respecting the integrity of the existing building, and taking into account the proximity of the neighbouring residents.

Strategies include;

- 1. Connection to the existing is kept below the eaves of the original 1868 building.
- 2. The new staircase connects at ground and first floor to the later part of the existing building north of the 1868 gable wall.
- 3. The glazed openings to the extension facing east towards the garden have perforated shutters for privacy.
- 4. The glazed panel with the fire exit door to the extension facing south will have a perforated shutter (TBC).
- 5. The glazing facing north in the extension building will have areas of obscured glazing for privacy.

DESIGN OPTIONS AND JUSTIFICATION STATEMENTS

GROUND FLOOR



Design Notes / Justification Statements

ENTRANCE



Objective; to provide universal access at the entrance to Mission Gallery. To comply with AD Part M 2014.

Options considered;

- 1. Existing entrance at 1920 opening on Gloucester Place; currently not compliant (local change in level, then a step over threshold of door). Changes to existing arrangements considered; (raising the pavement, lowering the entire timber ground floor, localised lowering with ramp inside the entrance). All disruptive to interior layout and levels, compliance difficult to pavement levels.
- 2. Former entrance at Apse Porch; ramp required along pavement, opening up/enlargement of former opening, enlargement of inner opening. Not practical, would not comply with AD Part M unless two openings enlarged.
- 3. Extension South; 300mm difference in levels insufficient room for ramp.
- 4. Existing façade North; Ramp up from street to new door opening sited to north wall of building facing Gloucester House. Ramp, gradient, single balustrade, width, finish and associated steps to east acceptable in principle to Building Control. New opening on axis with existing Mission Church building, opening up between tower piers allows view south to apse. Compliance with AD Part B Means of Escape achievable.

NEW STAIRCASE



Objective; To replace two existing non-compliant staircases, and to comply with current AD Part B Means of Escape + AD Part M Disabled Access. Options considered;

- 1. NW corner; not compliant due to space available, takes up existing space of Gallery.
- 2. East façade; possible to achieve space standards but would break through eaves of listed 1868 nave.
- 3. NE façade; compliant with B Regulations. Connects to existing north of 1868 gable at later 1st $\rm fl$ addition.

NEW LIFT



Objective; to install a platform lift for universal/disabled access to serve all levels of the building (the first floor is on two separate levels). Options considered;

- 1. Between the Tower piers; would require demolition of existing arched opening below gable at first floor.
- 2. External position outside footprint of existing and proposed extension; blocks alleyway and means of escape for residents.
- 3. NE corner outside footprint of existing building; does not serve upper and lower levels of first floor.
- 4. East façade outside footprint of existing building; does not serve upper and lower levels of first floor, interferes with circulation.
- 5. NE corner of existing building; overrun penetrates existing roof, needs opening up/rebuilding of 1868 gable wall to serve upper level 1st floor.
- 6. South of 1868 gable, within Education Room; overrun can be accommodated within existing space, reduced opening up required to 1868 gable wall to serve lower level 1st floor, improved circulation to lobby area.

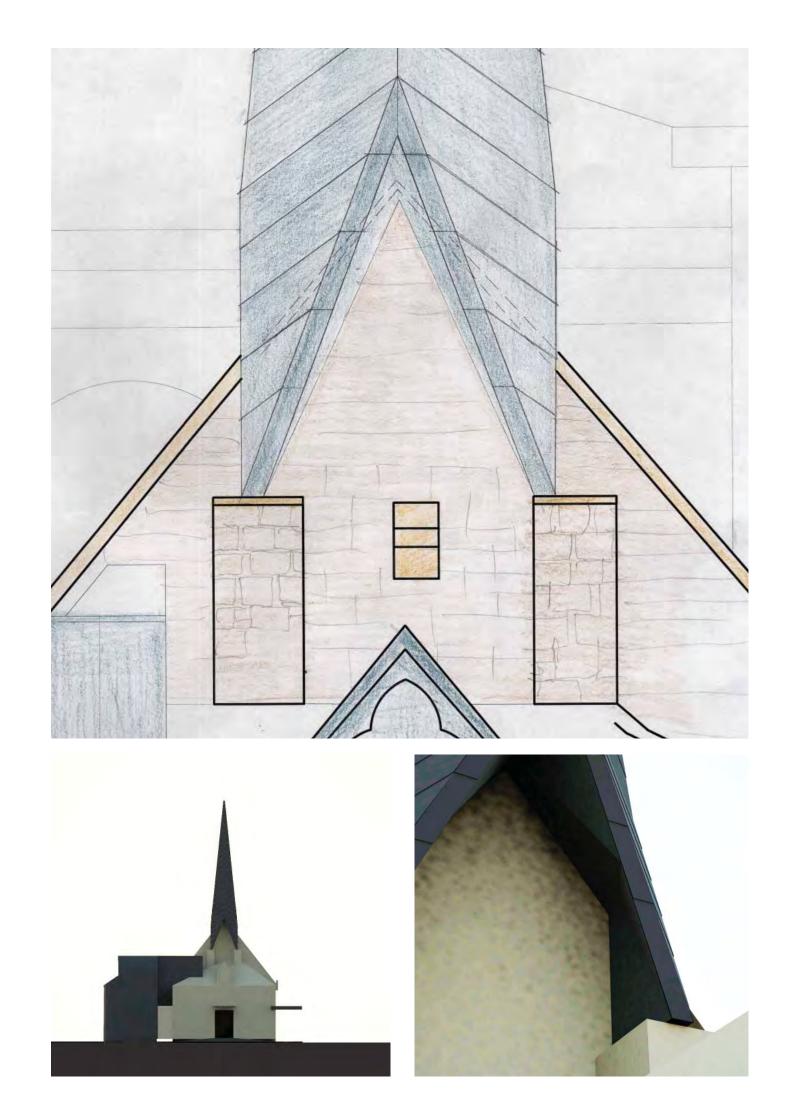
EXTENSION BUILDINGS

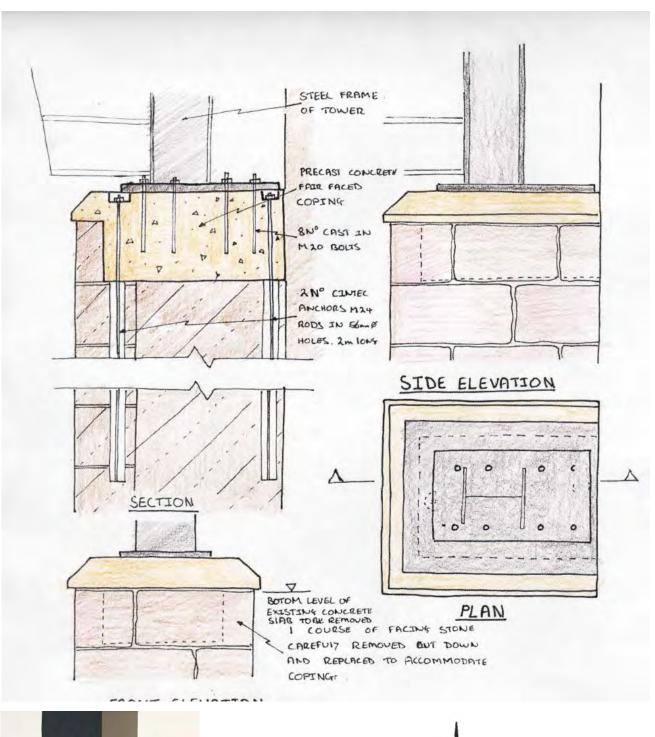
Objective; - to extend the existing building and the facilities of Mission Gallery, respecting the integrity of the existing building, and taking into account the proximity of the neighbouring residents.

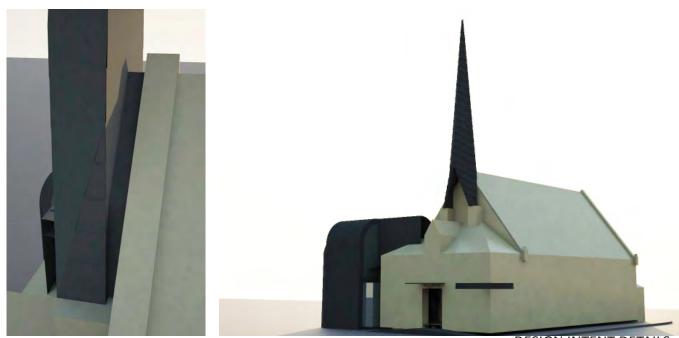
Strategies include;

- 1. Connection to the existing is kept below the eaves of the original 1868 building.
- 2. The new staircase connects at ground and first floor to the later part of the existing building north of the 1868 gable wall.
- 3. The glazed openings to the extension facing east towards the garden have perforated shutters for privacy.
- 4. The glazed panel with the fire exit door to the extension facing south will have a perforated shutter (TBC).
- 5. The glazing facing north in the extension building will have areas of obscured glazing for privacy.

