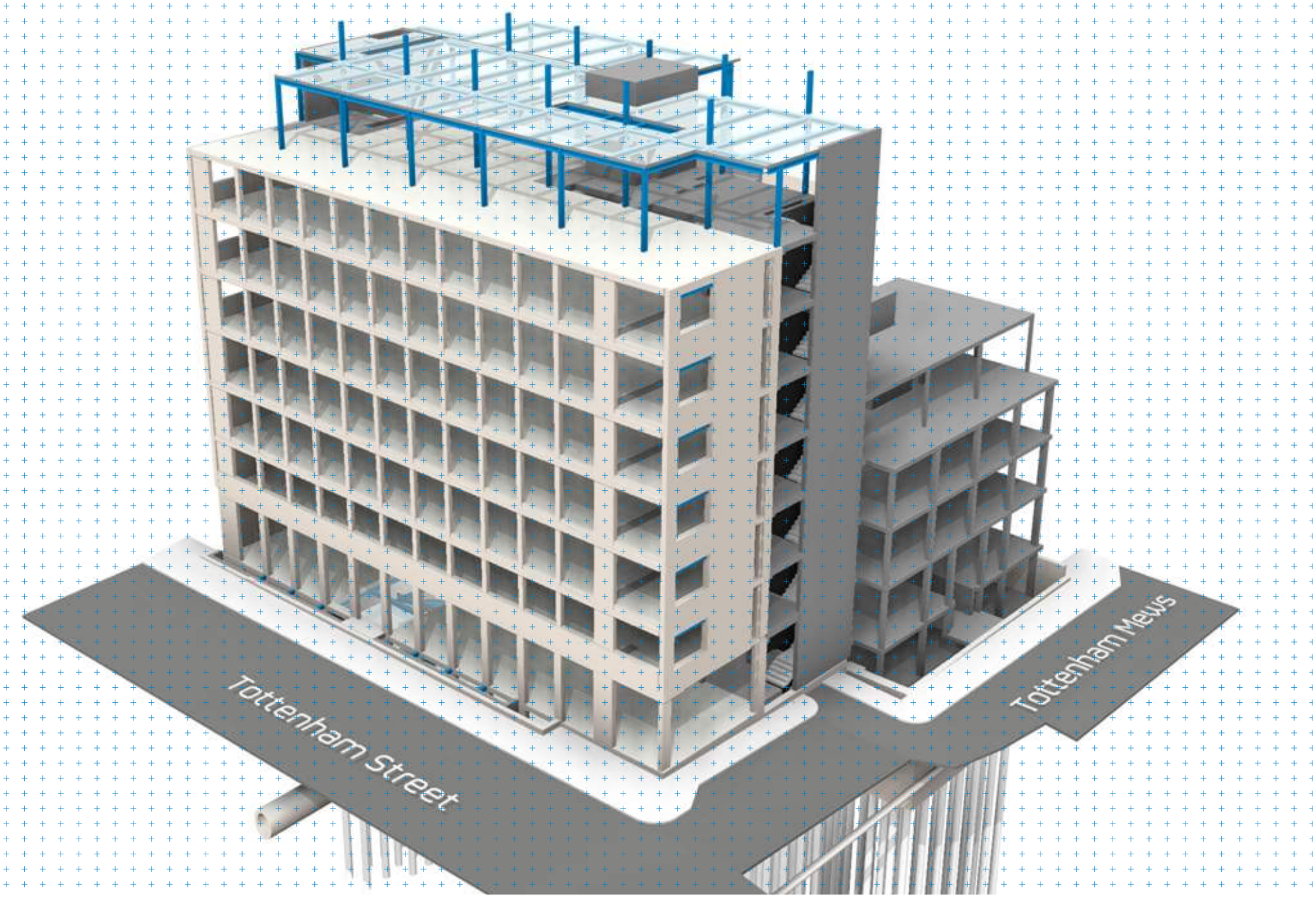
Arthur Stanley House
Structural Planning Report

Westbrook Partners / 1921 Mortimer Investments Limited

July 2017


Tottenham Street
Tottenham Mews

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Appendices

Status: Planning
Date: 20/07/2017
Revision: 01
Job no: 1431
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Approved by: Mark Tillett

HEYNE TILLETT STEEL

1 Introduction

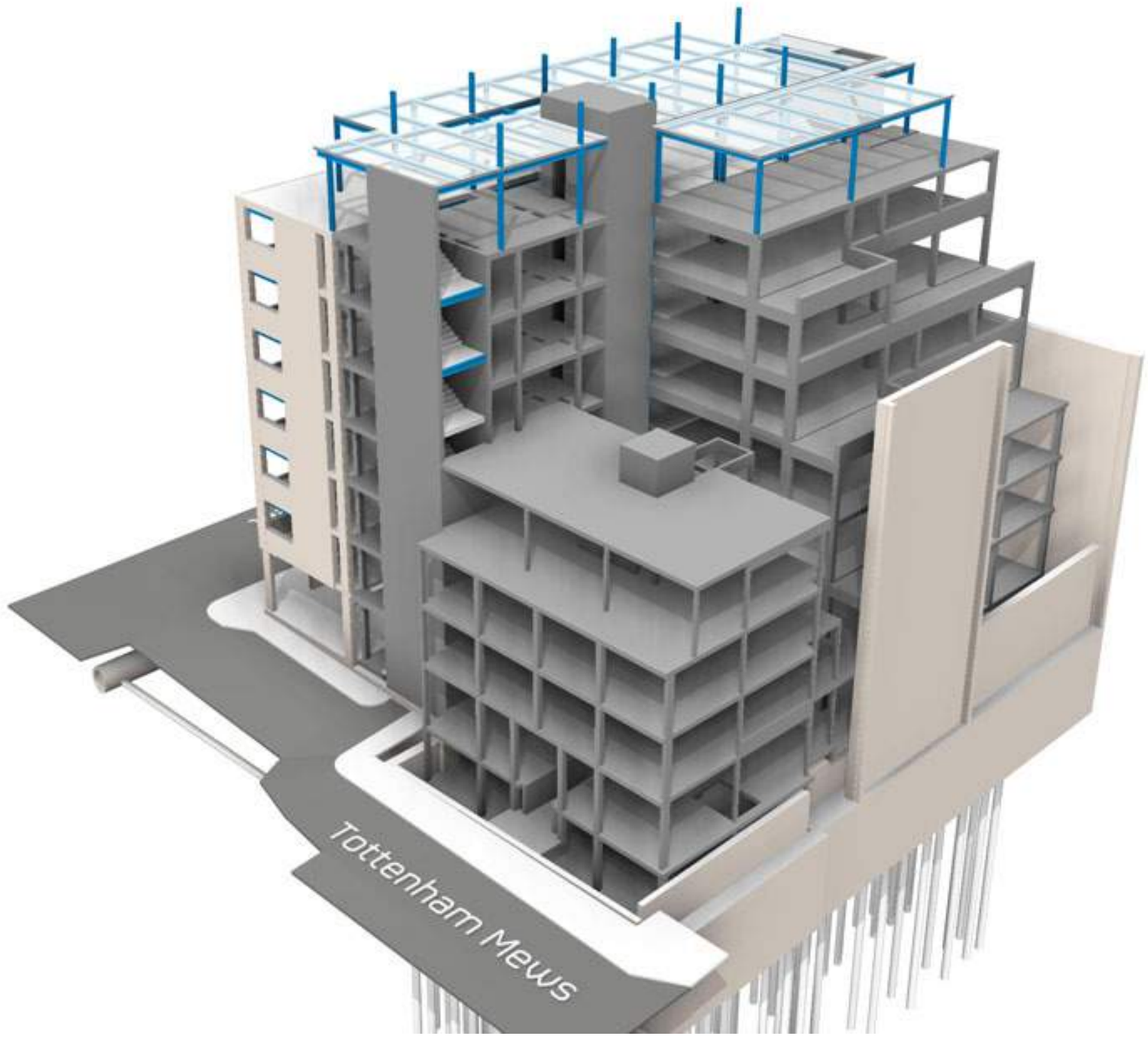
Heyne Tillett Steel have been appointed by 1921 Mortimer Investments Ltd. as consulting structural engineers to develop a structural scheme for the proposed redevelopment of Arthur Stanley House, Tottenham Street, London to support a planning application to Camden Council.

The scheme has been developed with Allford Hall Monaghan Morris architects and Green Building Design Consultants services engineers.

This report describes research, studies and investigations of the current site. The existing building is appraised and the proposed scheme for the site is described. The impact of the works on existing and neighbouring structures is also discussed.

In support of this planning application, a geotechnical desk study has been undertaken by CGL to assess the ground conditions and the potential for contamination at the site. The Study Report and Stage 1 Screening dated July 2017 is included within the Appendices.

A Flood Risk Assessment and a Surface Water Management Plan for the development have been described in the HTS Drainage Strategy Report.



2 The Site

The site is bounded by Tottenham Street to the south, Tottenham Mews to the east, Middlesex House to the north and 32-34 Cleveland Street to the west.

The site is located within the Charlotte Street conservation area within the London Borough of Camden, on the boundary with the City of Westminster.

2.1 Background research and archives

The existing building is known to have been completed in 1965, commissioned by The Middlesex Hospital and opened by the Queen. The building originally accommodated the Department of Rheumatology, a Physiotherapy and Rehabilitation section and a Department of Immunology.

A two storey basement plant room and boiler directly adjacent to the laboratory building is understood to have served the neighbouring hospital buildings.

Several archive sources have been searched and visited to understand the building history and construction. These include: -

- London Metropolitan Archives
- Camden Building Control·
- Westminster Building Control
- University College London Hospitals Archives

No archive structural drawings have been obtained for the building from the above archive sources. University College London Hospitals Planning Committee minutes identify the original design team as:

Architect: TP Bennett (specifically Phillip Bennett)

Structural engineer: R.T. James

Contractor: Taylor Woodrow Construction

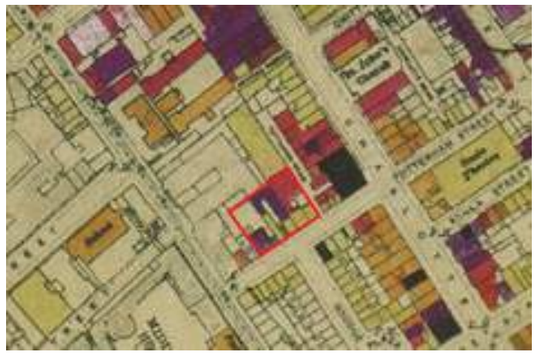
TP Bennett and Taylor Woodrow (now Vinci Construction) have been contacted but hold no records or archive information for the building. R.T. James have since ceased to trade.

2.2 Site geology

As per the CGL Study Report and Stage 1 Screening, according to BGS records, the site is underlain by the Lynch Hill Gravel Formation, which is in turn underlain by the London Clay Formation, the Lambeth Group Formation, the Thanet Sand Formation and Chalk at depth. Results from a historic ground investigation of the site confirm this stratigraphy.

Historic map c.1953

Historic map c.1965



WWII Bomb Map

Thames Water Asset Plan

The Lynch Hill Gravel member is classified as a Secondary A Aquifer by the Environment Agency. Results from a historic ground investigation of the site indicate that groundwater present within the Lynch Hill Gravel Member at a level of approximately 21.21mOD to 21.40mOD – 0.2-0.4m above the current Basement 2 structural slab level.

Intrusive investigations will be undertaken during the next design stage to confirm the findings of the historic ground investigation.

2.3 Buried infrastructure

2.3.1 Thames water

A Thames Water Asset Search for the site indicates that a 1219 x 813mm sewer runs under Tottenham Street and Cleveland Street. A 381mm diameter sewer is identified under Tottenham Mews. This sewer is identified as having an invert level of 22.81m at the junction between Tottenham Mews and Tottenham Street; this corresponds to approximately 3.7m below the street level.

A Thames Water manhole is identified at the junction between Tottenham Mews and Tottenham Street.

The Thames Water Asset Location Search for the site is included within the Appendices. The exact position of these sewers is not guaranteed by Thames Water.

Thames Water Developer Services will be contacted during the next design stage to determine whether they will require a Build Near a Sewer Approval prior to the commencement of the redevelopment. A Pre-Development Enquiry will be necessary to confirm the capacity of the sewage network wastewater discharges associated with the redevelopment.

2.3.2 London Underground

The Northern Line is located approximately 210m northeast of the site; the Victoria Line is located approximately 320m northwest of the site.

London Underground have confirmed that it has no assets within 50m of the site. A location enquiry letter from London Underground is included within the Appendices.

2.3.3 Crossrail

Crossrail maps identify that the site is outside of any safeguarding zones.

2.3.4 Royal Mail underground tunnels

The historic Royal Mail underground tunnels are located approximately 220m northwest and 240m southwest of the site.

The site is located outside the notifiable zone for Royal Mail underground tunnels.

2.3.5 Openreach Deep Level Assets

Openreach have confirmed that there is no Openreach Deep Level Plant or equipment at the site. A confirmation email from Openreach is included within the Appendices.

2.4 Party walls

The nature of the interfaces of the adjacent properties to Tottenham Street, Cleveland Street and Middlesex House with regard to party wall will need to be confirmed by the party wall surveyor in the next stage.

It is possible that party wall awards will be required where excavation and foundation works are being undertaken adjacent to boundaries.

A ground investigation and movement assessment will be undertaken at the next stage to investigate the impact of ground movements associated with the proposed development on the surrounding buildings and infrastructure.

2.5 Unexploded ordnance

London County Council bomb damage maps indicate that the structure at the southern corner of the site was damaged beyond repair during The Blitz, while the surrounding structures sustained minor bomb damage. Seventeen high explosive bombs have also been identified as having been dropped within 250m of the site.

As per the CGL Study Report and Stage 1 Screening, it is considered that the risk associated with encountering unexploded ordnance is low.

2.6 Archaeology

Historic England have confirmed that no archaeological assessments of conditions are required for the development.

A letter from Historic England is included in the Appendices

3 Existing Building

3.1 General

Due to the lack of archive structural drawings for the site, information on the existing building is largely drawn from visual site inspections, historic correspondence and limited structural investigation works on site.

The existing building is formed of a reinforced concrete frame, consisting of a traditional clay pot and concrete ribbed slab with solid RC band beams and columns.

3.1.1 Concrete grade

Material testing has not been undertaken at this stage to confirm the strength of the existing concrete.

A grade of 25N/mm2 has been adopted to assess the existing structural elements within the initial design stage.

3.1.2 Reinforcing steel grade

Material testing has not been undertaken at this stage to confirm reinforcement grades.

In accordance with BS1144:1943 the grade of steel is assumed not to exceed 415N/mm2 for a cold worked bar greater than 10mm in diameter, or 250N/mm2 for mild steel bars.

Main bars exposed during intrusive investigations were observed to be deformed while shear links were typically plain round.

3.1.3 Design imposed loading

No existing records have been obtained detailing existing design loading.

The relevant building loading code at the time of construction was British Standard Code of Practice CP 3 – Chapter V (1952) – Loading. This gives no specific live load requirement for a laboratory/institutional building. For assessments of existing loads, a uniformly distributed imposed floor load of 2.0 + 1.0 kN/m2 – corresponding to use A3 – hospital loads in Eurocode 1 – has been assumed.

3.1.4 Below ground drainage

A CCTV survey was undertaken by JPD Technical Services in November 2015. Results are contained within the Appendices.

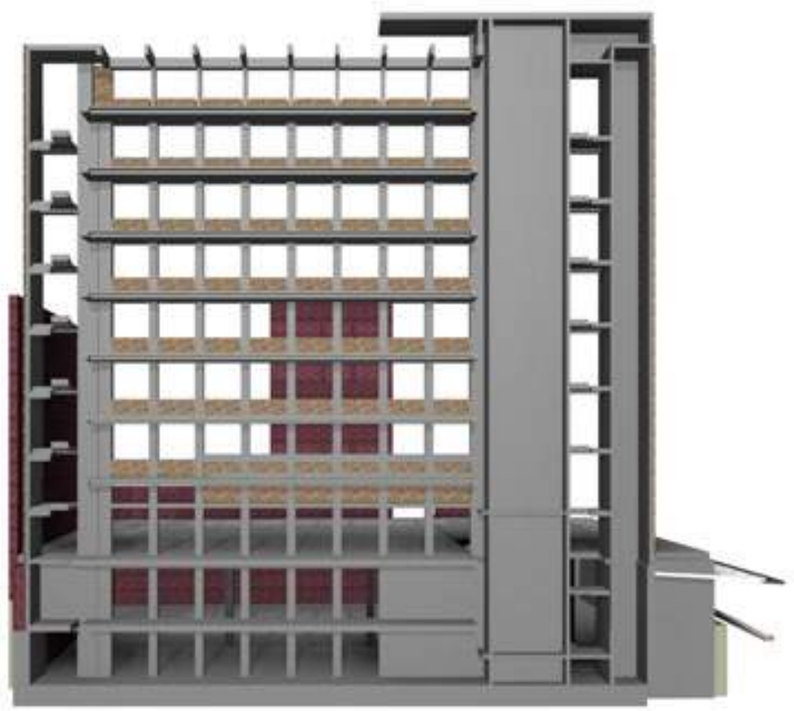
A combined drainage system collects foul and surface water from all suspended storeys and discharges via a suspended cast iron pipe at high level Basement 2 to the Thames Water sewer under Tottenham Street. The cast iron pipe has been surveyed and is in fair condition, free flowing and with no structural defects noted.

Basement 2 appears to be drained via sumps within two pump chambers below the slab level. Due to groundwater infiltration into the basement, these sumps have been supplemented by temporary pumps. Sumps and pumps discharge via existing pump rising mains connected to the high level Basement 2 suspended drainage system.

Additionally a number of drainage runs appear to penetrate through the existing masonry liner wall within the basement to the north of the site. It is not known if these serve to drain the existing ground floor external hardstanding, however this is not evident externally. There is no evidence of a drained cavity within the basement wall build up.

Existing Building Isometric

Exsisting Front Facade



Existing Building Isometric

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3.2 Structural arrangement

3.2.1 Superstructure

The existing building consists of seven upper floors above ground in reinforced concrete frame with two levels of basement. The superstructure consists of concrete ribbed beams and clay pot floors spanning between concrete band beams, which are supported on concrete columns.

Above Ground Floor, the suspended floorplates are approximately 32m long by 15m wide on plan. Below Ground Floor, the basement is approximately 36m long by 30m wide on plan.

Above 1st Floor, floor slabs are typically 250mm deep, consisting of 50mm concrete topping and 200mm x 150mm wide downstand RC ribs at 450mm centres. These clay pot floors span 7.25m from perimeter upstand RC beams set within the north and south façades of the building to a 650mm deep 300mm wide central downstand spine beam.

The topping screed does not appear to be structural.

The central downstand RC beam appears to be cast monolithically with the slabs to form a t-section with a 2100mm wide solid flange. The downstand beam has several local openings for service penetrations. These appear to have been formed when the beams were constructed. At 1st Floor the downstand beam is replaced with a wide, shallow RC band-beam.

Beams are supported on concrete columns, which are typically located at 2.44m centres along the north and south elevations and at 4.88m along the internal spine line. External columns are typically 450x300 square to 4th floor, reducing to 300x300 at high levels in the south elevation. Internal columns are 850x300 to 4th floor reducing to 450x300 above this level, and orientated in the east west direction.

At roof level a partially exposed RC frame supports Autoclaved Aerated Concrete (AAC) precast planks. The RC beams are exposed externally to the north and south facades to create a loggia structure.

3.2.2 Foundations

Results from a historic ground investigation of the site identify a reinforced concrete basement slab of thickness varying between 900-1100mm at column locations and around the perimeter and 400mm thickness at general slab locations.

It is assumed that the foundations are either a ground bearing slab with local strip thickenings at the line of columns or a raft of varying thickness. However, it is possible that columns are supported on piles.

Intrusive investigations will be undertaken during the next design stage to confirm the findings of the historic ground investigation and to determine if piles are present.

It is assumed that spread or raft foundations would bear onto the water bearing Lynch Hill Gravels and that piles – if present – would have been installed into the underlying London Clay.

3.2.3 Building stability

Wind loads on the façade will be transmitted to the floor slabs, which will transfer forces through diaphragm action to the lateral force resisting elements, which are assumed to be the existing RC lift shaft and stair core walls in the north-south direction and the RC downstand beam in the east west direction action as a moment frame.

Existing AAC concrete slabs at roof level

Arthur Stanley House Existing 3D Section

3.2.4 Basement construction

Beneath the Arthur Stanley House superstructure the basement appears to be constructed with an RC box which is typically restrained at Basement 1 and Ground Floor levels. Along the Tottenham Street elevation, there is no restraint from the Ground Floor slab due to the presence of a lightwell.

The basement walls retain the Tottenham Street and Tottenham Mews highways.

An existing swimming pool at Basement 1 along the southern elevation of the building has been removed as part of earlier enabling works and replaced with steel raking props which provide temporary lateral restraint to the Tottenham Street highway.

Adjacent to the party wall to the west of the site there is evidence of underpinning to the neighbouring property.

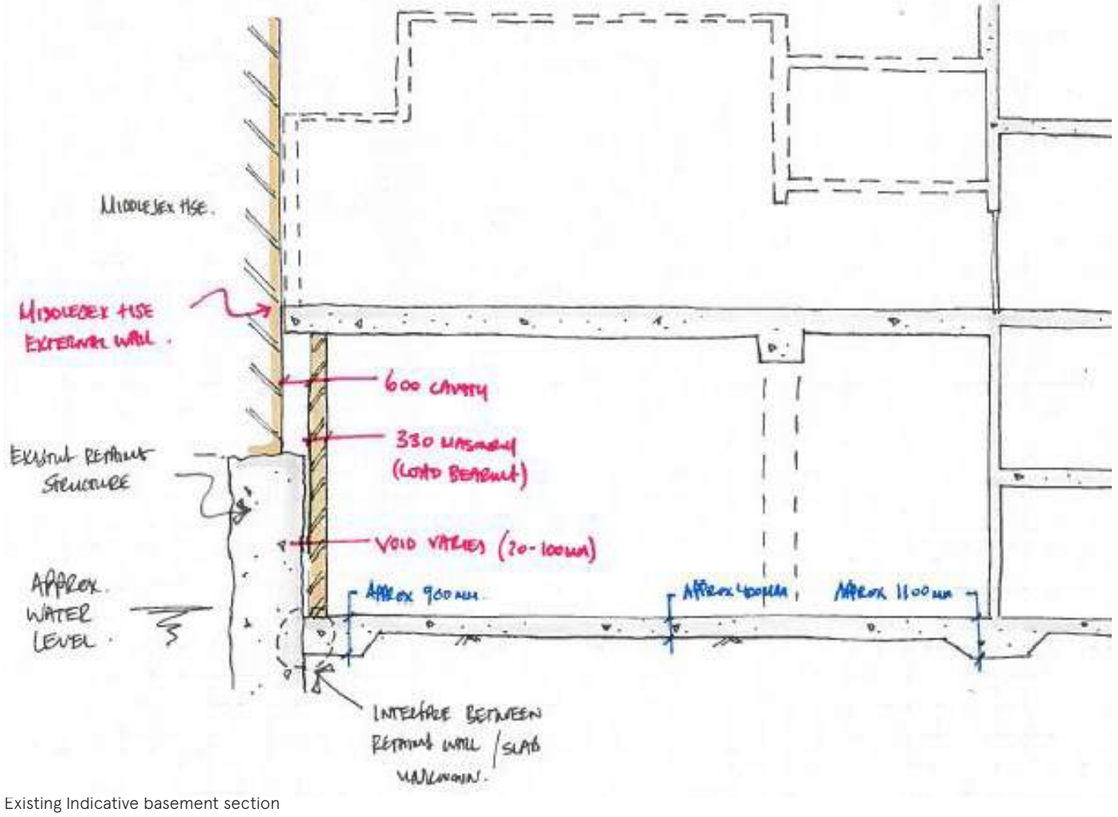
Within the existing plant room the basement construction varies. Along the interface with Middlesex House and Cleveland Street to the west, the existing Ground Floor concrete slab is supported on a double height loadbearing masonry wall bearing on the concrete floor slab at Basement 2.

Behind the masonry wall, investigations have identified a concrete foundation terminating at Basement 1 level, which appears to be supporting the Middlesex House courtyard and external wall. This is a mix of rough and fair-faced concrete suggesting that this may have been constructed as part of underpinning works undertaken during the construction of either property at this party wall interface.

The existing Ground Floor slab and the supporting masonry wall do not appear to provide any lateral restraint to the neighbouring properties. At Ground Floor a soft joint has been identified between the existing Ground Floor slab and the boundary wall with Middlesex House to the north of the site.

