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Tor Bridge Primary School & Cann Bridge School

Design And Access statement

Miller Way, Plymouth PL6 8UN

Issue Date: 21.08.2019 Latest Revision: P0

CANN BRIDGE SCHOOL

TOR BRIDGE PRIMARY

PLYMOUTH CITY COUNCIL

Document Revision History

Revision	Date	Issue / Revision Details	Prepared by	Checked by	Approved by
P0	10.07.2019	Planning submission	BMP	IJN	IJN

Job Number: 32344

Document Reference: 32344 TBH-BPC-XX-XX-RPT-X-000-0001_Tor Bridge Primary School & Cann Bridge School DAS

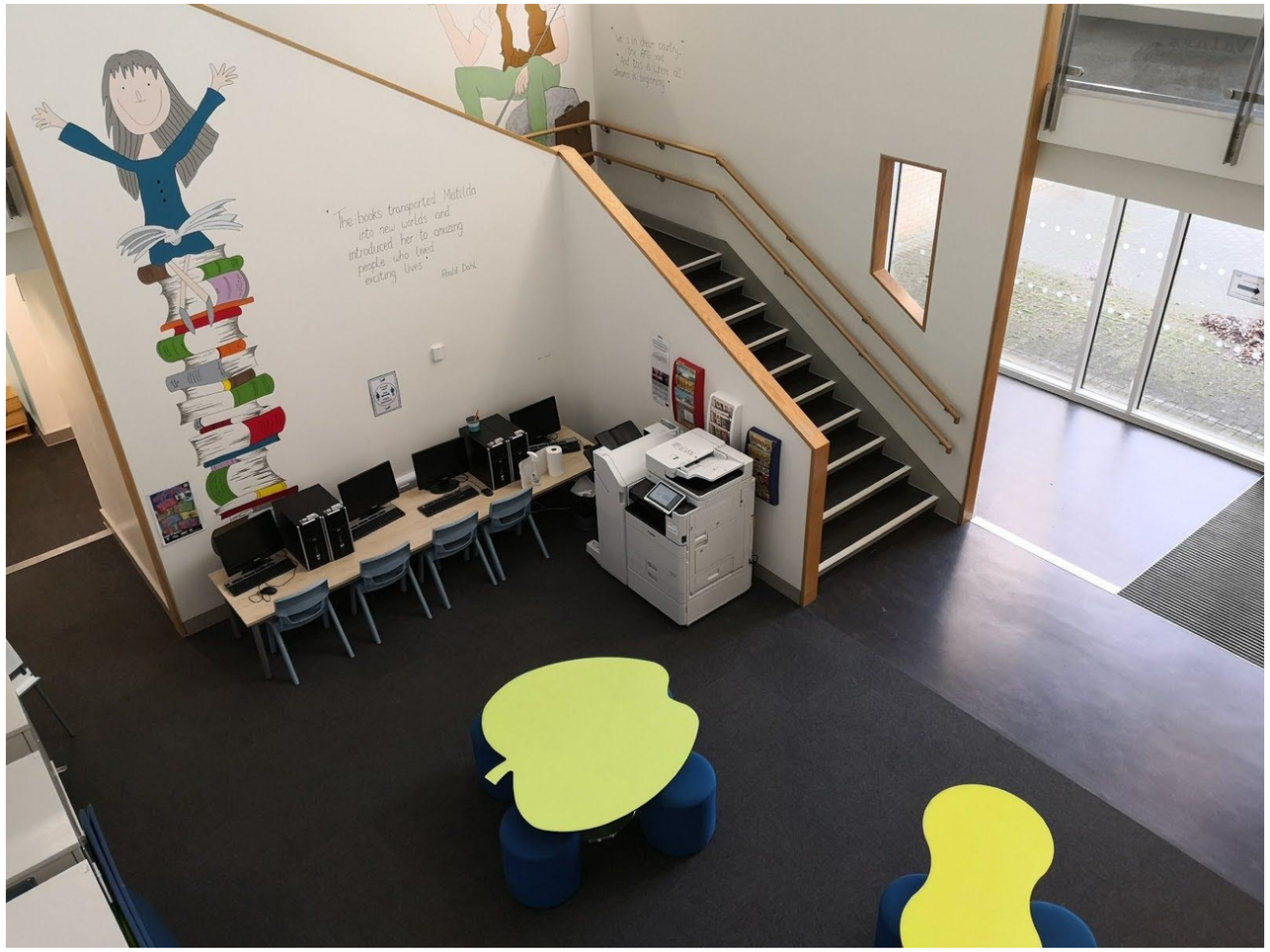
Section 1

Report Introduction

Site location

The large school campus incorporates a high school, a Nursery, Cann Bridge Special School and Tor Bridge Primary School. It is located in Estover, Plymouth on the outskirts of the city.