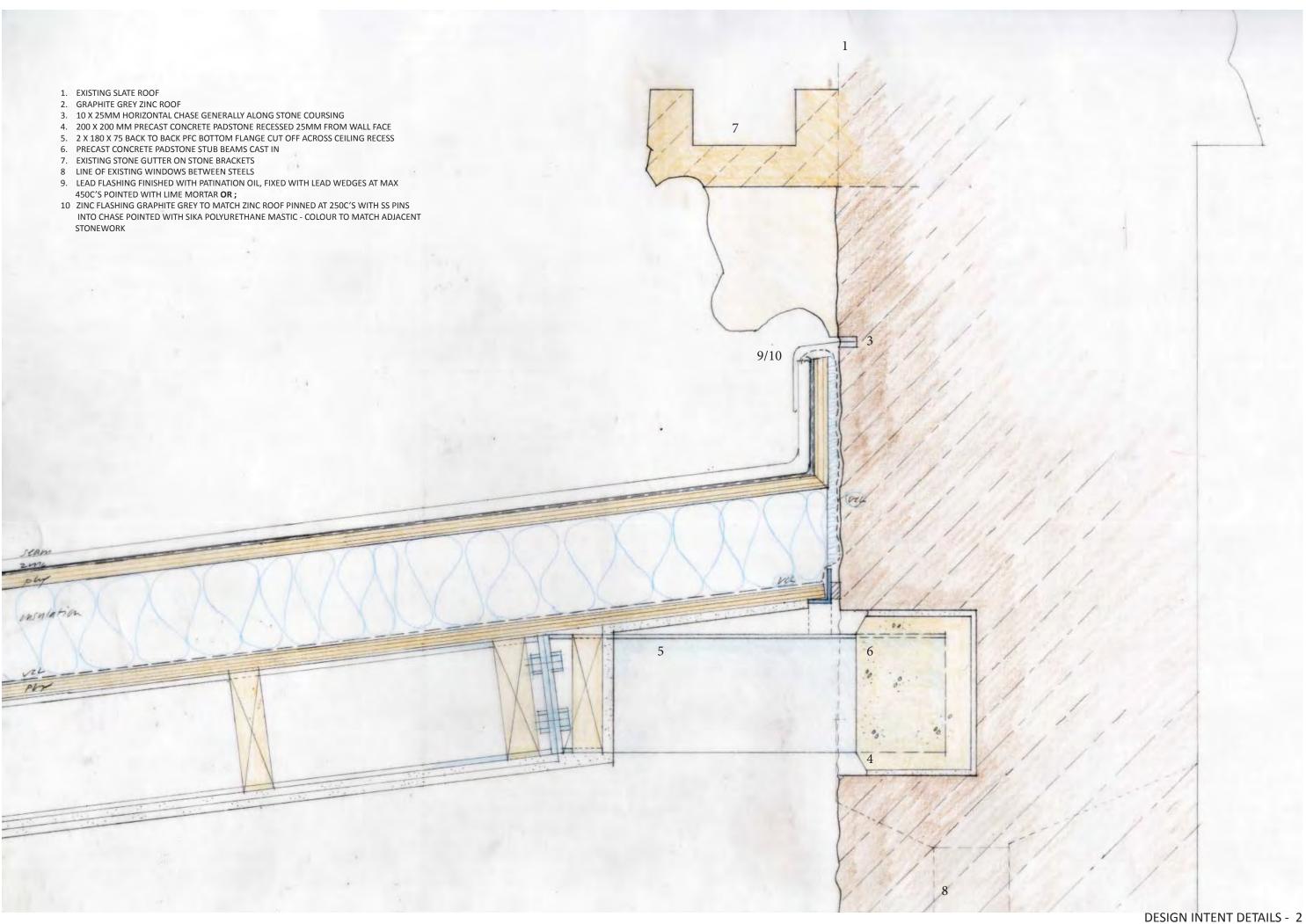
DESIGN OPTIONS AND JUSTIFICATION STATEMENTS FIRST FLOOR

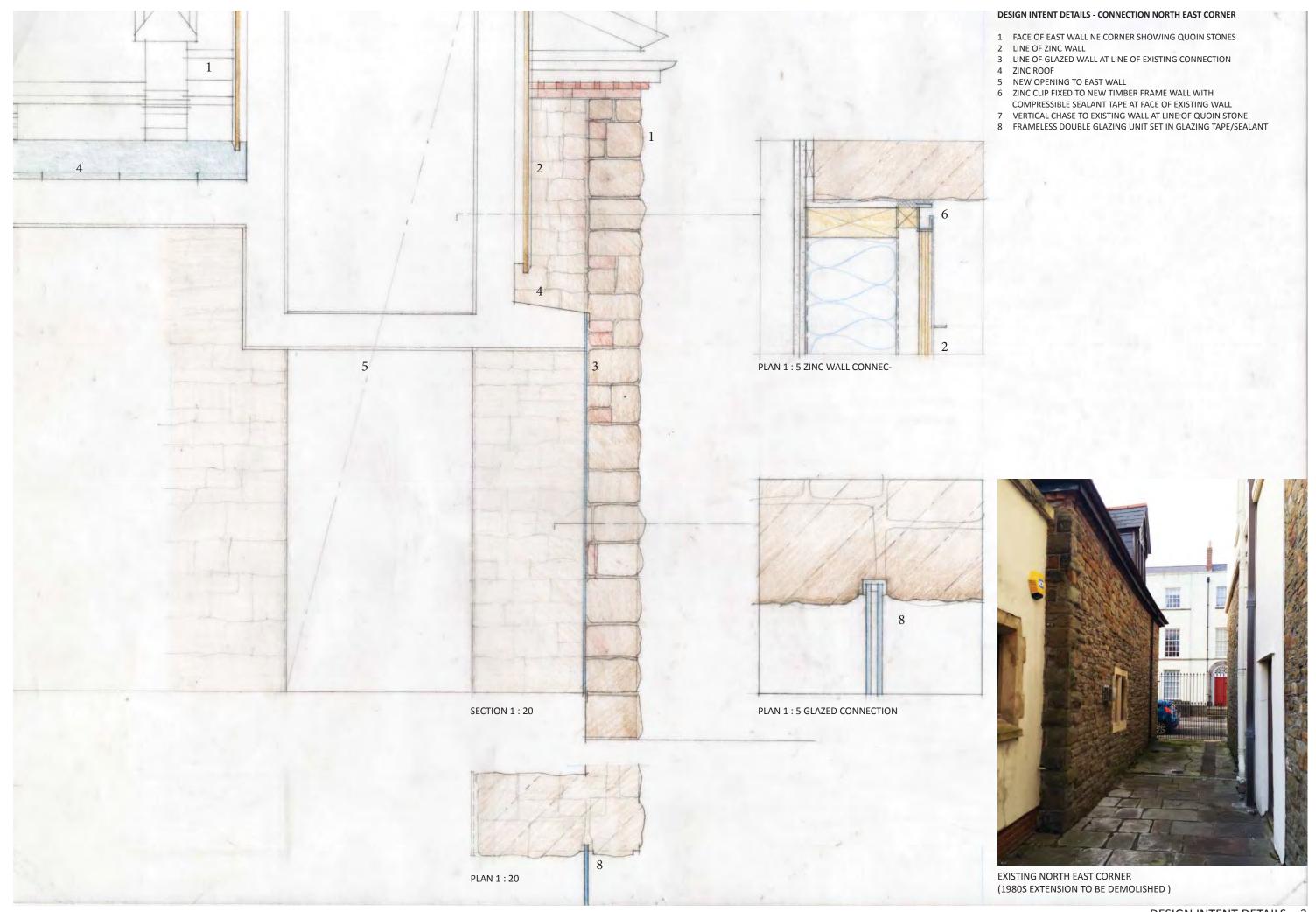


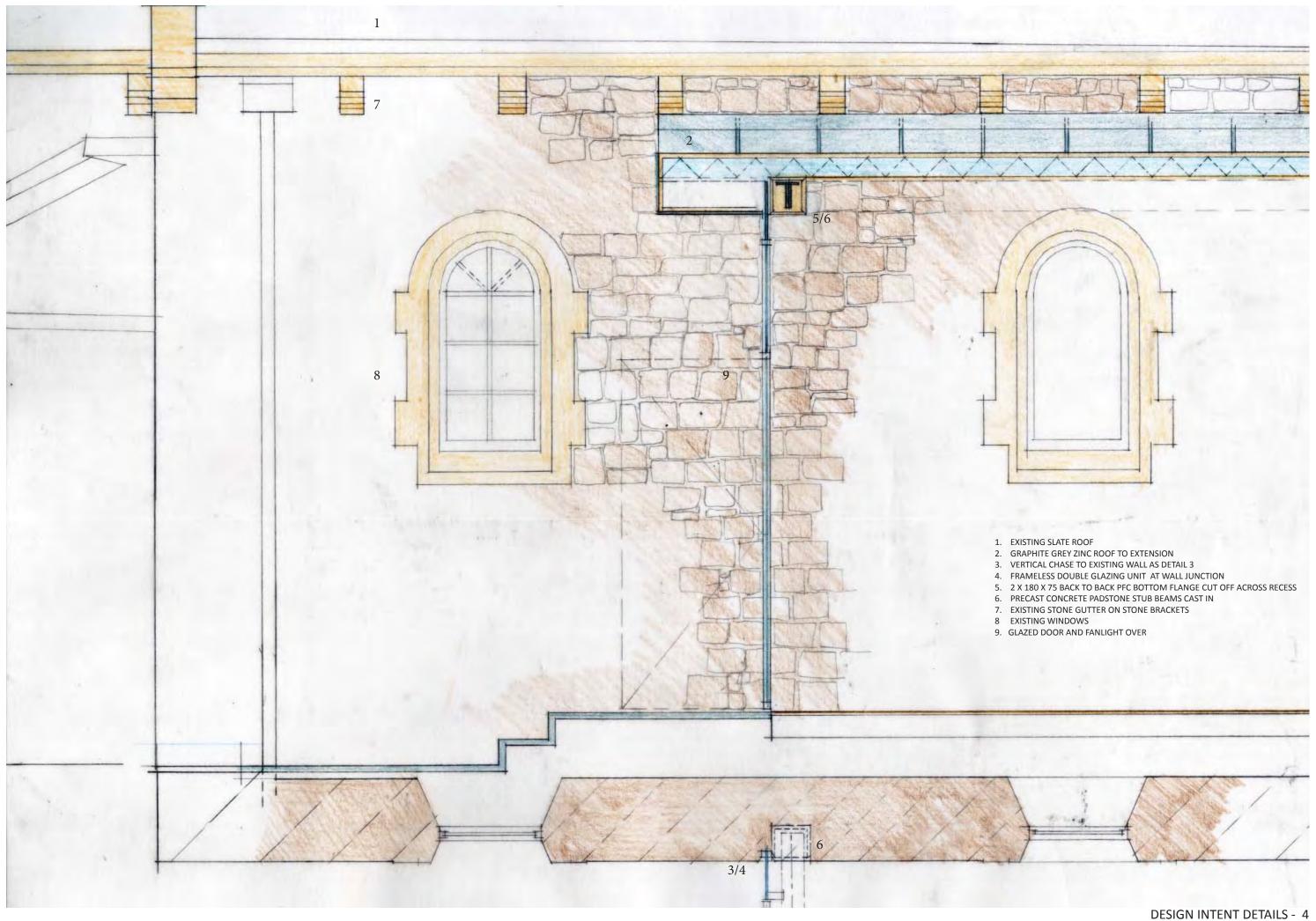


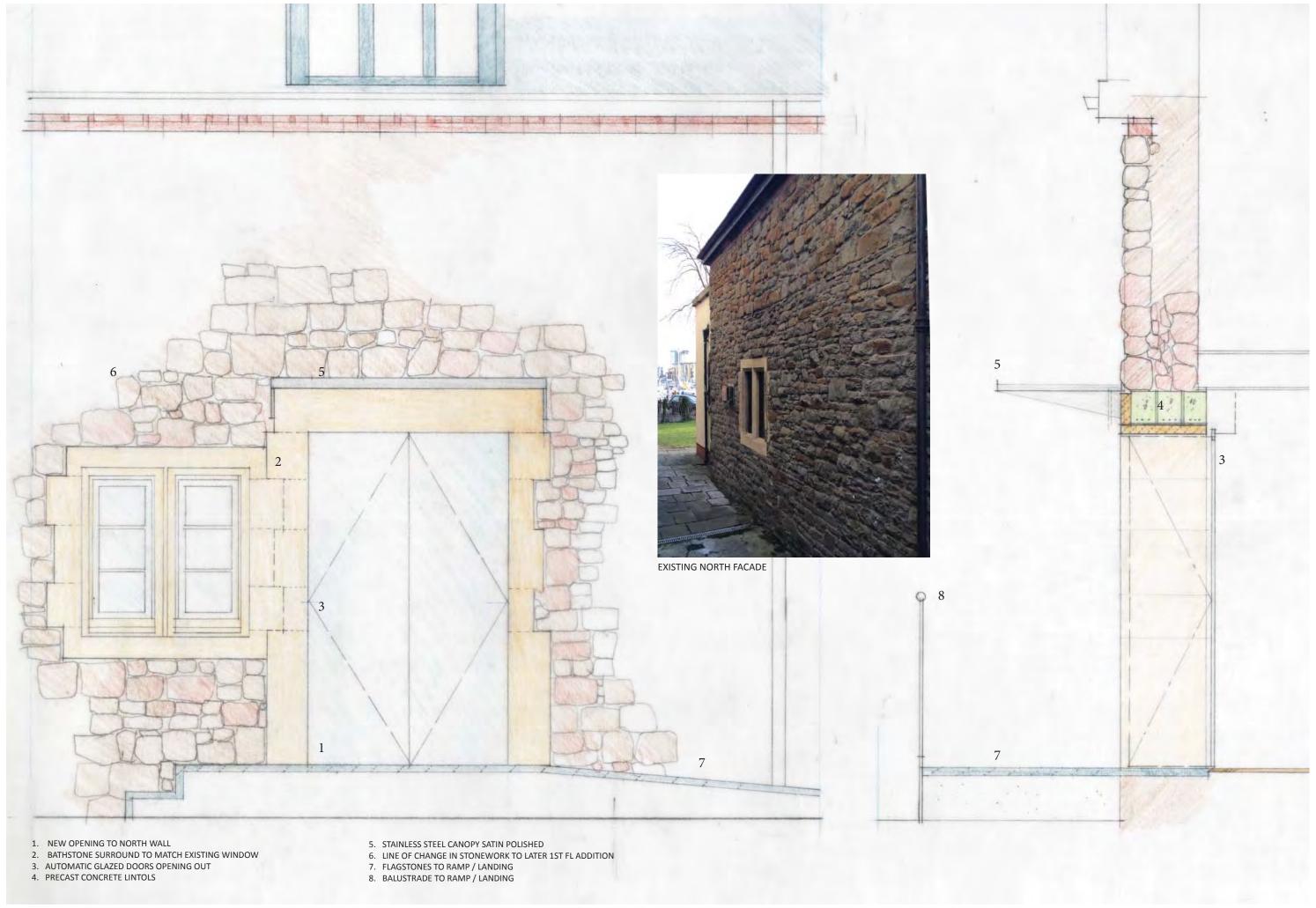


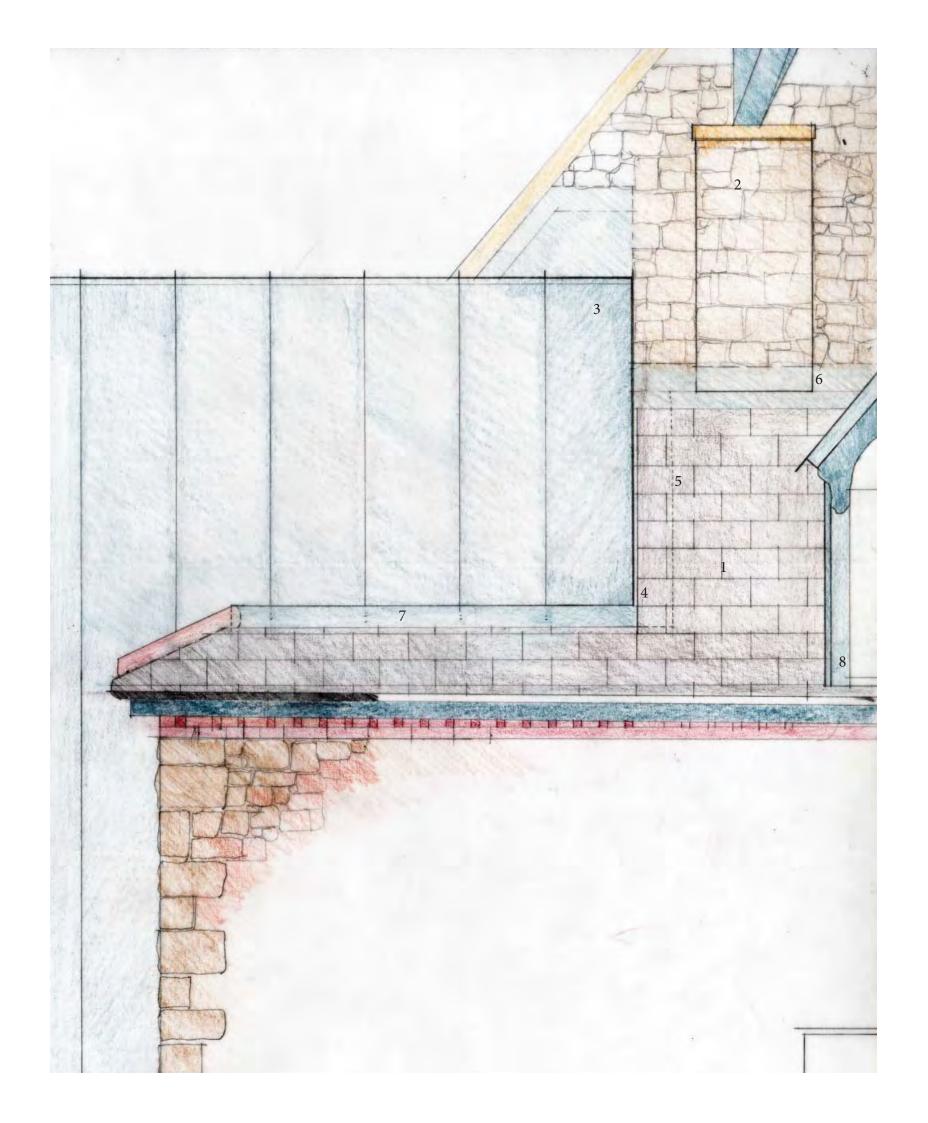
DESIGN INTENT DETAILS - 1









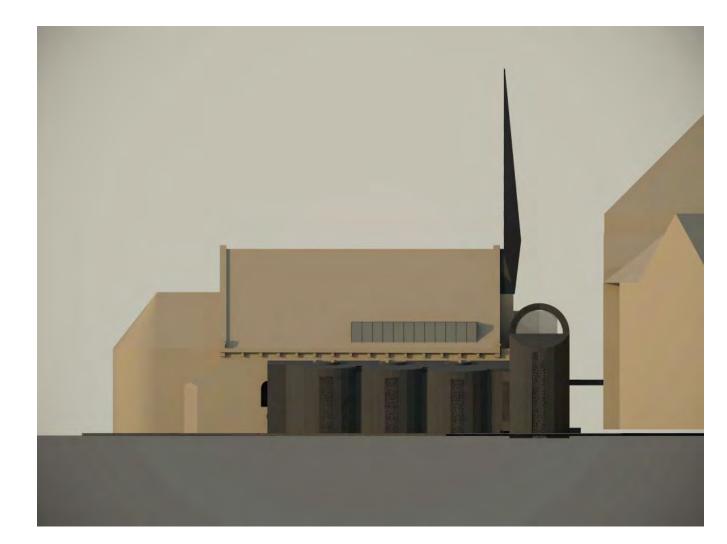






- 1. EXISTING SLATE ROOF
- 2. TOWER PIER
- TOWER PIER
 GRAPHITE GREY ZINC CLAD BARREL VAULT / GABLE
 SLATE ROOF BUILT UP AGAINST ZINC GABLE
 ZINC SOAKER UNDER
 EXISTING LEAD FLASHING
 ZINC FLASHING AT BASE OF VAULT WALL
 EXISTING DORMER WINDOW



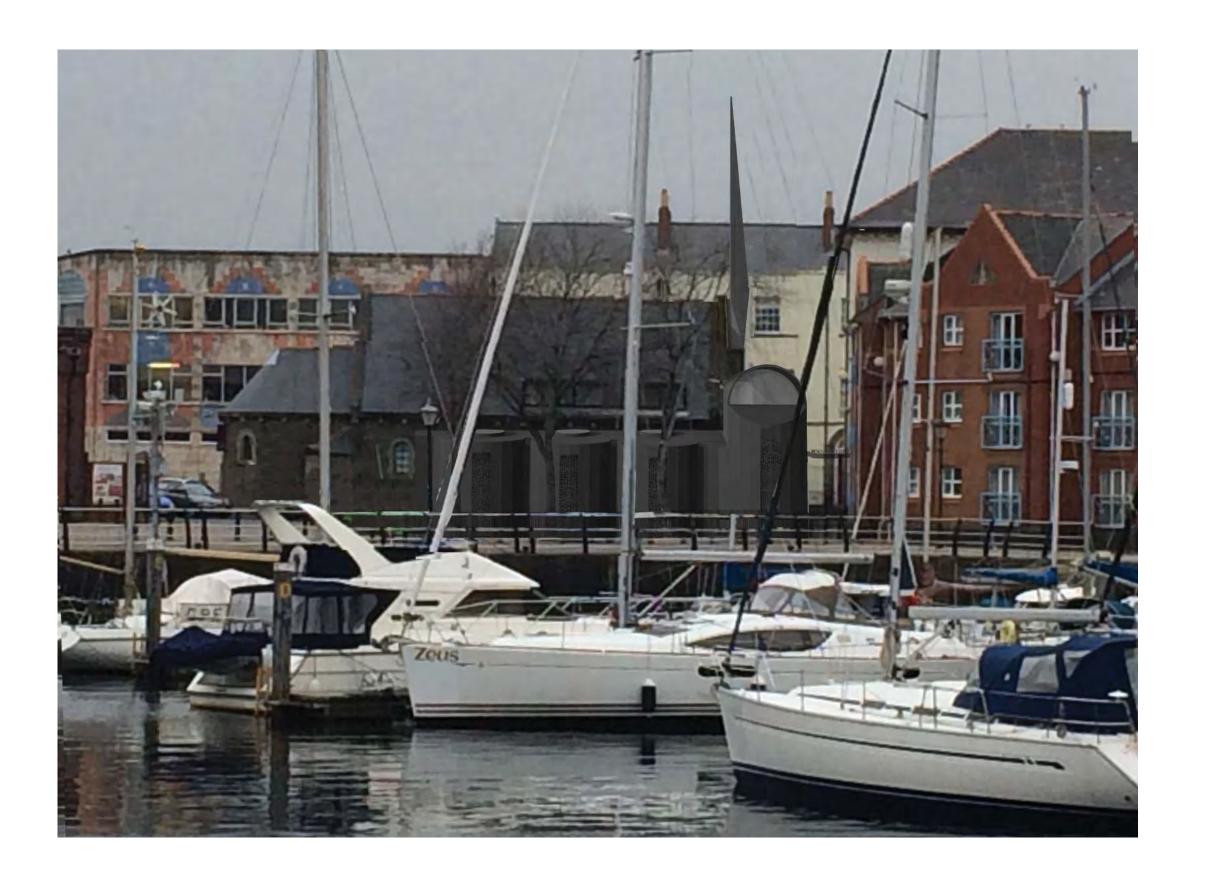


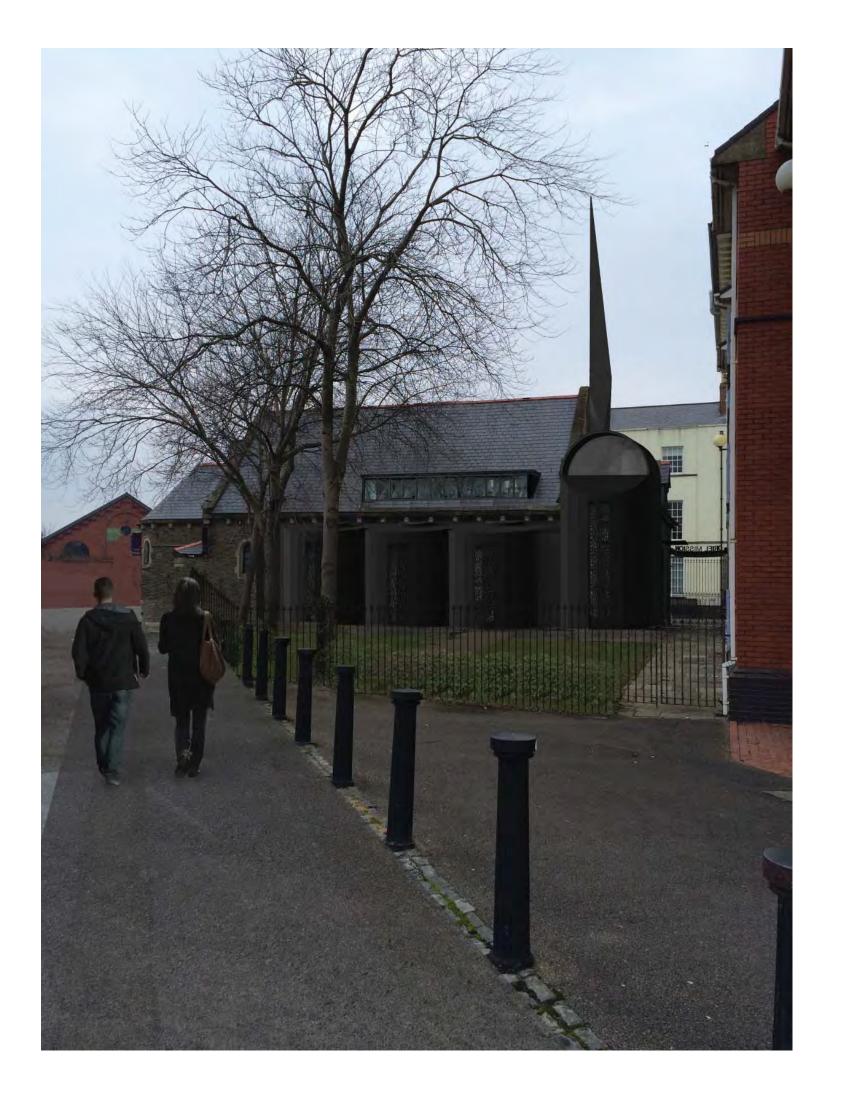














Mission Gallery Swansea

Stage D Report

For

Clash Associates Ltd

Project Number: - 6833

Date: - 21/04/15

Rev: - 5

Content/Quality Assurance

1.0	Introduction				
2.0	Client Brief / Loading				
3.0	Investigation Work				
4.0	Proposed Structure				
5.0	Proposed Drainage				
6.0	Conclusions				
Appendix A – Structural Drawings					
Appendix B – Brief for External Trial Pits					
Apı	Appendix C – Designers Risk Assessment				

Document issue details:

Version Number	Issue Date	Issue Status	Distribution
1 2 3 4 5	28/4/15 29/4/15 05/05/15 24/07/15 04/08/15	Draft Draft 2 Final Final Final	Architect Architect & Client Architect & Client Architect & Client Architect & Client
Prepared	Checked	Approved	Date
TM	PR		28/4/15

Mann Williams Consulting Civil and Structural Engineers 03 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

1.0 Introduction

- 1.1. Mann Williams were appointed by Peter Clash of Clash Associates Ltd to undertake the design of this project. The project is now reaching the conclusion of stage D design and this report is intended to present the design as it stands at this stage.
- 1.2. The project comprises of the refurbishment and extension of an existing grade II listed church building in the Swansea Dock area. The building is currently in use as a gallery and will continue to be used for this purpose.
- 1.3. The existing building was constructed in 1868 and was subsequently extended in the 1900s on the North side and again in the 1980s/1990s. The form of the 1980s extension is in keeping with the original building however the latter is of modern construction.
- 1.4. The proposed works include strengthening the ground floor, forming new openings in walls, demolishing the existing modern extension and replacing it with a larger extension, installing a platform lift and rebuilding the spire with a modern interpretation.
- 1.5. A structural feasibility report was undertaken by Ove Arup and Partners Limited (ARUP) in early 2014.

Mission Gallery Swansea Stage D Report Mann Williams Consulting Civil and Structural Engineers 04 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

2.0 Client Brief / Loading

2.1. As part of the design development the client (Mission Galleries) has produced a Load Bearing Brief, an Acoustic Brief and a Lighting Brief. Of these only the load bearing brief has an impact on the proposed structure of the building. The key points form this brief and how they are addressed are presented below.

2.2. Gallery Floor

- 2.2.1. The gallery floor is to be used for the display of art and sculpture and the clients brief reflects this by asking for the floor to be designed for a load of 10kN (i.e. 1 tonne) on any one metre square. In a subsequent design team meeting it was agreed that this be reduced to 5kN on any one metre square.
- 2.2.2. The recommended loading for museum and art galleries in the British Standards is a distributed load of 4kN/m² and a point load of 4.5 kN. However the standard acknowledges that this loading requirement may be as high as 10 kN/m² in some circumstances.
- 2.2.3. Two options have been shown on our drawings to provide a load bearing capacity of 5 kN/m² across all of the ground floor structure. At detailed design stage, further coordination will be needed with the M & E design , particularly regarding floor boxes, to maintain the target load bearing capacity.

2.3. Ceiling Loading

- 2.3.1. It was agreed in a design team meeting that the clients brief should have stated a requirement for a suspended load of up to 10 kN on any point of the gallery ceilings. This was discussed during the meeting and it was made clear that this may be not completely achievable given the historic nature of the ceiling.
- 2.3.2. From our current assessment of the historic roof structure we believe it will be possible to suspend a load of 2.5 kN from any position on each truss. In order to support the load of 10 kN it would be possible to distribute the load over four trusses with steel beams.
- 2.3.3. Fixing points able to carry these loads would be required at specific locations and the installation of these through the historic ceiling fabric would need careful consideration.
- 2.3.4. All of this is conditional on a more detailed investigation of the roof trusses following stripping of the roof finishes. This will need to have particular emphasis on the connections.

2.4. Education Room

- 2.4.1. The education room currently has an occupancy limit of 30 people at any given time. The clients brief expresses a desire to increase this and it has been agreed subsequently that they would like to increase it to 60 people if possible.
- 2.4.2. A proposal for increasing the load bearing capacity of this floor has been included on our drawings. This is based on enhancing the lateral support to the principal steel beam provided by the joists. The joists themselves are sufficient to carry the increased load of 60 people evenly distributed. It is also intended that the floor boards be renewed with T& G boarding, which will tend to improve the overall stiffness of the floor structure.

Mann Williams Consulting Civil and Structural Engineers 05 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

3.0 Investigation Work

3.1. During the course of the scheme design we have undertaken a series of investigations to build on the investigation work undertaken during the feasibility study. Some investigation works identified as required were not carried out at this stage but will be required during detailed design or construction stages of the project.