Adjacent to Tottenham Mews, the basement is constructed of an in-situ RC box with double height RC walls restrained at Ground Floor level by the in-situ RC slab.

The existing Basement waterproofing system is unknown. There is evidence of groundwater infiltration into the basement.



Existing Indicative basement section

3.2.5 Existing façade

The existing façade appears to be constructed of a solid 327mm thick masonry wall supported on an upstand beam integral with the RC slab along the edge. The upstand is approximately 200mm high at all levels above 1st Floor.

A pre-cast RC cladding panel is face fixed to the upstand beam. Exact support details are unknown at this stage and will be investigation in the next design stage.


Existing double height basement (looking south)


Existing double height basement (looking east)

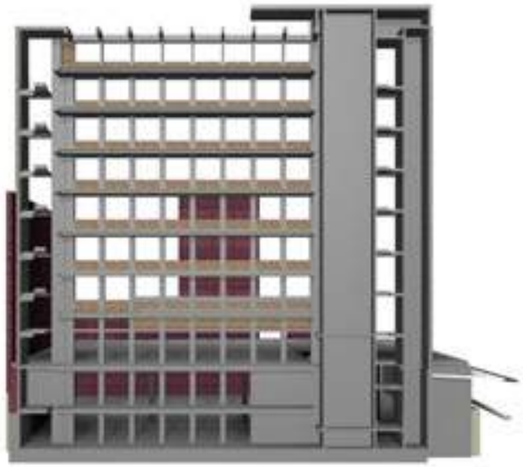
3.2.6 Existing structural defects

The existing concrete structure appears to be generally in good condition. Concrete elements typically show little consistent evidence of material deterioration. The exception of this is at roof level where there is evidence of concrete spalling and initial corrosion to reinforcement in the loggia frame elements.

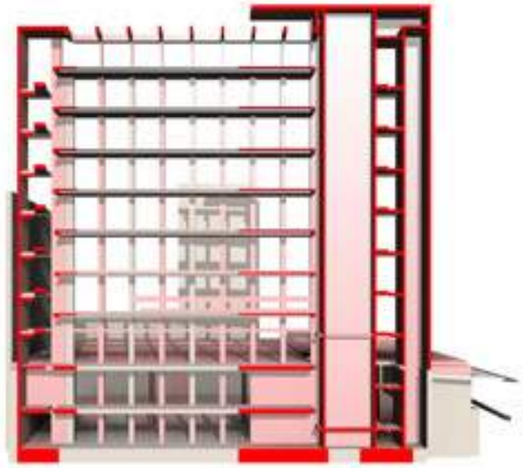
The AAC precast slab units at roof level have visually deflected and show some areas of exposed and corroded reinforcement. This is typical of this type of slab construction.

In the Basement area rainwater and groundwater ingress is evident. This appears to be due to temporary works to the existing structures at ground floor and removal of waterproofing. Whilst the ground floor slab is topped with an existing non-structural screed, it is unlikely that the RC elements will have been detailed with sufficient concrete cover to reinforcement suitable for external environments. The basement slab is almost entirely flooded in the temporary case.

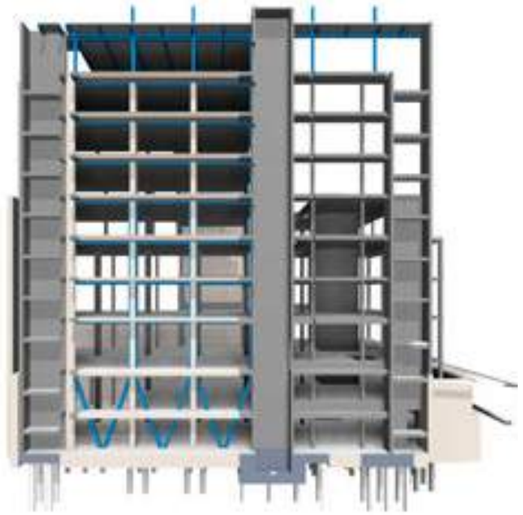

Existing Drainage Outlet at High Level Basement



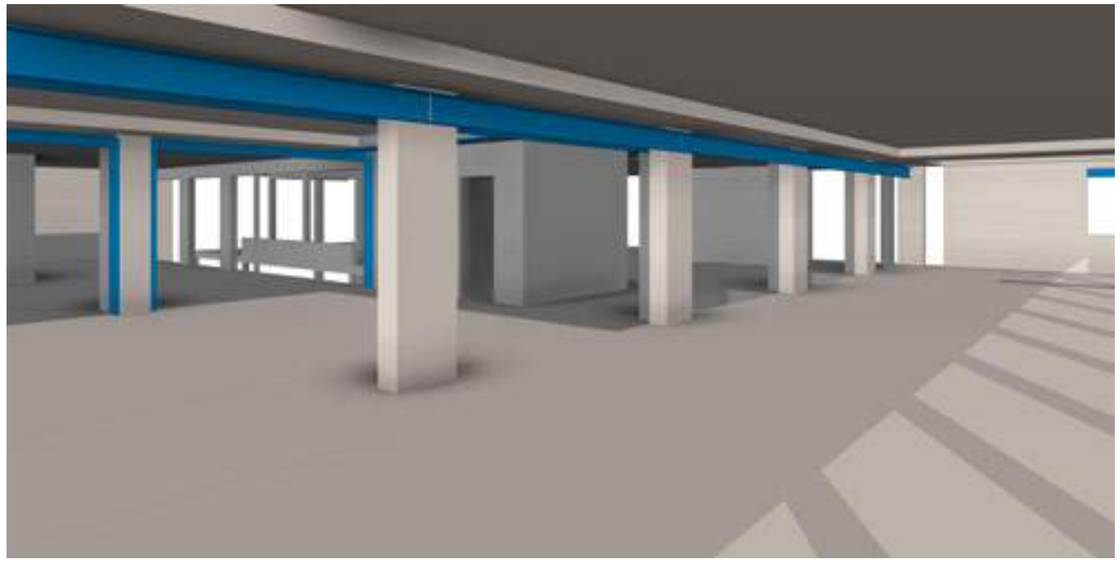
Existing 3D Section



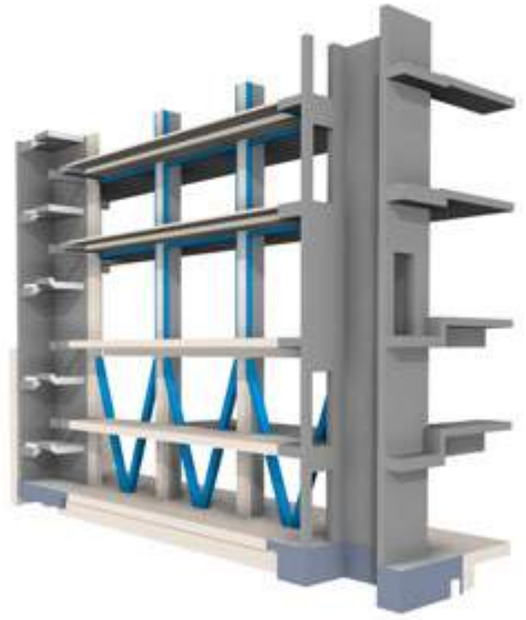
Demolition 3D Section



Proposed 3D Section



Internal View



Isometric on Proposed Trusses

4 Proposed Structure

4.1 Existing building modifications

4.1.1 Building design load

Based on the limited intrusive investigations currently undertaken, the existing RC structure has been justified to support an office live load of 2.5 + 1.0kN/m2 in line with the British Standards.

4.1.2 Façade column removal

The column spacing at the existing façade to the north of Arthur Stanley House is 2.44m. In the proposed scheme each alternate column is to be removed and the existing RC upstand demolished to allow step free access to the extension to the rear of the building.

New steel downstand beams will be installed along the northern elevation of the building to support the slab previously supported on the removed façade columns. The beams will be supported on steel columns, which will transmit axial forces through the slabs at every floor level onto steel columns in the same line below.

To facilitate the redistribution of loads to the foundations and thus negate the need for foundation strengthening, raking steel columns will be installed between Ground Floor and Basement 2 to transfer the forces in the steel columns back to the locations of the bases of the removed concrete façade columns.

Two sequencing options are being considered to enable the removal of the façade columns and the installation of steel beams and columns. The works could be carried out sequentially from bottom to top with one level of temporary props required at each floor level to support the slab on the completed slab below, or in one operation, which would require a full height temporary propping system and temporary foundations. In both cases, temporary propping will be required from before the demolition of the façade columns and upstand beams until after the installation of the steel trimming beams and columns.

4.1.3 Building re-coring

Both existing stairs are proposed to be removed and the cores extended to facilitate and new stairs, lifts and risers.

New cores to the east and west of the existing floor plates will be tied into the existing floor diaphragms in order to provide stability to the entire building.

Temporary stability systems will be required from before the removal of the existing stair cores until after the completion of the new cores.

New cores and areas of floor structure will be constructed off new piles foundations. A movement joint between existing and proposed will allow for differential settlement.

4.1.4 Central downstand beam removal

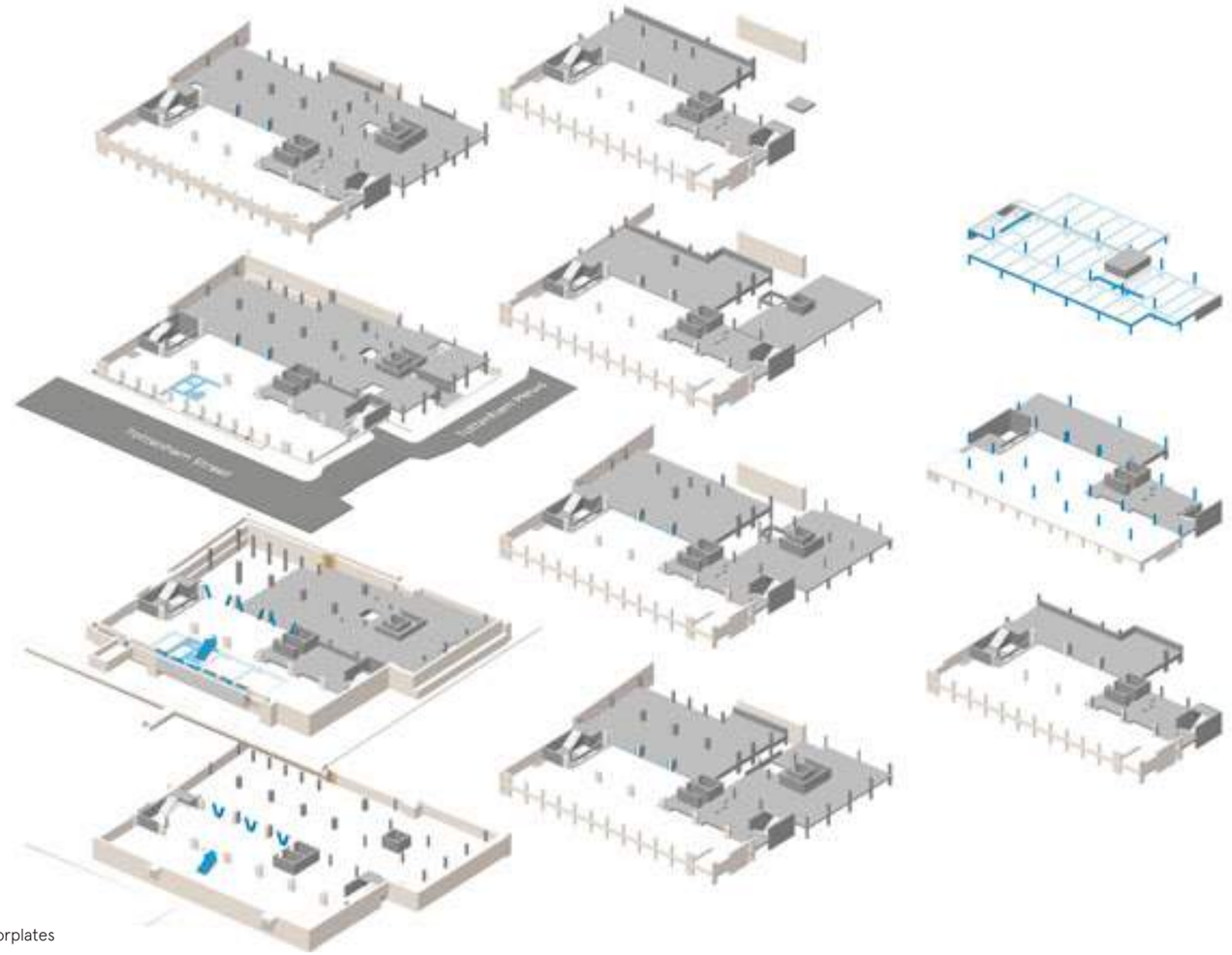
The existing downstand spine beams that span along the centre of the floor plates will be demolished and replaced with parallel flange channel downstand beams.

To avoid the need for temporary propping to the existing slabs, the steel beams will be installed each side of the concrete beams and face fixed to the central columns prior to the demolition of the concrete beams.

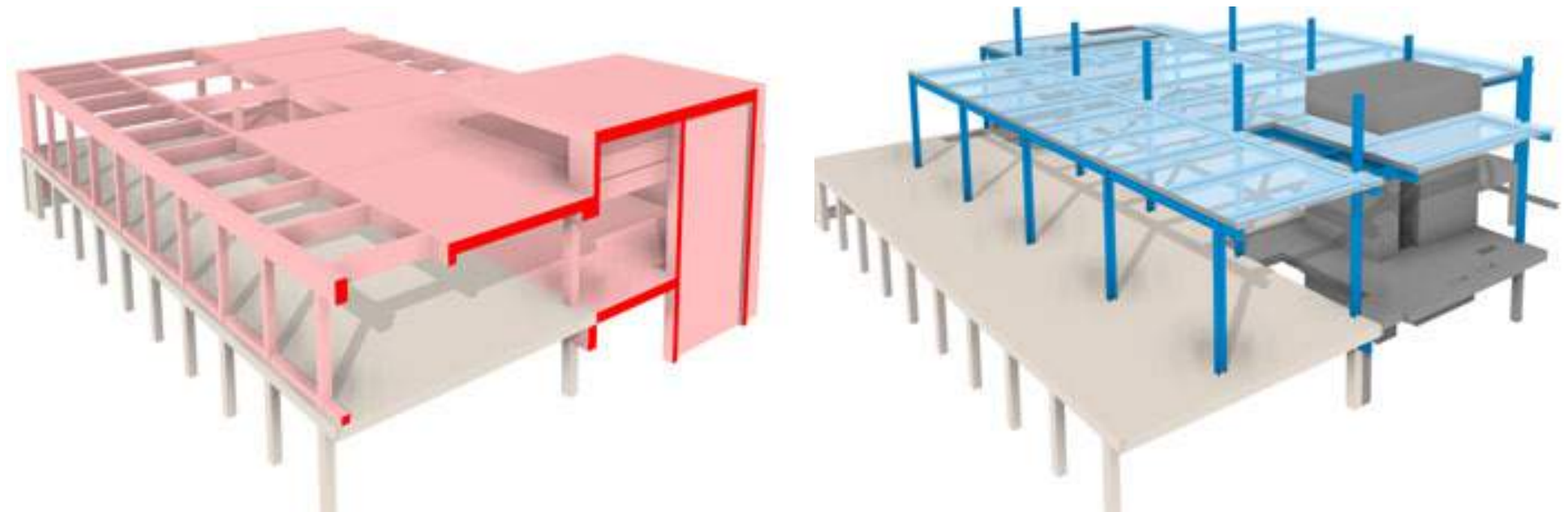
4.1.5 Roof structure and plant support

All existing structure above 7th Floor – that is the concrete columns and beams, the AAC precast slab units and the loggia structure – will be removed and replaced with a new roof structure. This will be formed of concrete filled profiled metal decks supported on and working compositely with steel beams, which will in turn be supported on steel columns.

On the north elevation and along the central line of the building, the new steel columns will line up with the existing concrete columns below 7th Floor and will therefore transmit axial forces directly into these. On the southern elevation, the proposed column line above 7th Floor is stepped in from the existing façade line below. Steel beams will be installed underneath the 7th Floor slab to transfer the forces from the steel columns above to the concrete columns below.



Isometric Proposed Floorplates



Seventh floor Transfer Demolition and Proposed Details

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4.1.6 Pavement lightwell modification

It is proposed to reduce the level of the existing lightwell slab along Tottenham Street by approx. 2.8m to allow daylight ingress to Basement 2 level. Wall panels between Basement 1 and Ground Floor will also be removed and replaced with discrete columns.

In order to facilitate these works, temporary props fixed to the existing Ground Floor slab will provide temporary lateral restraint to the retaining wall at the boundary with Tottenham Street, which is currently assumed to be cantilevering from the slab at the base of the lightwell. The Ground Floor slab will transfer the horizontal retained loads to the building's stability elements to prevent horizontal movements during construction.

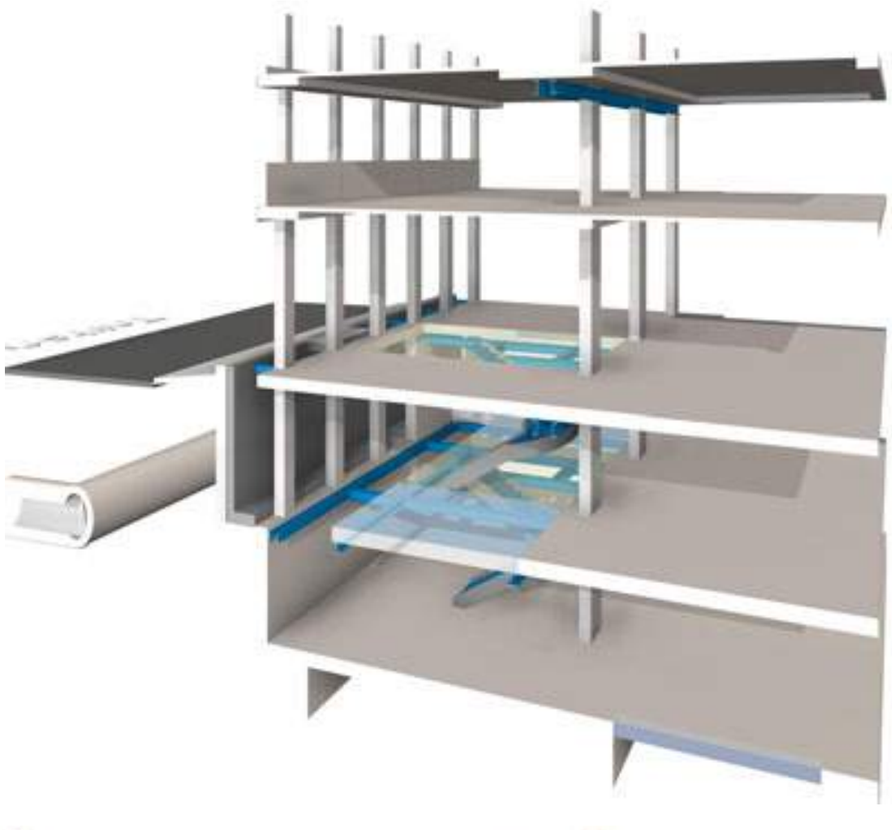
The existing retaining wall will span horizontally between the props. Intrusive investigations to the existing wall will confirm the reinforcement detailing and overall wall thickness to determine maximum spans achievable between temporary props.

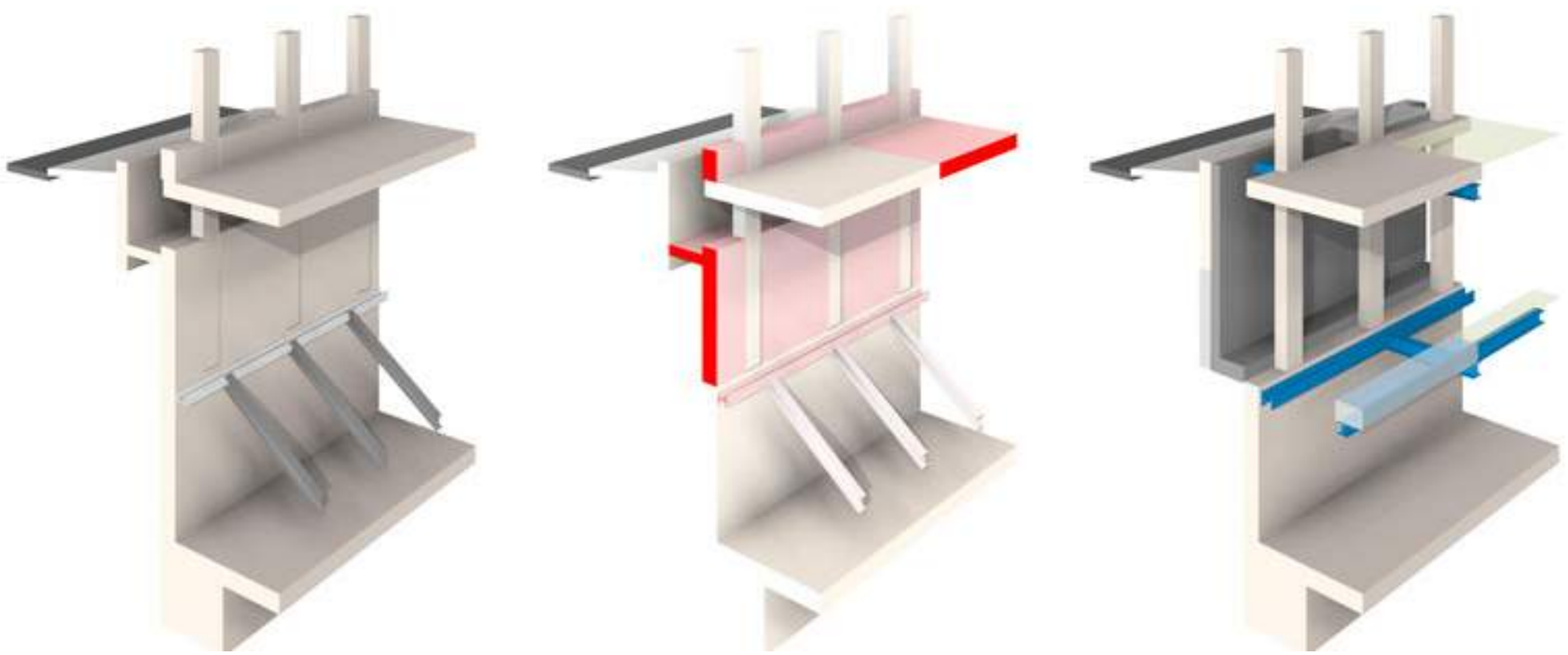
To enable excavation within the lightwell, the existing wall will be underpinned using a traditional sequenced construction. It will be necessary to provide dowels between the tops of the underpins and the underside of the existing wall prior to casting in order to connect the pins to the wall for top restraint. Once the concrete has been poured, dry packing between the wall and the pin will ensure full vertical bearing for load transfer.

The permanent structure will be formed by providing a new liner wall in front of the existing retaining wall. The liner wall will be propped by the floor slabs at both Ground Floor and Basement 1 level.

The liner wall will be restrained at the top by props to the Ground Floor slab and at the base by the Basement 1 slab. Sketches of the above construction sequence can be found in the appendices.

A Thames Water impact study together with a ground movement analysis will be required for this area of works.





Existing, Demolition and Proposed Details of Lightwell Modification

4.2 Building extension

4.2.1 Proposed office & residential

The existing Ground Floor slab to the north of the site will be removed and the remaining basement structure retained. A concrete framed structure will be constructed to the north of the site. This will consist of a seven storey above ground extension to the office block and a three storey above ground residential building.

The floors will typically be formed of concrete flat slabs supported on RC columns. The 8th Floor roof slab will be a concrete filled metal deck slab supported on steel beams, which will be supported on steel columns.

The upper storeys in the new office block step in from the north elevation to form the terraces at different levels. Internal columns are typically 500 by 500mm which extend up to the underside of the third floor level. A single column, located centrally in the floor plate will continue up to the roof level, incorporated into the façade from the fifth level upwards. The north edge of the slab receives support by upstand beams incorporated into the façade for levels fourth to sixth. Slabs are typically 300mm thick for all levels.

4.2.2 Interface between new and existing slabs

Support of the proposed floor slabs adjacent to the existing building is to be provided by a new line of RC columns located directly adjacent to the existing columns in the northern façade.

The proposed floor slab will be connected to the existing to enable lateral force distribution from the extension building to the new stability cores. All interfaces between new and proposed structure will be detailed to allow differential vertical movements.

4.3.4 Building stability

The two main buildings are to be interconnected at each level to facilitate the distribution of lateral forces into the two new cores. Additional stability will be provided by the new lift core and walls within the residential building.

Pits to the proposed lifts will require local excavation below the level of the current basement.