This application is dealing with the the Tor Bridge primary school and the Cann Bridge special school which are located on the southern side of the main campus (highlighted in pink left).



Library space between the two schools pupils can uncontrollably mix

Brief

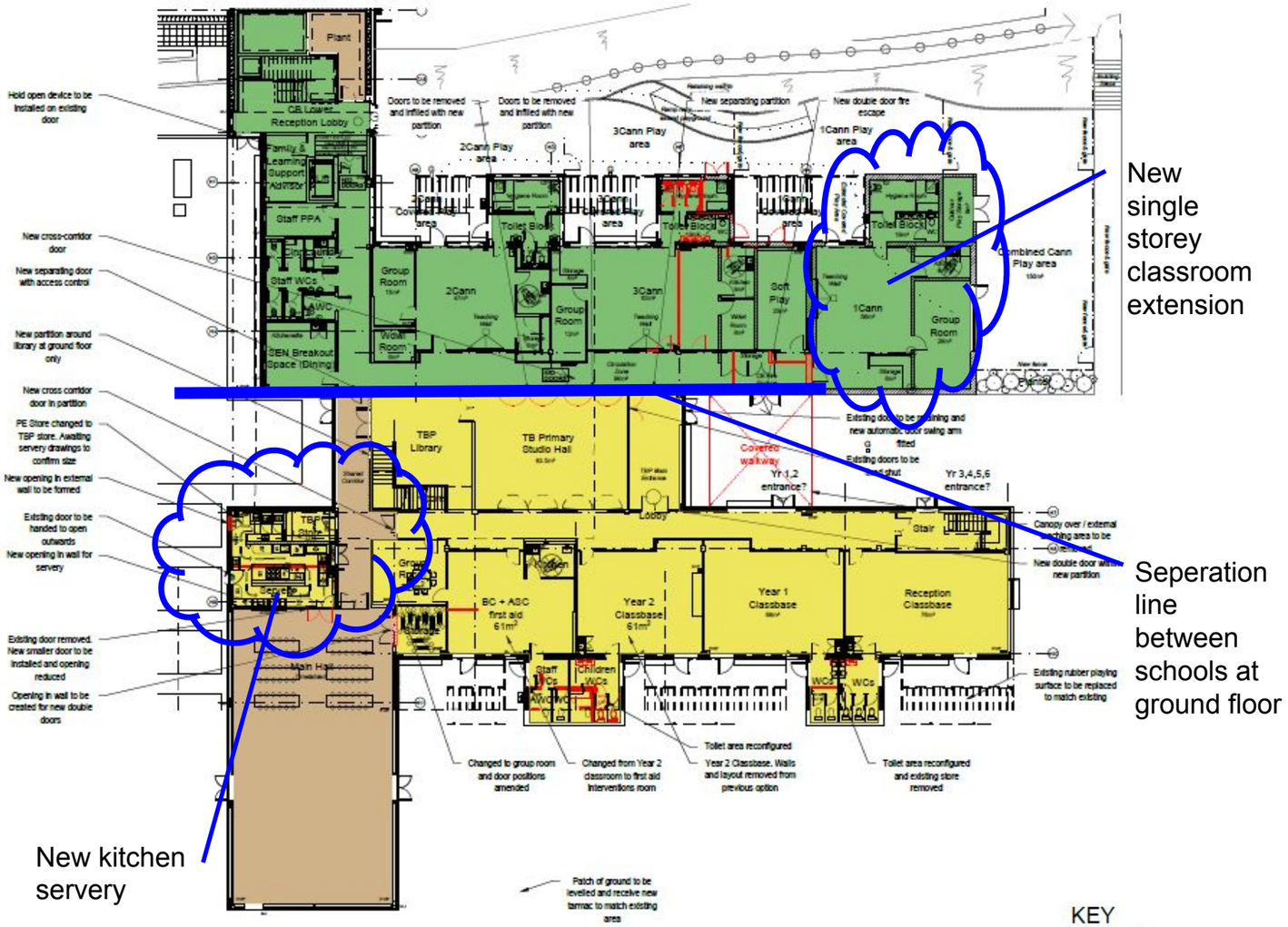
Tor Bridge primary and Cann Bridge special school are currently sharing one building. The primary school occupies the western side and the special school occupies the east side, split across two floors.