3.2. Building Opening Up and Asbestos Survey

- 3.2.1. On 9th March 2015 we visited site with PHH Environmental to carry out some opening up works and a partial asbestos survey.
- 3.2.2. This opening up work confirmed the construction in a number of areas including:
 - Construction of ground floor lintel in lobby
 - Construction of ground floor wall between office and shop
 - Construction of ceiling down-stand in shop
 - Supporting structure over infilled external doorway to shop
 - Construction of gable wall
 - Construction of spire piers
 - Form of education room floor
 - Span of first floor joists
 - General arrangement of roof trusses
- 3.2.3. The subsequent report from PHH Environmental did not find any asbestos bearing materials. This does not constitute a full demolition and refurbishment asbestos survey but will act as substantial start to one.

3.3. Drainage CCTV Survey

- 3.3.1. On the 5th of March 2015 I Spy Technology attended site to undertake a CCTV survey of the drainage.
- 3.3.2. This confirmed that the drainage layout was largely in accordance with our initial assumptions. The foul drainage is connected to the Welsh Water sewer in Gloucester place and the surface water runs along the front of Gloucester House before discharging into the dock.
- 3.3.3. The CCTV footage showed that both of the drainage runs are in a poor condition generally and that in particular the head of the foul run inside the existing building is very poor.

3.4. Investigation Work Carried out as Part of Feasibility Study

- 3.4.1. During the feasibility study for this project a series of investigations were undertaken including some opening up of structural elements of the building and some ground investigations.
- 3.4.2. The opening up within the building was largely limited to floor structures and the visible elements of the roof structure. This information has formed the basis of the additional investigation work detailed above which has provided information for a number of the areas not covered.
- 3.4.3. The ground investigation works completed in this stage were largely concerned with the foundations of the existing building although they also included some contamination testing. These were undertaken as hand dug trial pits in two locations adjacent to the existing church walls. One of these trial pits proved the bearing of the wall and suggested that this bearing was on sand which is natural ground. All of the remaining ground encountered in these pits was made ground. Due to the location of these trial pits adjacent to the building, where the ground has almost certainly been disturbed by the construction of the church, and the lack of penetration into the sand strata we feel these do not provide a sufficient level of understanding of the formation material or levels.
- 3.4.4. The contamination testing showed no significant ground contamination. Further contamination testing may be required as part of the additional ground investigations described in 3.5.1 below..

Mission Gallery Swansea Stage D Report Mann Williams Consulting Civil and Structural Engineers 06 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

3.5. Investigation Works yet to be Completed

- 3.5.1. Ground Investigations As discussed in paragraph 3.4.3 the existing geotechnical information is not suitable for designing the foundations of the extension and as such further ground investigation work is required. A Brief for External Trial Pts document was produced as part of the stage D design and is presented in appendix B. This work needs be undertaken at the beginning of the detailed design stage.
- 3.5.2. As noted in paragraph 3.2.2 the opening up works to date have not included a detailed survey of the roof trusses and their connections. This would be required prior to finalising the design of them to support hanging gallery loads. It is likely that this would be carried out once the roof has been stripped.
- 3.5.3. The ground floor structure was only investigated during the feasibility study, this investigation work identified the general construction of the floor but did not provide any detail on the spacings of joist bearers. Although this does not impact the design of the floor, as we have specified a minimum joist bearer spacing, it does impact the scope of works. As such it may be prudent to confirm this prior to tendering the work if the ground floor is to remain as a timber floor.
- 3.5.4. At this stage no access has been achieved to the concrete capping slab at the top of the tower support structure. This will be required prior to finalising the details of the proposed spire and may include a cover meter survey of the slab and concrete core testing if the slab is to be re-used. The stone piers supporting this slab will also have to be inspected within the roof space. It is likely that this work would be best carried out following stripping of the roof when access to this level will be required by the main contractor however if the investigation work is required sooner than this it could be undertaken externally via a cherry picker.
- 3.5.5. Asbestos survey A full demolition & refurbishment asbestos survey will be required once the building has been vacated but prior to the contractor starting on site.

Mann Williams Consulting Civil and Structural Engineers 07 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

4.0 Proposed Structure

4.1. The details of the proposed structure are shown on our structural sketch drawings which are presented in appendix A of this document. A brief description has also been given in this section where the work has been split into the existing building and the extension.

4.2. Existing Building

- 4.2.1. Within the existing building the majority of the structure is to remain as existing with a series of isolated interventions.
- 4.2.2. Ground Floor Structure The majority of this is to be strengthened to meet the clients loading specification as discussed in section 2.2. This is to comprise 60mm of rigid insulation with a 75mm screed over and a 20mm zone for finishes (either hardwood or polished screed). The remainder of the floor is to remain a suspended timber floor. Refer to drawing SK 012 for details of extents.
- 4.2.3. Lift Shaft Opening to be formed in existing joisted floor for proposed platform lift. Existing joists to be supported by new doubled up joists framing opening within depth of floor.
- 4.2.4. New Openings in Internal and External Load Bearing Walls Openings to be formed and masonry / floors above to be supported on new steel / concrete lintels.
- 4.2.5. Expanded Opening to Gloucester Place Area of infill to be removed to increase height of opening to original size. Original opening height visible on site by timber lintels. Proposed steel beam to be installed at first floor level to support existing floor beam and proposed glazed panel.
- 4.2.6. First Floor Structure Floor to be strengthened by improving connection of joists to steel beams. Every other floor joist bearing to be improved to provide lateral restraint. Improvement to consist of a steel angle cleat fixed to the steel flange with tek screws and bolted through the pair of joists.
- 4.2.7. Roof Provision to be made to suspend loads from existing roof trusses to meet clients loading brief. Structure may also be required to distribute loads between trusses. Detailed requirements to be confirmed following detailed inspection of trusses and their connections.
- 4.2.8. Spire The church tower (damaged and dismantled during the Second World War) is to be replaced with a modern interpretation. The currently favoured design strategy is for a 12m high zinc clad spire with a 2.5m diameter base. The primary frame is to be formed with hot rolled steel which is to be clad in plywood and zinc. A suitable corrosion protection system will be required for the hot rolled steel such as hot dip galvanising. A preliminary design of this structure has been undertaken at this stage together with its connection to the existing structure. These are shown on sketches SK 19, SK 20 and SK 21.
- 4.2.9. As part of the structural design work a Designers risk assessment has been developed. This details the significant hazards associated with the proposed development. It also shows how these risks have been reduced or removed through the design process.

Mission Gallery Swansea Stage D Report Mann Williams Consulting Civil and Structural Engineers 08 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

4.3. Proposed Extension

- 4.3.1. The proposed extension is predominantly a timber framed building with isolated loose steel beams to support the roof.
- 4.3.2. Ground Floor Slab and Foundations The proposed foundations are mass concrete strip footings, these are positioned back from the ground floor slab edges to allow the slab to cantilever and avoid undermining the existing building and significant excavation in the root zone of adjacent trees. The ground floor slab is a reinforced concrete slab spanning between and over the strip footings.
- 4.3.3. Timber framed walls The timber framed wall is curved and sloped which will require significantly more complex detailing than standard timber framed structures.
- 4.3.4. Roof The principal roof of the extension, at first floor, is formed with steel beams spanning between the timber framed wall and the existing church wall. These support timber roof joists forming the roof. The connection detail between the steel beams and existing masonry wall has been carefully considered and a detail developed in conjunction with the architect.
- 4.3.5. Stair Core and Roof The stair core and its barrel vaulted roof is formed from a small steel frame. This extends into the existing building to form the half barrel vaulted link section. The stair itself is proposed as a steel supporting structure with concrete trays supported on steel beams at half landing and first floor level and concrete slab at ground floor level.

Mann Williams Consulting Civil and Structural Engineers 09 53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

5.0 Proposed Drainage

5.1. As part to the proposals for the building the number of WCs is being increased as is the roof area. Therefore alterations are required to both the foul drainage and surface water drainage networks.

5.2. Foul Drainage

- 5.2.1. The existing foul drainage collects at an internal shallow manhole and runs under the building to the site boundary with Gloucester road. From here it connects to the main Welsh Water Sewer in Gloucester Road which is significantly deep.
- 5.2.2. Our proposal is to remove the existing internal manhole and replace it with a new internal manhole in a different location where it can collect the internal drainage from the first floor and the under slab drainage from the ground floor. This work will also replace the section of foul drainage identified in the CCTV survey as being in the poorest condition. The depth of this manhole will be dictated by the depth of the existing drainage run in this location and some local underpinning to existing walls may be required so that its construction does not undermine them.

5.3. Surface Water Drainage

- 5.3.1. The existing drainage either discharges onto the pavement or is collected by a surface water drainage run along the front of Gloucester house. This drainage run discharges through the dock wall via a catch pit.
- 5.3.2. Our proposal is to construct a new drainage run along the extension to collect the roof discharge and act as a land drain for the garden area. This is connected into the existing drainage via a new inspection chamber.
- 5.3.3. There is one existing down pipe on the same elevation as the extension. There are three options for how this could be incorporated into the new proposals.
 - To remain as an internal down pipe and maintain its existing connection to the surface water network.
 - To discharge across the roof
 - To be relocated away from the extension and connected into the proposed drainage network Our preferred solution is the third option as this provides the most robust engineering solution. However this is reliant on modifying the existing gutter lining to fall in one direction to the new downpipe location.
- 5.3.4. The remaining existing downpipes which currently discharge onto the pavement are to be renewed so that they discharge into a channel through the pavement and discharge onto the highway.
- 5.3.5. The proposed inspection chamber and some other works required in the alleyway between Mission Gallery and Gloucester House have the potential to impact on the existing Virgin Media cable in this area.

Mission Gallery Swansea Stage D Report

Mann Williams Consulting Civil and Structural Engineers

53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

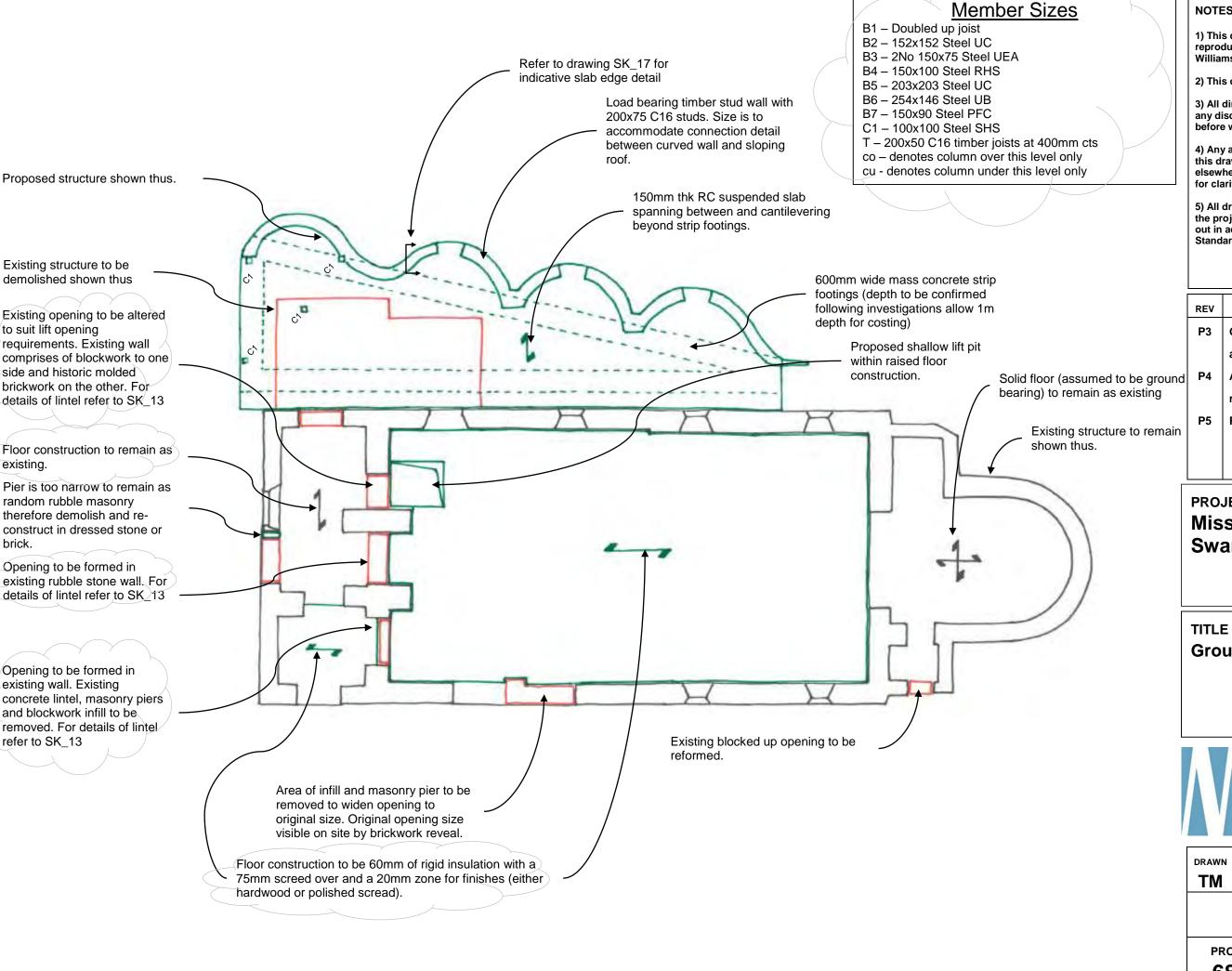
010

6.0 Conclusions

- 6.1. This document and the attached drawings demonstrate the Civil and Structural design up to stage D of this project.
- 6.2. A number of areas requiring further design work and investigation work have been identified however there is no reason this should not be undertaken in the future stages of the project.
- 6.3. No significant barriers to progressing the design beyond this point have been identified and the project appears to be structurally viable.

53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

Appendix A - Structural Drawings



NOTES:-

- 1) This drawing is copyright and may not be reproduced without the permission of Mann
- 2) This drawing is not to be scaled
- 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences
- 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds
- 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice

REV	DESCRIPTION	ВҮ	DATE
Р3	Ground floor options	TM	07/04/15
	added		
P4	Area of floor to be	TM	16/04/15
	renewed increased		
P5	Floor Areas Updated	TM	07/07/15

PROJECT Mission Gallery Swansea

Ground Floor Plan



Mann Williams Consulting Civil And Structural Engineers 53 Mount Stuart Square Cardiff CF10 5LR t 02920 480333 f 02920 435920

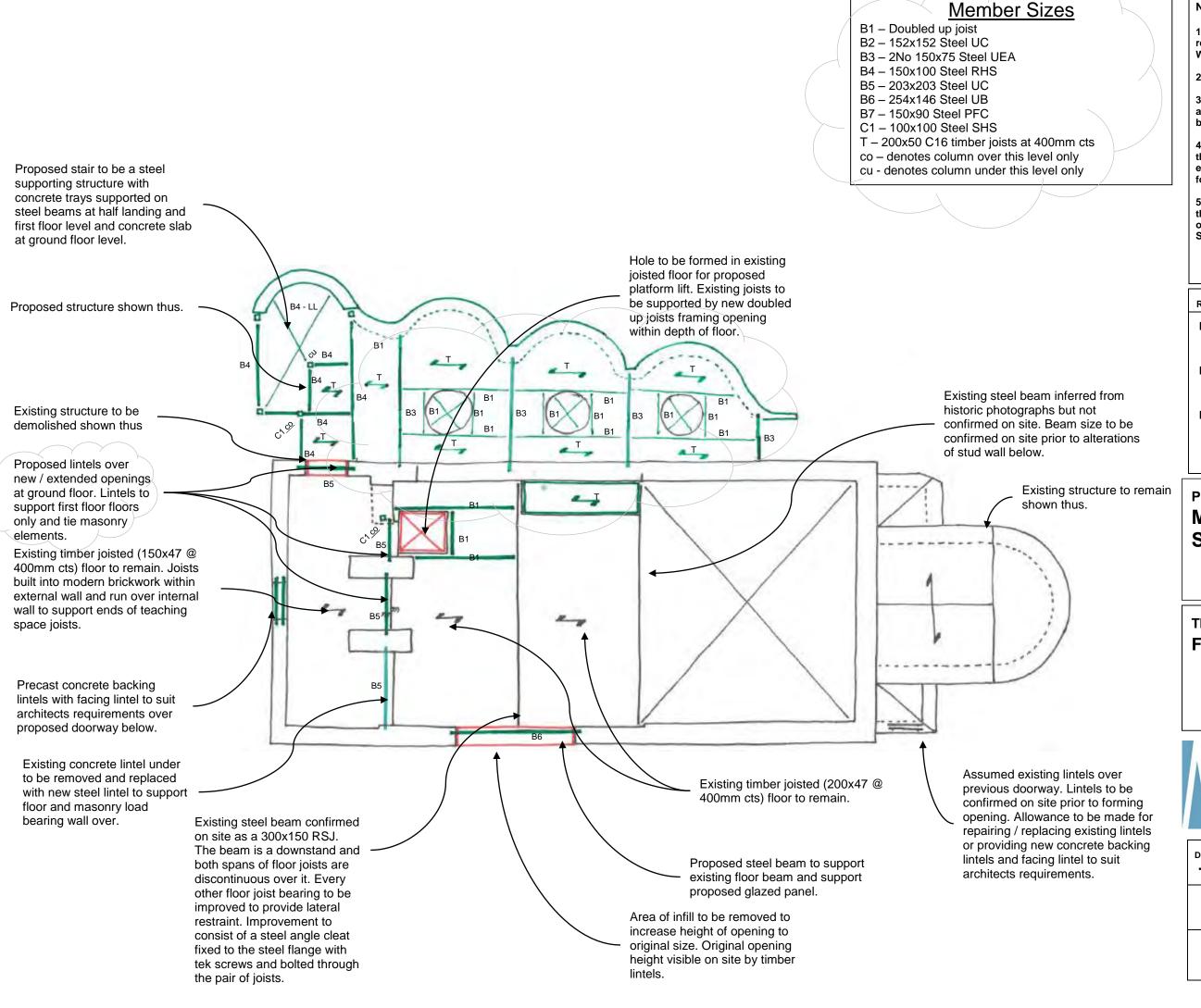
TM	PR	A3	1:100	02.15
DRAWN	CHKD	SIZE	SCALE	DATE

STATUS PRELIMINARY

PROJECT DRAWING 6833

SK_012

REV P5



NOTES:-

- 1) This drawing is copyright and may not be reproduced without the permission of Mann Williams
- 2) This drawing is not to be scaled
- 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences
- 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds
- 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice

REV	DESCRIPTION	BY	DATE
Р3	Extension structure	ТМ	07/04/15
	amended		
P4	Floor Strengthening	тм	16/04/15
	Added		
P5	Lower Roof Updated	ТМ	07/07/15

PROJECT Mission Gallery Swansea

TITLE First Floor Plan



Mann Williams
Consulting Civil And
Structural Engineers
53 Mount Stuart Square
Cardiff CF10 5LR
t 02920 480333 f 02920 435920

TM	PR	A3	1:100	02.15
DRAWN	CHKD	SIZE	SCALE	DATE

PRELIMINARY

PROJECT DRAWING REV

6833 SK 013 P5

Member Sizes

B1 – Doubled up joist

B2 - 152x152 Steel UC

B3 - 2No 150x75 Steel UEA

B4 - 150x100 Steel RHS

B5 - 203x203 Steel UC

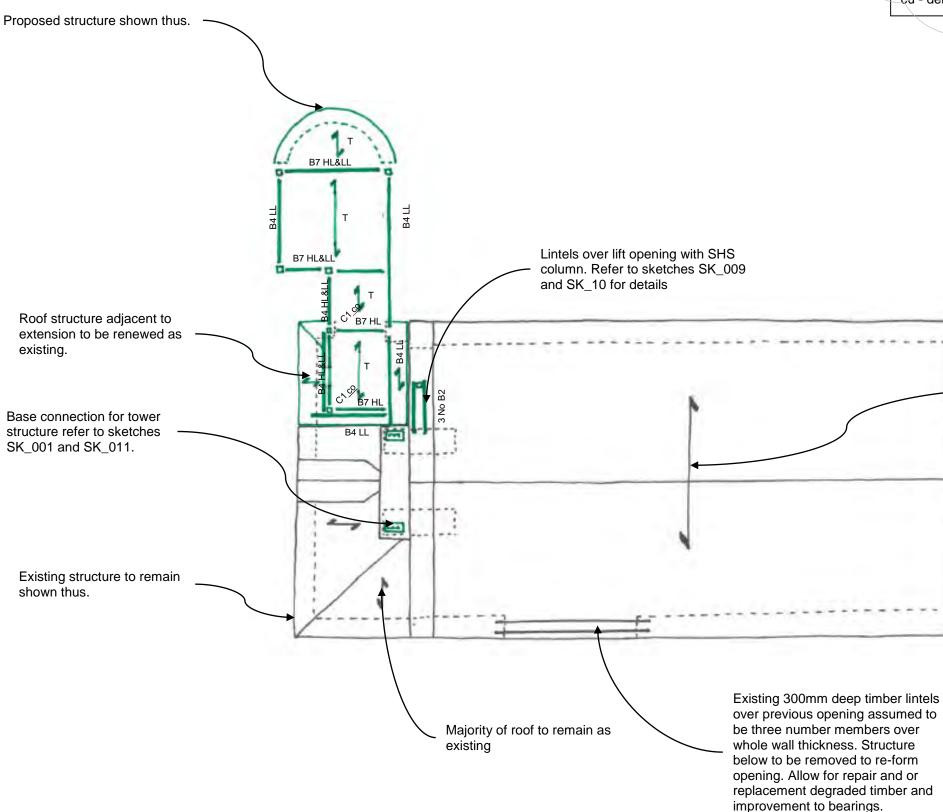
B6 - 254x146 Steel UB B7 - 150x90 Steel PFC

C1 - 100x100 Steel SHS

T – 200x50 C16 timber joists at 400mm cts

co – denotes column over this level only

cu - denotes column under this level only



Existing roof formed from timber scissor trusses at 500mm centers with curved ceiling formed from faceted booms. In its current arrangement the roof is estimated to be able to support an additional hanging load of 250 kg per truss. A 1 tone hanging load could be achieved by distributing the load over 4 No trusses with steel beams (such as B7). In order to verify this Mann Williams will need to inspect the roof once the slates have been removed to verify member sizes and connection arrangements.