4.2.3 Foundations

Foundations to the new concrete buildings will consist of CFA piles under RC pile caps. The existing Basement 2 slab will be broken back locally to allow the installation of new pile caps.

Vertical movement joints will be installed at the interfaces between existing and proposed foundations to allow differential vertical movements.

Foundations adjacent to the existing basement perimeter (both externally and adjacent to Arthur Stanley House) are to be offset from the site boundary to minimise the excavation of existing strip foundations.

Excavation within the basement to form new pile caps and lift pits will require control measures to prevent water ingress. It may be feasible to adopt local or site wide shoring through the use of interlocking sheet or Giken piles embedded into the impervious clay layer, although the feasibility of this through dense gravels will need to be considered.

As per the CGL Study Report and Stage 1 Screening, as the proposed redevelopment of the site does not involve overall deepening of the existing basement, it is considered that no further assessment is required in relation to the impacts on subterranean (groundwater) flow.

4.4 Drainage strategy

See Heyne Tillett Steel Drainage Strategy Report for a detailed discussion of the surface water drainage strategy for the development.

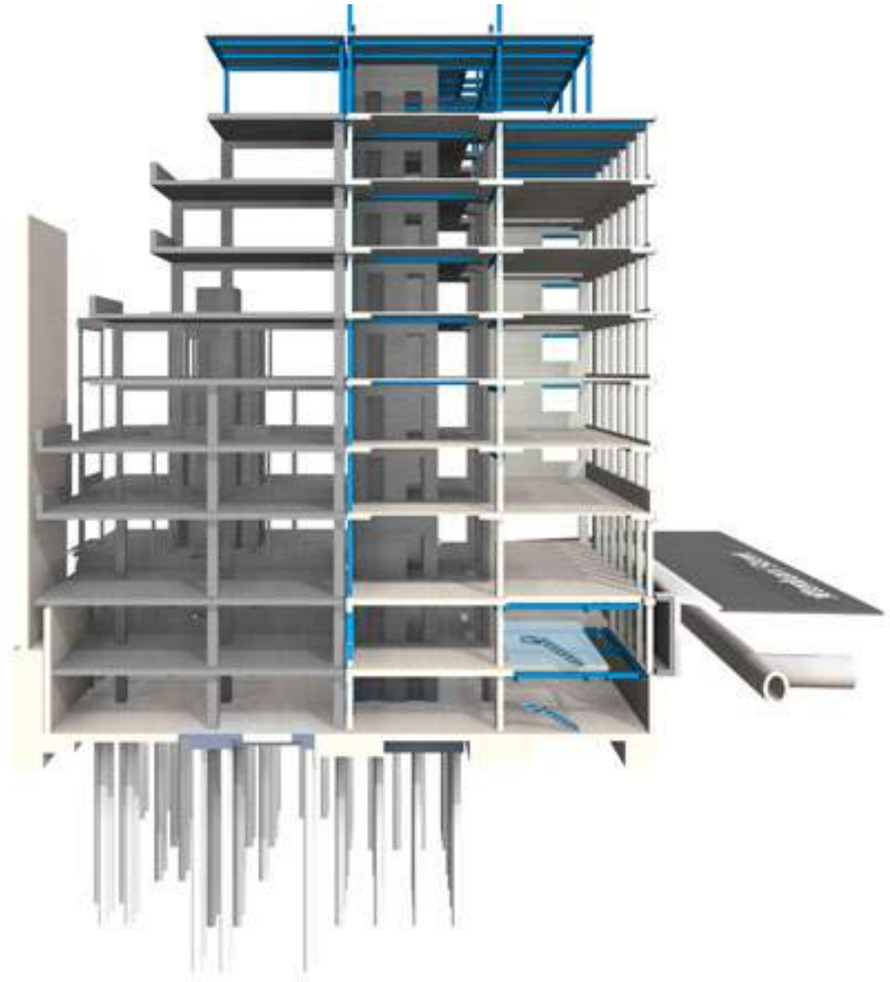
After reviewing the SuDS hierarchy it is considered that the only feasible SuDS technique is to store surface water runoff in an attenuation structure for gradual release. The surface water flows will be directed to basement level to a tank structure where it will be restricted via a pump device at 5l/s. The attenuation has been sized to allow for zero flooding in a 1 in 100 year event plus 40% climate change.

All foul water flows generated at basement level will be drained to a foul water pump device. This will discharge via a rising main to the high level gravity system.

The risk of flooding to the development has been assessed for fluvial, pluvial, groundwater and sewers. It is considered that the site is at low risk from flooding for all of these sources.

Although the surface water maps show flooding along Tottenham Mews it is understood that the majority of the water will be contained within the highway. Any water which makes it to the building threshold will be of low volume and velocity and therefore can be easily drained into the attenuation structure via a channel drain.

Basement Column Construction



Proposed Building Section and Foundations

4.5 Disproportionate collapse

The existing block is a seven storey concrete framed building that was originally for hospital use. The existing concrete roof slab will be removed and replaced with a higher steel framed roof slab. In the proposed development the building will be for office use.

In accordance with Building Regulations Part A3, the existing block and rear extension are considered to be a Class 2B building, being an office greater than 4 storeys but not exceeding 15 storeys. The block to the north east of the development is considered to be a Class 2A building, a residential building not exceeding four storeys.

However, as the rear extension and the block to the north east of the development will be supported on common columns, the whole development will be treated as a Class 2B building.

The concrete framed elements of new structure – the rear extension and the residential building – will be designed to have effective horizontal and vertical ties as per the requirements of Eurocode 2.

The steel framed elements of new structure – the roof slab over the existing building and rear extension – will be designed to have effective horizontal and vertical ties as per the requirements of Eurocode 3.

In accordance with Building Regulations, the existing block would have previously been considered to be a Class 3 building, being hospital building exceeding three storeys. The change to Class 2B is therefore an improvement. To ensure that the existing building complies with Class 2B, key elements – identified by HTS – will be justified as being capable of withstanding 34kN/m2 applied one direction as a time.

4.6 Fire

As per advice from BRCS (Building Control) Ltd, new elements of structure should typically have 90 minute fire resistance. The enclosure and support of the fire-fighting shaft will need to offer 120 minutes.

Fire protection to new reinforced concrete structure will be achieved by providing cover to the reinforcement and minimum concrete Section sizes as recommended in Eurocode 2. Fire protection to steelwork elements – such as spray applied systems, fire boarding or intumescent paints – will be developed by the architect.

Any existing elements supporting new structure above should also offer or be upgraded to provided 90 minutes. Any other existing elements can maintain the existing arrangement.

The fire resistance of existing structural reinforced concrete elements has been determined based upon limited intrusive investigations into the building fabric in 2015.

The reinforcement within beams, columns and slabs was revealed in order to measure and record its condition, diameter, spacing and corresponding concrete cover.

According to BRE Report 128 Guidelines for the construction of fire-resisting structural elements, the fire resistance of clay hollow pots slabs including any non-combustible finish on top is obtained from the cover thickness to the reinforcement and the total solid slab per unit width.

Similarly for beams and columns, fire resistance is determined by minimum element dimension and concrete cover to reinforcement.

The table below summarises the fire resistance of each element type as observed during the intrusive investigations works.

	Elements dimension mm	Bar diameter mm	Concrete cover to reinforcement mm	Fire resistance mins
Beams	250	25	25	60
Columns	230	25	25	60
Slabs	250	25	25	90

Based on the above, columns and concrete beams will need to be upgraded to provide 90 minutes fire resistance. Protection will be specified by the architect.

Appendix A

HTS Proposed drawings

HEYNE TILLETT STEEL

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

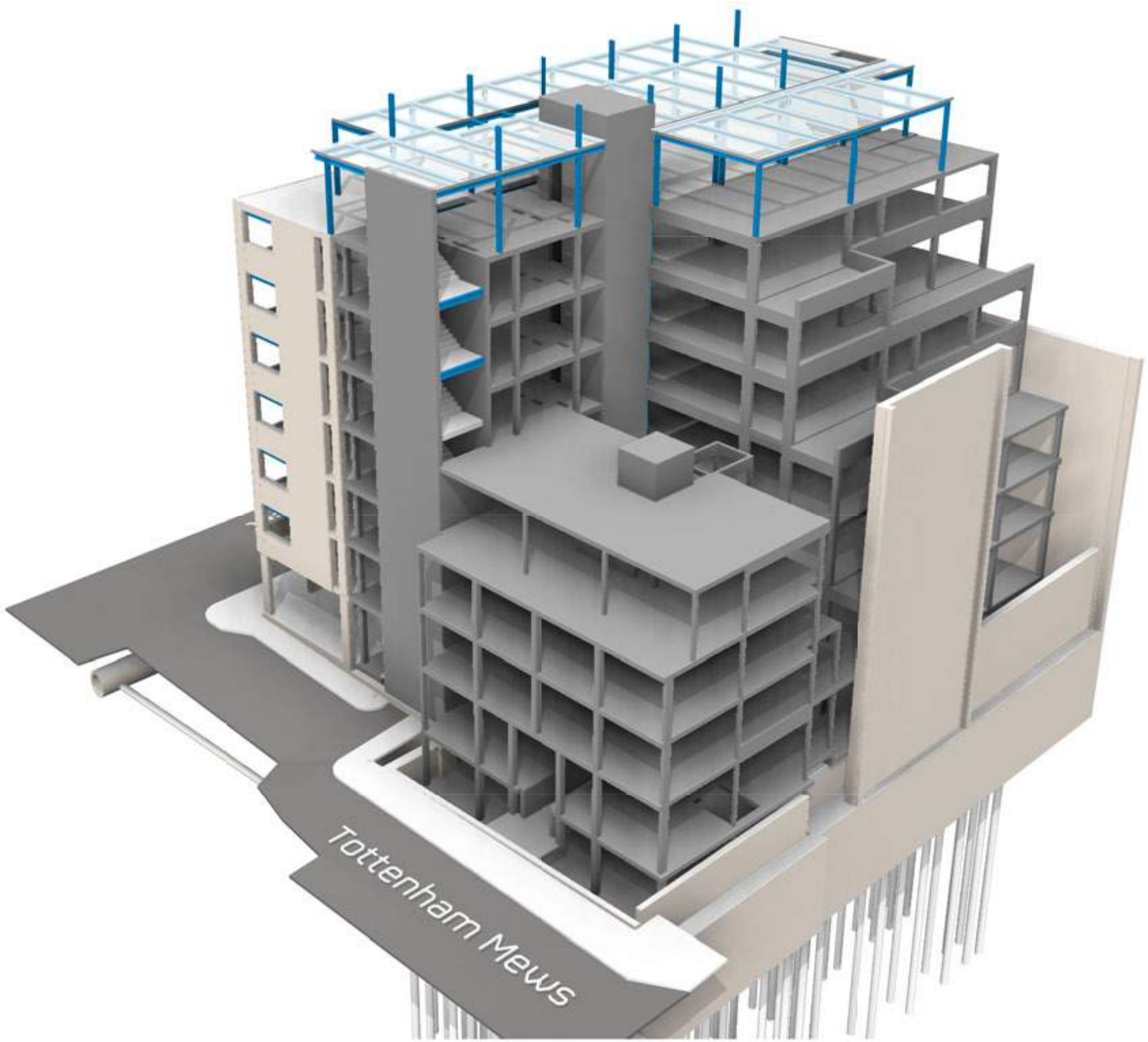
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Overall View Sheet 1

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P003** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Overall View Sheet 2

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P004** Rev **P5**

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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3 All new concrete in contact with the ground to be water resistant concrete

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5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

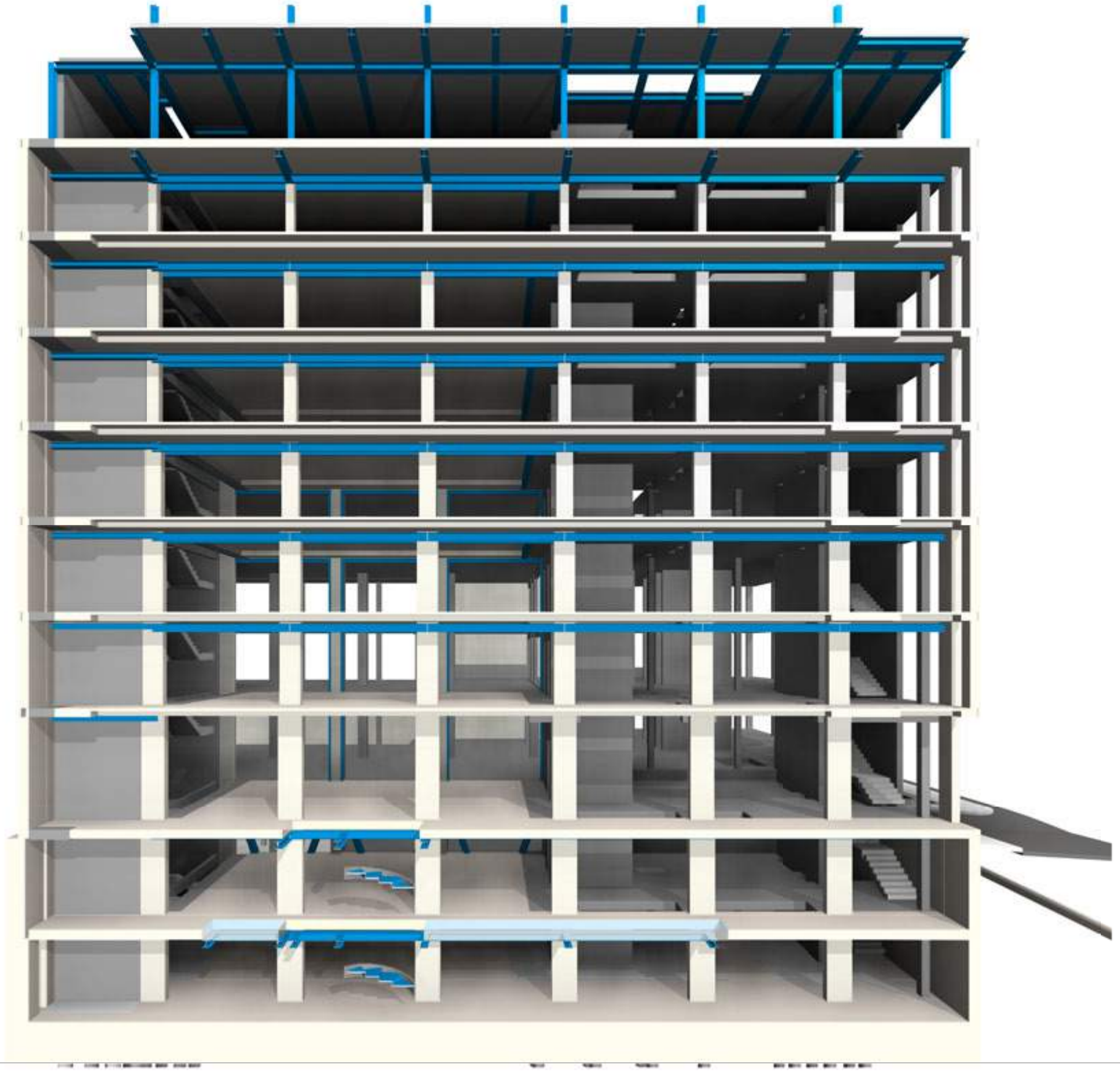
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Overall Section Sheet 1

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P005** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

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Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
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P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

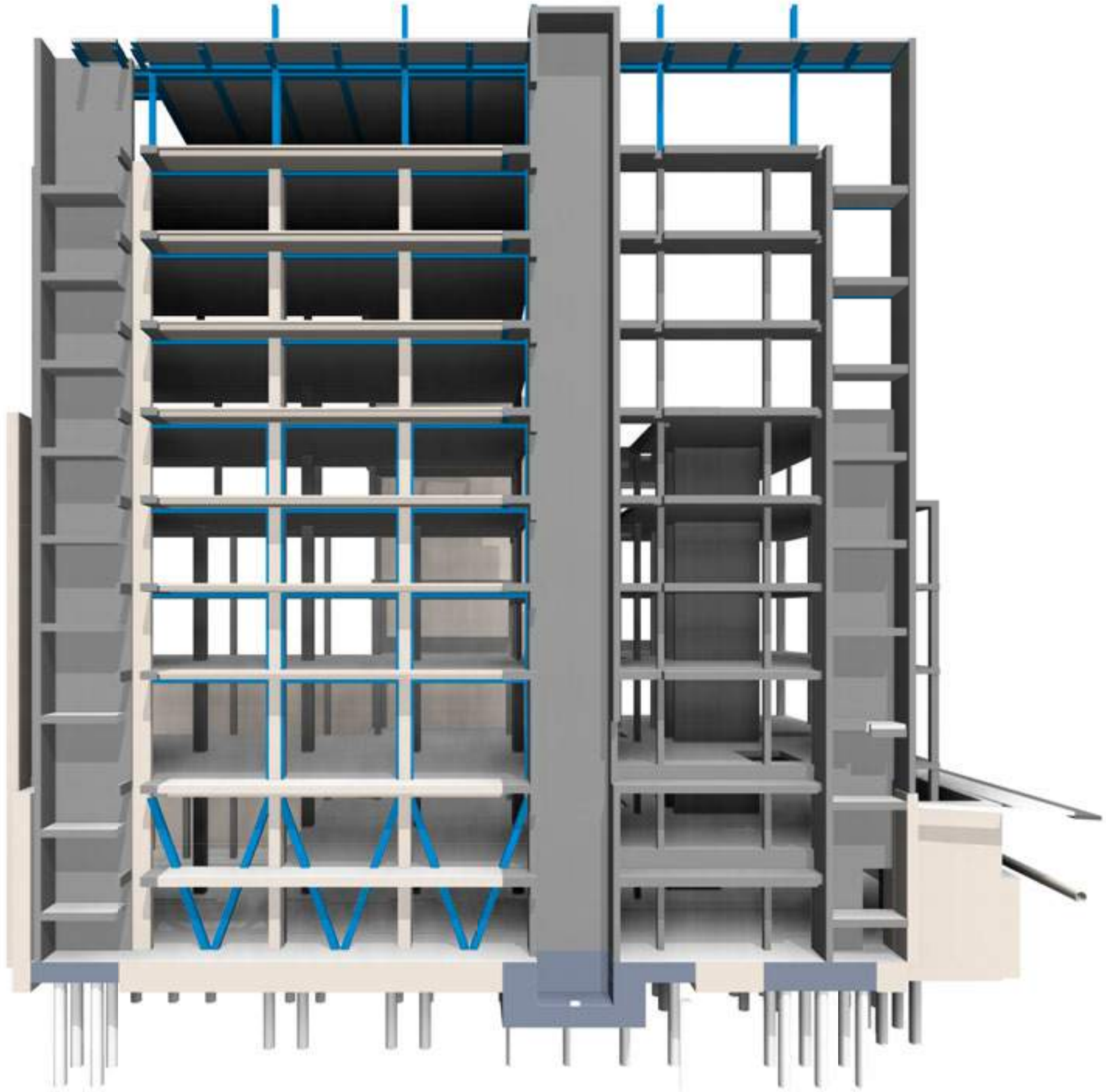
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Perspective Section

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P006** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

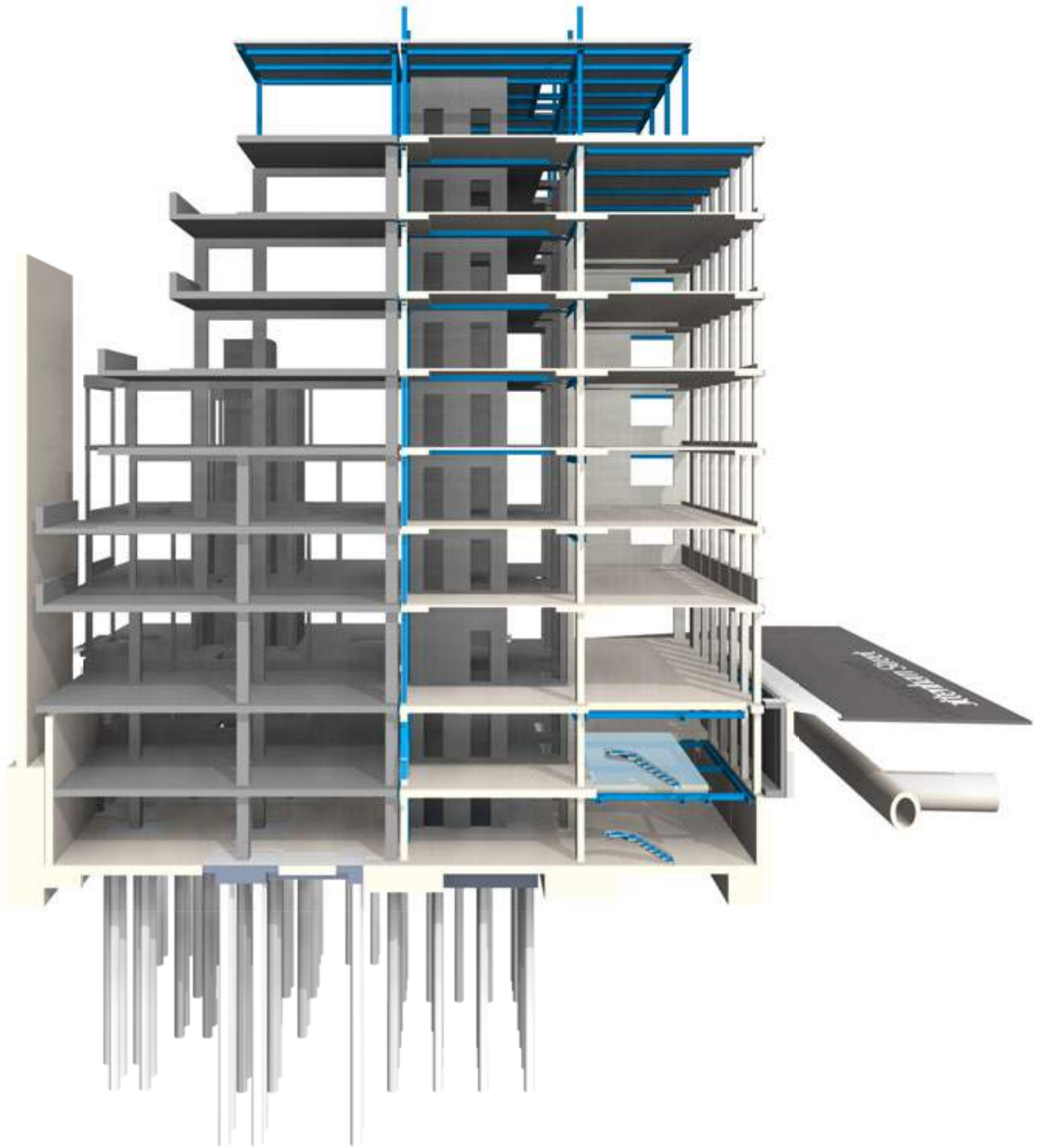
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Perspective Section

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P007** Rev **P5**



100mm @ A1 (50mm @ A3)

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5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