NOTES:-

- 1) This drawing is copyright and may not be reproduced without the permission of Mann
- 2) This drawing is not to be scaled
- 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences
- 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds
- 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice

REV	DESCRIPTION	вү	DATE
P1	PRELIMINARY ISSUE	TM	27/02/15
P2	Amended following	TM	10/03/15
	site visit		
P3	Roof Loading Notes	TM	07/04/15
	Added		
P4	Member Table	TM	07/07/15
	Updated		

PROJECT Mission Gallery Swansea

TITLE **Roof Plan**



DRAWN	CHKD DD	SIZE	SCALE	DATE
I IVI	PK	A3	1:100	02.15

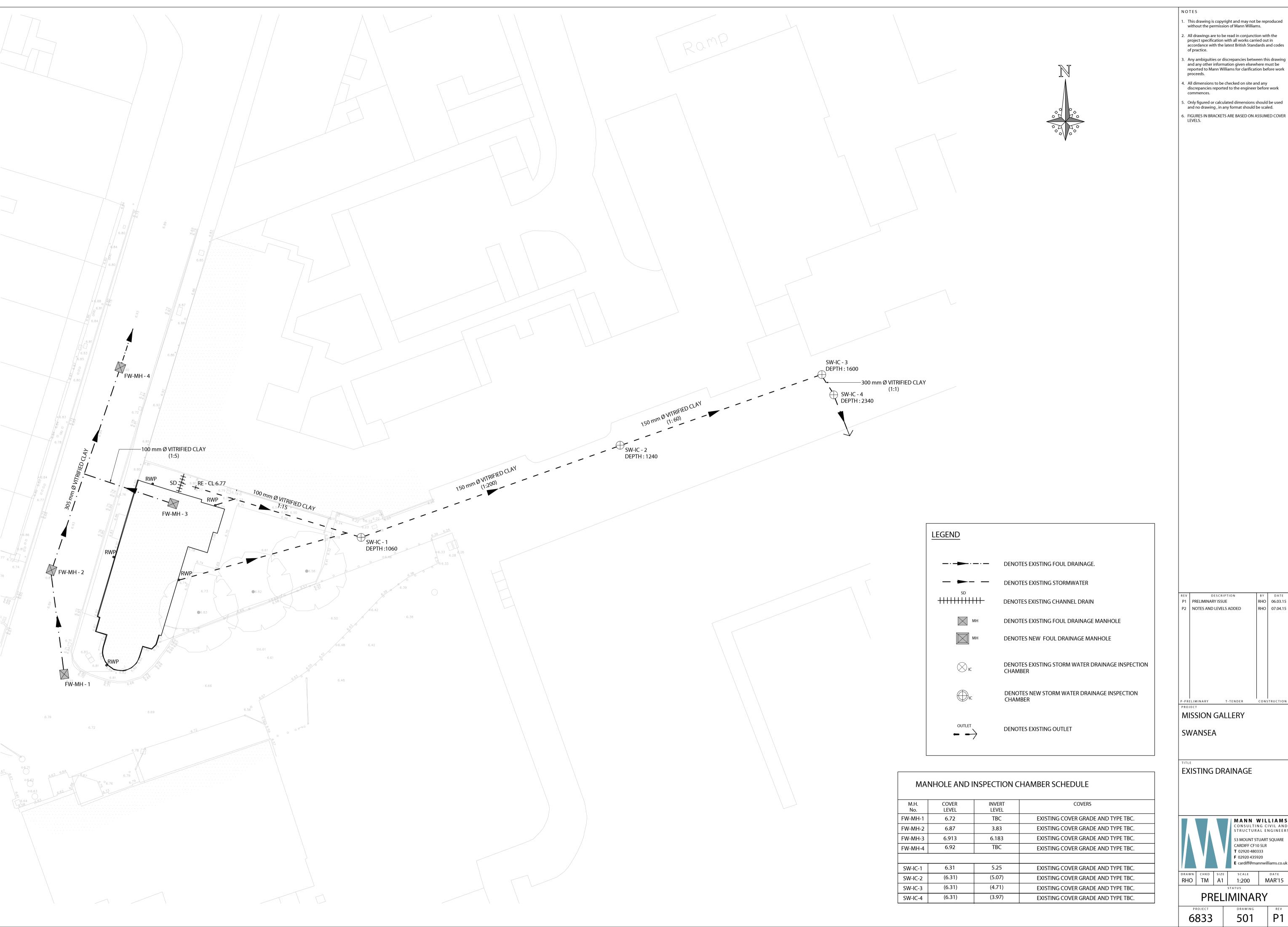
STATUS PRELIMINARY

PROJECT DRAWING 6833

SK_014

REV

P4



. This drawing is copyright and may not be reproduced without the permission of Mann Williams.

All drawings are to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice.

All dimensions to be checked on site and any discrepancies reported to the engineer before work commences.

6. FIGURES IN BRACKETS ARE BASED ON ASSUMED COVER

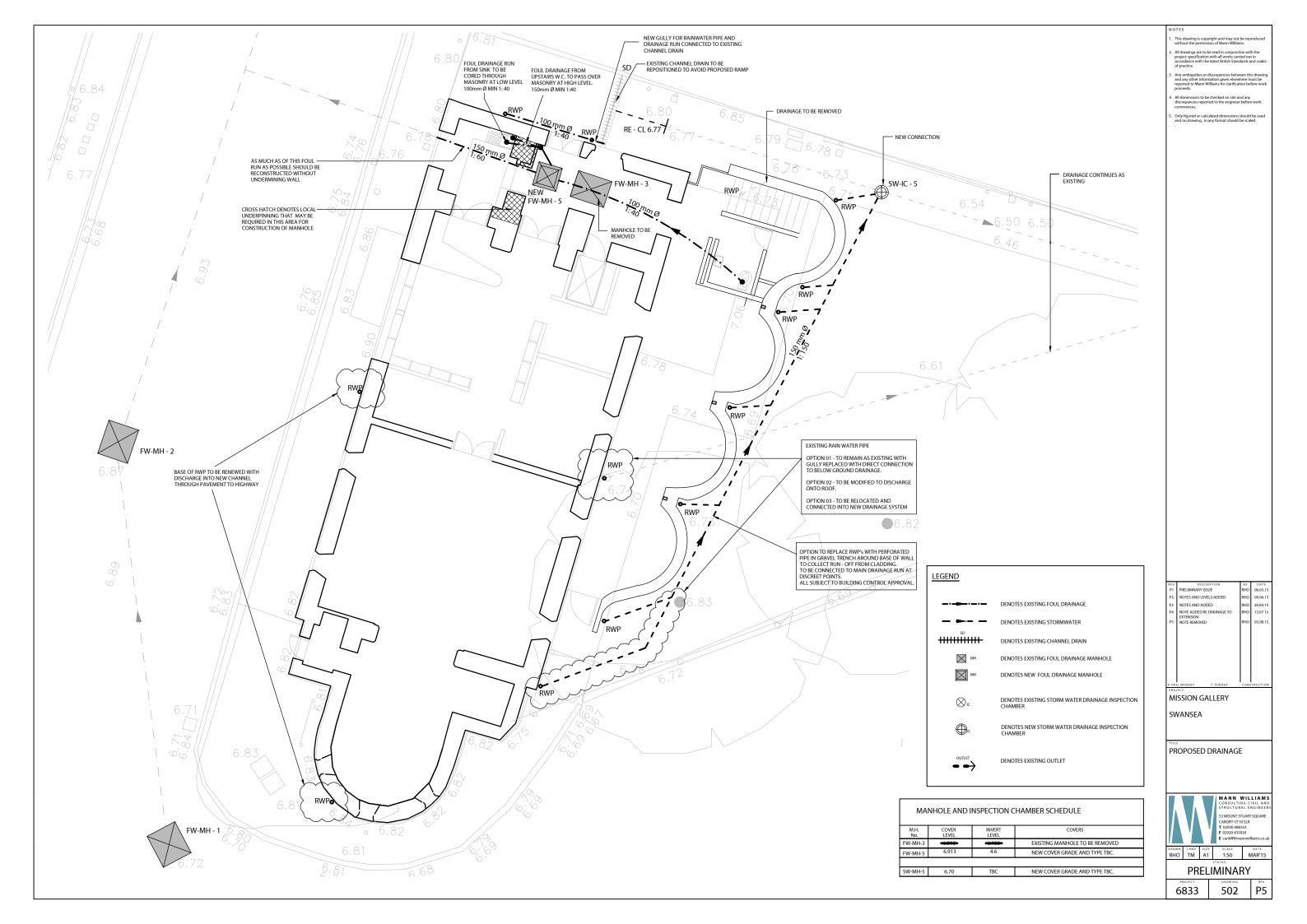
PRELIMINARY ISSUE RHO 06.03.15 P2 NOTES AND LEVELS ADDED RHO 07.04.15

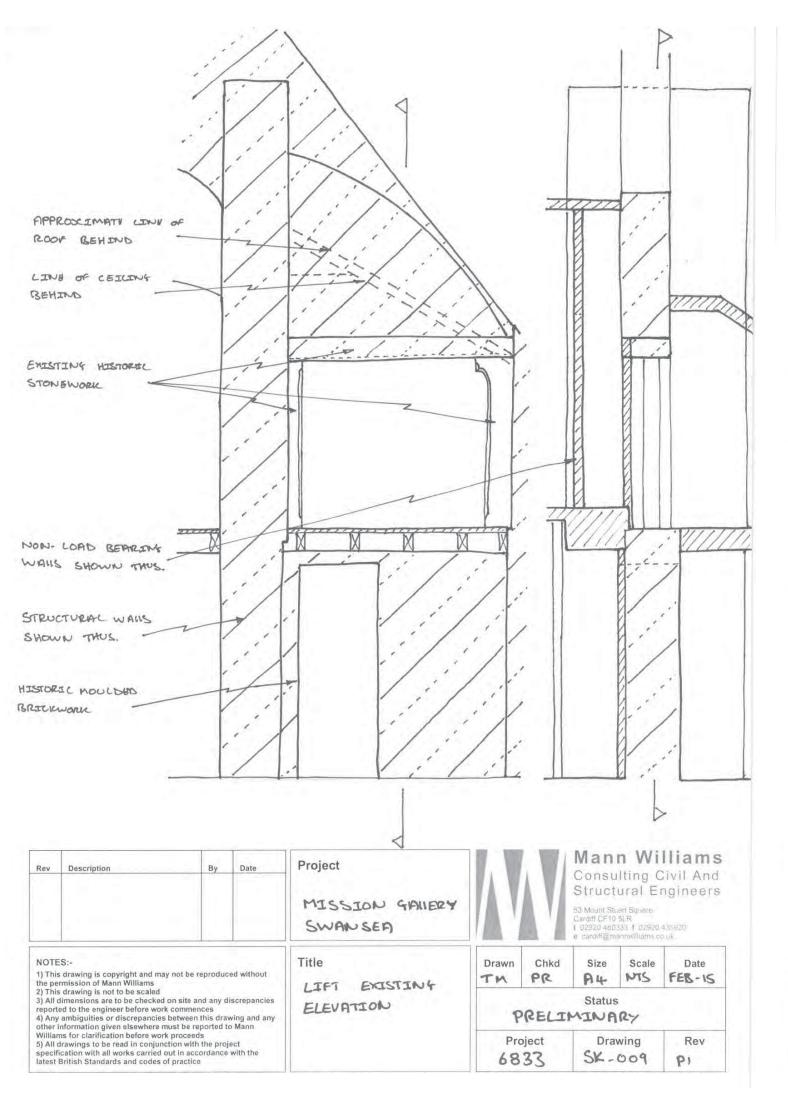
MANN WILLIAMS CONSULTING CIVIL AND STRUCTURAL ENGINEERS 53 MOUNT STUART SQUARE CARDIFF CF10 5LR **T** 02920 480333 **F** 02920 435920 **E** cardiff@mannwilliams.co.uk

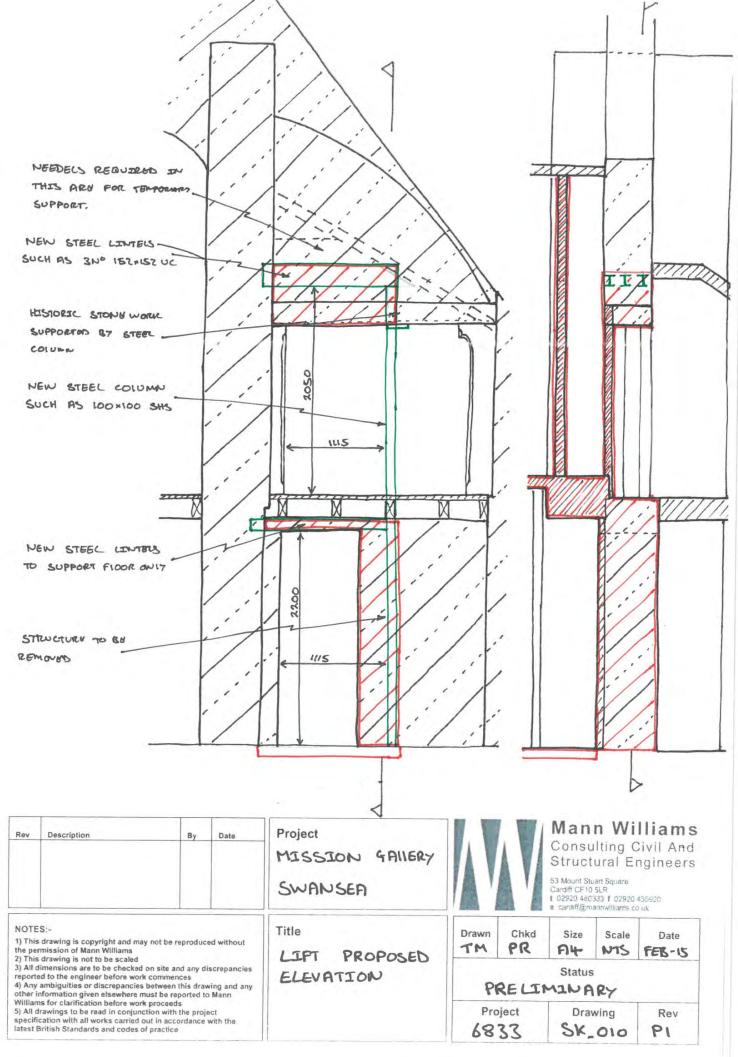
RHO TM A1 1:200 MAR'15

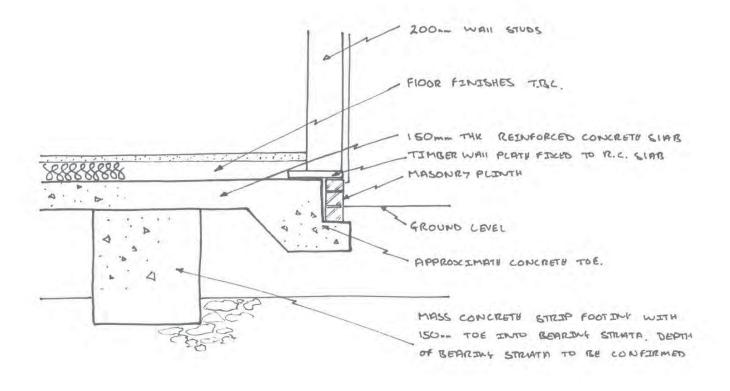
PRELIMINARY

501 P1

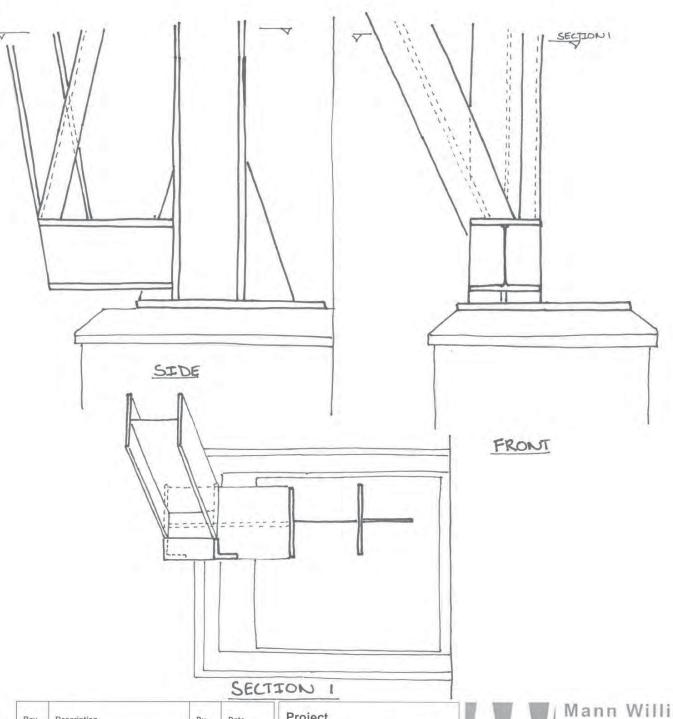








Rev	Description	Ву	Date	Project MISSION FAILERY SWANSEA			Consu Struct 53 Mount Str Cardiff CF10 1 02920 480	ulting C ural E una Square	
NOTES:- 1) This drawing is copyright and may not be reproduced without the permission of Mann Williams 2) This drawing is not to be scaled 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann		Title	Drawn TM	Chkd PR	Size A4	Scale 1:20	Date APRIL IS		
		SIAB EDIE DETAIL	PRELI MIN ARY						
William 5) All specif	other information given elsewhere must be reported to warm Williams for clarification before work proceeds 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice			Pro 683	oject 33	Dra	wing	Rev	



Rev Description

Project MISSION GALLERY SWANSEA

Chkd

Mann Williams Consulting Civil And Structural Engineers

Scale

JULY - 2015

53 Mount Stuart Square Cardiff CF10 5LR ± 02920 480333 f 02920 435920 a cardiff@mannwilliams co.uk

- NOTES:
 1) This drawing is copyright and may not be reproduced without the permission of Mann Williams

 2) This drawing is not to be scaled

 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences

 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds

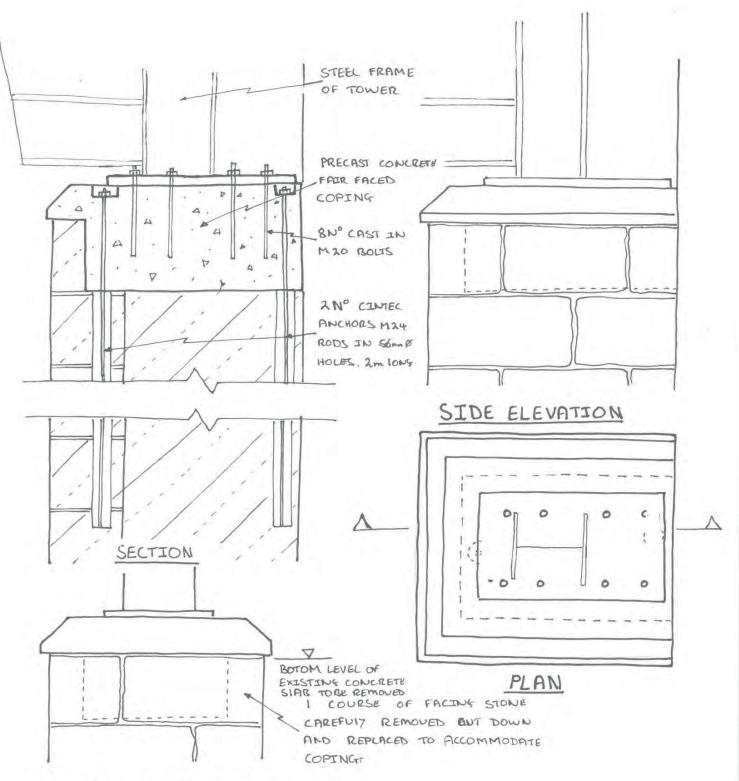
 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice

ZINC TOWER BASE DETAIL.

TM	PR	A4	1:10
		Status	3
	PREL	IMIN	JARY

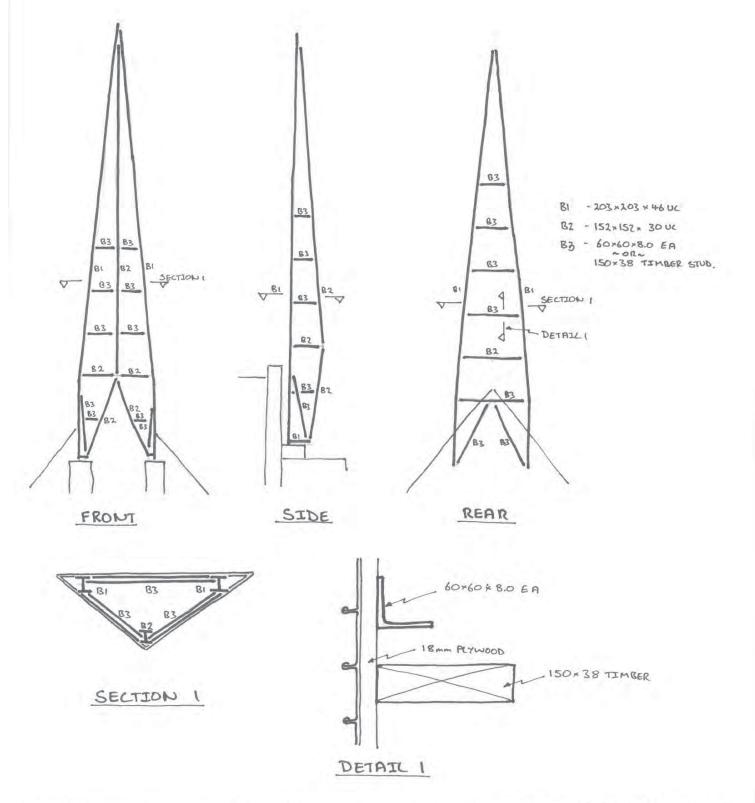
Project Drawing Rev 6833 SK_21 PI

Size



FRONT ELEVATION

Rev	Description	Ву	Date	Project MISSION GAILERY SWANSEA			Consu Struct 53-Mount St Carolf CF10 1 02920 480	ulting (ural E	
NOTES:- 1) This drawing is copyright and may not be reproduced without the permission of Mann Williams 2) This drawing is not to be scaled 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice		Title TOWER BASE	Drawn	Chkd PR	Size A4	Scale 1:10	Date		
		CONNECTION	Status PRELIMINARY						
			683	ject 3	A THE RESERVE	wing	Rev P2		



Rev	Description	Ву	Date	Project MISS: SWAN
NOTE	ES:-			Title

ION GALLERY USEA

Mann Williams Consulting Civil And Structural Engineers

53 Mount Stuan Square Cardiff CF10 5LR 1 02920 480333 f 02920 435920

- NOTES:
 1) This drawing is copyright and may not be reproduced without the permission of Mann Williams

 2) This drawing is not to be scaled

 3) All dimensions are to be checked on site and any discrepancies reported to the engineer before work commences

 4) Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Mann Williams for clarification before work proceeds

 5) All drawings to be read in conjunction with the project specification with all works carried out in accordance with the latest British Standards and codes of practice

ZINC	TOWER	
STEEL	FRAME	

Drawn	Chkd PR	Size A4	Scale 1:100	Date 5017 - IS
	PREL	Status		
	ject 33	Dra SK.	wing _19	Rev P2

Mann Williams Consulting Civil and Structural Engineers

53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 80333

Appendix B – Brief for External Trial Pits

6833

MISSION GALLERY SWANSEA



6833/PR

16 February 2015

BRIEF FOR EXTERNAL TRIAL PITS

Purpose of trial pits - To confirm ground conditions to assist in design of foundations to new extension. (Refer location plan ref 6833/ SK 06)

Scope of works: Excavation of 2 No. trial pits to nominally 1200mm below ground level, to confirm existing ground conditions. Backfilling of trial pits following inspection by Mann Williams engineer, and reinstatement of existing topsoil and turf on completion.

Anticipated ground conditions: Topsoil/made ground over natural ground (possibly sand)

Context: Trial pits are to be excavated in an area which serves as a garden to the adjacent flats in Gloucester House. Contractors are advised to visit site to appreciate site constraints prior to providing quotations. Failure to visit site will not be accepted as justification for subsequent increase in costs. Contractors are to allow for taking reasonable precautions to avoid damage to existing soft landscaping in accessing trial pit locations, and for securing the site against unauthorised access during the works.

Underground services – Statutory services record drawings are attached for information. The contractor is to allow for CAT scanning trial pit locations to ensure underground services are identified and avoided.

Mann Williams Consulting Civil and Structural Engineers 53 Mount Stuart Square, Cardiff, CF10 5LR t 02920 480333

Appendix C – Designers Risk Assessment

DESIGNER'S RISK ASSESSMENT



MANN WILLIAMS CONSULTING CIVIL AND STRUCTURAL ENGINEERS 53 MOUNT STUART SQUARE, CARDIFF, CF10 5LR T 02920 480333 F 02920 435920

E cardiff@mannwilliams.co.uk

Project Mission Gallery Swansea	Project No 6833	Date May - 2015	Designer TM	Sheet 01 of 01
---------------------------------	--------------------	-----------------	-------------	----------------

Ref	Activity/Element	Potential Hazards	Persons at Risk	Risk Rating L/M/H	Action at Design Stage	Possible Control Operations (Contractors)
1	Modifications to existing building	Risk of local instability or collapse	Main contractor personnel	L	Investigation works undertaken to better understand the nature of the existing building. Information to be conveyed to contractor via design drawings.	Contractor to make Mann Williams aware of any variations form the existing structure as noted on drawings
2	Erection of Spire	Risk of damage to building and therefore falling debris during lifting and positioning of large	Main Contractor personnel / members of the public	L	Design undertaken to limit the weight of the spire. Connection will be designed to facilitate erection.	Contractor to give consideration to closing the footpath on Gloucester place.
3	Working in roof void above historic ceiling	Risk of falling through ceiling.	Main contractor personnel	L	Not possible to provide scaffold access without damaging historic ceiling. Crash deck below historic ceiling to be recommended	Installation of crash deck and possible man safe systems
4	Construction of deep (>2m) manhole within footprint of historic structure	Risk of local or global collapse of structure due to undermining	Main contractor personnel	Н	Deep manholes have been designed out by re locating them and adjusting the above slab drainage. The deepest manhole is now approx. 1m deep. Some local underpinning has been included in this area to further mitigate any undermining.	Excavation to be undertaken with care and Mann Williams to be informed immediately if there is any risk of undermining existing foundations.

NOTE:-

THE ABOVE RISKS ARE SPECIFIC TO THE PROJECT, AND ARE IN ADDITION TO ALL STANDARD RISKS ASSOCIATED WITH NORMAL BUILDING REFURBISMENT PROJECTS.



Mission Gallery, Swansea

Report on Daylight and Sunlight Simulation Analysis

For:

Mission Gallery

Prepared by:

Sustainable Construction Services Ltd



Record Revision

Description	Revision	Date	Reviewed
Draft Final Report	1	20-04-2015	Mark Morant
Final Report	2	21-04-2015	Mark Morant
Final Report	3	06-05-2015	Mark Morant

Disclaimer

This report is provided for the sole purpose of providing information for Mission Gallery. It is confidential to Sustainable Construction Services Ltd and Mission Gallery. Sustainable Construction Services Ltd accept responsibility that the report has been prepared with the skill, care and diligence. No responsibility is accepted whatsoever to any other parties. Any such parties rely upon the report at their own risk. Neither the whole nor any part of the report nor reference to it may be included in any published document, circulation or statement without Sustainable Construction Services Ltd and Mission Gallery written approval of the form and content in which it may appear.

This report is made on behalf of Sustainable Construction Services Ltd. By receiving the report and acting on it, the client - or any third party relying on it - accepts that no individual is personally liable in contract, tort or breach of statutory duty [including negligence].

28764 06-05-2015 Mission Gallery Daylight & Sunlight Analysis v3 Page 2



TABLE OF CONTENT

Executive Summary	4
Introduction	5
Background	5
Documents Considered	5
Planning Conditions	5
3D Model	6
Daylight Analysis	11
Methodology	11
Results	11
Sunlight Analysis	16
Methology	16
Results	16
Conclusion	21
Daylight Analysis	21
Sunlight Analysis	21
Planning Condition	2.1



EXECUTIVE SUMMARY

The purpose of this report is to determine if the proposed extension and new church spire at Mission Gallery complies with the planning recommendations for daylight and sunlight availability levels at the critical adjacent residential buildings, namely Gloucester House and residential buildings on Gloucester Place and the Marina.

The study is based on the recommendations set down in the BRE Report 209, 'Site layout planning for daylight and sunlight, a guide to good practice', by P J Littlefair [2011].

The RADIANCE lighting simulation package, developed by the Lawrence Berkeley Laboratory in California, in conjunction with IES modelling software and interfaces has been used to perform the daylight simulations.

Sunlight availability calculations were performed using Suncast [IESVE, 2015] to quantify the effect of the proposed extension and church spire for Mission Gallery on the critical adjacent buildings sunlight availability, both annually and during winter time.

A 3D model of the existing and proposed site was created from drawings supplied by the Architects, Clash Associates Ltd.

Where necessary, Google street view images and photographs supplied by the architects were used to supplement the available information for the adjacent residential buildings.

Due to limitations of the daylighting software with modelling non-planar structures, it was not possible to exactly match the physical characteristics of the proposed church spire [i.e. sculpt the form] nor to incorporate the perforations in the church spire in the 3D model. Thus, it was not possible to predict the effect of the perforations in the church spire on the adjacent buildings with regard to light speckles, glare, sunspots or similar.

Overall, the results show that the proposed extension and new church spire satisfies the BRE requirements for daylight and sunlight, and complies with policy EV1 of the City and County of Swansea 'Unitary Development Plan'. As such the proposed development is unlikely to adversely affect the light receivable by nearby sensitive windows, namely the critical adjacent residential buildings on Gloucester Place [including Gloucester House] and Marina.



INTRODUCTION

BACKGROUND

The purpose of this report is to determine if the proposed extension and new church spire at Mission Gallery complies with the planning recommendations for daylight and sunlight availability levels at the critical adjacent residential buildings, namely the south-facing façade of Gloucester House, the residential houses for Gloucester Place on the facing elevation and the adjacent residential building on the marina.

DOCUMENTS CONSIDERED

This report is based on the design detailed on drawings provided by Clash Associates Ltd:

- MN2664/01 Topographical Survey
- MN2664/02 Existing Ground Floor Plan
- MN2664/03 Existing First Floor Plan
- MN2664/04 Existing Elevations
- MN2664/05 Existing Sections
- P1/20150318/04 Proposed Floor Plans, Elevations and Sections

Where necessary, Google street view images and photographs supplied by the architects were used to supplement the available information for the adjacent residential buildings.

Due to limitations of the daylighting software with modelling non-planar structures, it is not possible to exactly match the physical characteristics of the proposed church spire [i.e. sculpt the form] nor to incorporate the perforations in the church spire in the 3D model. As such it should be noted that the modelling software is not capable of predicting the effect of the perforations in the church spire on the adjacent buildings with regard to light speckles, glare, sunspots or similar.

With regards to the proposed extension and spire, the limitations to the 3D modelling software are likely to result in a potential over emphasis of the impact on reduced daylight and sunlight levels. As such the result presented in this analysis are likely to represent a 'worst case' scenario.

PLANNING CONDITIONS

The report and proposal is intended to address the requirements for new development for daylight/sunlight under Policy EV1 of the document 'City and County of Swansea Unitary Development Plan'.



3D MODEL

Figures 1 to 8 below illustrate the 3D models of the existing and proposed building and surrounding properties that were evaluated by the daylight and sunlight model.

Figure 1: Plan view of 3D Model showing the existing Mission Gallery and the adjacent residential buildings.

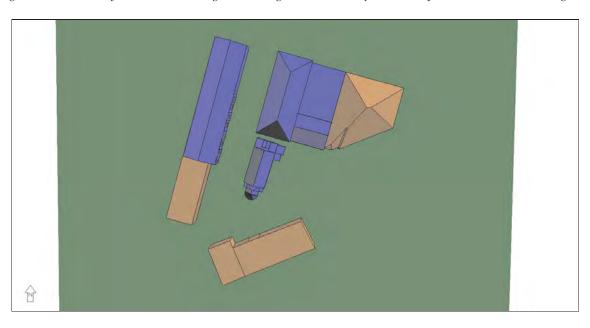


Figure 2: Photograph showing existing Mission Gallery and adjacent building Gloucester House.



28764 06-05-2015 28764 06-05-2015 Mission Gallery Daylight & Sunlight Analysis v3 Page 5 Daylight & Sunlight Analysis v3 Page 6



Figure 3: 3D Model image showing existing Mission Gallery and critical adjacent buildings, namely the south-facing façades of Gloucester House and Marina.

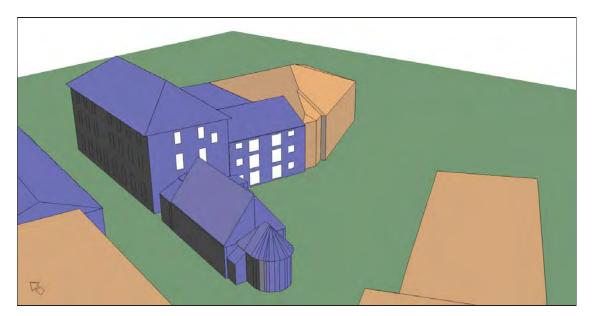


Figure 4: 3D Model image showing proposed extension and new church spire to the Mission Gallery and critical adjacent buildings, namely the south-facing façades of Gloucester House and Marina.

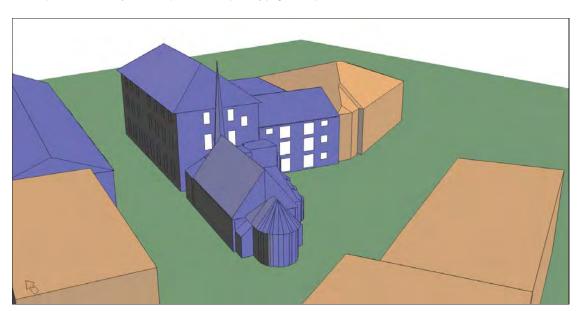




Figure 5: Photograph showing existing Mission Gallery and adjacent building Gloucester House.



Figure 6: Plan view of 3D Model showing the proposed extension and new church spire to the Mission Gallery and the adjacent residential buildings.

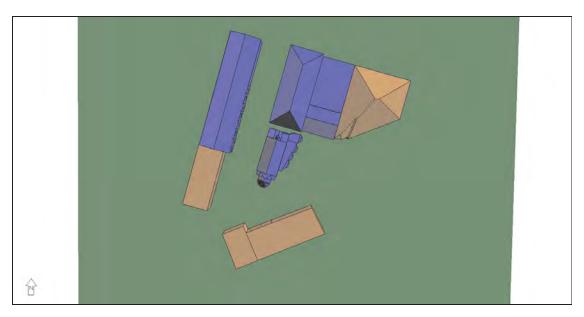




Figure 7: 3D Model image showing existing Mission Gallery and critical adjacent buildings, namely the south-facing façades of Gloucester House and Marina and the facing residential buildings of Gloucester Place.

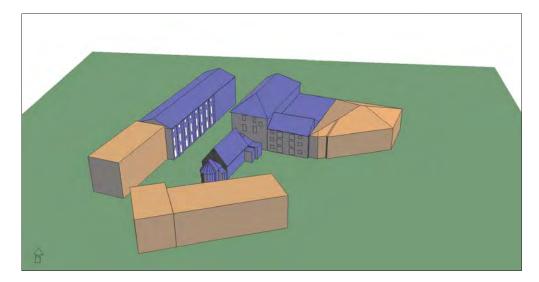


Figure 8: 3D Model image showing proposed extension and new church spire to the Mission Gallery and critical adjacent buildings, namely the south-facing façades of Gloucester House and Marina and the facing residential buildings of Gloucester Place.

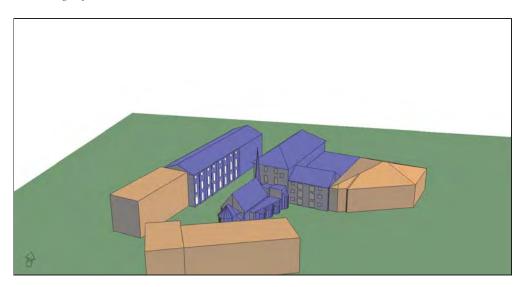




Figure 9 shows the reference number of each window for the facing adjacent residential buildings on Gloucester Place. Figure 10 shows the reference number of each window for the adjacent residential buildings south façade of Gloucester House and Marina.

Figure 9: Window Reference Numbers 1-20 for facing residential buildings on Gloucester Place.

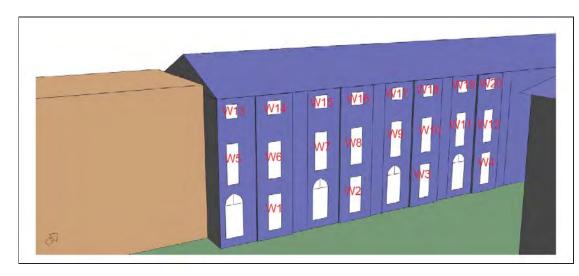
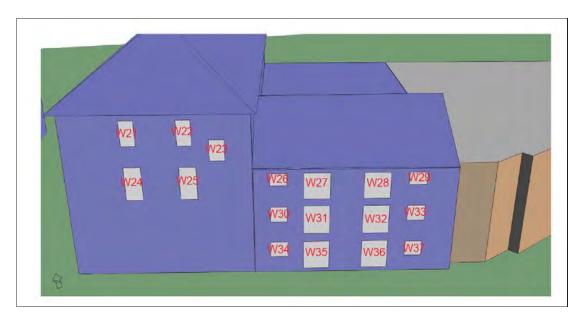


Figure 10: Window Reference Numbers 21-37 for the adjacent residential buildings south façade of Gloucester House and Marina.