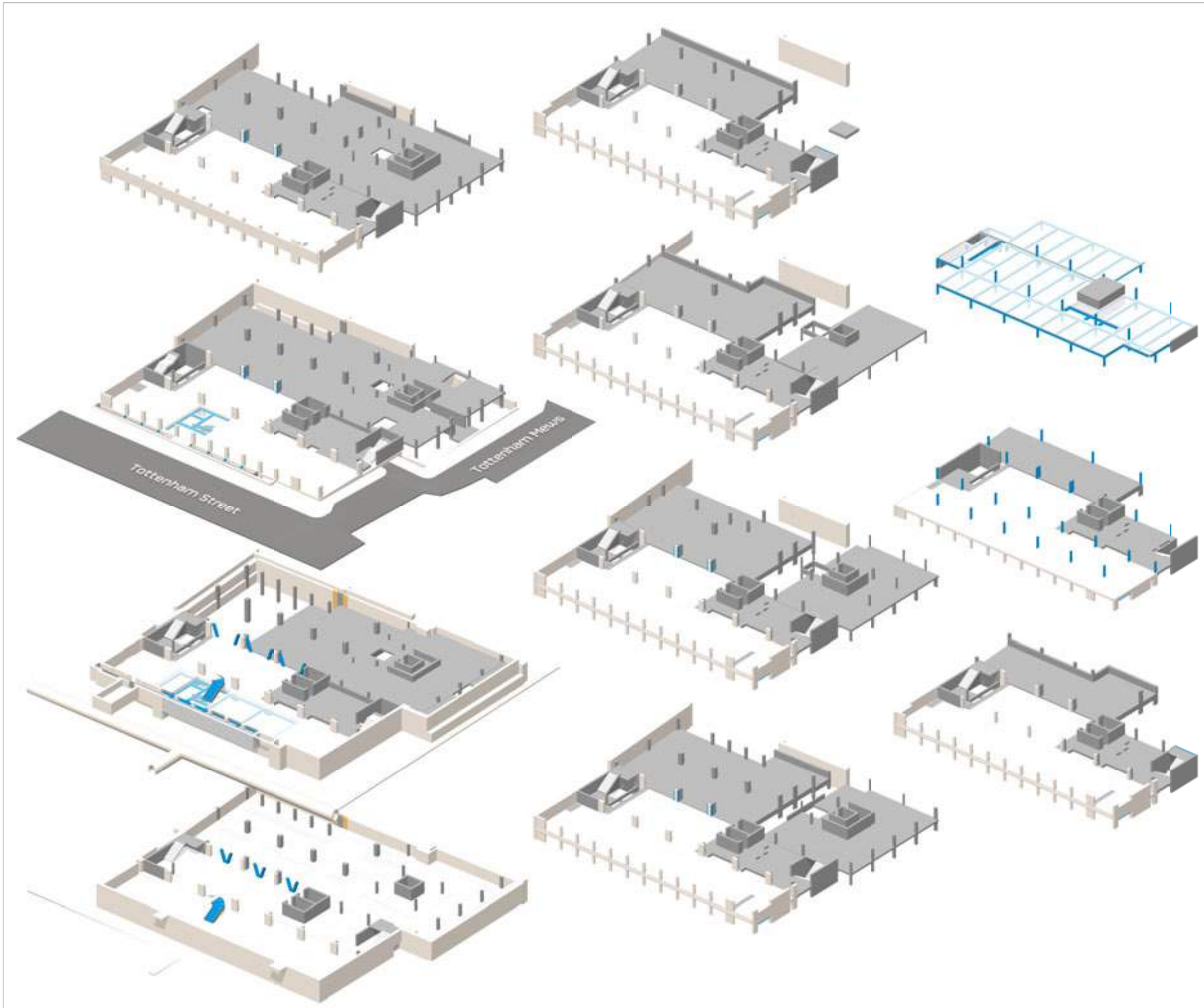
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Perspective Section

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P008** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Rev	Date	By	Eng	Amendments
P1	20.07.17	DV	DT	Issued for Planning

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

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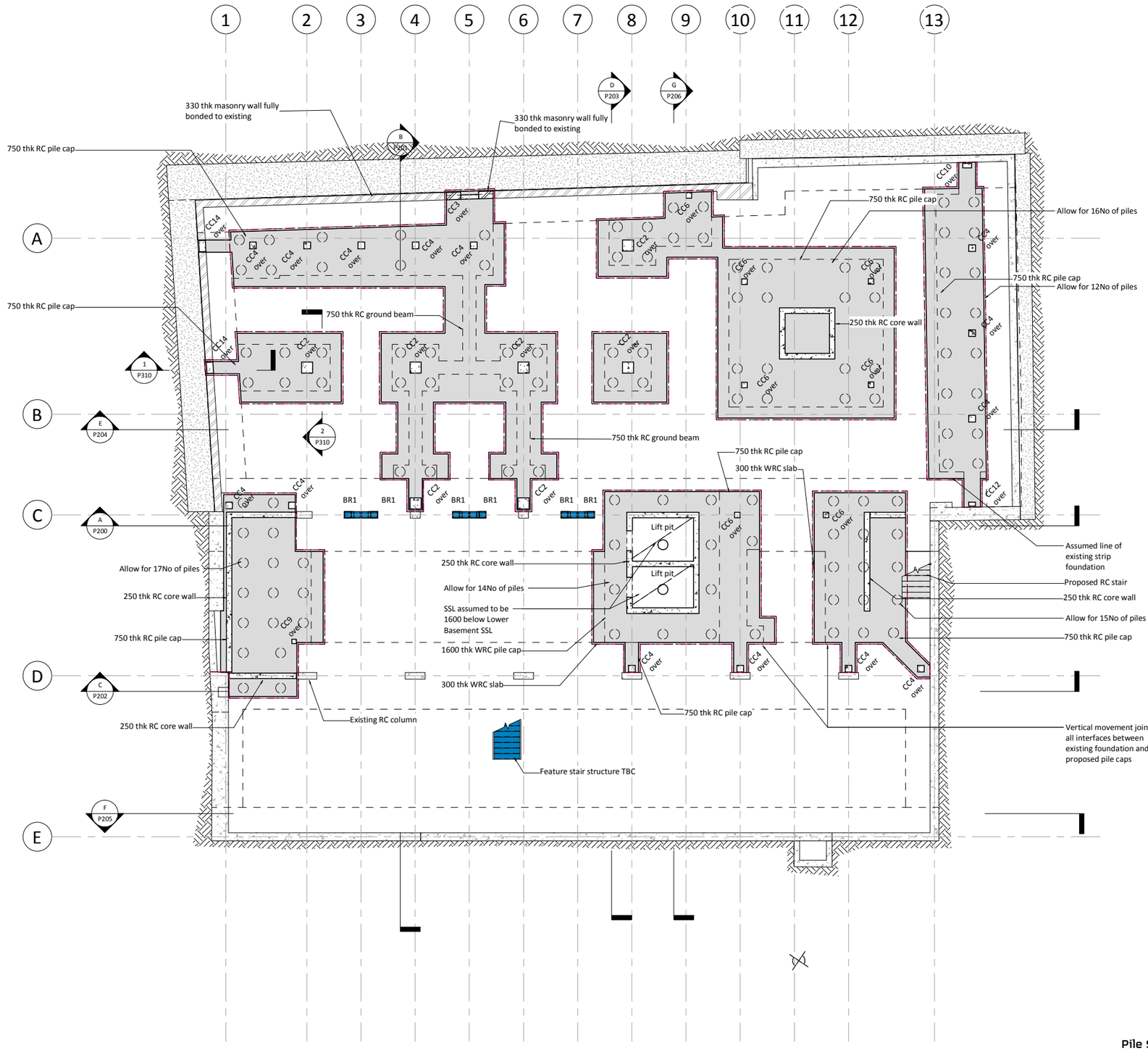
Job Name
Arthur Stanley House

Drawing Title
Proposed Stacked Floor Plates

Purpose of Issue **Planning** Scale at A1

Drg No **1431_P009** Rev **P1**



Pile Schedule

Ref	Diameter
Pile	450

Total Piles: 77

100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

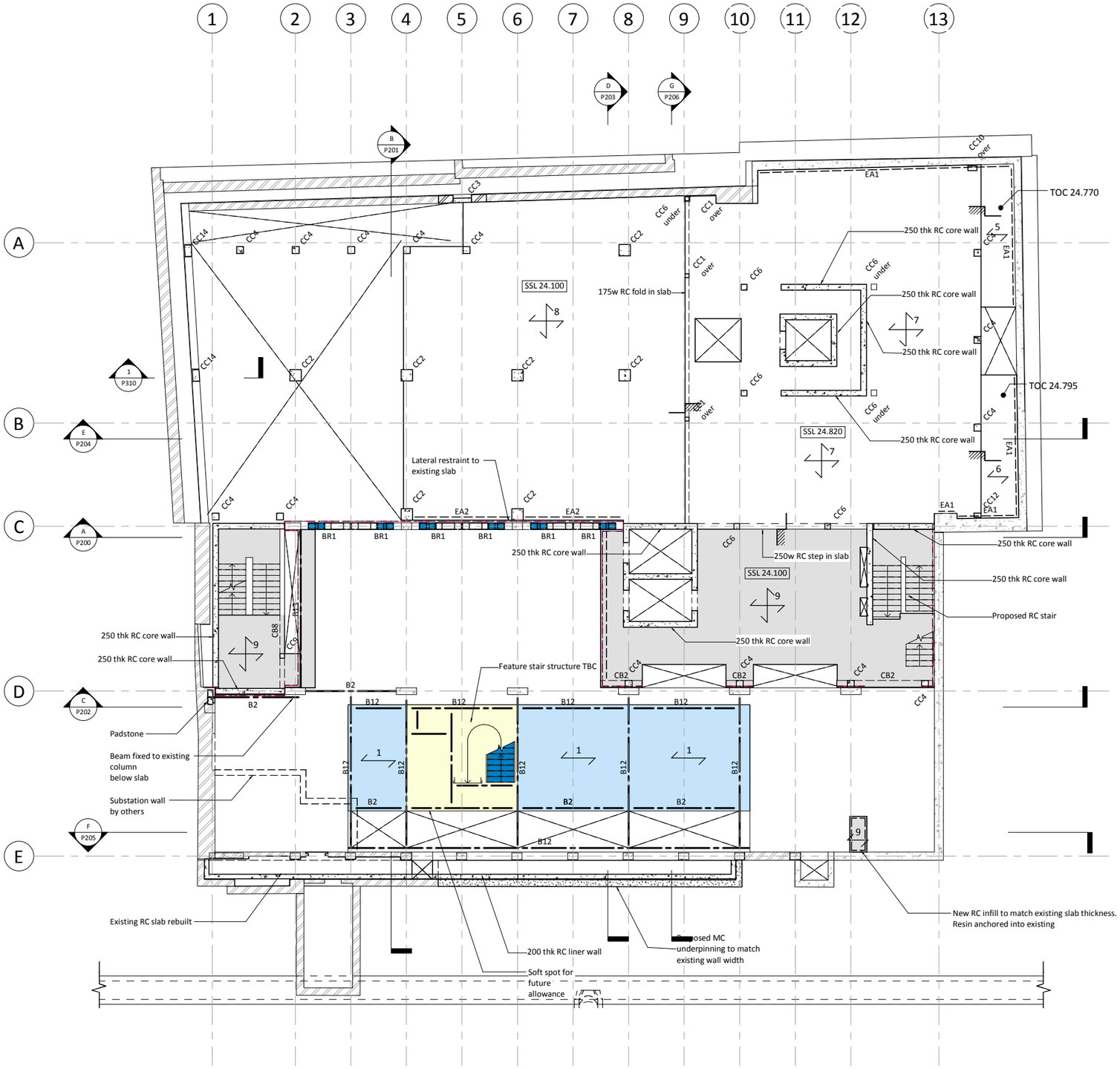
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Plan Lower Basement

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P080** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

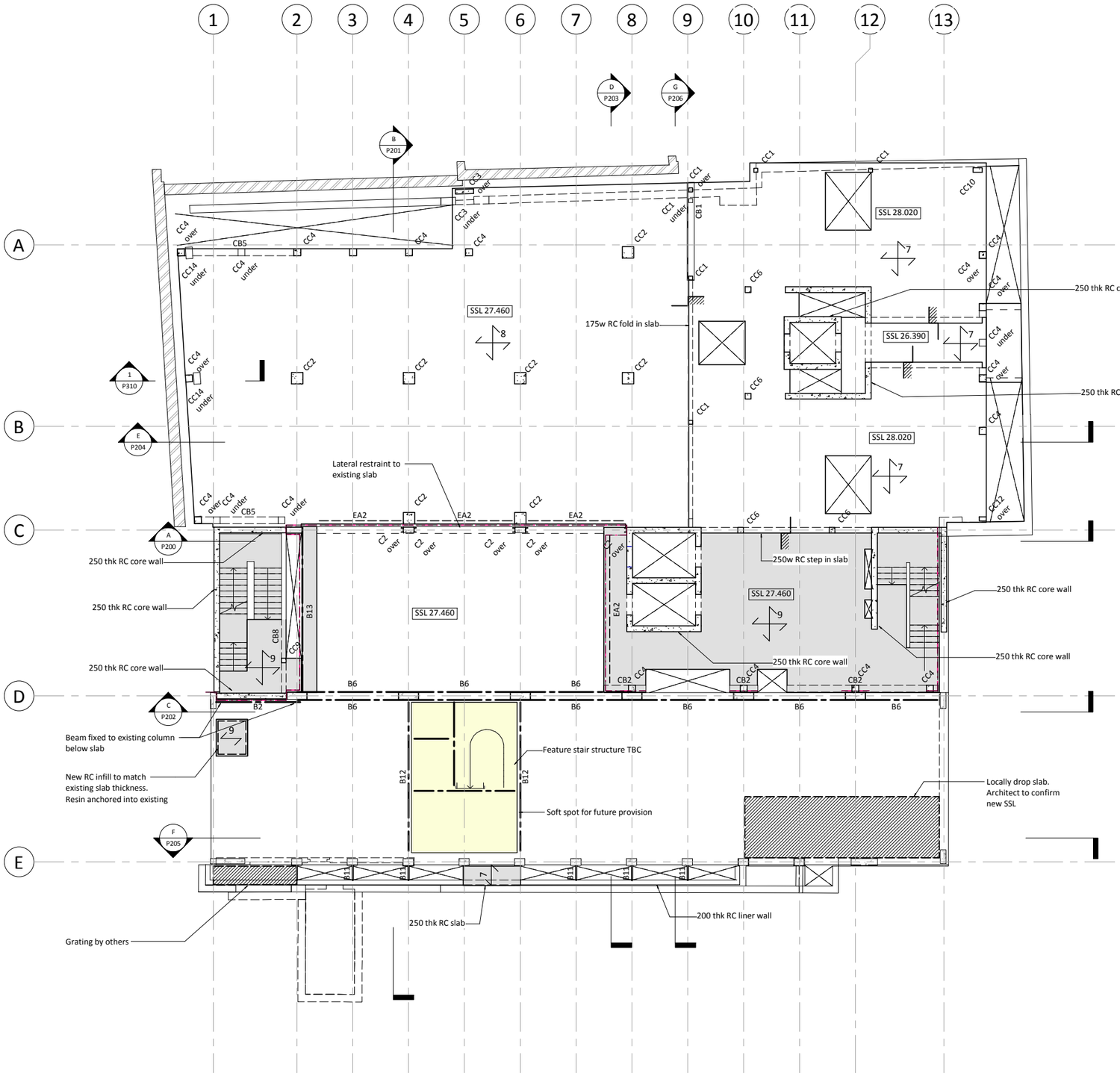
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Plan Basement

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P090** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
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P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

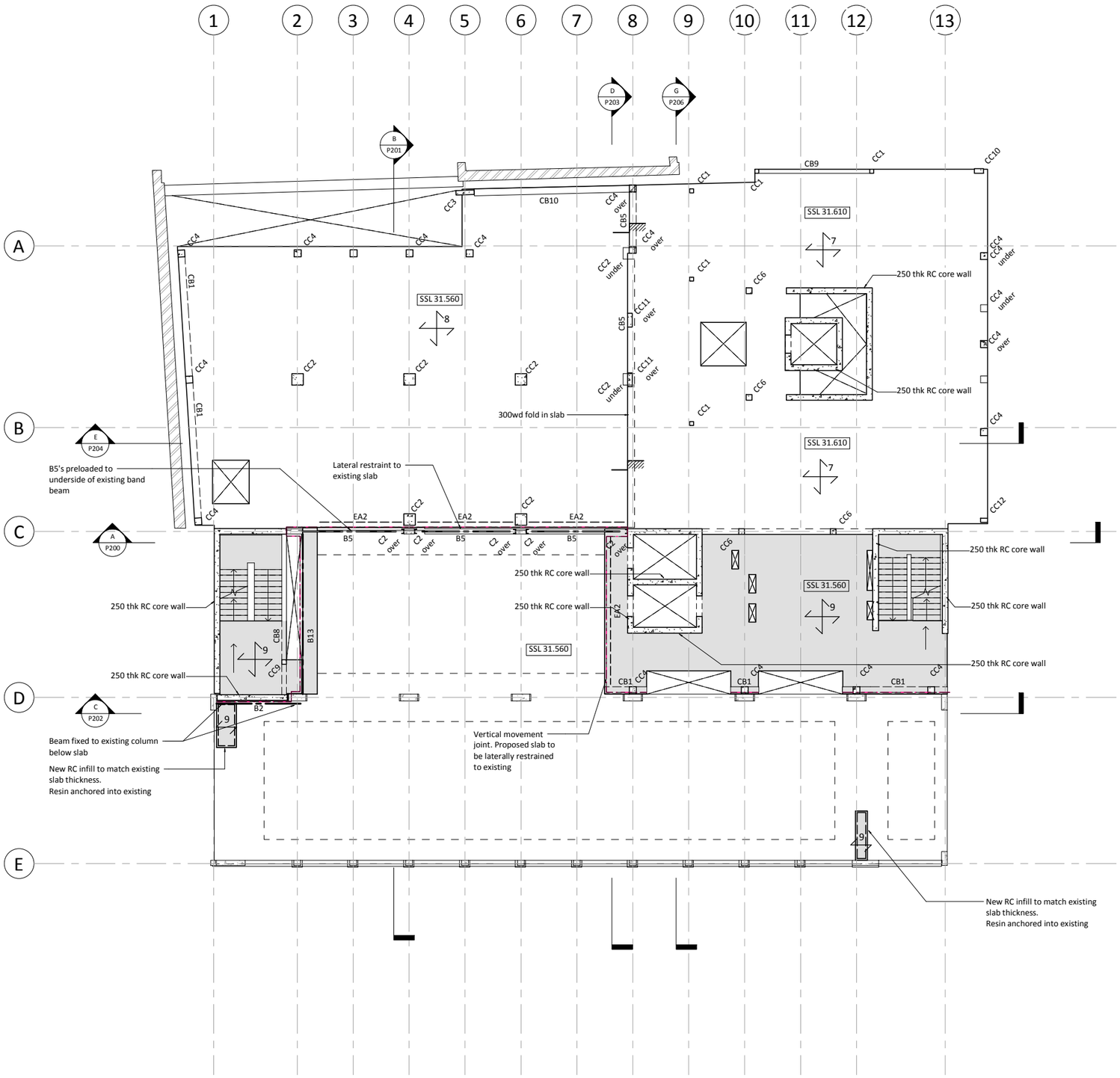
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Plan Ground Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P100** Rev **P5**



100mm @ A1 (50mm @ A3)

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
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5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
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P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

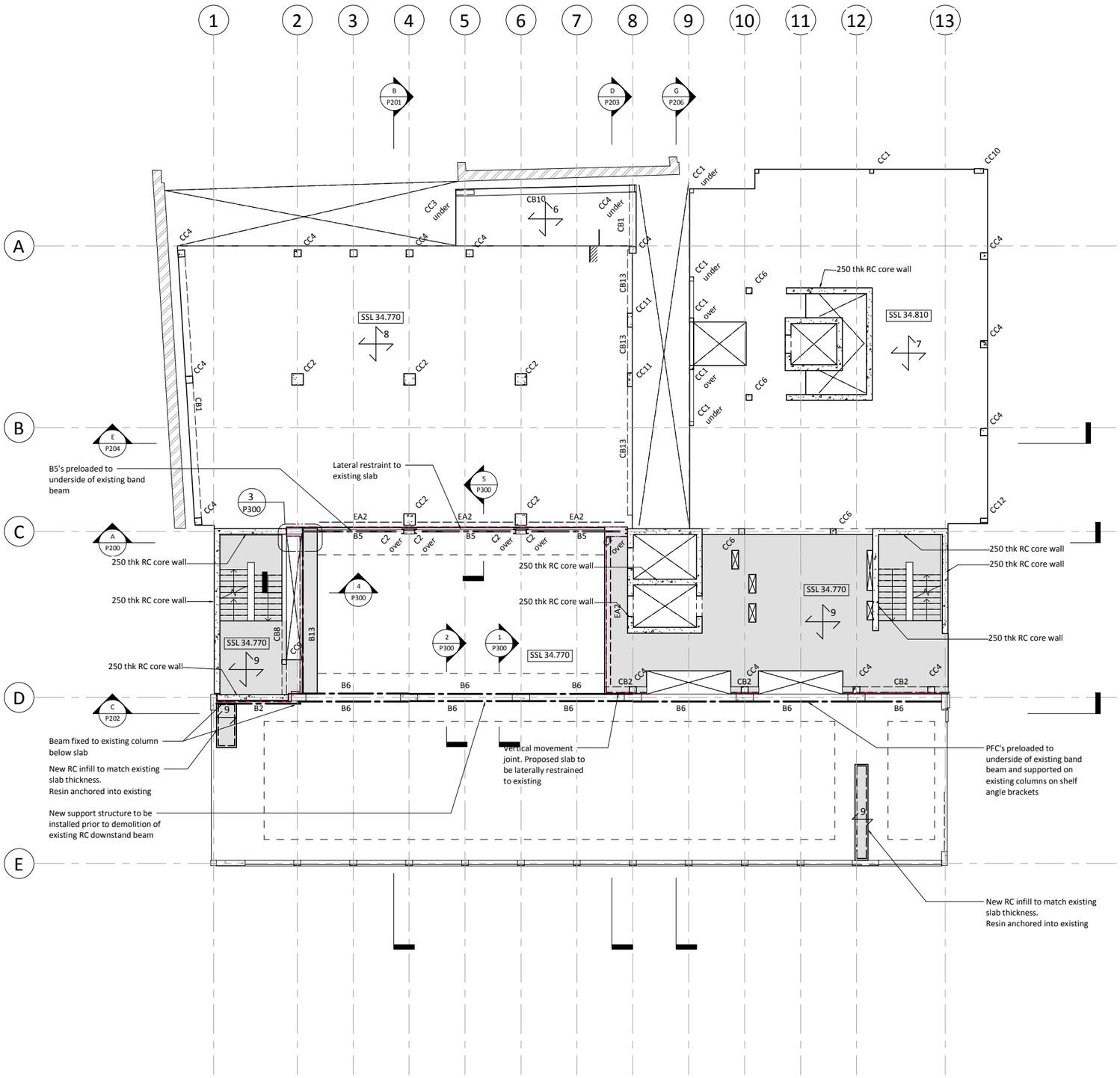
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
First Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P110** Rev **P5**



100mm @ A1 (50mm @ A3)

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4 All waterproofing and insulation details to architect's specifications