DAYLIGHT ANALYSIS

METHODOLOGY

The percentage of the sky visible from the centre of a window is known as the Vertical Sky Component. The Vertical Sky Component on a window can be related to the average daylight factor in a room.

The Vertical Sky Component is usually expressed as a percentage and the maximum value for a completely unobstructed wall is slightly less than 40%.

The recommendations set down in the BRE Report 209, 'Site layout planning for daylight and sunlight, a guide to good practice' state, for residential properties, that a Vertical Sky Component [VSC] value of greater than 27% is acceptable. Where the VSC value is less than 27% then provided that the VSC is not less than 80% of the value prior to the development, daylight levels are deemed to be appropriate.

The RADIANCE lighting simulation package, developed by the Lawrence Berkeley Laboratory in California, in conjunction with IES modelling software and interfaces has been used to perform the daylight simulations. The 3D model of the site was created from drawings and photographs supplied by the architects, Clash Associates Ltd.

All simulations have used the same sky conditions – 21st September 12:00 noon using the CIE Standard Overcast Sky.

Two simulations were performed. The first simulation used a 3D Model of the building with the proposed extension and new church spire and the second simulation used a 3D Model of the existing site.

Where necessary, the results were then compared for Vertical Sky Component for each window for the critical adjacent residential buildings, namely the south-facing façade of Gloucester House, the residential houses for Gloucester Place on the facing elevation and the adjacent residential building on the marina.

RESULTS

GLOUCESTER PLACE

Tables 1 and 2 show the results for Vertical Sky Component for each window for the critical adjacent residential buildings on Gloucester Place.



Table 1: Results for Vertical Sky Component Calculations for facing adjacent residential buildings on Gloucester Place for 3D Model with proposed extension and new church spire.

Window Reference	Vertical Sky Component [%] with Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W1	26.3	No
W2	24.8	No
W3	23.8	No
W4	21.1	No
W5	33.1	Yes
W6	32.4	Yes
W7	31.2	Yes
W8	31.3	Yes
W9	30.6	Yes
W10	28.1	Yes
W11	26.2	No
W12	25.8	No
W13	36.1	Yes
W14	36.1	Yes
W15	35.8	Yes
W16	34.5	Yes
W17	33.7	Yes
W18	33.3	Yes



06-05-2015

Page 13

Window Reference	Vertical Sky Component [%] with Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W19	31.9	Yes
W20	31.0	Yes

From Table 1, it can be seen that **windows W1 to W4** and **W11 to W12** for facing adjacent residential buildings on Gloucester Place, with the proposed extension and new church spire, **do not** meet the BRE criteria for Vertical Sky Component [Target from BRE $209 \ge 27\%$]. All other windows meet the BRE criteria for daylighting. Because of this, it was necessary to compare the values for VSC associated with the proposed extension to those of the existing site.

Table 2: Comparison of results for Vertical Sky Component Calculations for facing adjacent residential buildings on Gloucester Place for 3D Model for both the existing site and the proposed extension and new church spire.

Window Reference	VSC [%] for Existing Site	VSC [%] with Proposed Extension and New Church Spire	Target Minimum VSC [%] Value	Meets Criteria?
W1	27.3	26.3	21.8	Yes
W2	25.4	24.8	20.3	Yes
W3	24.0	23.8	19.2	Yes
W4	21.1	21.1	No change	Yes
W11	26.2	26.2	No change	Yes
W12	26.5	25.8	21.2	Yes

From Table 2, the results for windows W1 to W4 and W11 to W12 show that although the proposed extension reduces the available daylight, it is within the tolerance of existing daylight levels. As such the proposed extension and new church spire is unlikely to reduce the daylight levels for facing adjacent residential buildings on Gloucester Place to less than 80% of its former value.

GLOUCESTER HOUSE & MARINA



Tables 3 and 4 show the results for the adjacent residential buildings south façade of Gloucester House and Marina for 3D Model with proposed extension and new church spire.

Table 3: Results for Vertical Sky Component Calculations for adjacent residential buildings south façade of Gloucester House and Marina for 3D Model with proposed extension and new church spire.

Window Reference	Vertical Sky VSC [%] for Existing Site Proposed Extension New Church Sp		Meets BRE Report 209 Criteria?
W21	33.4	31.4	Yes
W22	33.7	32.8	Yes
W23	37.3	36.0	Yes
W24	33.9	30.8	Yes
W25	34.9	33.0	Yes
W26	35.9	34.6	Yes
W27	36.9	36.3	Yes
W28	37.9	37.2	Yes
W29	37.4	37.2	Yes
W30	34.1	29.0	Yes
W31	34.6	33.6	Yes
W32	36.1	36.1	Yes
W33	36.4	36.4	Yes
W34	30.4	20.6	No
W35	32.3	29.5	Yes
W36	34.3	34.3	Yes

28764 06-05-2015 Mission Gallery Daylight & Sunlight Analysis v3 Page 14



Window Reference	VSC [%] for Existing Site	Vertical Sky Component [%] with Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W37	34.9	34.3	Yes

From Table 3, it can be seen that **window W34** for adjacent residential buildings south façade of Gloucester House and Marina, with the proposed extension and new church spire, **does not** meet the BRE criteria for Vertical Sky Component [Target from BRE $209 \ge 27\%$]. Because of this, it was necessary to compare the values for VSC for both the existing site and the proposed extension for this window.

Table 4: Comparison of results for Vertical Sky Component Calculations for adjacent residential buildings south façade of Gloucester House and Marina for 3D Model for both the existing site and the proposed extension and new church spire.

Window Reference	VSC [%] for Existing Site	Vertical Sky Component [%] with Proposed Extension and New Church Spire	Target Minimum VSC [%] Value	Meets Criteria?
W34	30.4	20.6	24.3	No

From Table 4, the results show that the ground floor window W34 slightly exceeds the 20% tolerance of the BRE Guidelines. However, although this window falls slightly short of the recommended BRE targets, it is thought that this is still within acceptable limits given that:

- The predicted VSC level for this window is 20.6, which is still a good level of daylight.
- The room function for this window is thought to be a bedroom where daylight levels are less critical.



SUNLIGHT ANALYSIS

METHOLOGY

For existing buildings, the recommendations set down in the BRE Report 209, 'Site layout planning for daylight and sunlight, a guide to good practice', and British Standard [BS 8206-2] states "that interiors where the occupants expect sunlight should receive at least one quarter of annual probable sunlight hours [APSH], including at least 5% of annual probable sunlight hours during the winter months [WPSH], between 21 September and 21 March".

BRE Report 209 states that if these conditions can be met, 'then the room should still receive enough sunlight'.

Where these conditions are not met, the BRE Report 209 states that 'if the available sunlight hours are less than the amount recommended above and also less than 0.8 times the existing value, it is likely that the occupants of the existing building will notice the loss of sunlight'.

Sunlight availability calculations were performed using Suncast [IESVE, 2015] to quantify the effect of the proposed extension and new church spire for Mission Gallery on the critical adjacent buildings sunlight availability, both annually and during winter time.

RESULTS

Tables 5 and 6 provide a summary of the results of both the annual and winter probable sunlight hours [stated as a percentage] for each window for the adjacent residential buildings on Gloucester Place [including Gloucester House] and Marina.

Please refer to Figures 9 and 10 above for the reference number of each window for the adjacent buildings on Gloucester Place [including Gloucester House] and Marina.

Table 5 confirmed that all evaluated windows [W1 to W37] met the minimum required BRE criteria for Annual Probable Sunlight Hours [25%], with APSH values ranging from 25 to 78%.

Table 6 confirmed that all windows [W1 to W37] met the BRE criteria for Winter Probable Sunlight Hours [5%], with WPSH values ranging from 27 to 93%.

The results of the sunlight assessment show that the proposed extension and new church spire for Mission Gallery satisfies the BRE requirements and will not adversely affect the sunlight receivable by the adjacent residential buildings on Gloucester Place [including Gloucester House] and Marina.



Table 5: Results for Annual Sunlight Availability Calculations for facing adjacent residential buildings on Gloucester Place and south façade of Gloucester House and Marina for 3D Model with proposed extension and new church spire.

Window Reference	APSH [%] Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W1	34	Yes
W2	32	Yes
W3	29	Yes
W4	25	Yes
W5	44	Yes
W6	43	Yes
W7	41	Yes
W8	41	Yes
W9	38	Yes
W10	37	Yes
W11	34	Yes
W12	32	Yes
W13	52	Yes
W14	52	Yes
W15	49	Yes
W16	48	Yes
W17	45	Yes
W18	44	Yes



Window Reference	APSH [%] Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W19	40	Yes
W20	38	Yes
W21	63	Yes
W22	64	Yes
W23	73	Yes
W24	64	Yes
W25	68	Yes
W26	74	Yes
W27	74	Yes
W28	77	Yes
W29	78	Yes
W30	61	Yes
W31	69	Yes
W32	73	Yes
W33	74	Yes
W34	47	Yes
W35	58	Yes
W36	65	Yes
W37	68	Yes



Table 6: Results for Winter Sunlight Availability Calculations for facing adjacent residential buildings on Gloucester Place and south façade of Gloucester House and Marina for 3D Model with proposed extension and new church spire.

Window Reference	WPSH [%] Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W1	37	Yes
W2	33	Yes
W3	34	Yes
W4	27	Yes
W5	48	Yes
W6	48	Yes
W7	43	Yes
W8	46	Yes
W9	45	Yes
W10	46	Yes
W11	40	Yes
W12	35	Yes
W13	59	Yes
W14	61	Yes
W15	57	Yes
W16	58	Yes
W17	54	Yes
W18	54	Yes



Window Reference	WPSH [%] Proposed Extension and New Church Spire	Meets BRE Report 209 Criteria?
W19	45	Yes
W20	42	Yes
W21	83	Yes
W22	87	Yes
W23	88	Yes
W24	72	Yes
W25	74	Yes
W26	87	Yes
W27	87	Yes
W28	91	Yes
W29	93	Yes
W30	68	Yes
W31	81	Yes
W32	84	Yes
W33	87	Yes
W34	58	Yes
W35	72	Yes
W36	74	Yes
W37	78	Yes



CONCLUSION

DAYLIGHT ANALYSIS

Overall, the results show that the proposed extension and new church spire satisfies the BRE requirements and will not adversely affect the daylight receivable by the critical adjacent residential buildings.

A single ground floor window on Gloucester House, the closest to Mission Gallery, did not achieve the daylight levels as a result of the proposed extension. However, on comparison against existing daylight levels, which were established to be restricted, whilst again slightly exceeding the guideline tolerance, it was thought that this is still within acceptable limits given that:

- The predicted VSC level for this window is 20.6, which is still a good level of daylight.
- The room function for this window is thought to be a bedroom where daylight levels are less critical.

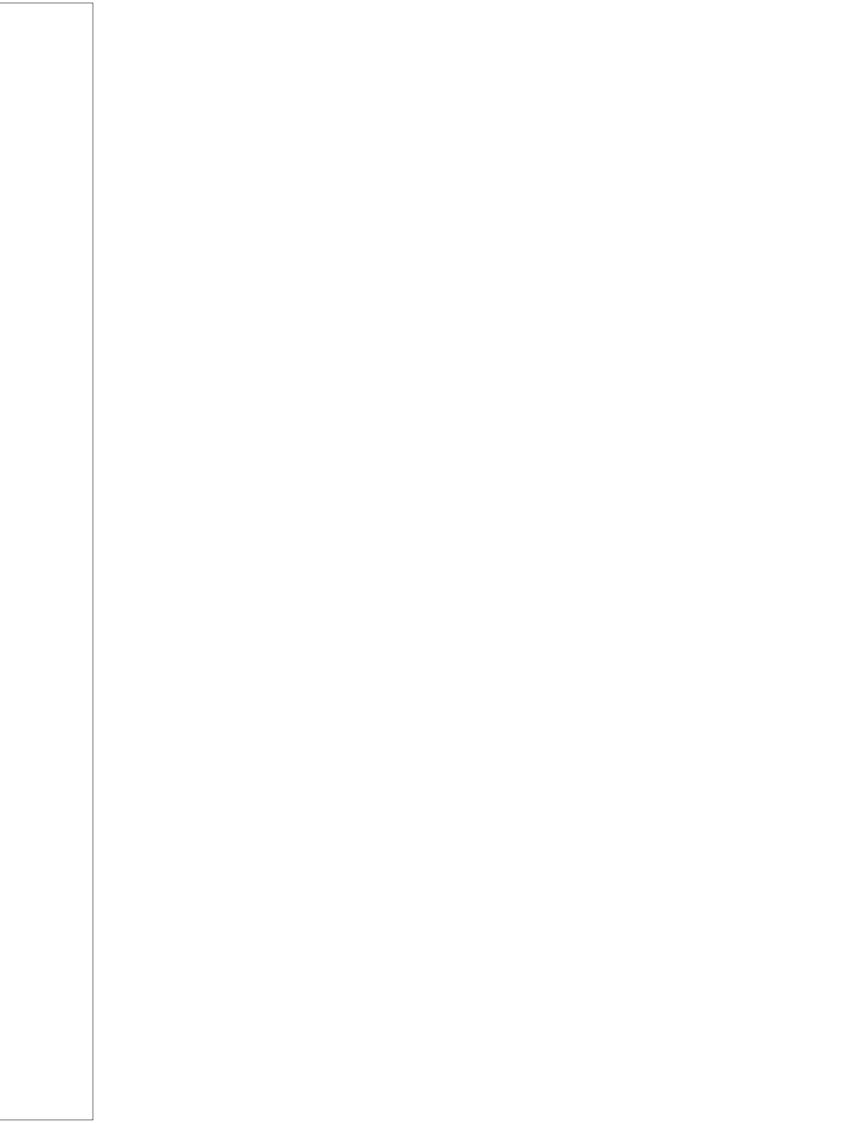
SUNLIGHT ANALYSIS

Overall, the results show that the proposed extension and new church spire satisfies the BRE requirements and will not adversely affect the sunlight receivable by the critical adjacent residential buildings.

PLANNING CONDITION

Overall, the results show that the proposed extension satisfies the BRE requirements and complies with policy EV1 of the City and County of Swansea 'Unitary Development Plan' and will not adversely affect the light receivable by nearby sensitive windows, namely the critical adjacent residential buildings on Gloucester Place [including Gloucester House] and Marina.

2876406-05-2015Mission GalleryDaylight & Sunlight Analysis v3Page 21





Mission Gallery, Swansea **BREEAM Pre-Assessment Report** BREEAM UK Non-Domestic Refurbishment and Fit-out 2014

For

Mission Gallery 16th March 2015 Ref:1700B

The Beacon, Dafen Business Park, Llanelli. Carmarthenshire, SA14 8LQ 0845 094 1593 llanelli@melinconsultants.co.uk

Park House, 10 Park Street, Bristol, BS1 5HX 0845 094 1279 bristol@melinconsultants.co.uk

4th Floor, Rex House, 4-12 Regent Street, London, SW1Y 4RG. 0845 094 1847 london@melinconsultants.co.uk



Melin Consultants are accredited to provide a range of calculation, assessment and testing services. They are members of CIBSE Low Carbon Consultants.

Melin Consultants fully check all work prior to completion and a robust audit trail exists to demonstrate accountability.

All information within this document is based on evidence provided in the form of drawings and specifications.

CPD (Continual Professional Development) records are kept and all technical staff are required to complete a minimum 20 hours per year in training activities.

Low Carbon Consultants have the expertise and necessary qualifications to offer advice in a professional capacity on matters relating to Part L of the Building Regulations and sustainability within the construction sector.

This document contains the following information:

BREEAM Pre-Assessment Report

Project Ref: 1700B

Report Date: 16th March 2015

Report author: Matthew Fryer

Function: Junior Sustainability Consultant

Authorised by: Matthew John

Function: Senior Consultant









Introduction

 This Pre-Assessment has been prepared by Melin Consultants considering local planning requirements. This report is intended to provide a clear and straightforward assessment of the proposed development's sustainability measures through the use of BREEAM and to outline the rating that the development is likely to achieve if the targeted credits are undertaken and completed in the correct manner as prescribed by the BRE.

Introduction to BREEAM

- BREEAM (Building Research Establishment's Environmental Assessment Method) was first developed
 as an assessment method in 1990 and has been continually developed in line with the Building
 Regulations ever since, BREEAM UK Non-Domestic Refurbishment and Fit-out was developed and
 released in July 2014.
- 3. BREEAM is currently the world's leading and most widely used environmental assessment method for buildings and can currently be used to assess any building, anywhere in the world. BREEAM is tried and tested in terms of its technical standards and its commercial delivery and expert advice is sought for almost every issue within BREEAM. It is overseen by an independent Sustainability Board which represents a wide cross section of construction industry stakeholders.

BREEAM Aims and Objectives

- 4. The main aims of using BREEAM as a tool are listed below:
 - To reduce the impacts of buildings on the environment.
 - To enable buildings to be recognised according to their environmental benefits.
 - To provide a credible, environmental label for buildings.
 - To simulate demand for sustainable buildings.
- 5. The main objectives of using BREEAM as a tool are listed below:
 - To provide market recognition to low environmental impact buildings.
 - To ensure best environmental practice is incorporated within buildings.
 - To set criteria and standards surpassing those required by regulations and challenge the market to provide solutions that minimise the environmental impact of buildings.
 - To raise the awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment.
 - To allow organisations to demonstrate progress towards corporate environmental objectives.

The BREEAM Assessment

6. A BREEAM assessment is used to measure a building's environmental performance. There are two main stages of assessment the Design Stage and Post-Construction Stage Assessments, although a Pre-Assessment is often carried out before the Design Stage as a planning or funding body requirement. This Pre-Assessment involves an initial evaluation of the sustainability of the proposed development which provides advice on the elements that need to be incorporated into the detailed design and cost plan. The main benefits of carrying out a Pre-Assessment are that the Design Team and BREEAM Assessor are introduced at an earlier stage of the project; this will help to identify the constraints of the project sooner meaning that they can be addressed more quickly and cost effectively. This Pre-Assessment helps to highlight which credits are likely to be easily achievable, which in turn will help to maximise the credits that will be available and make it easier to achieve the desired rating.

Once this scheme progresses to the Design and Procurement stage, evidence will be provided by the Design Team to demonstrate compliance with each targeted credit issue. At this stage, the Design Team and Assessor have sought to highlight which credits can be targeted to reach the benchmark of 55% for a 'Very Good' rating. At the Pre-Assessment stage, the credits targeted to achieve this score meet all minimum requirements for the 'Very Good' rating. Although, 56.71% surpasses the required threshold to achieve BREEAM 'Very Good', we advise that additional credits are sought to include an additional 5% to increase the overall score to approximately 60%. This will help mediate any credits which are lost during the process, allowing the project to still achieve a BREEAM 'Very Good' rating.

- 7. A BREEAM UK Non- Domestic Refurbishment and Fit-out Assessment is made up of the following categories:
 - Management
 - Health and Wellbeing
 - Energy
 - Transport
 - Water
 - Materials
 - Waste
 - Land Use and Ecology
 - Pollution
 - Innovation
- 8. The BREEAM UK Non-domestic Refurbishment and Fit-out 2014 scheme provides a modular set of criteria that are applied depending upon the scope of works for a particular project type including:
 - Part 1: Fabric and Structure
 - Part 2: Core Services
 - Part 3: Local Services
 - Part 4: Interior Design

Pre-Assessment Summary

9. The Pre-Assessment produced for the proposed refurbishment of the Mission Gallery, Swansea has been assessed using the BREEAM UK Non-domestic Refurbishment and Fit-out criteria. The scope of the assessment will cover all four parts as listed under point 8.

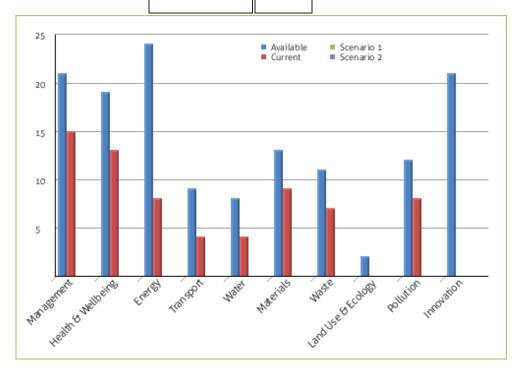
10. The table and graph below summarises the results of the Pre-Assessment and each environmental section performance. This demonstrates that a score of beyond the BREEAM 'Very Good' threshold is

achievable:

	Available	Weighting
Management	21	14.51
Health & Wellbeing	19	15.66
Energy	24	16.71
Transport	9	7.25
Water	8	6.45
Materials	13	15.11
Waste	11	8.31
Land Use & Ecology	2	4.84
Pollution	12	11.16
nnovation	21	
Total	140	68
	=0.00.0/	

Current:

56.29 %



11. The following pages contain the completed Pre-Assessment document and highlight each targeted credit under each environmental section.

Pre-assessment completed by licensed Melin BREEAM Assessor, and BREEAM Accredited Professional (AP), Matthew John.



Matthew John (AP Number: MJ09)



Mission Gallery, Swansea

BREEAM Pre-Assessment Summary Report

Pre-assessment

Uncontrolled revision

01 Apr 2015

Melin Consultants

The Beacon Dafen Business Park Llanelli Carmarthenshire SA14 8LQ

tel 0845 0941593 matthew@melinconsultants.co.uk



1.0 Introduction

This report is intended as a summary of the BREEAM pre-assessment review for the following project:

Project Name	Mission Gallery, Swansea
BREEAM Version	BREEAM 2014 Non-Dom RFO
Assessment Stage	Pre-Assessment Stage
Lead Assessor	Matthew John
Target Rating	Very Good (55%)
Downloaded By	Matthew John
Download Date	01/04/15
Download Time	16:21:19 (BST)

Please note that this is an uncontrolled copy and is for information only and a more detailed, formal pre-assessment report may be issued by your appointed assessor. If you have any queries on the content of this report or the award of any of the credits please contact your licensed assessor as noted above.



2.0 Scoring scenarios

It should be noted that the pre-assessment scores have been based on the following scoring scenarios;

- Current The number currently achieved.
- Scenario 1 Current, plus credits which can be easily gained.
- Scenario 2 Scenario 1, plus credits which can be won but not so easily.

On this basis, the following scores are considered achievable under each scenario;

Scenario	Score	BREEAM Rating
Current	56.29	Very Good
Scenario 1	0	Unclassified
Scenario 2	0	Unclassified



2.1 Minimum Standards

In addition performance against the minimum standards (required for the specified target rating) under each scenario is summarised below;

Issue	Current	Scenario 1	Scenario 2
Man 03 - Responsible construction practices	~	×	×
Man 04 - Commissioning and handover	~	~	~
Man 05 - Aftercare	~	~	~
Ene 01 - Reduction of energy use and carbon emissions	~	~	~
Ene 02 - Energy Monitoring	~	×	×
Wat 01 - Water Consumption	~	×	×
Wat 02 - Water Monitoring	~	×	×
Mat 03 - Responsible Sourcing of Materials	~	×	×
Wst 01 - Construction Waste Management	~	~	~
Wst 03 - Operational Waste	~	~	~

If the required minimum standards are not met then the target rating will not be achieved regardless of overall score.



3.0 - Credits and Comments Table

	Available	Current	Scenario 1	Scenario 2	Comments
Management					



Man 01	Project brief and design	4	2	0	0	Stakeholder consultation - Project delivery (1 of 1 credits targeted)
l'iuii 01	Troject brief and design		_		v	A clear sustainability brief will be developed prior to Concept Design which sets out:
						- Client requirements e.g. internal environmental conditions required
						- Sustainability objectives and targets including target BREEAM rating, business objectives etc.
						- Timescales and budget
						- List of consultees and professional appointments that may be required e.g. Suitably Qualified Acoustician etc.
						- Constraints for the project e.g. technical, legal, physical, environmental.
						Prior to completion of the Concept Design (RIBA Stage 2) the project delivery stakeholders have met to identify and
						define their roles, responsibilities and contributions for each of the key phases of project delivery. In defining the
						roles and responsibilities for each key phase of the project, the following must be considered:
						- End user requirements - Aims of the design and design strategy
						- Particular installation and construction requirements/limitations
						- Design and construction risk assessments e.g. CDM, legionella risk assessment
						- Legislative requirements e.g. building control notification, heritage requirements
						- Procurement and supply chain
						- Identifying and measuring project success in line with project brief objectives
						- Occupiers' budget and technical expertise in maintaining any proposed systems
						- Maintainability and adaptability of the proposals
						- Requirements for the production of project and end user documentation
						- Requirements for commissioning, training and aftercare support.
						The project team will; demonstrate how the project delivery stakeholder contributions and the outcomes of the
						consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project
						Execution Plan, Communication Strategy, and the Concept Design.
						Stakeholder Consultation - Third Party (1 of 1 credits targeted)
						Prior to completion of the Concept Design stage, all relevant third party stakeholders will have been consulted by the
						design team.
						The project will demonstrate how the stakeholder contributions and outcomes of the consultation exercise have
						influenced or changed the Initial Project Brief and Concept Design.
						Prior to completion of the detailed design (RIBA Stage 4), consultation feedback has been given to, and received by,
						all relevant parties.
						Sustainability Champion - Design (0 of 1 credits targeted)
						The Sustainability Champion (Design) credit have not been targeted at this stage. Melin were appointed at too late a
						stage to award this credit.
						Sustainability Champion - Monitoring Progress (0 of 1 credits targeted)
						The Sustainability Champion (Monitoring Progress) credit have not been targeted at this stage. Melin were appointed
						at too late a stage to award this credit.
						Design Team Meeting Comments - 16th March 2015
						Melin explained to the design team that the two Sustainability Champion Credits in Man 01 Product Brief and Design
						were not achievable as Melin had been appointed to late in the process.
	l					The following table as From that been appointed to late in the process.





1	Life cycle cost and service life planning	4	1	0	0	Elemental Life Cycle Costing (0 of 2 credits targeted) The Elemental Life Cycle Costing credits have not been targeted at this stage. To achieve these credits an elemental life cycle cost analysis will need to be carried out (RIBA Stage 2) together with any design option appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:2008 The LCC analysis would need to show: - An outline LCC plan has been undertaken for the project based on the building's basic structure and envelope, appraising a range of options and based on the life expectancy of the refurbished building, e.g. 20, 30, 50+ years. - The servicing strategy for the project outlining services component over a 15 -year period, in the form of an 'elemental LCC Plan'. - A fit-out strategy is developed outlining fit-out options over a 10-year period. Component Level Life Cycle Costing (0 of 1 credits targeted) The Component Level Life Cycle Costing credits have not been targeted at this stage. To achieve this credit a component level LCC plan will need to be developed (RIBA Stage 4) in line with PD 156865:2008 Capital Cost Reporting (1 of 1 credits targeted) The capital cost for the refurbishment / fit out works will be in pounds per square metre will be reported to the BREEAM Assessor. Design Team Meeting Comments - 16th March 2015 The design team agreed that although we have only targeted the Capital Cost Reporting credit. The other Man 02
						The design team agreed that although we have only targeted the Capital Cost Reporting credit. The other Man 02 credits could be investigated if necessary.



Man 03	Responsible construction	6	6	0	0	Pre-requisite Pre-requisite
	practices					All timber and timber-based products used on the project will be 'legally harvested and traded timber'
						Environmental Management (1 of 1 credit targeted)
						The principal contractor will operate an environmental management system (EMS) covering their main operations.
						The EMS will be either: - A.Third party certified, to ISO 14001/EMAS or equivalent standard;
						- Have a structure that is in compliance with BS 8555: 2003 and has reached phase four of the implementation stage,
						'implementation and operation of the environmental management system', and has completed phase audits 1 to 4, as defined in BS 8555:2003.
						The principal contractor implements best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition-sites: PPG61.
						Sustainability Champion (construction) (1 of 1 credit targeted)
						A Sustainability Champion will appointed to monitor the project to ensure ongoing compliance with the relevant
						sustainability performance/process criteria, and therefore BREEAM targets, during the Construction, Handover and Close Out stages.
						Considerate Construction (2 of 2 credits targeted)
						The contractor will significantly exceed, 'compliance', with the Considerate Constructors Scheme criteria
						Monitoring of Refurbishment or Fit-out Site Impacts (2 of 2 credits targeted)
						Responsibility will be assigned to an individual for monitoring, recording and reporting energy use, water
						consumption and transport data resulting from all on-site refurbishment or fit-out processes (and dedicated off-site monitoring) throughout the refurbishment or fit-out programme.
						The Utility Consumption (electricity and water use) will be monitored, recorded, and reported. (1 credit)
						Transportation data will be monitored, recorded, and reported. (1 credit)
						Design Team Meeting Comments - 16th March 2015
						The design team agreed achieving 2 credits in Man 03 Responsible Construction Practices: Considerate Construction was an achievable target.



handover There will be schedule of commissioning and testing that identifies appropriate commissioning required Commissioning will be carried out where changes are being made to the following: 1. Building services (including both complex and non-complex systems) 2. Building services control systems (including Building Management Systems) 3. Changes to the building fabric that will affect thermal performance. The commissioning will comply with the appropriate standards such as current Building Regulations, BS CIBSE guidelines and/or other appropriate standards. An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	SRIA and
2. Building services control systems (including Building Management Systems) 3. Changes to the building fabric that will affect thermal performance. The commissioning will comply with the appropriate standards such as current Building Regulations, BS CIBSE guidelines and/or other appropriate standards. An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
2. Building services control systems (including Building Management Systems) 3. Changes to the building fabric that will affect thermal performance. The commissioning will comply with the appropriate standards such as current Building Regulations, BS CIBSE guidelines and/or other appropriate standards. An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
The commissioning will comply with the appropriate standards such as current Building Regulations, BS CIBSE guidelines and/or other appropriate standards. An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
CIBSE guidelines and/or other appropriate standards. An appropriate project team member will be appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor will account for the commissioning and testing programme, responsibilities and within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
within their budget and main programme of works. Commissioning building services (1 of 1 credits targeted) For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	d criteria
For complex building services and systems, a specialist commissioning manager will be appointed during stage with responsibility for:	
stage with responsibility for:	ng the design
Undertaking design reviews and giving advice on suitability for ease of commissioning	
1. providing commissioning management input to construction programming and during installation states 2. Management of commissioning, performance testing and handover/post-handover stages.	iges
For simple building services, this role will be carried out by an appropriate project team member who in the general installation works for the building services systems.	s not involved
Testing and inspecting building fabric (0 of 1 credit targeted)	
The testing and inspecting building fabric credits have not been targeted at this stage. To achieve thes integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air will be quality assured through completion of a thermographic survey as well as airtightness testing an inspection	leakage paths
Any defects identified in the site inspection, thermographic survey and the airtightness testing reports rectified	will be
Handover (1 of 1 credit targeted) A Building User Guide will be developed prior to handover for distribution to the building occupiers and managers	premises
A training schedule is prepared for building occupiers/premises managers, timed appropriately around	handover and
proposed occupation plans, which includes the following content as a minimum: - The design intent of refurbishment/fit-out works	iandover unu
- The available aftercare provision and aftercare team main contact(s), including any scheduled seasor commissioning and post occupancy evaluation	al
- Introduction to, and demonstration of, installed systems and key features, particularly building management of the control o	jement
systems, controls and their interfaces, to ensure they are fully conversant with the detailed operation of	of the building
- Introduction to the Building User Guide and other relevant building documentation, e.g. design data, t	
guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log - Maintenance requirements, including any maintenance contracts and regimes in place.	book etc.





Man 05	Aftercare	3	3	0	0	Aftercare Support (1 of 1 credits targeted) There will be operational infrastructure and resources in place to provide aftercare support to the building occupiers, including: 1. A meeting programmed to occur between the aftercare team/individual and the building occupier/management 2. On-site facilities management training, 3. Initial aftercare support provision for at least the first month of building occupation 4. Longer term aftercare support provision for occupants for at least the first 12 months from occupation There will be operational infrastructure and resources in place to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied. Discrepancies between actual and predicted performance should be identified, with a commitment to identify actions required to address any discrepancies. Seasonal commissioning (1 of 1 credits targeted) The following seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied: - Complex systems - Specialist Commissioning Manager: - Testing of all building services under full load conditions, i.e. heating equipment in mid-winter, cooling/ventilation equipment in mid-summer, and under part load conditions (spring/autumn). - Testing should will be carried out during periods of extreme (high or low) occupancy. - Interviews with building occupants to identify problems or concerns regarding the effectiveness of the systems. - Re-commissioning of systems, and incorporating any revisions in operating procedures into the operations and maintenance (O&M) manuals. - Simple systems (naturally ventilation, and lighting, at three, six and nine month intervals after initial occupation, either by measurement or occupant feedback. - Take all reasonable steps to re-commissions systems following the review to take account of deficiencies identified and incorporate any relevant revisions in operating procedures into the O&M manuals. Pos
	Management Totals:		15	0	0	
	Management Totals: Management score totals:	21 14.508	15 10.363	0	0	





Health & Wellbeing					
Hea 01 Visual Comfort	7	4	0	0	Glare control (1 of 1 credit targeted) The potential for disabling glare has been designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures. Daylighting (1 of 3 credit targeted) Daylighting Calculations will be undertaken that confirm that the proposed development meets the BREEAM Requirements View out (1 of 1 credit targeted) 80% of the floor area space in relevant building areas will be within 7m of a wall which has a window or permanent opening that provides an adequate view out. In addition the window/opening will be ≥ 20% of the surrounding wall area. Internal lighting (1 of 1 credit targeted) All fluorescent and compact fluorescent lamps will be fitted with high frequency ballasts. Internal lighting in all relevant areas of the building are designed to provide an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. External lighting (1 of 1 credit targeted) All external lighting located within the refurbishment or fit-out zone will be designed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. External is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places. Zoning and occupant control (1 of 1 credit targeted) Internal lighting will be zoned to allow for occupant control in accordance with the criteria below for relevant areas present within the building: - In office areas, zones of no more than four workplaces - Workstations adjacent to windows/atria and other building areas separately zoned and controlled - Teaching space or demonstration area - Whiteboard or display screen



Hea 02	Indoor Air Quality	5	3	0	0	Indoor air quality (IAQ) plan (1 of 1 credit targeted) An indoor air quality plan will be produced and implemented, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during the design, construction and occupation of the building. Ventilation (0 of 1 credit targeted) The ventilation credits have not been targeted at this stage. To achieve these credits the refurbishment and fit-out
						works include measures to minimise the concentration and recirculation of pollutants in the building as follows: - Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation Design ventilation pathways to minimise the build-up of air pollutants in the building, Volatile organic compound (VOC) emission levels (products) (1 of 1 credits targeted) All decorative paints and varnishes specified will meet the criteria in Table – 20 (BREEAM UK Refurbishment and Fit out 2014.SD216: Issue 1.0. Page 94) At least five of the seven remaining product categories listed in Table – 20 (BREEAM UK Refurbishment and Fit out 2014.SD216: Issue 1.0. Page 94) will meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions.
						Volatile organic compound (VOC) emission levels (post construction) (1 of 1 credits targeted) The formaldehyde concentration levels and Total Volatile Organic Compound concentration levels will be measured and compared against the relevant standards, as defined in the (BREEAM UK Refurbishment and Fit out 2014.SD216: Issue 1.0. Page 93) If VOC and formaldehyde levels are found to exceed the limits measures that will be taken, in accordance with the IAQ plan, to reduce the levels to within these limits, including re-measurement Adaptability - Potential for natural ventilation (1 of 1 credit target) The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and
Hea 04	Thermal comfort	3	3	0	0	Climatic scenarios and is designed to be capable of providing fresh air entirely via a natural ventilation strategy. Thermal modelling (1 of 1 credit targeted) Thermal modelling will be carried out using software in accordance with CIBSE AM11 Building Energy and Environmental Modelling. The modelling demonstrates that: 1. For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5. 2. For naturally ventilated/free running buildings. Adaptability - for a projected climate change scenario (1 of 1 credit targeted) The thermal modelling will demonstrate that the relevant requirements set out above are achieved for a projected
						climate change environment. The project team demonstrates how the building has been adapted, or designed to be easily adapted in the future using passive design solutions. Thermal zoning and controls (1 of 1 credit targeted) The thermal modelling analysis will inform the temperature control strategy for the building and its users. The strategy for proposed heating/cooling system(s) demonstrates that it will address the following: - Zones within the building and how the building services could efficiently and appropriately heat or cool these areas. - Any new local cooling or heating services (or changes to existing services) will be designed to ensure they do not conflict with core services - The degree of occupant control required for these zones, based on discussions with the end user





	Acoustic Performance Safety and Security	1	1	0	0	Acoustic Performance (2 of 3 credit targeted) The building will meet the appropriate acoustic performance standards and testing requirements defined in the BREEAM Non Domestic Refurbishment and Fit-Out. 1. Sound insulation 2. Indoor ambient noise level 3. Reverberation times. Security of site and building (1 of 1 credit targeted) A Suitably Qualified Security Specialist (SQSS) will conducts an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2).
						The SQSS will develop a set of recommendations or solutions during or prior to (RIBA Stage 2). The recommendations or solutions proposed by the SQSS will be implemented Design Team Meeting Comments - 16th March 2015 The design team agreed that this was a credit worth pursuing. It was discussed that the relevant members of the design team would have a meeting with the Police Architectural Liaison Officer or another Suitably Qualified Security Consultant in the coming weeks.
	Health & Wellbeing Totals:	19	13	0	0	
	& Wellbeing score totals:	15.662	10.716	0	0	
Energy	Т Т		1	•		
Ene 01	Reduction of energy use and carbon emissions	15	5	0	0	Reduction of Energy Use and Carbon Emissions (3 of 15 credit targeted) The Energy Performance Ratio for Non Domestic Refurbishment (EPRNDR) and compare with the benchmarks in Table - 27 of the BREEAM Non Domestic Refurbishment and Fit Out. The targeted number of credits have been assumed at this stage, to determine the corresponding number of BREEAM credits, SBEM Calculations will need to be undertaken.
						Design Team Meeting Comments - 16th March 2015 Troup, Bywaters and Anders agreed that they will be undertaking the initial SBEM calculations Shortly.
Ene 02	Energy Monitoring	2	2	0	0	Sub-metering of major energy consuming systems (1 of 1 credit targeted) Energy metering systems will be installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems.
						The building will be metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system.
						The end energy consuming uses will be identifiable to the building users, for example through labelling or data outputs.
						Sub-metering of high energy load and tenancy areas (1 of 1 credit targeted) An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system will be provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant function areas or departments within the building/unit.





Ene 03	External Lighting	1	1	0	0	External Lighting (1 of 1 credit targeted) The average initial luminous efficacy of the external light fittings within the construction zone will not be less than 60 luminaire lumens per circuit Watt. All external light fittings will be automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.
Ene 04	Low carbon design	3	0	0	0	The Low Carbon Design credits have not been targeted at this stage. To achieve these credits the requirements below would need to be met: Passive design (0 of 1 credits targeted) The project team will undertake an analysis of the existing building fabric, form, site location and outline scheme design to influence decisions made during the Concept Design stage (RIBA Stage 2) and identify the opportunities for the implementation of passive design solutions and retrofit measures that reduce demands for energy consuming building services. (Credit 1 of Hea 04 would also need to be achieved) Free cooling (0 of 1 credits targeted) The passive design analysis carried out will include an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions. The building will use uses ANY of the free cooling strategies in the BREEAM Non Domestic Refurbishment and Fit Out Manual (Version: SD216 Page 165) to reduce the cooling energy demand. Low and zero carbon technologies (0 of 1 credits targeted) A feasibility study will be carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent) by an energy specialist to establish the most appropriate recognized local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development A local LZC technology/technologies will be specified for the building in line with the recommendations of this feasibility study and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO2) emissions.