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL
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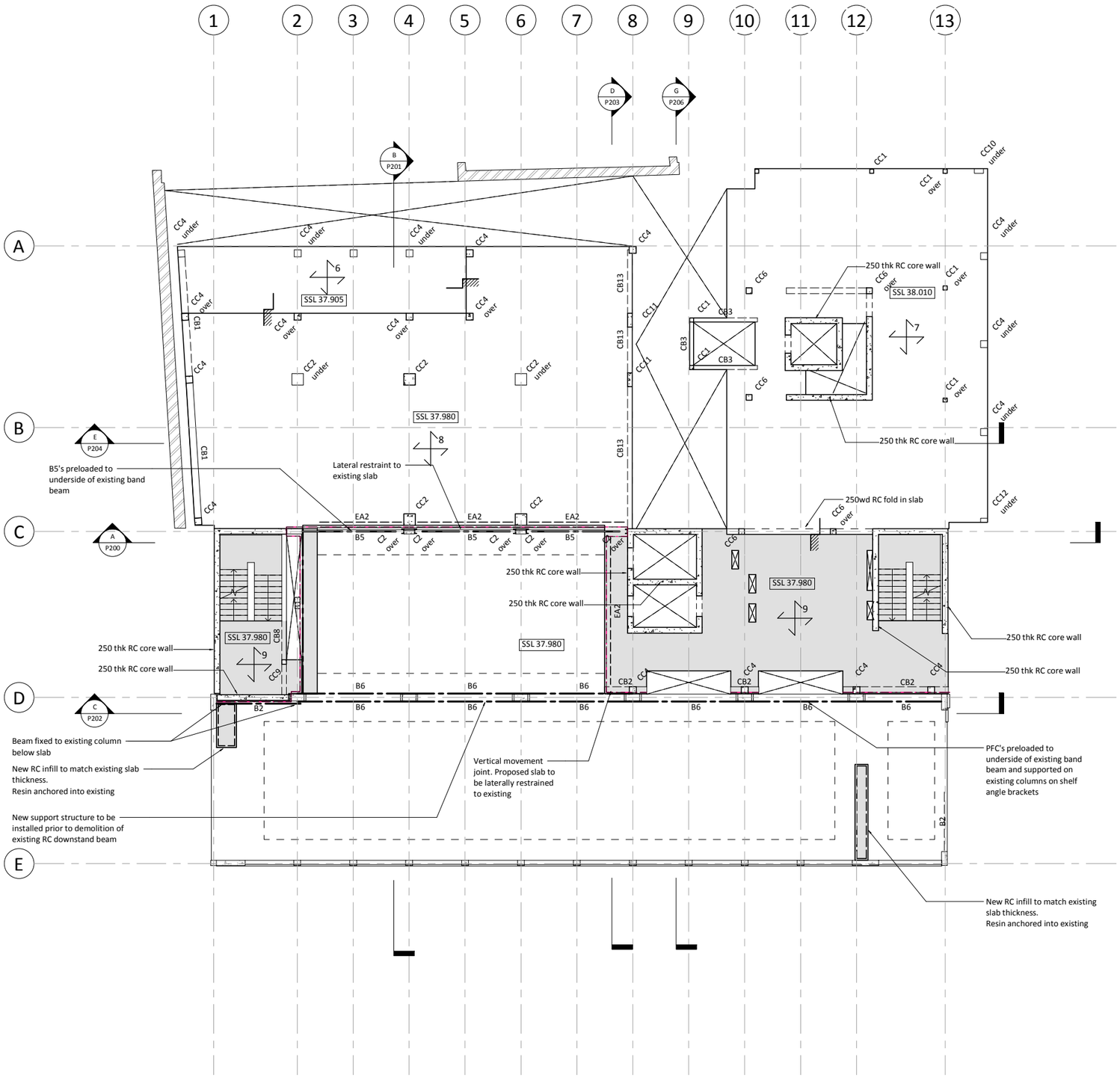
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Second Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P120** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL
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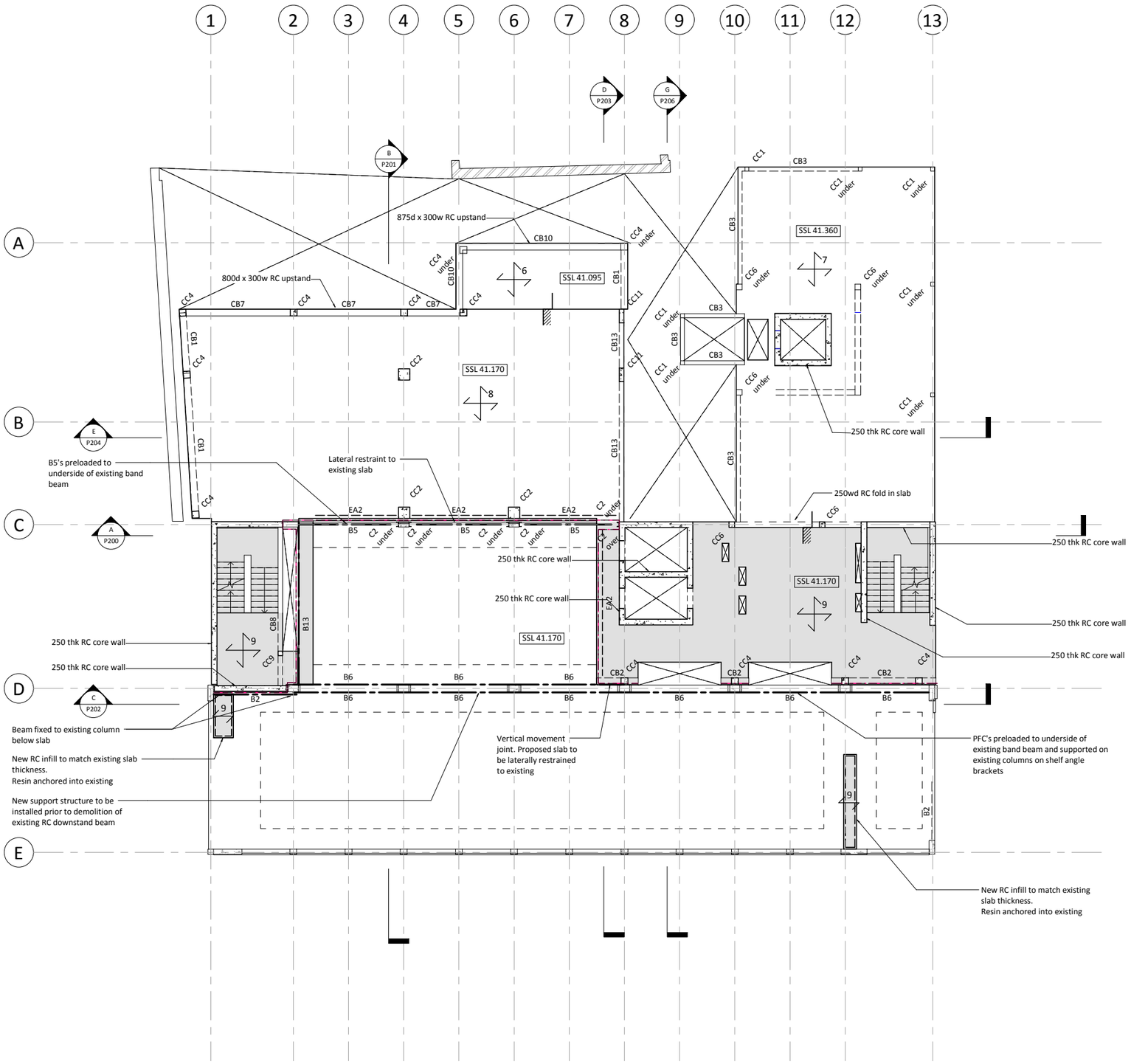
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Third Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P130** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL
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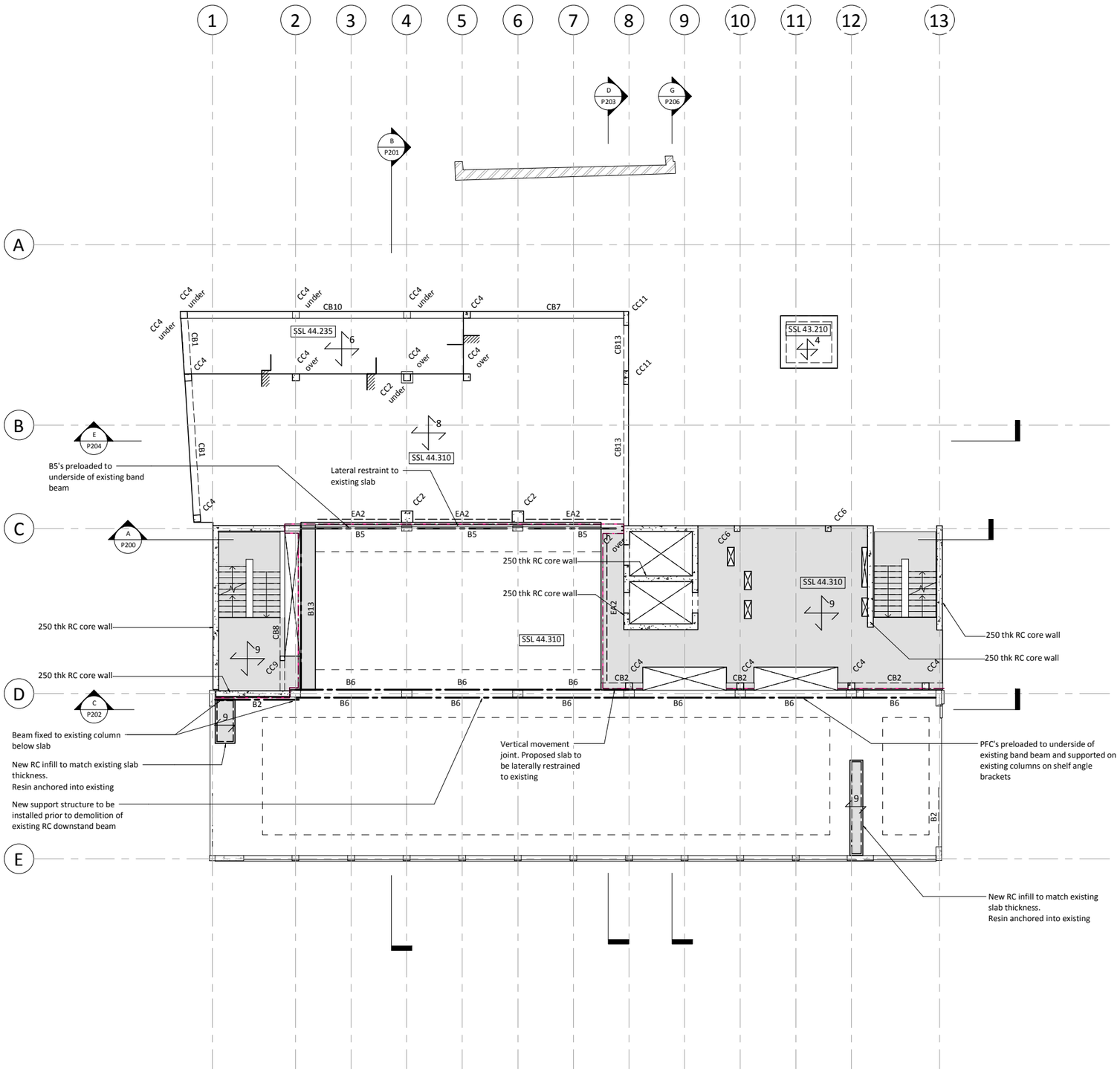
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Fourth Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P140** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

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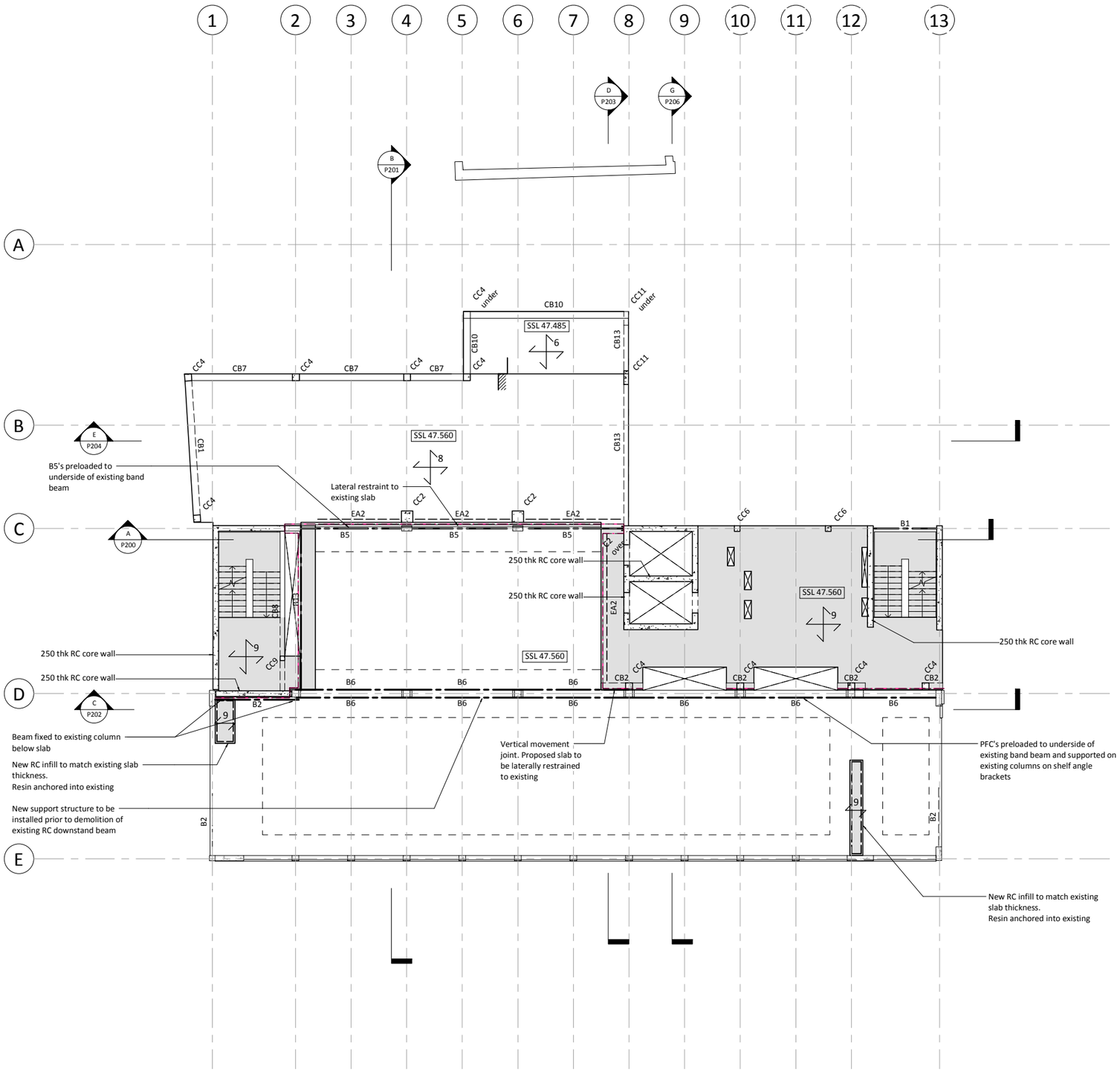
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Fifth Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P150** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

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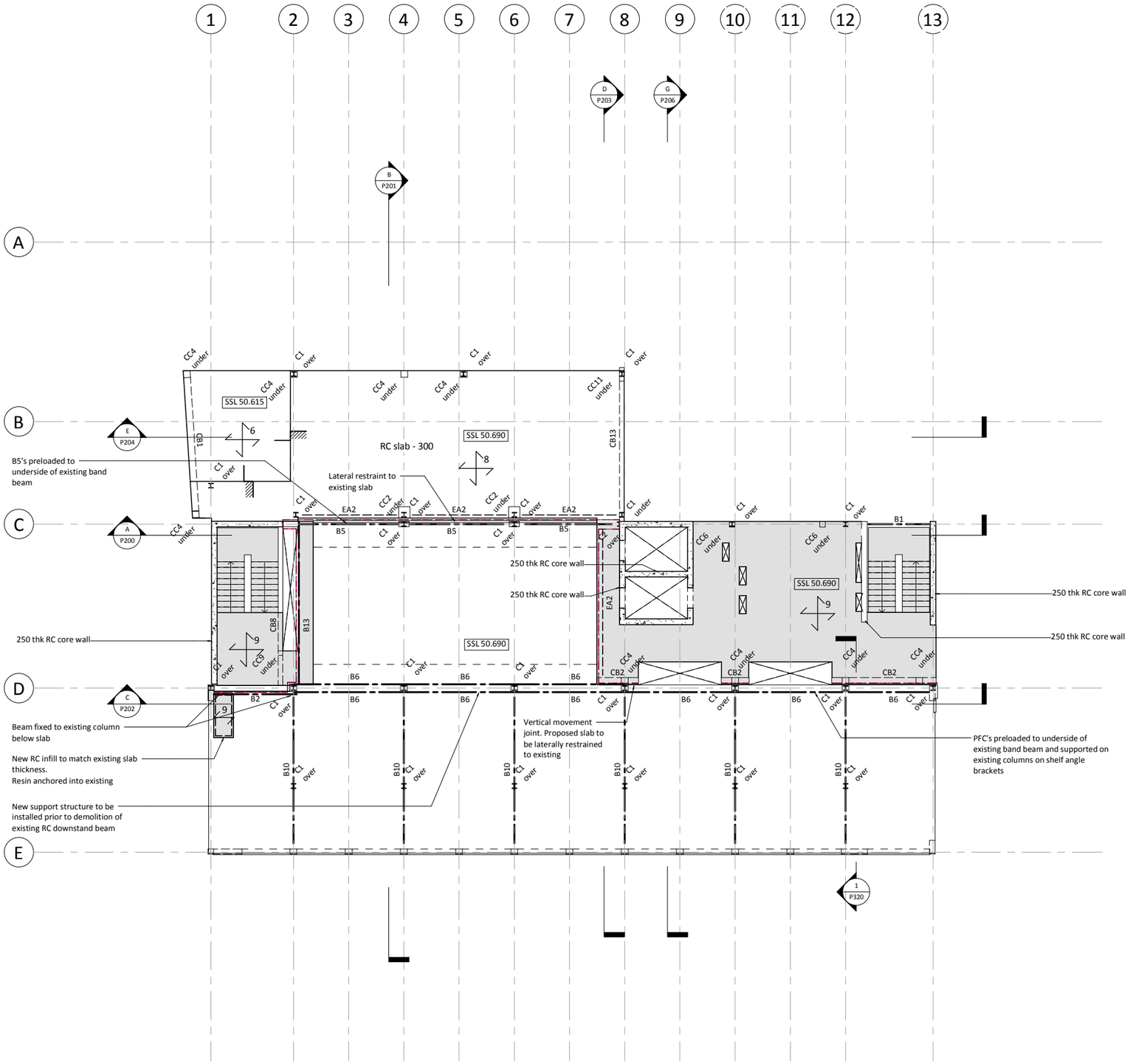
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Sixth Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P160** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

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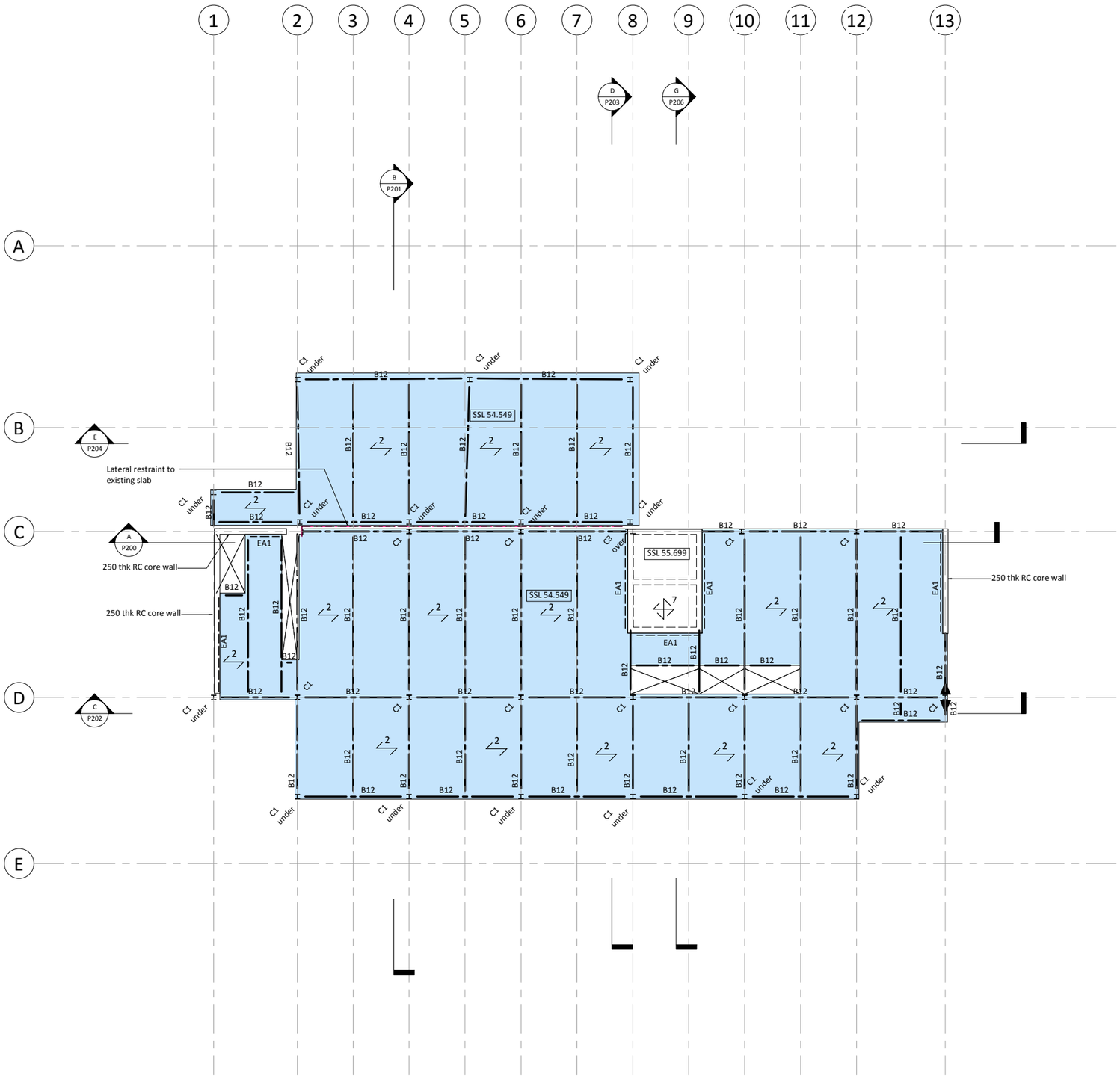
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Seventh Floor

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P170** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL
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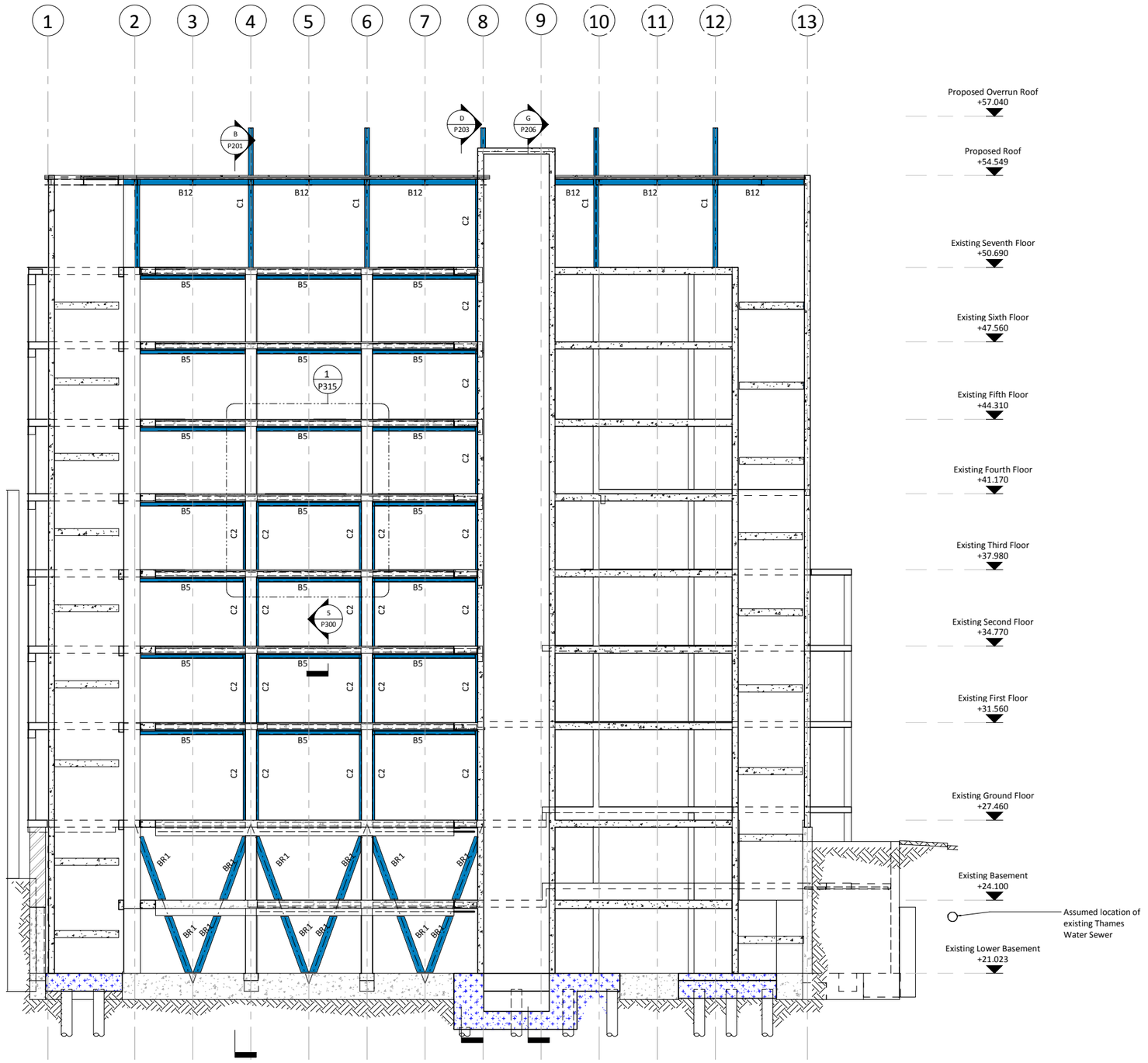
Job Name
Arthur Stanley House

Drawing Title
Proposed Plan
Roof

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P180** Rev **P5**



100mm @ A1 (50mm @ A3)

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3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