Ene 06	Energy Efficient Transportation Systems	3	0	0	0	The Energy Efficient Transportation Systems credits have not been targeted at this stage. To achieve these credits the requirements below would need to be met: Energy Efficient Transport Systems - Energy Consumption (0 of 1 credit targeted) Where new lifts are specified within refurbishment works the following will be undertaken: 1. An analysis of the transportation demand and usage patterns for the building will be carried out to determine the optimum number and size of lifts, escalators and/or moving walks. 2. The energy consumption will be estimated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks, Part 2: Energy calculation and classification for lifts (elevators) for one of the following: 1. At least two types of system (for each transportation type required); OR 2. An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less lift (MRL)); OR 3. A system strategy which is 'fit for purpose'. 1. The use of regenerative drives will be considered 2. The transportation system with the lowest energy consumption will specified Energy Efficient Features (0 of 2 credits targeted) Criterion 1 is achieved for newly specified lifts. The following three energy efficient features will be specified, at least two of the following energy efficient features are specified: 1. The lifts will operate in a standby condition during off-peak periods. 2. The lift car lighting and display lighting will provide an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. 3. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.
	Energy Totals:	24	8	0	0	4. if the use of regenerative drives is demonstrated to save energy, they will be specified.
	Energy score totals:	16.706	5.569	0	0	
Transpo						
Tra 01	Public Transport Accessibility	5	3	0	0	Accessibility Index (3 of 5 credits targeted) At this stage, 3 credits have been assumed based on an initial desk top investigation. The actual accessibility Index will need to be calculated at design stage. At Design Stage the public transport Accessibility Index will be calculated for the site. It will investigate the local public transport locations (Bus Stop, Train Station) and the number of services from each node.
Tra 02	Proximity to amenities	1	1	0	0	Proximity to Amenities (1 of 1 credit targeted) At this stage, 1 credit has been assumed based on an initial desk top investigation. The Type, Location and Proximity of the local relevant amenities will need to be confirmed at design stage. To award the credit the development will need to be located with in 500m of 2 of the following amenities: Food Outlet, Cash Machine, Open Outdoor Space, and Recreation /Leisure Facilities.





	Ia I			1 .		
Tra 03	Cyclist facilities	2	0	0	0	This credit looks at the cycle storage and cyclist facilities provided for the building users.
						Cycle Storage (0 of 1 credit targeted) This credit has not been targeted at this stage. To achieve this credit the following criteria would need to be met: - 1 cycle storage space for every 10 Staff - 1 cycle storage space for every 10 visitors
						Cycle Storage (0 of 1 credit targeted) This credit has not been targeted at this stage. To achieve this credit 2 of the following cyclist facilities will need to be specified: - Showers - Changing Facilities - Lockers - Drying Space
Tra 05	Travel Plan	1	0	0	0	Travel Plan (0 of 1 credit targeted) The Travel Plan credit has not been targeted at this stage. To achieve this credit a BREEAM Compliant site specific travel plan will need to be developed as part of the feasibility stages, including a specific travel assessment.
	Transport Totals:	9	4	0	0	
	Transport score totals:	7.254	3.224	0	0	
Water	-			•		
Wat 01	Water Consumption	5	3	0	0	Water Consumption (3 of 5 Credit targeted Newly specified domestic water-consuming components and (where relevant) retrofitted devices to the existing fittings will be undertaken to ensure that the water consumption (litres/person/day) for the assessed building achieve a 40% reduction over baseline performance. As a guide, the 40% reduction can be met by ensure that the water consumption of each component meets the values below: Component Water Consumption: WCs: 4 Litres (Effective Flush Volume) Urinal1 urinal only: 1.5 Litres/Bowl/Hour 2 or more: 1.5 Litres/Bowl/Hour Wash hand basin taps: 4.5 Litres/Minute
						Domestic Sized Dishwashers12 Litres/Cycle Domestic Sized Washing Machine: 40 Litres/Use Kitchen Tap: 7.30 Litres/Minute Kitchenette Tap: 5 Litres/Minute



Wat 02	Water Monitoring	1	1	0	0	Water Monitoring (1 of 1 Credit targeted)
						A water meter will be specified on the mains water supply to each building. (<i>Minimum Standard</i>)
						All water-consuming plant or building areas, consuming 10% or more of the building's total water demand, will be fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area
						Each meter (main and sub) will have a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system.
						If the refurbishment zone is within a site that has an existing BMS, managed by the same occupier/owner (as the space undergoing refurbishment or fit-out), the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the existing BMS
						If the refurbishment or fit-out zone is within a building that is leasehold, the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the incoming water supply for water using equipment in tenanted areas.
Wat 03	Leak Detection	2	0	0	0	Water Monitoring (0 of 2 Credit targeted) This credit has not been targeted at this stage due to the following:
						- No leak detection system has been specified - No flow control device has been specified.
	Water Totals:	8	4	0	0	
	Water score totals:	6.448	3.224	0	0	
Materia	ls			•		
Mat 01	Life Cycle Impacts	6	4	0	0	Assessment of Environmental Performance Information (4 of 4 credit targeted: Option 2) The credits awarded under the Mat 01 credit will have been assumed at the pre-assessment stage. These will be confirmed at design stage. Material used in the major building elements will be specified in accordance with the BRE Green Guide to Specification.
	Responsible Sourcing of Materials	4	3	0	0	All timber and timber-based products used on the project will be legally harvested and traded timber
						Sustainable procurement plan (1 of 1 credit targeted) The main contractor will produce and work to a sustainable procurement plan and will source materials for the project in accordance with a documented
						Responsible sourcing of materials (RSM) (2 of 3 credits targeted) Materials will be sourced from suppliers/manufacturers capable of providing the relevant responsible sourcing and chain of custody documentation (For Example BES 6001:2008 Certificates). This will be required for ≥36% of the





Mat 04	Insulation	1	1	0	0	Embodied Impact (1 of 1 credit targeted) Details of any new insulation specified for use within the following building elements will be provided to the assessor: 1. External walls 2. Ground floor 3. Roof 4. Building services. The Insulation Index for the building fabric and services insulation will be the same as or greater than 2.5. In addition the will be specified in accordance with the Green Guide to Specification. Furthermore the Insulation will be sourced from companies able to provide the appropriate chain of custody and responsible sourcing documentation.
Mat 05	Designing for durability and resilience	1	0	0	0	Designing for Durability and Resilience (0 of 1 Credit targeted) The Designing for Durability and Resilience credit has not been targeted at this stage. To achieve this credit the design team will need to demonstrate to the BREEAM Assessor that: - The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This should include any environmental factors and material degradation relevant to the specific site.
Mat 06	Material efficiency	1	1	0	0	Material Efficiency (1 of 1 Credit targeted) Opportunities will be identified, and appropriate measures investigated and implemented within the scope of refurbishment or fit-out works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life. This will be carried out by the design team at each of the following RIBA Stages: a. Preparation and Brief, b. Concept Design, c. Developed Design, d. Technical Design and, e. Construction.
	Materials Totals:	13	9	0	0	
	Materials score totals:	15.113	10.463	0	0	





Waste						
Wst 01	Construction Waste Management	7	5	0	0	Pre-Refurbishment Audit (1 of 1 credits targeted) A pre-refurbishment audit of all existing buildings, structures or hard surfaces within the scope of the refurbishment or fit-out zone will be completed. Reuse and Direct Recycling of Materials (1 of 2 credits targeted) The waste material types detailed in in the table below are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling. 50% of the total available points for the waste material types detailed in Table - 64 BREEAM UK Non - Domestic Refurbishment and Fit-out Resource Efficiency (2 of 3 credits targeted) We will develop and implement a compliant resource management plan covering the waste arisings from the refurbishment or fit-out project with the aim of minimising waste, recording and reporting accurate data on waste arising. The non-hazardous waste relating to on-site refurbishment or fit-out, and dedicated off-site manufacture or fabrication processes generated by the building's design and construction meets, or exceeds, the resource efficiency benchmarks set out in Table - 61 and Table - 62 of BREEAM UK Non - Domestic Refurbishment and Fit-out as relevant to the project type. Diversion of waste from landfill (1 of 1 credits target) The non-hazardous construction and demolition waste generated have been diverted from landfill: Refurbishment and Fit out: 85% Demolition: 90%
Wst 02	Recycled Aggregates	1	1	0	0	Recycled Aggregates (1 of 1 credits targeted) The percentage of high grade aggregate that will be recycled or secondary aggregate, specified in each application (present) will meet the minimum % levels (by weight or volume) to contribute to the total amount of recycled or secondary aggregate BREEAM Non Domestic Refurbishment and Fit Out (SD216. Table 67 - Page 316) The total amount of recycled or secondary aggregate specified, will meet the BREEAM standards, will be greater than 25% (by weight or volume) of the total high grade aggregate specified for the project.
Wst 03	Operational Waste	1	0	0	0	Operational Waste (0 of 1 credits targeted) This credit has not been targeted at this stage due to the following: - No dedicated space for segregating and storing the appropriate volumes of recyclable waste likely to be generated by this development. This space would need to be: - Clearly labelled Accessible to building operators Adequately sized to hold the capacity of waste likely to be generated by weekly operational activities. Design Team Meeting Comments - 16th March 2015 It was discussed with in the meeting that the client will not require a operational waste area. It was decide to omit the credit from the assessment.





Wst 05 Adaptation to climate change 1 0 0 0 Adaption to Climate Change (0 of 1 credits targeted) This credit has not been a climate change adaptation strategy appraisal for structural and fabrineed to be undertaken before RIBA Stage 2. Wst 06 Functional adaptability 1 1 0 Functional Adaptability (1 of 1 credits targeted) A building-specific functional adaptation strategy study will be undertaken by the client and Design (RIBA Stage 2), this will include the recommendations for measures to be incorporate adaptation. Functional adaptation measures will be adopted in the design by Technical Design stage (RIBA Stage 2) accordance with the functional adaptation strategy recommendations, where practical and omissions will be justified in writing to the assessor. Waste Totals: 11 7 0	nd design team by Concept ated to facilitate future RIBA Stage 4) in
- There has not been a climate change adaptation strategy appraisal for structural and fabrineed to be undertaken before RIBA Stage 2. Wst 06 Functional adaptability 1 1 0 0 Functional Adaptability (1 of 1 credits targeted) A building-specific functional adaptation strategy study will be undertaken by the client and Design (RIBA Stage 2), this will include the recommendations for measures to be incorporated adaptation. Functional adaptation measures will be adopted in the design by Technical Design stage (RI accordance with the functional adaptation strategy recommendations, where practical and omissions will be justified in writing to the assessor. Waste Totals: 11 7 0 0	nd design team by Concept ated to facilitate future RIBA Stage 4) in
A building-specific functional adaptation strategy study will be undertaken by the client and Design (RIBA Stage 2), this will include the recommendations for measures to be incorporated adaptation. Functional adaptation measures will be adopted in the design by Technical Design stage (RI accordance with the functional adaptation strategy recommendations, where practical and omissions will be justified in writing to the assessor. Waste Totals: 11 7 0 0	ated to facilitate future RIBA Stage 4) in
accordance with the functional adaptation strategy recommendations, where practical and omissions will be justified in writing to the assessor. Waste Totals: 11 7 0 0	
Waste score totals: 8.312 5.289 0 0	
Land Use & Ecology	
Ecological Value of Site and Protection of Ecological Features The Protection of Ecological Features Protection of Ecological Feature	I be adequately protected by the Suitably Qualified (e.g. erection of temporary
Enhancing site ecology 1 0 0 0 Enhancing Site Ecology (0 of 1 credits targeted) This credit has not been targeted at this stage: - A suitably qualified ecologist (SQE) would need to be appointed by the by the end of the P stage (RIBA Stage 1) to advise on enhancing the ecology of the site at an early stage. - An Ecology Report would need to be produced which provides appropriate recommendation of the site's ecology. (RIBA Stage 2). The report will need to be based on a site visit/survey - The ecologist's recommendations for the enhancement of site ecology have been, or will be refurbishment or fit-out	tions for the enhancement y by the SQE.
Land Use & Ecology Totals: 2 0 0 0	





Pollutio	n					
Pol 01	Impact of Refrigerants	3	3	0	0	Impacts of Refrigerants (3 of 3 credits targeted) There will be no refrigeration within the development, and thus at this stage this 3 credits are awarded by default
Pol 02	NOx emissions	3	3	0	0	NOx Emissions (3 of 3 credits targeted)
						The plant installed in the proposed development will meet the buildings delivered heating and hot water demand, under normal operating conditions NO_x emission level (based on a dry basis at $0\% O_2$) will meet $\le 40 \text{mg/kWh}$.
Pol 03	Surface Water Run Off	5	1	0	0	Flood Risk Management (0 of 2 credits targeted) The Flood Risk Assessment credits have not been targeted. This would require a flood risk assessment to be produced, confirming the specific flood risk zone which the proposed development is located in. - Low Flood Risk: The project will need to meet the requirements for avoidance of flooding in accordance e.g. where the refurbishment or fit-out zone is of a floor level that is 0.3m higher than the obtained/estimated flood level and safe access/escape routes are available/present. - Medium/High Flood Risk: The proposed development would need to meet one of the following: - Avoidance from flooding; - Flood resilience/resistance strategy is implemented for the building's scope of works in accordance with recommendations made by a Suitably Qualified Building Professional Surface Water Run-off (1 of 2 credits targeted) The new development will result in an increase in the impermeable surface as a result of the refurbishment work. The following actions will be taken to ensure that there is a neutral impact on surface water: - Hard standing areas - where there is an extension or increase in the hardstanding area must be permeable or be provided with on-site SuDS to allow full infiltration of the additional volume, to achieve the same end result. The permeable hardstanding must include all pavements and public rights of way, car parks, driveways and non-adoptable roads, but exclude footpaths that cross soft landscaped areas which will drain onto a naturally permeable surface. - Building extension - where there is an increase in building footprint, extending onto any previously permeable surfaces, the additional run-off caused by the area of the new extension must be managed on-site using an appropriate SuDS technique for rainfall depths up to 5mm. Minimising Watercourse Pollution (0 of 1 credits targeted) The Minimising Watercourse Pollution credit has not been targeted. To achieve this credit the following actions would need to be taken: - There is no dischar





	Reduction of Night Time Light Pollution Pollution Totals:	1	1 8	0	0	Reduction of Light Time Light Pollution (1 of 1 credits targeted) The external lighting strategy has been designed in compliance with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011 In addition, all external lighting (except for safety and security lighting) will be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. Illuminated advertisements, where specified, will be designed in compliance with ILE Technical Report 5 - The Brightness of Illuminated Advertisements
	Pollution score totals:	11.16	7.44	0	0	
Innovat	ion					
Man 01	Project brief and design	2	0	0	0	-
1	Responsible construction practices	2	0	0	0	-
Man 05	Aftercare	1	0	0	0	-
Hea 01	Visual Comfort	1	0	0	0	-
Hea 02	Indoor Air Quality	2	0	0	0	-
	Reduction of energy use and carbon emissions	5	0	0	0	-
Wat 01	Water Consumption	1	0	0	0	-
Mat 01	Life Cycle Impacts	1	0	0	0	-
	Responsible Sourcing of Materials	1	0	0	0	-
	Construction Waste Management	1	0	0	0	-
Wst 02	Recycled Aggregates	1	0	0	0	-
Wst 05	Adaptation to climate change	1	0	0	0	-
Pol 03	Surface Water Run Off	1	0	0	0	-
Al	Approved Innovation	1	0	0	0	
	Innovation Totals:	21	0	0	0	
	Innovation score totals:	21	0	0	0	
	OVERALL SCORE TOTALS:	120.999	56.288	0	0	

KEEPING SOUTH WALES SAFE . CADW DE CYMRU'N DDIOGEL



Neath Police Station Gnoll Park Road Neath SA11 3BW

Tel 07815 953 028 Michael.Harvey2@south-wales.pnn.police.uk

18th May 2015

Clash Associates Ltd London

Dear Mr Clash

Re Mission Gallery.

In relation to the above I would make the following observations with a view to the development obtaining the Secured by Design award:-

(i). Perimeter security.

The side alleyway and rear of the gallery must be protected by gates and railings at least 1.8 metres high (preferably 2 metres). They must be designed to be difficult to climb over and robust. Any chains or locks securing gates must meet Sold Secure SBD or recognised security standards.

(ii). CCTV.

I would ask for the outside of the building especially the entrances to be protected by $\mathsf{CCTV}.$

The CCTV cameras must be located in elevated positions and protected in vandal proof housings.

Chief Constable Peter Vaughan, BSc (Hons), DipAppCrim Prif Gwnstabl

KEEPING SOUTH WALES SAFE . CADW DE CYMRU'N DDIOGEL



The images produced must be admissible in a court of law and the Data Protection Act must be complied with.

(iii). Signage.

Signs must be prominently sited advertising the fact that CCTV cameras are protecting the building to comply with the Data Protection Act.

(iv). Lighting.

The rear of the gallery and side alleyway must be protected by security lighting.

The lighting must be effective and enhance CCTV coverage e.g. Metal halide.

The lighting must be situated in elevated positions to prevent vandalism and be protected in vandal proof housings.

(v). Landscaping.

Maximum surveillance must be maintained across the site. Ideally plants and bushes should only grow to a maximum height of 1 metre.

Trees should be located in areas where they do not obstruct CCTV coverage or lighting. They should have no branches below 2 metres from the ground and should not be adjacent to the building or perimeter security. This is to allow clear lines of sight across the development.

(vi). Bin stores.

Bin storage areas must be secure areas.

(vii). Drainpipes.

Rainwater down pipes can provide a convenient scaling aid onto roofs or to reach windows above ground floor level. Rain water pipes must be either flush fitting (i.e. square profile) or concealed within the cavities of the buildings.

Chief Constable Peter Vaughan, BSc (Hons), DipAppCrim Prif Gwnstabl

KEEPING SOUTH WALES SAFE . CADW DE CYMRU'N DDIOGEL



(viii). Building shell security.

The extension must be constructed of materials that are resistant to attack.

The design of the building must take into account the need to prevent features that aid scaling or climbing and hidden areas must be designed out.

(ix). Access control.

Access in the building from public areas into semi private and private areas, e.g. the office, must be controlled via access control e.g. fob, swipe card, digital locks etc.

(x). Door security.

The main entrance doors giving access into the building, should meet Secured by Design (SBD) standards e.g. PAS 24 2012, LPS 1175 SR2 or equivalent.

I realise this may not be possible due to the building being listed.

The doors must be multi point locking or the locks fitted must be up to the British Standard 3621.

Glass in door panels or adjacent to door panels should be laminated and at least 6.8 millimetres thick.

Doors in recesses of more than 600mm should be avoided.

Fire doors must not have external door furniture fitted, and be up to SBD standards. They must also be alarmed.

Doors if not protected by SBD doors must be protected by internal shutters or grilles that meet SBD standards and must be protected against ram raiding.

Chief Constable Peter Vaughan, BSc (Hons), DipAppCrim Prif Gwnstabl

KEEPING SOUTH WALES SAFE . CADW DE CYMRU'N DDIOGEL



(xi). Window security.

All vulnerable external windows should meet SBD standards e.g. LPS 1175 SR2, PAS 24 2012 or equivalent.

I realise this may not be possible due to the building being listed.

Please advise me of the specification for the windows you propose if they are not SBD approved due to the building being listed.

All glass in vulnerable windows i.e. ground floor windows within this development must be laminated and at least 6.8 millimetres thick.

(xii). Intruder alarm systems.

The building must be alarmed on all floors with the alarm system linked to a central monitoring station. All rooms where there is valuable equipment or information stored must be alarmed. Any alarm wires must be protected e.g. redcare.

Panic buttons linked to the alarm system must be installed at appropriate locations for use when staff are under attack or are threatened by members of the public.

For further information in respect of Secured by Design please visit the Secured by Design website $\underline{www.securedbydesign.com}$.

If you require further information or to discuss any of the points raised in this report please do not hesitate to contact me.

Yours Sincerely

Mike Harvey

Designing out Crime Officer

Chief Constable Peter Vaughan, BSc (Hons), DipAppCrim Prif Gwnstabl

KEEPING SOUTH WALES SAFE + CADW DE CYMRU'N DDIOGEL



Please Note.

For the Secured by Design Award to be made certification will have to be provided to prove the relevant British and SBD standards have been met. Ideally such products e.g. doors and windows etc would be manufactured/installed by a SBD licensed installer.

Chief Constable Peter Vaughan, BSc (Hons), DipAppCrim Prif Gwnstabl