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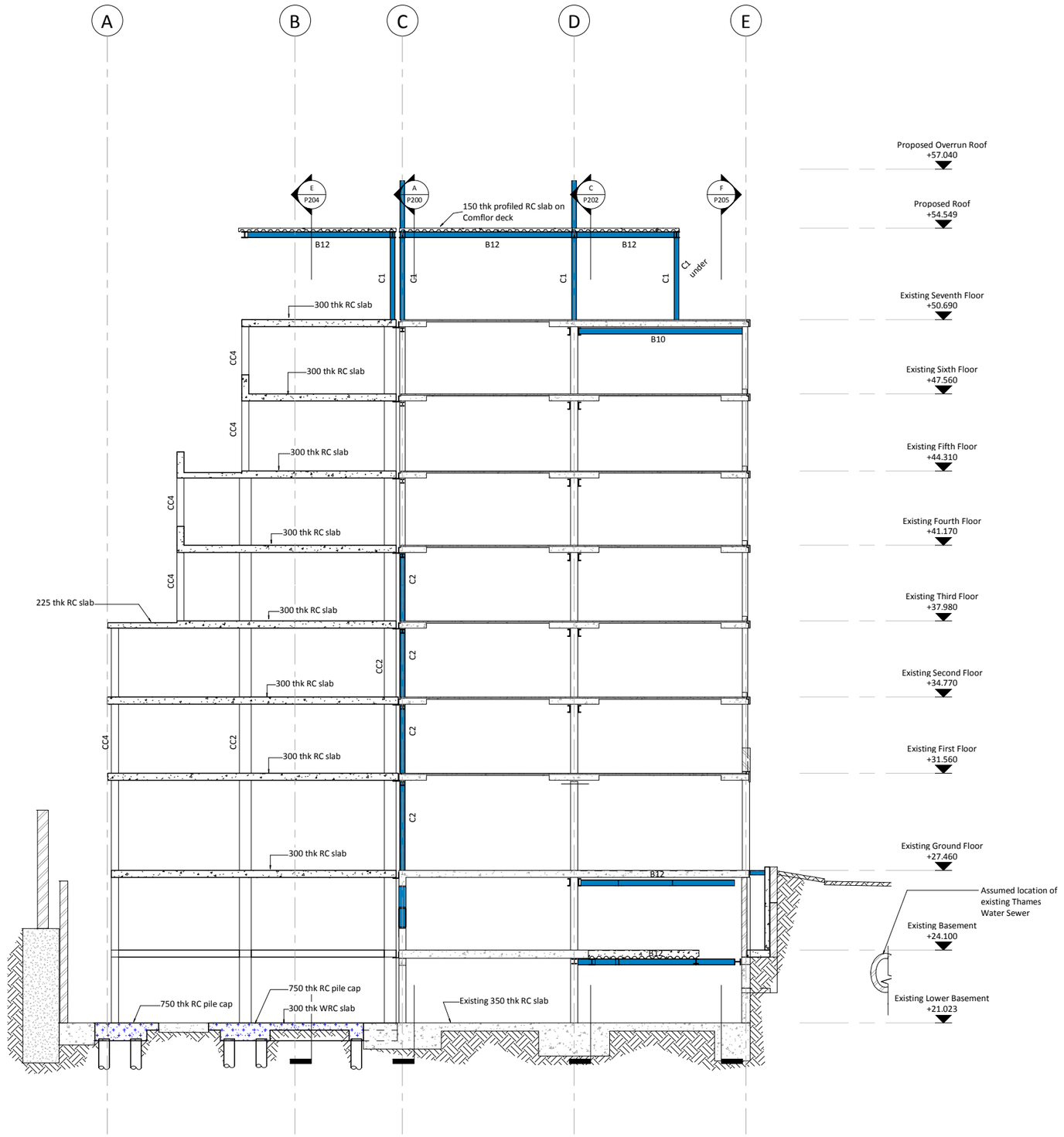
Job Name
Arthur Stanley House

Drawing Title
Proposed Section A-A

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P200** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P5	20.07.17	DV	DT	Issued for Planning
P4	05.07.17	DV	DT	Revised Preliminary Issue
P3	22.05.17	DV	DT	Revised Preliminary Issue
P2	08.05.17	DV	DT	Issued for Information
P1	19.04.17	DV	DT	Preliminary Issue

HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
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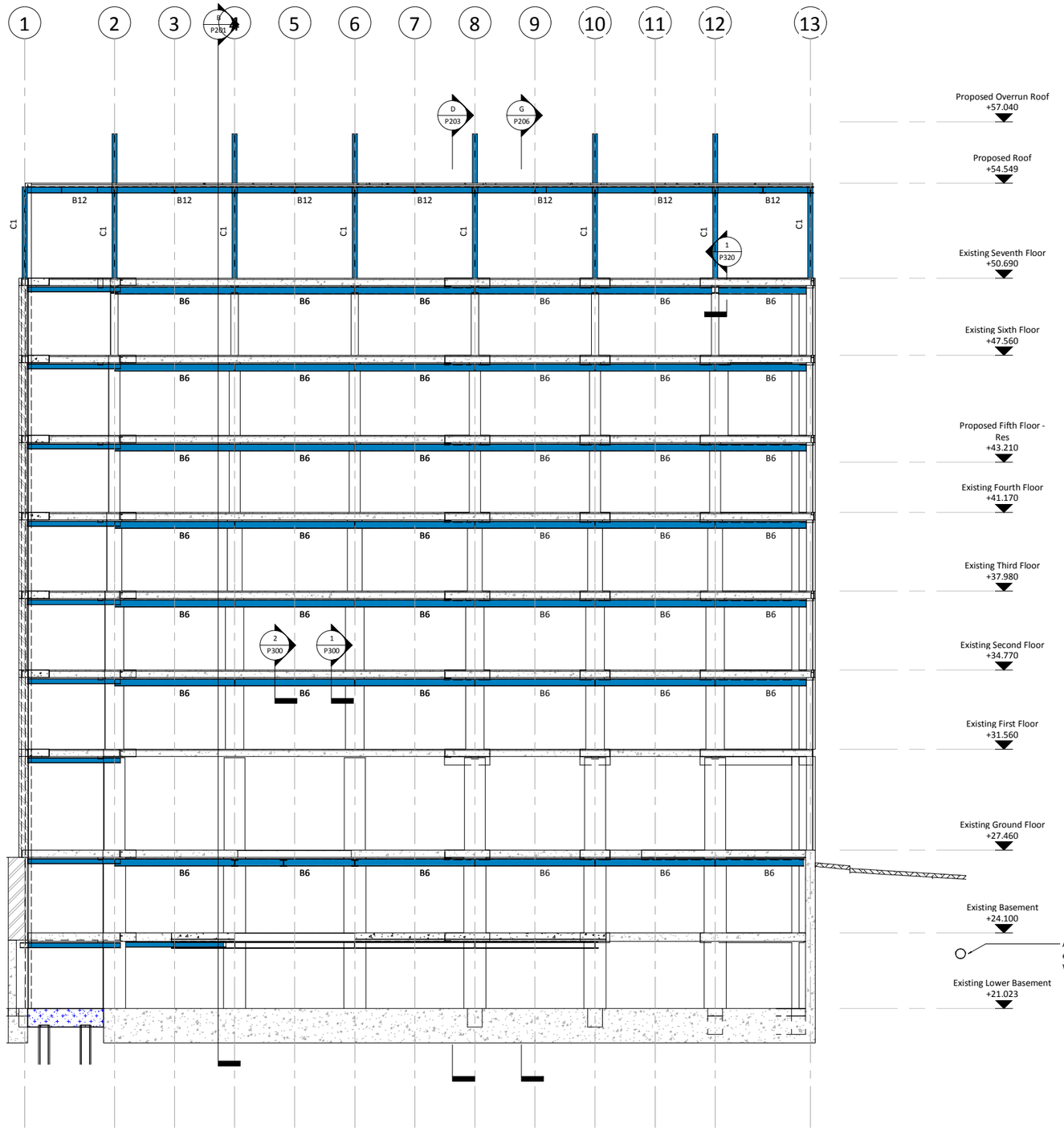
Job Name
Arthur Stanley House

Drawing Title
Proposed Section B-B

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P201** Rev **P5**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
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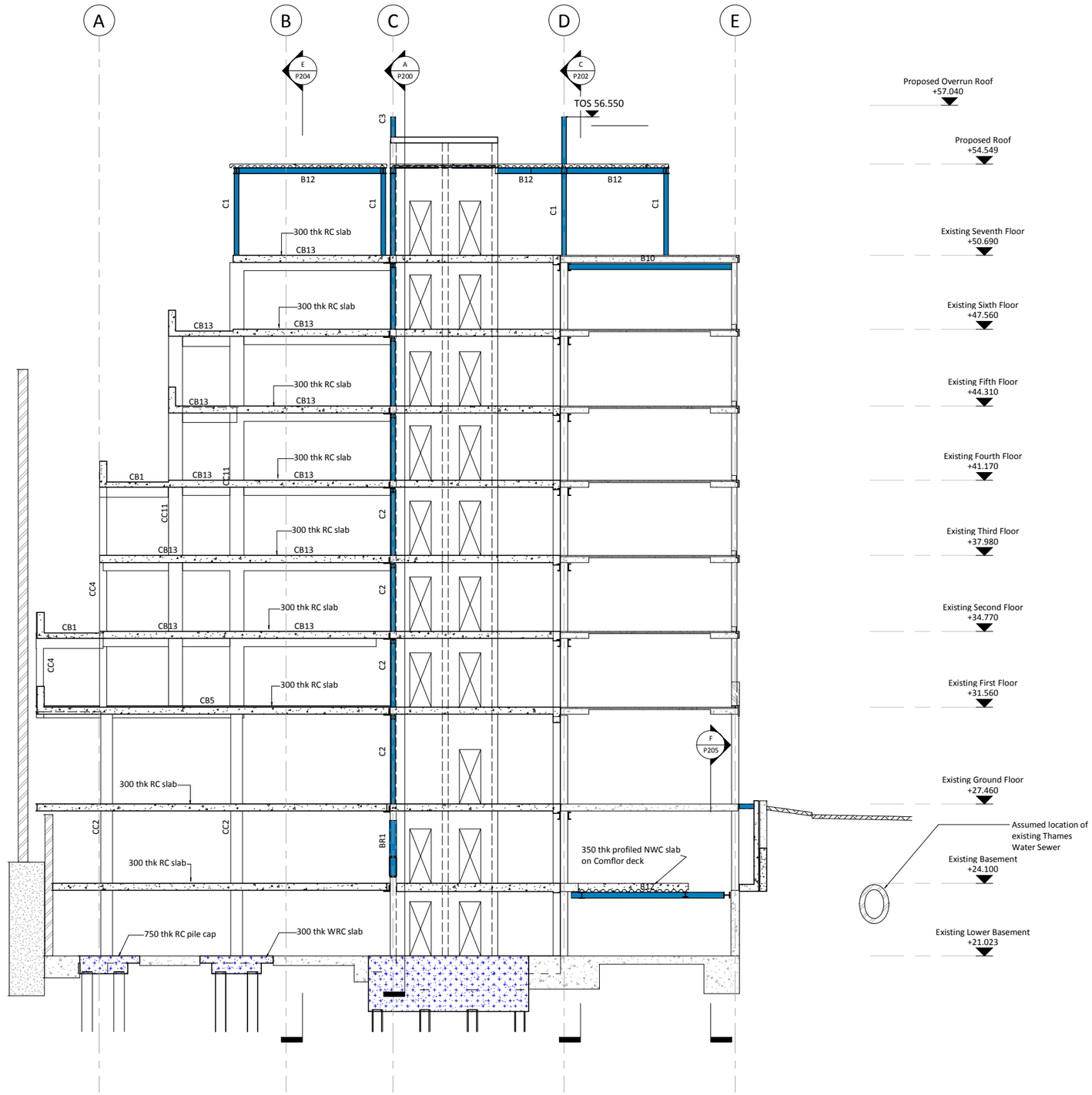
Job Name
Arthur Stanley House

Drawing Title
Proposed Section C-C

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P202** Rev **P3**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

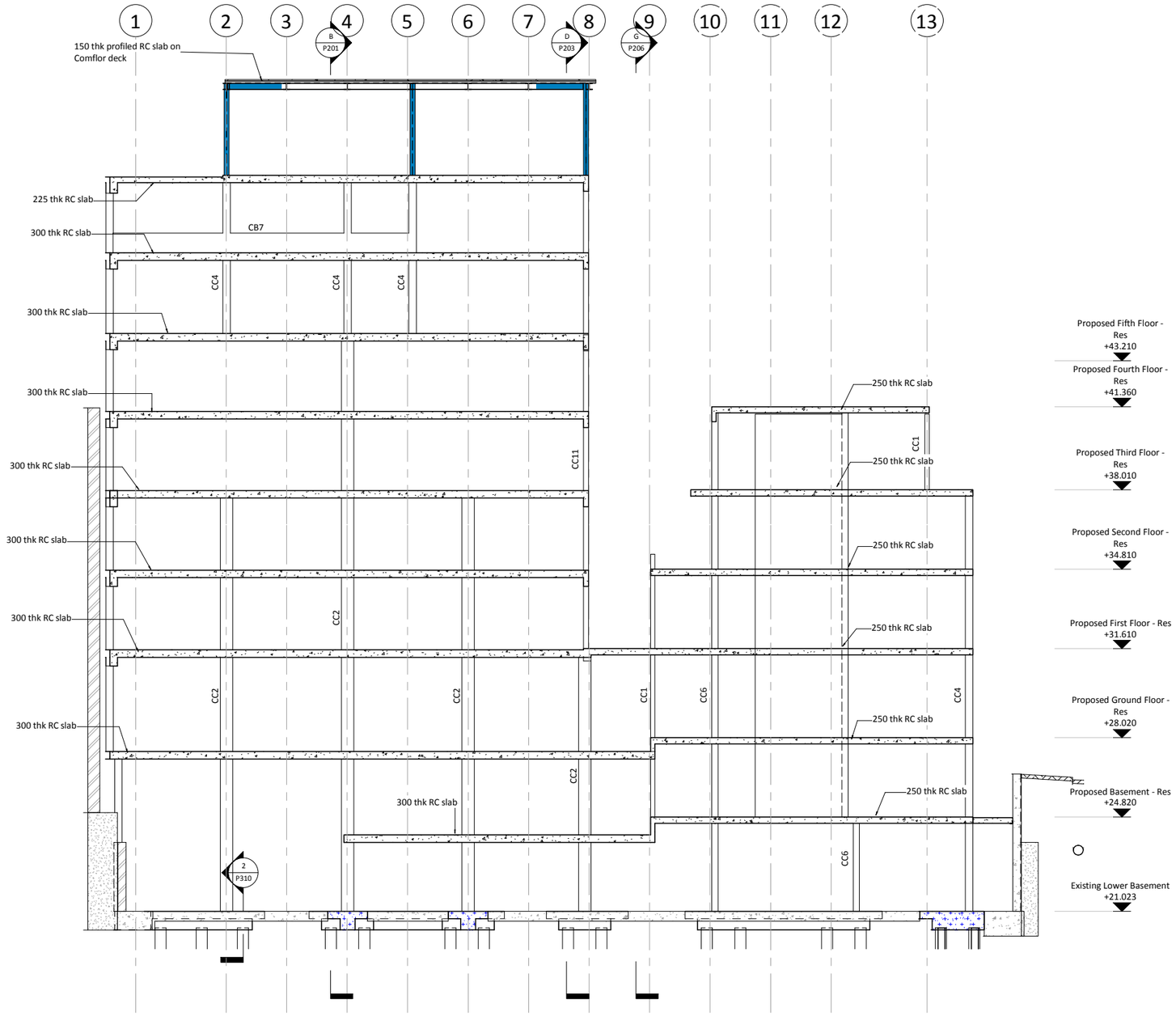
HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
hts.uk.com

Job Name
Arthur Stanley House

Drawing Title
Proposed Section D-D

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P203** Rev **P3**



DWG P080

Section E-E

1 : 100

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
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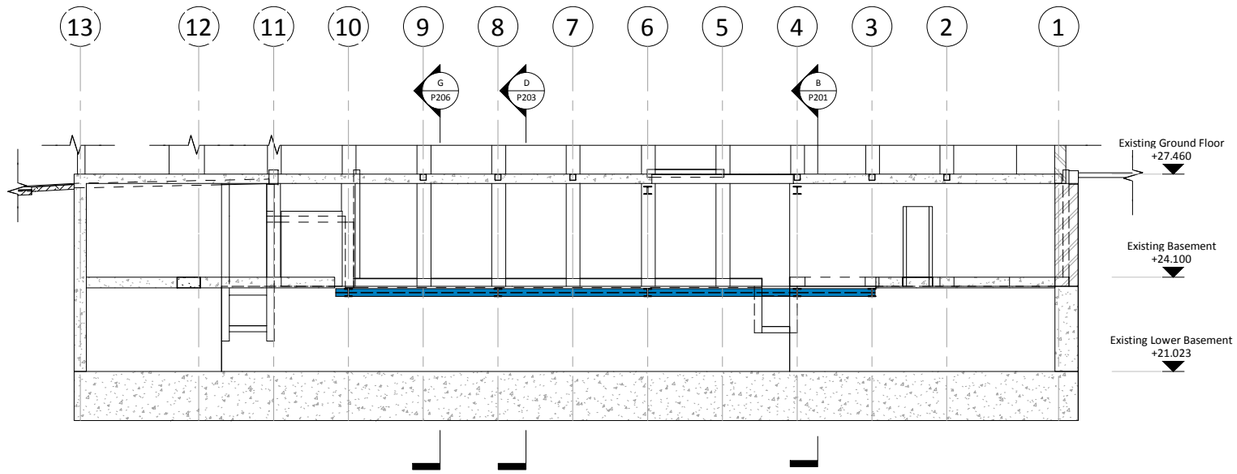
Job Name
Arthur Stanley House

Drawing Title
Proposed Section E-E

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P204** Rev **P3**



DWG P080

Section F-F

1 : 100

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
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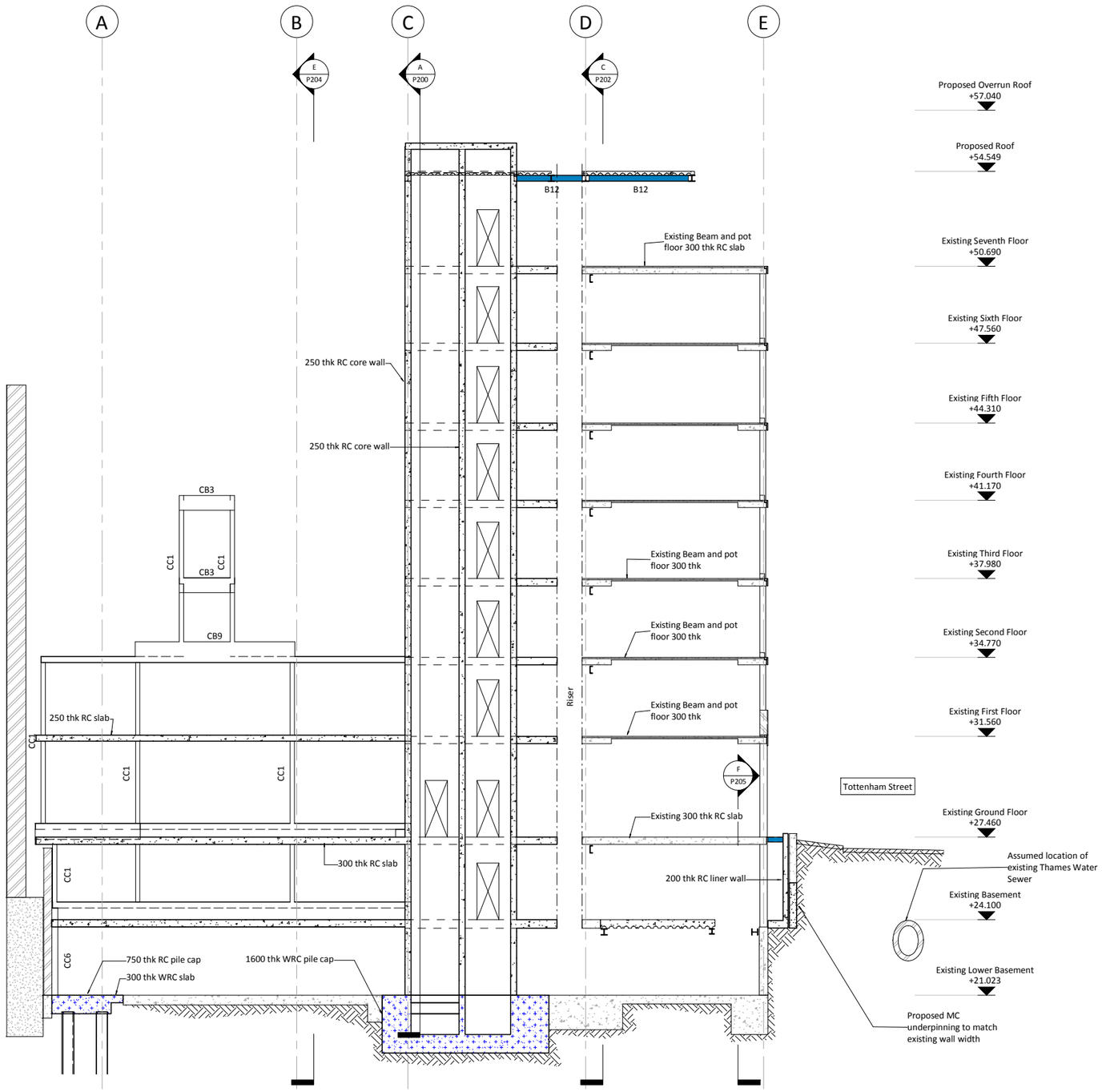
Job Name
Arthur Stanley House

Drawing Title
Proposed Section F-F

Purpose of Issue **Planning** Scale at A1 **1 : 100**

Drg No **1431_P205** Rev **P3**



100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P1	20.07.17	DV	DT	Issued for Planning

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

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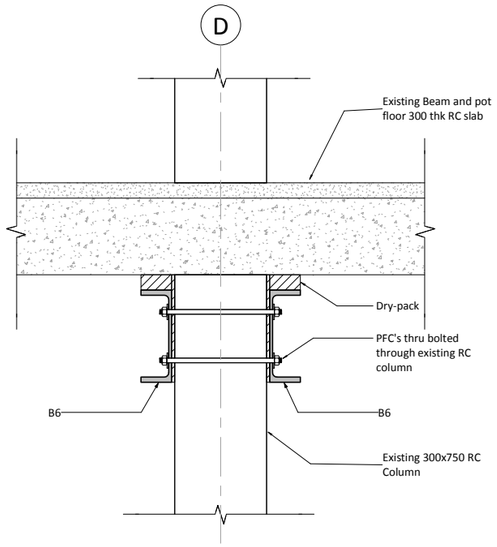
Job Name
Arthur Stanley House

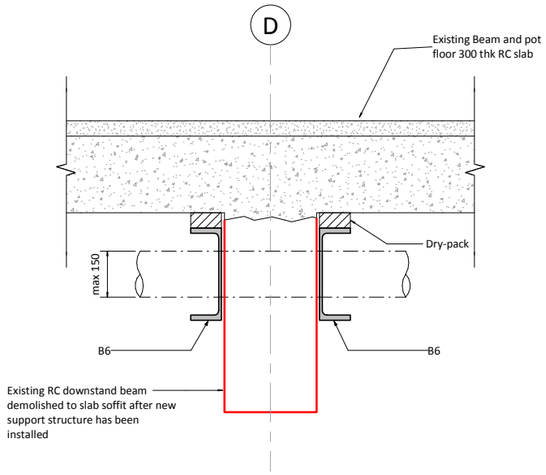
Drawing Title
Proposed Section G-G

Purpose of Issue **Planning** Scale at A1 **1 : 100**

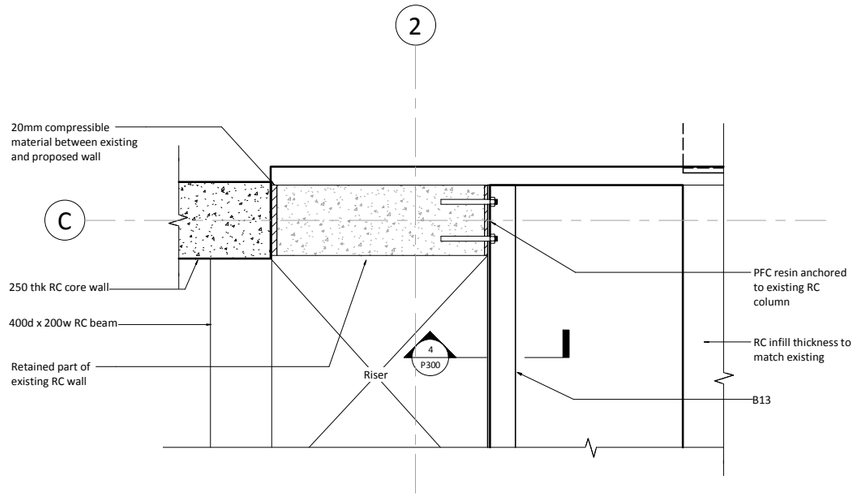
Drg No **1431_P206** Rev **P1**



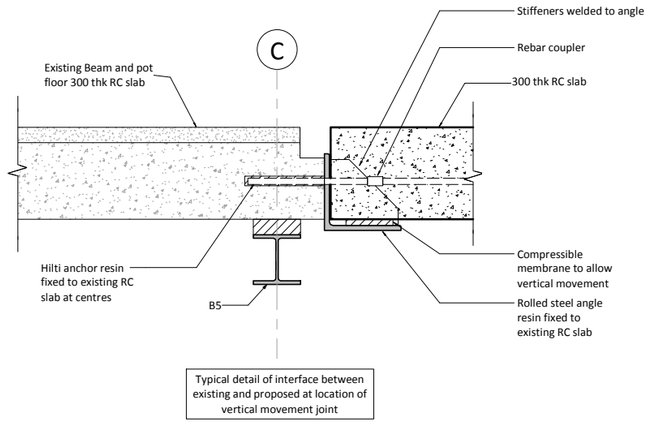
DWG P120 **Section 1-1**
1 : 10



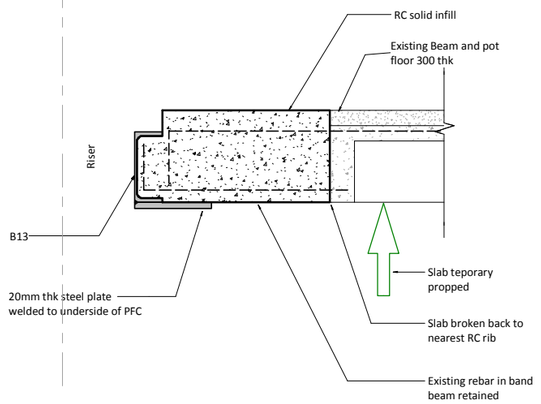
DWG P120 **Section 2-2**
1 : 10



DWG P120 **Detail 3**
1 : 10



DWG P120 **Section 5-5**
1 : 10



DWG P120 **Section 4-4**
1 : 10

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P2	20.07.17	DV	DT	Issued for Planning
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
STRUCTURAL ENGINEERS
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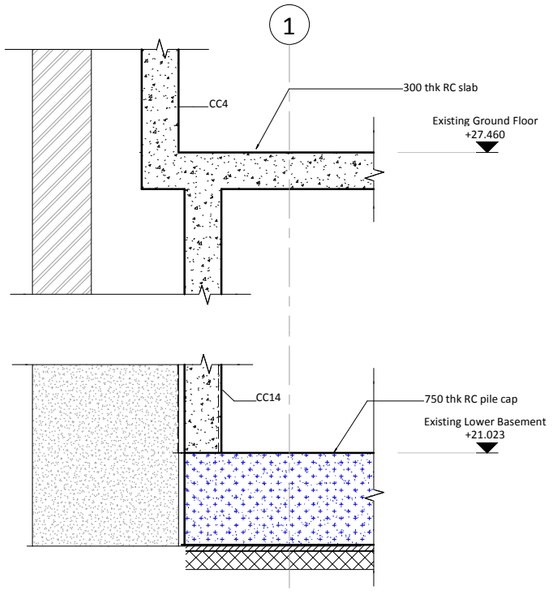
Job Name
Arthur Stanley House

Drawing Title
Proposed Typical Details

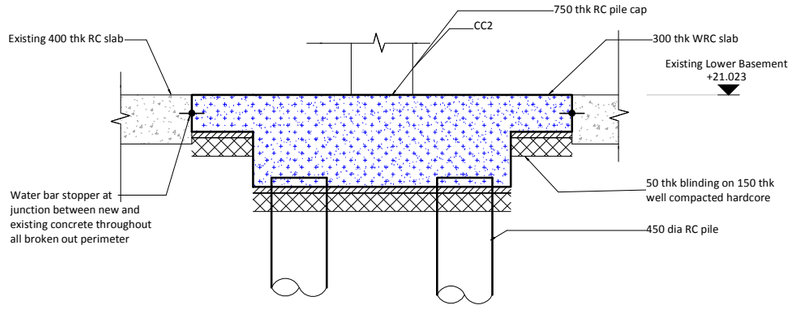
Purpose of Issue **Planning** Scale at A1 **1 : 10**

Drg No **1431_P300** Rev **P2**



DWG P080 **Section 1-1**

1 : 25



DWG P080 **Section 2-2**

1 : 25

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
C Crank
S Splice
M Moment connection
TB Thermal Break
B1 [25mm] Pre-camber
BR Break in beam

Rev	Date	By	Eng	Amendments
P1	20.07.17	DV	DT	Issued for Planning

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

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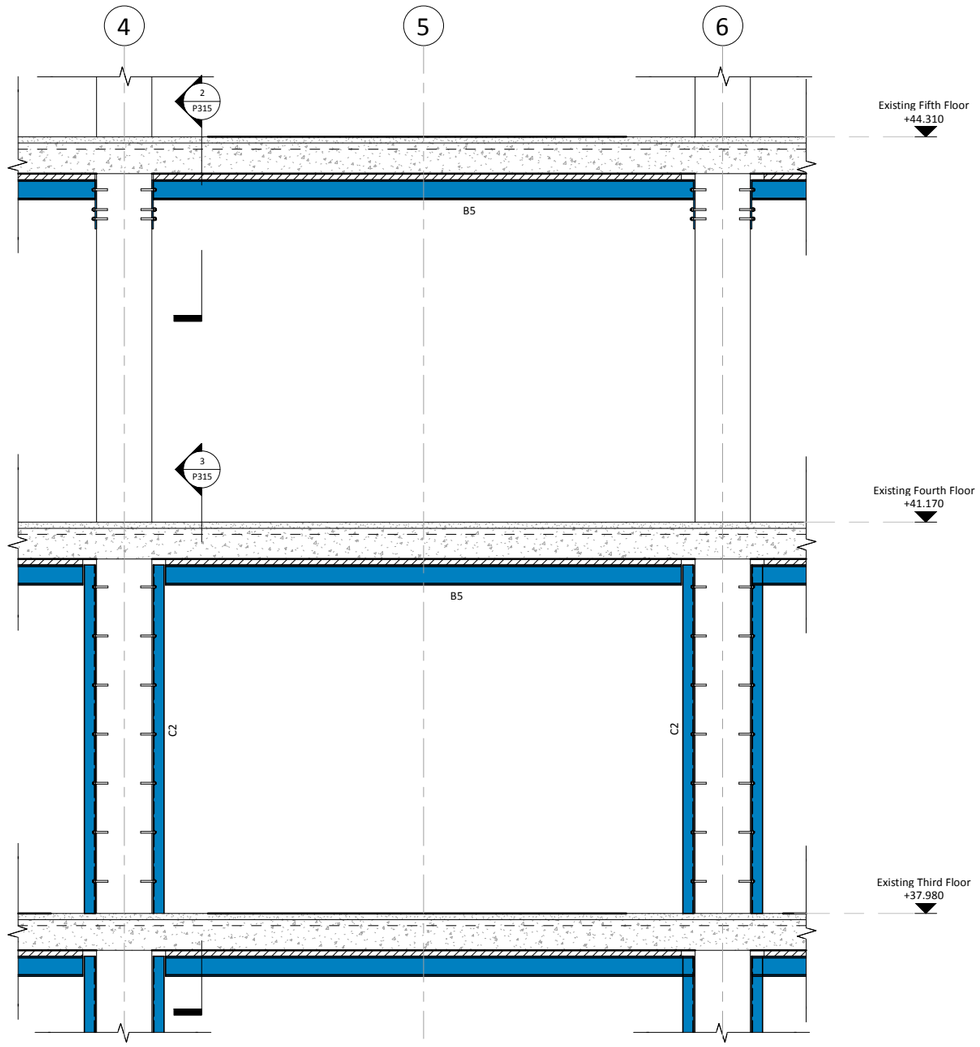
Job Name
Arthur Stanley House

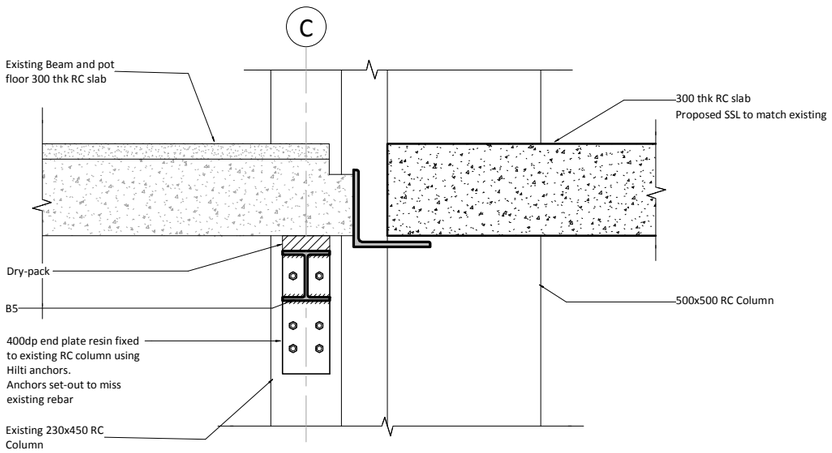
Drawing Title
Proposed Basement Details

Purpose of Issue **Planning** Scale at A1 **1 : 25**

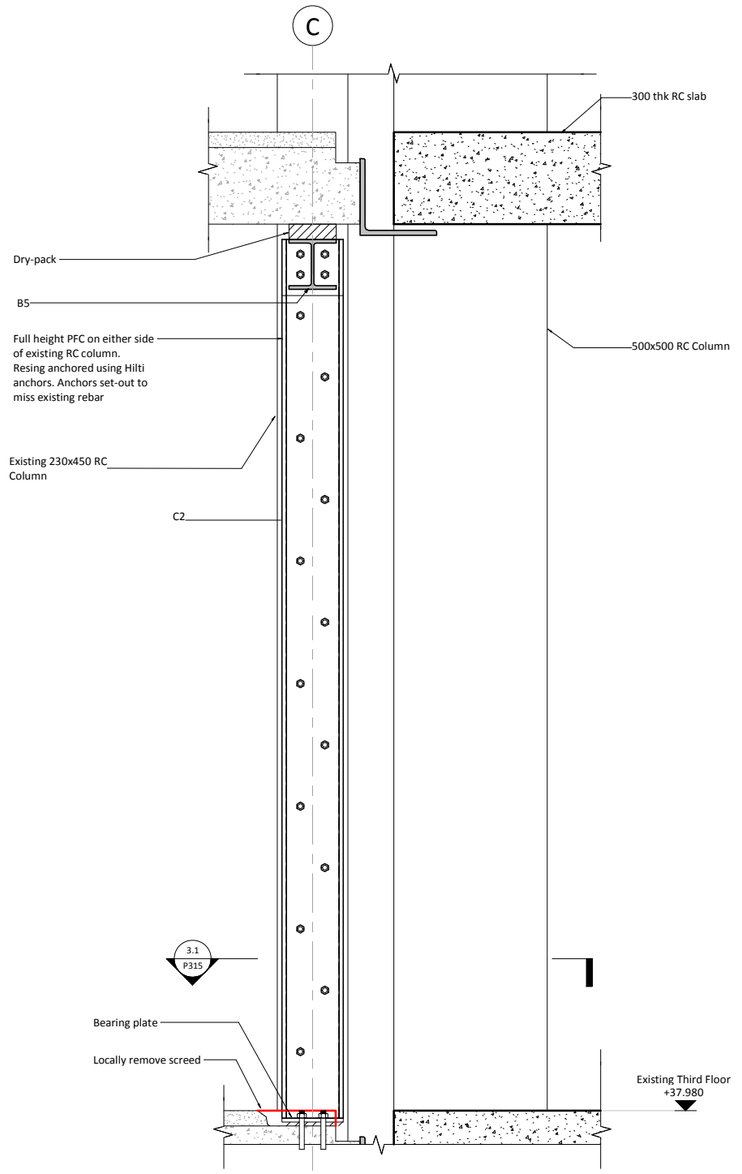
Drg No **1431_P310** Rev **P1**



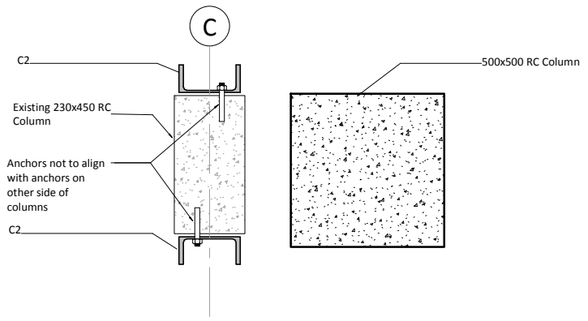
DWG P200 **Detail 1-1**
1 : 25



DWG P315 **Section 2-2**
1 : 10



DWG P315 **Section 3-3**
1 : 10



DWG P315 **Section 3.1-3.1**
1 : 10

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P1	20.07.17	DV	DT	Issued for Planning

HEYNE TILLETT STEEL
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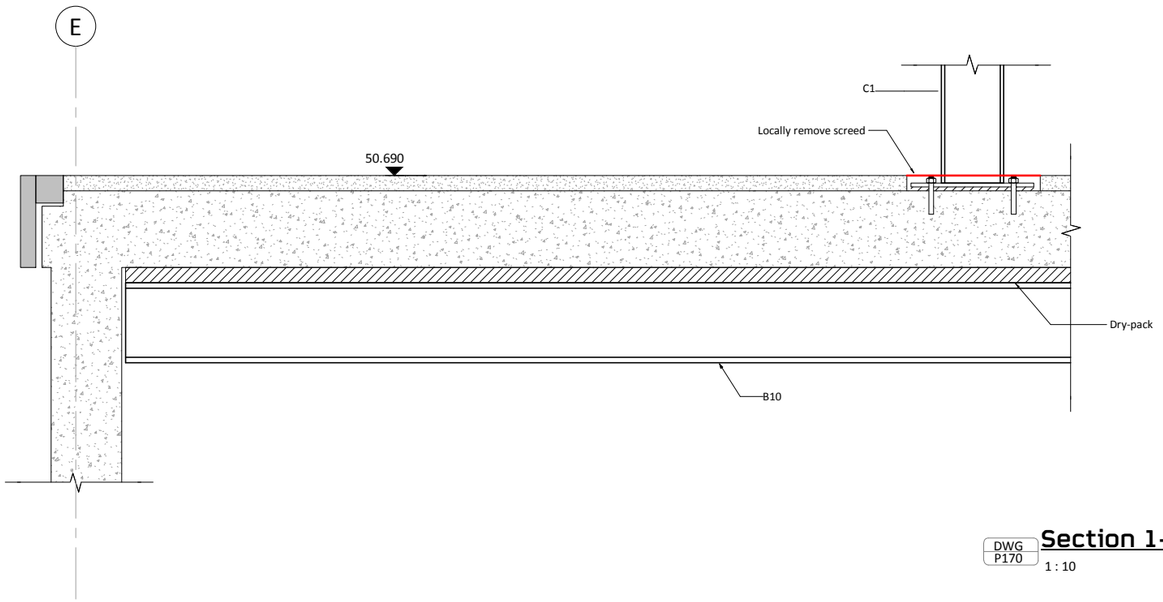
Job Name
Arthur Stanley House

Drawing Title
Proposed Column Strengthing Details

Purpose of Issue **Planning** Scale at A1 **As indicated**

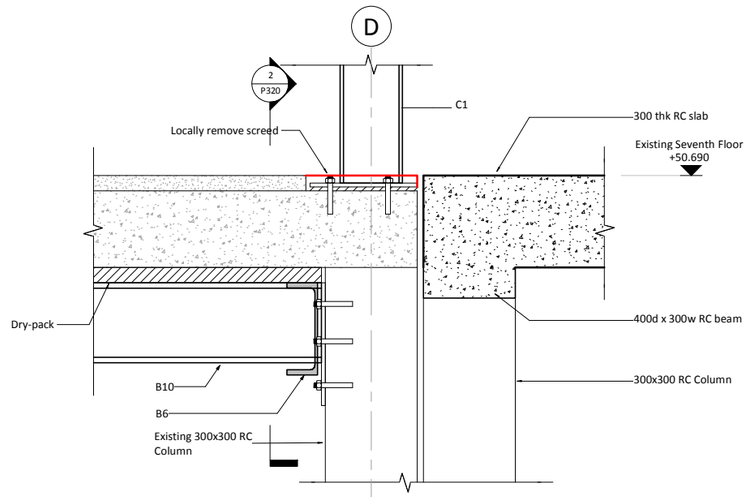
Drg No **1431, P315** Rev **P1**

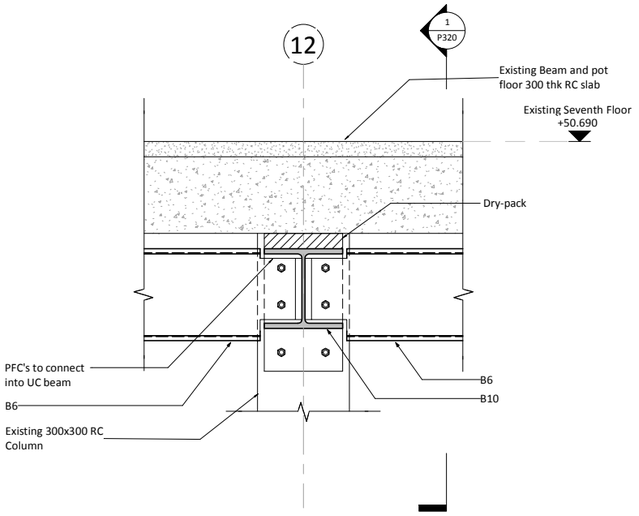


DWG P170

Section 1-1

1 : 10





DWG P320

Section 2-2

1 : 10

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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3 All new concrete in contact with the ground to be water resistant concrete

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed
ST	Connection Strengthening
M	Moment connection
B1 [25mm]	Pre-camber
C	Crank
S	Splice
TB	Thermal Break
BR	Break in beam

Rev	Date	By	Eng	Amendments
P1	20.07.17	DV	DT	Issued for Planning

HEYNE TILLETT STEEL

STRUCTURAL ENGINEERS

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Job Name

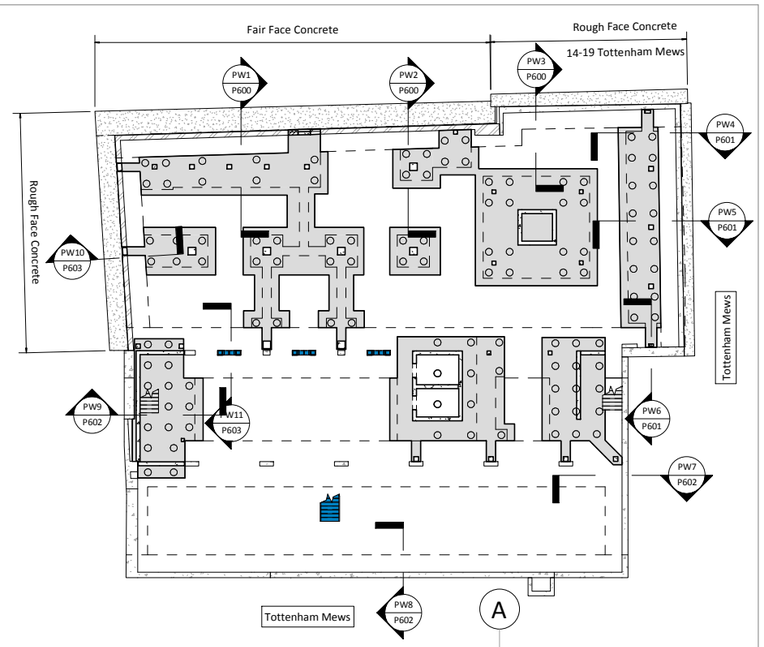
Arthur Stanley House

Drawing Title

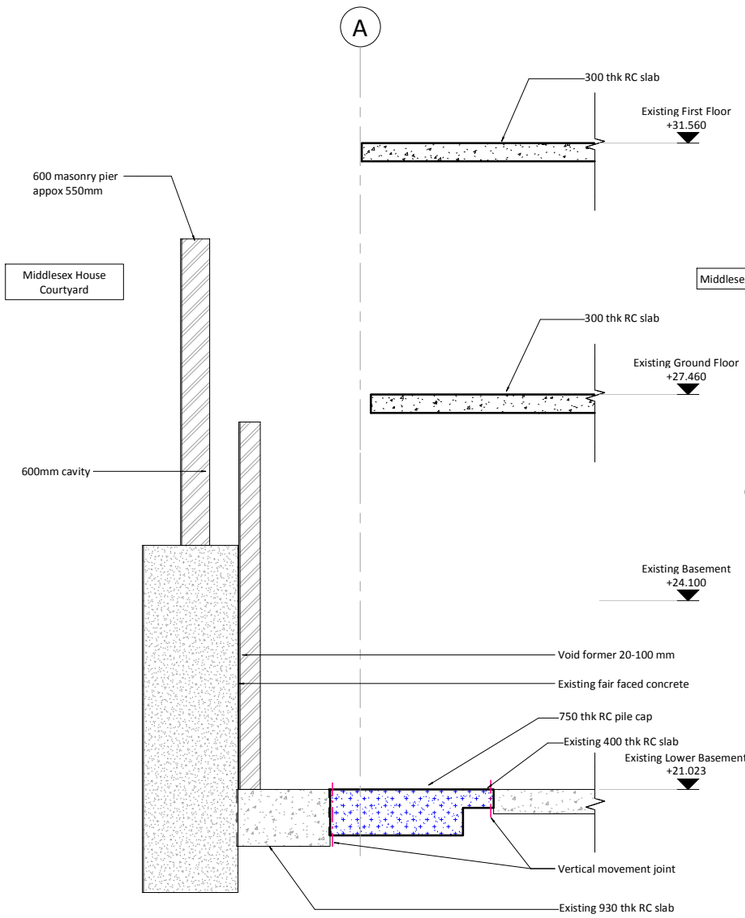
Proposed Upper Level Details

Purpose of Issue **Planning** Scale at A1 **1 : 10**

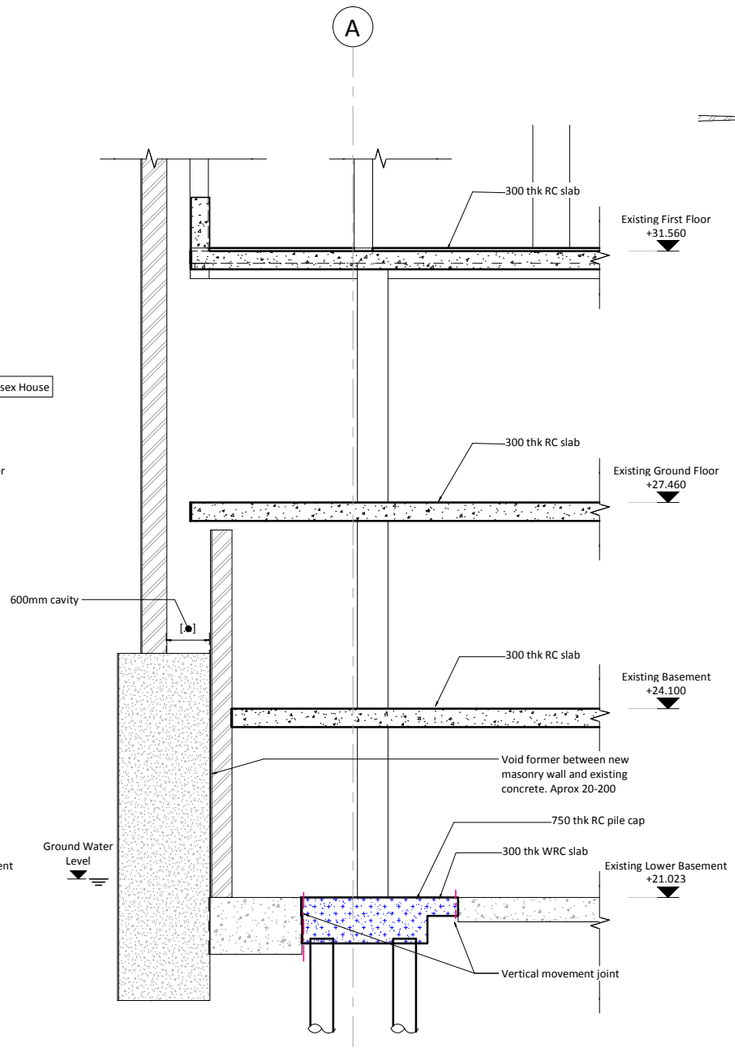
Drg No **1431_P320** Rev **P1**



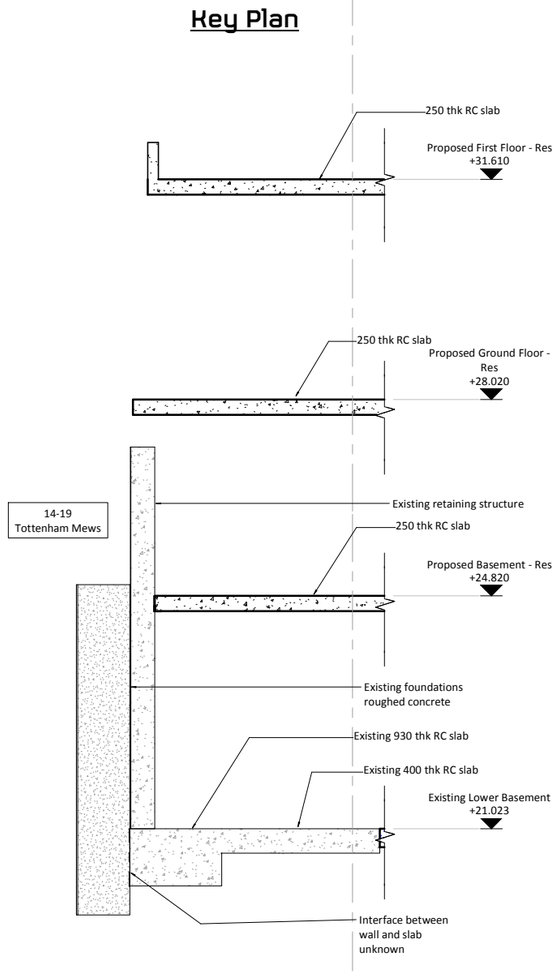
Key Plan



DWG P600 **Boundary Section 1-1**
1 : 50



DWG P600 **Boundary Section 2-2**
1 : 50



DWG P600 **Boundary Section 3-3**
1 : 50

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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4 All waterproofing and insulation details to architect's specifications

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
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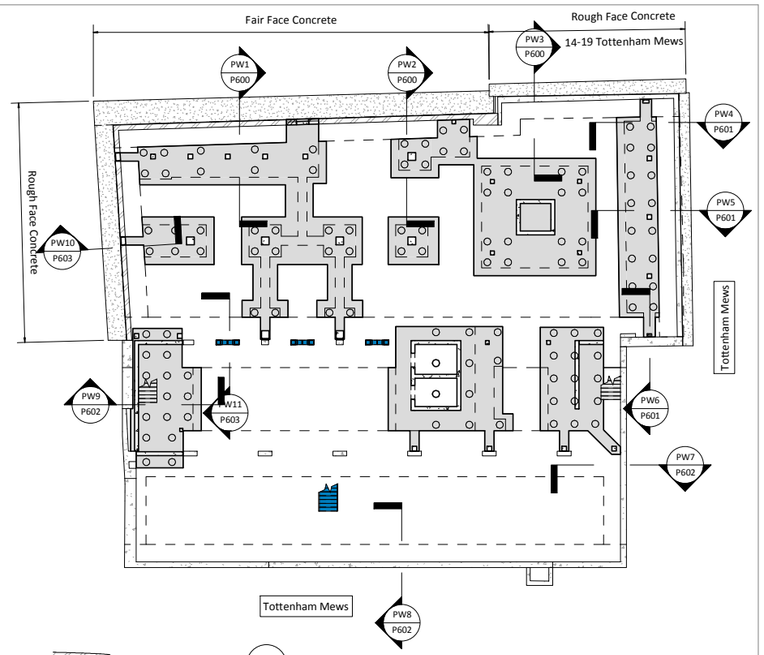
Job Name
Arthur Stanley House

Drawing Title
Boundary Sections Sheet 1

Purpose of Issue **Planning** Scale at A1 **As indicated**

Drg No **1431_P600** Rev **P3**

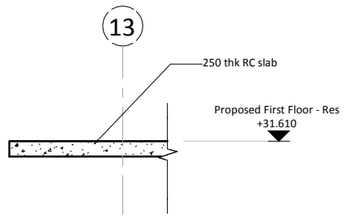


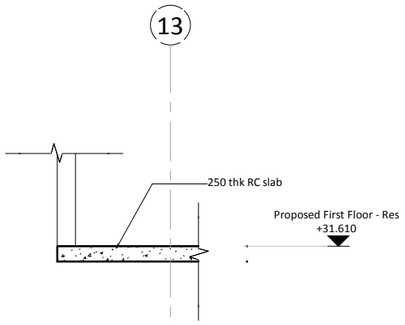
C

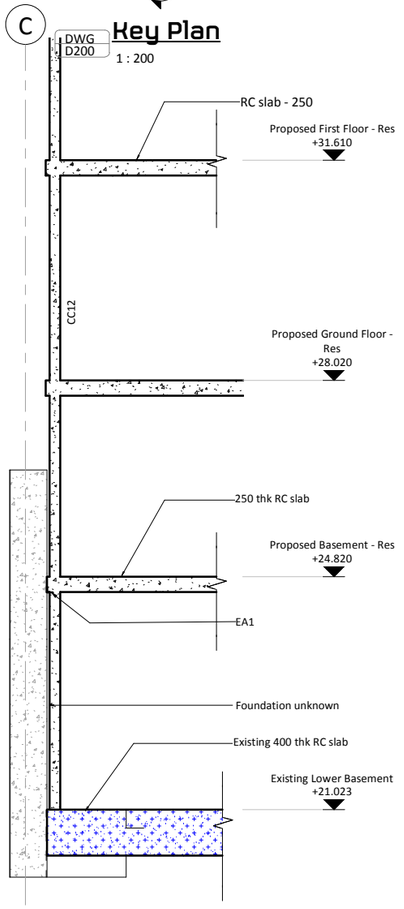
Key Plan

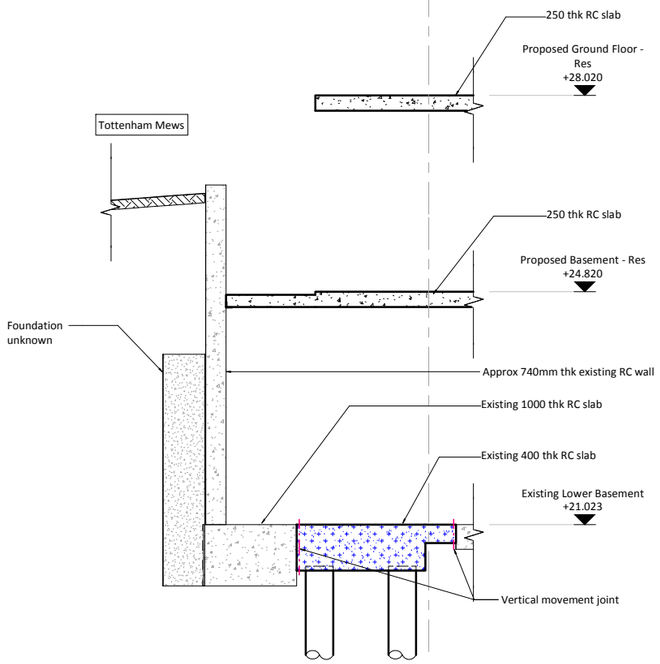
DWG D200

1 : 200





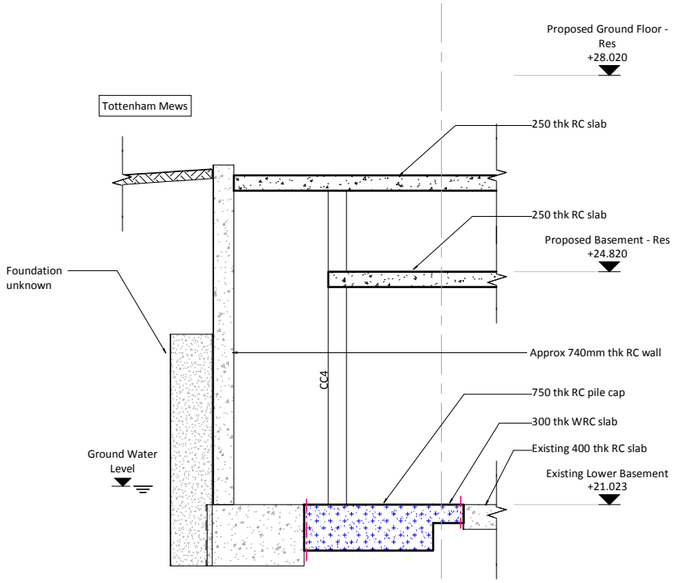




DWG P600

Boundary Section 4-4

1 : 50



DWG P600

Boundary Section 5-5

1 : 50

DWG P600

Boundary Section 6-6

1 : 50

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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4 All waterproofing and insulation details to architect's specifications

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

HEYNE TILLETT STEEL
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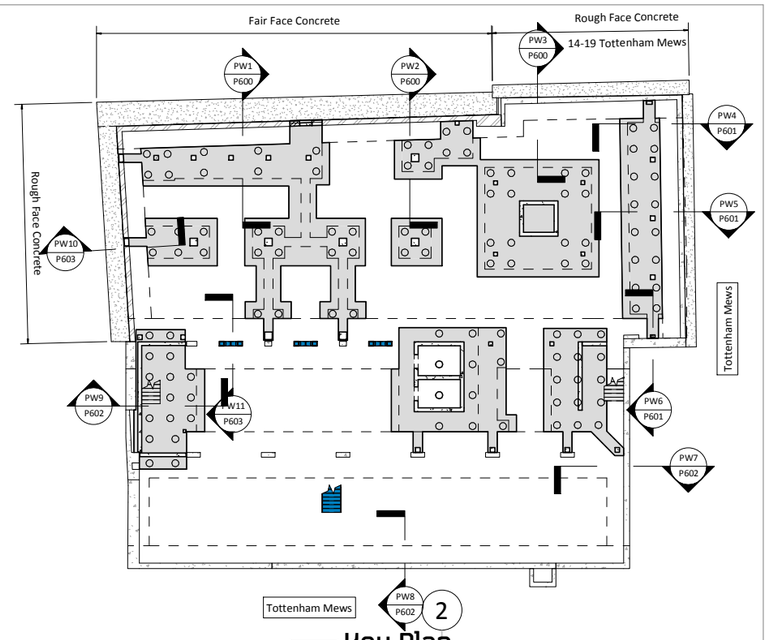
Job Name
Arthur Stanley House

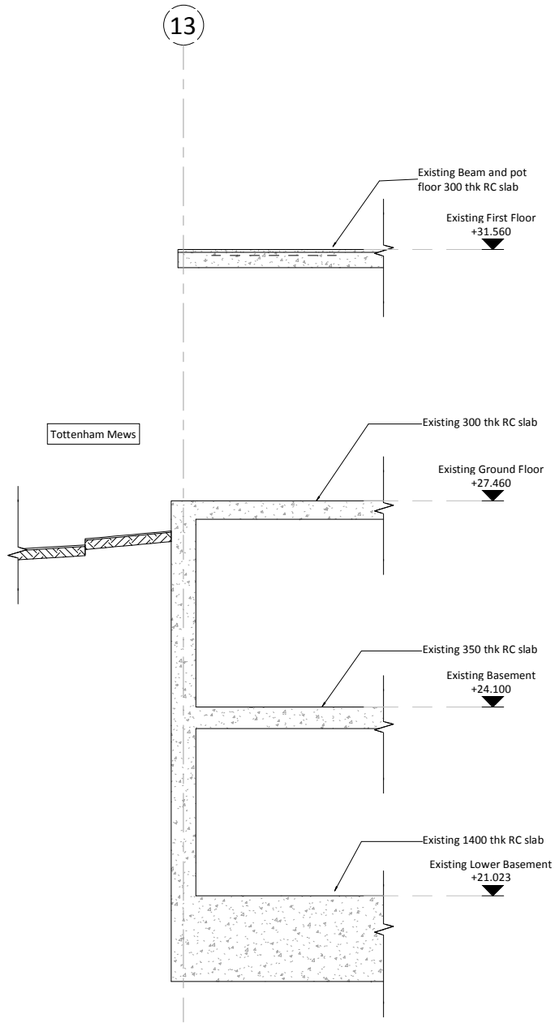
Drawing Title
Boundary Sections Sheet 2

Purpose of Issue **Planning** Scale at A1 **As indicated**

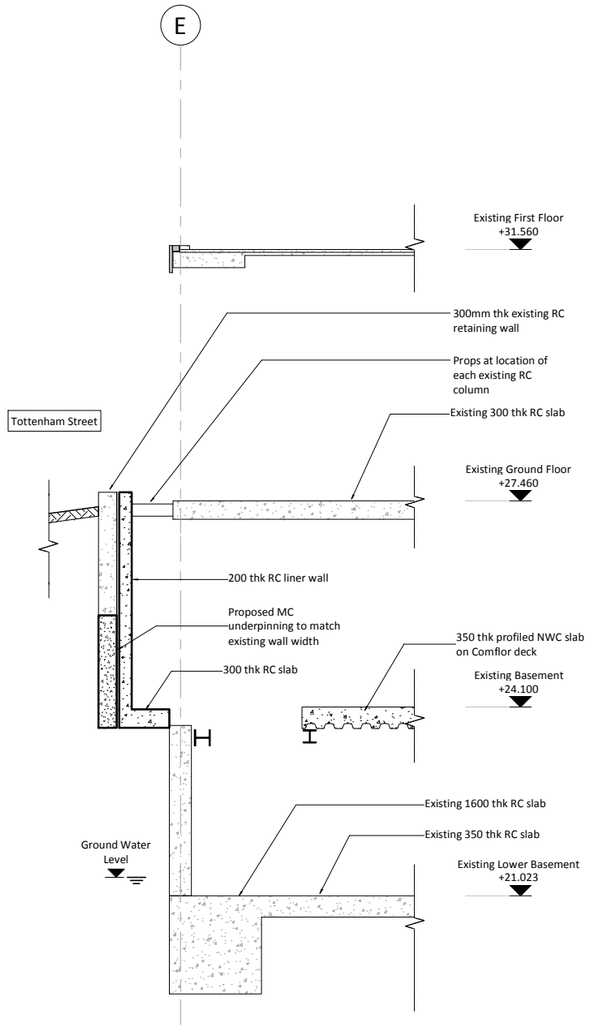
Drg No **1431_P601** Rev **P3**



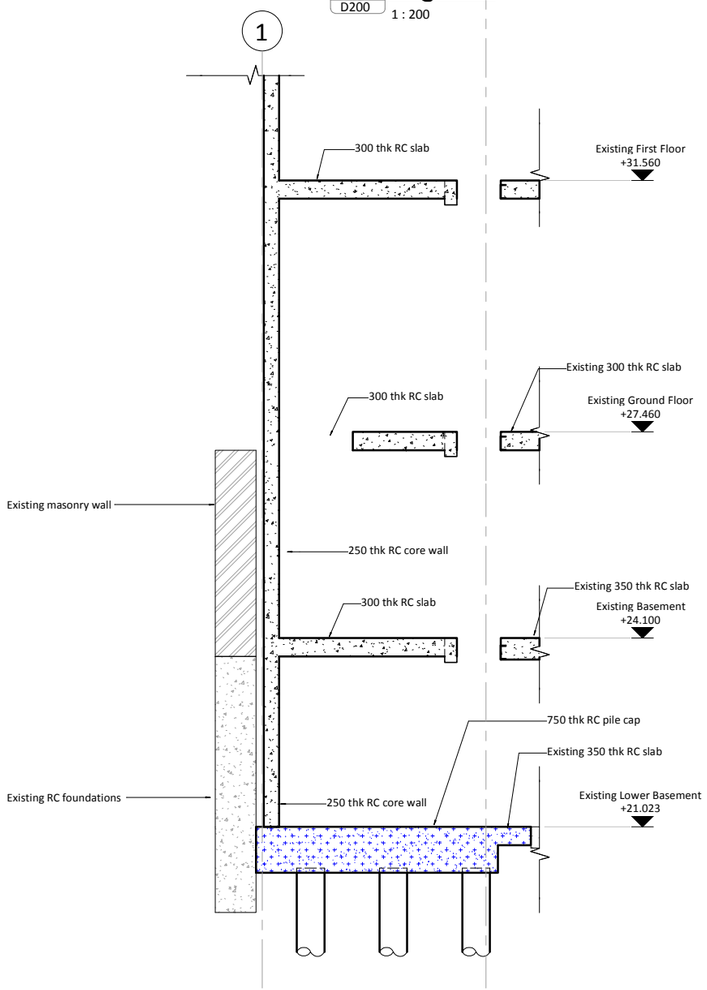
DWG D200 **Key Plan**
1 : 200



DWG P600 **Boundary Section 7-7**
1 : 50



DWG P600 **Boundary Section 8-8**
1 : 50



DWG P600 **Boundary Section 9-9**
1 : 50

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

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Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
3	175 d x50 wC24 joists C24 at 300 crs. with 18 thk plywood screwed to top face of joists
4	150thk RC Slab
5	200thk RC Slab
6	225thk RC Slab
7	250thk RC Slab
8	300thk RC Slab
9	RC Slab thickness to match existing (min 300)
	Proposed RC structure
	Proposed WRC structure
	Proposed Steel Framing
	Denotes vertical movement joints between interface of existing and proposed

ST Connection Strengthening
M Moment connection
B1 [25mm] Pre-camber
C Crank
S Splice
TB Thermal Break
BR Break in beam

Rev	Date	By	Eng	Amendments
P3	20.07.17	DV	DT	Issued for Planning
P2	05.07.17	DV	DT	Revised Preliminary Issue
P1	22.05.17	DV	DT	PRELIMINARY ISSUE

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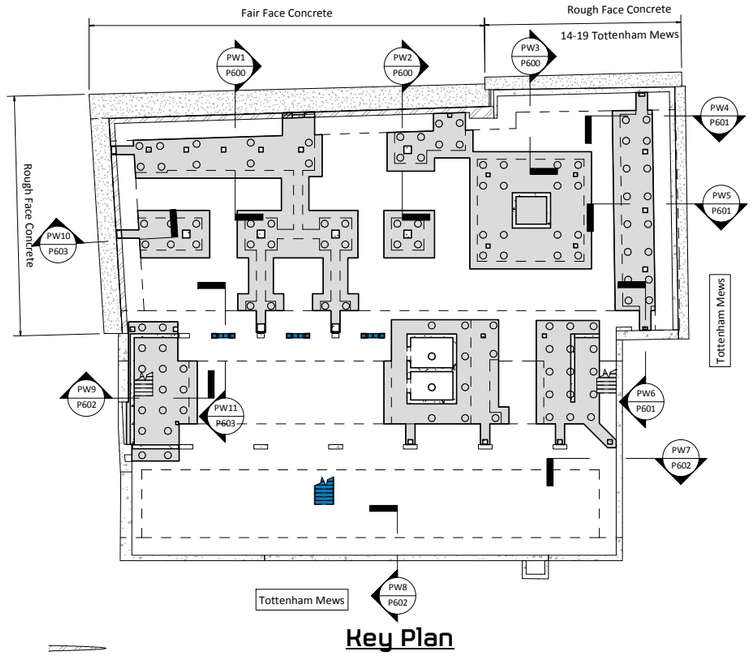
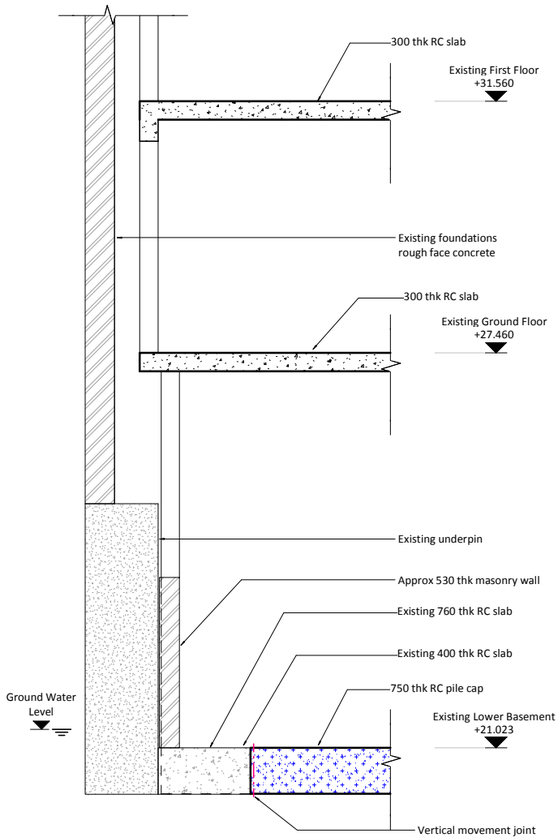
Drawing Title
Boundary Sections Sheet 3

Purpose of Issue **Planning** Scale at A1 **As indicated**

Drg No **1431_P602** Rev **P3**



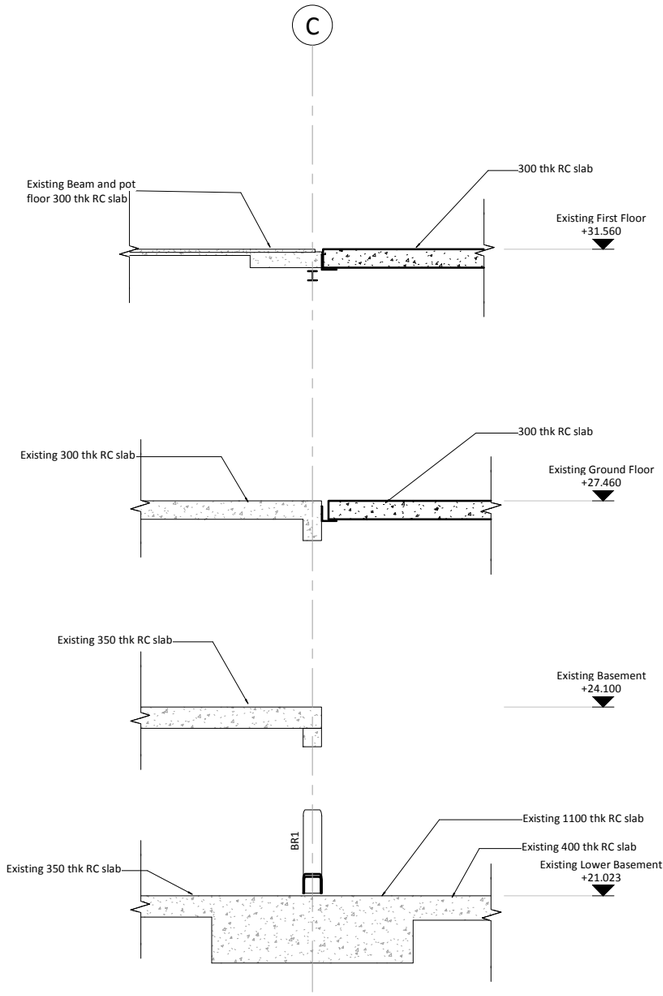
Key Plan



DWG P600

Boundary Section 10-10

1 : 50



DWG P600

Boundary Section 11-11

1 : 50

100mm @ A1 (50mm @ A3)

1 This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

2 Do not scale from this drawing in either paper or digital form. Use written dimensions only. To check drawing has been printed to the intended scale the above bar should be 100mm

3 All new concrete in contact with the ground to be water resistant concrete

4 All waterproofing and insulation details to architect's specifications

5 All existing details and building information are based on survey and limited opening up works. Assumptions have been made regarding existing construction

Column Schedule

BR1	300x300x16.0 SHS	CC4	300x300 RC Column
C1	203x203x46 UC	CC6	250x250 RC Column
C2	200x90x30 PFC	CC9	200x200 RC Column
C3	203x203x60 UC	CC10	200x400 RC Column
CC1	175x175 RC Column	CC11	200x600 RC Column
CC2	500x500 RC Column	CC12	175x300 RC Column
CC3	200x800 RC Column	CC14	300x500 RC Column

Beam Schedule

B1	305x165x54 UB	CB3	600d x 175w RC
B2	203x203x60 UC	CB5	500d x 300w RC
B4	254x254x167 UC	CB7	800dp x 300w RC Upstand
B5	152x152x37 UC	CB8	400d x 200w RC
B6	300x100x46 PFC	CB9	600d x 175w RC Upstand
B10	254x254x89 UC	CB10	875dp x 300w RC Upstand
B11	200x200x8.0 SHS	CB13	650d x 200w RC
B12	254x254x73 UC	EA1	100x100x10 EA fixed to perimeter
B13	230x90x32 PFC	EA2	EA fixed to perimeter
CB1	650d x 300w RC		
CB2	400d x 300w RC		

Legend

1	NWC slab on TATA Comflor deck with A195 mesh top and 1 no. H16 bar per trough. Thickness to match existing slab
2	150 thk profiled NWC slab on TATA Comflor 80 0.9 mm gauge deck with A192 mesh top and 1 no. H16 bar per trough
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Job Name
Arthur Stanley House

Drawing Title
Boundary Sections Sheet 4

Purpose of Issue **Planning** Scale at A1 **As indicated**

Drg No **1431, P603** Rev **P3**