Problems

Currently there is no internal separation between the two schools and therefore the pupils can cross over into each others spaces which causes disruption and problems for the schools to manage. Separately there is no pupil dining within this school element and pupils have to navigate over to the main block for lunch which again is a management issue which they hope to address.

Solution

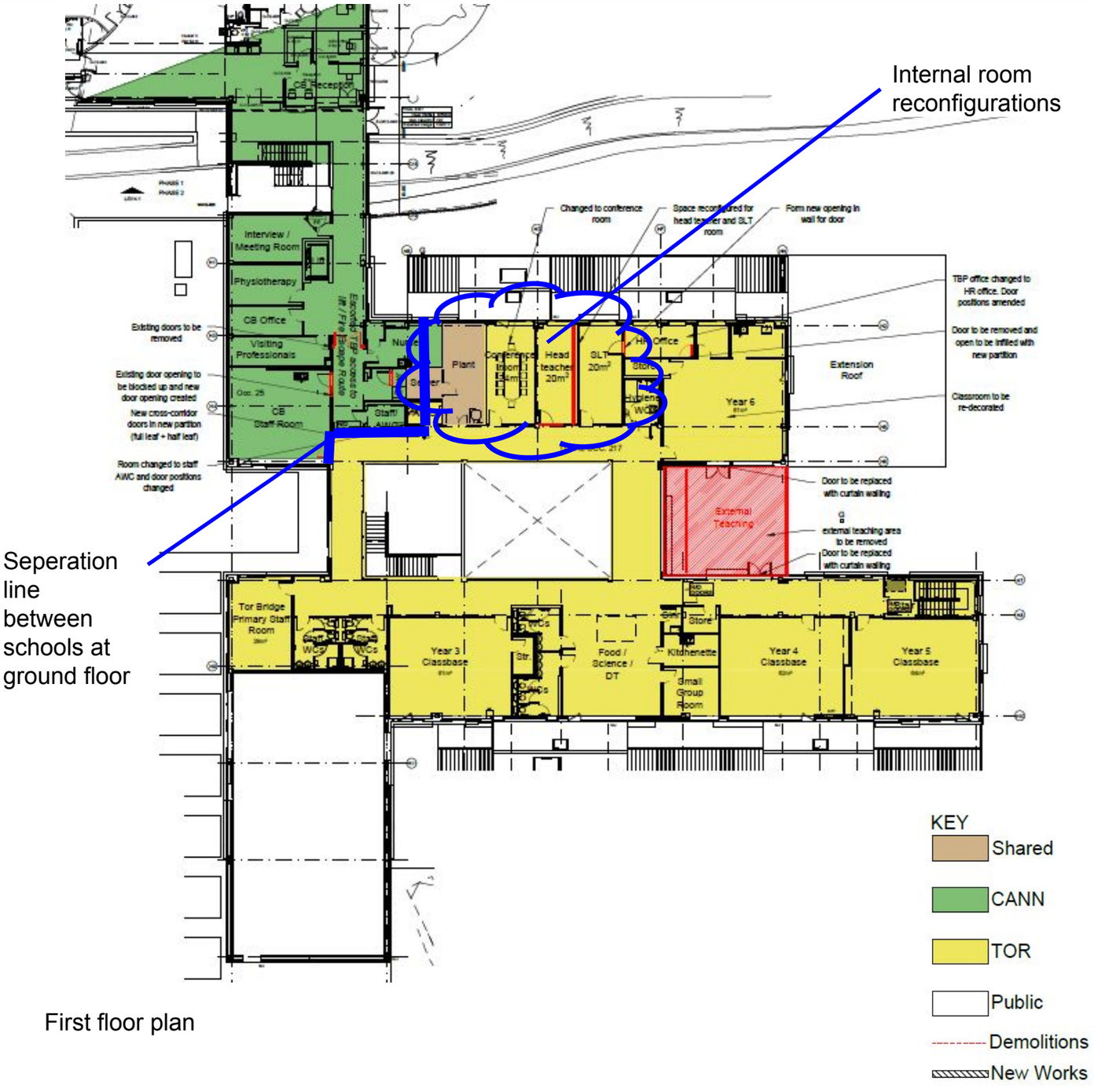
The proposal is to internally seperate the two schools with new internal partitions and doors on management control systems. To add a new kitchen facility for providing schools dinners within existing Tor Bridge School footprint, and add an additional single storey classroom extension to Cann Bridge school.



Ground floor plan

Proposal - ground floor

At ground floor it is proposed to introduce a physical separation between both the Tor Bridge primary school (yellow) and the Cann special school (green) through infilling openings with new partitions and having access controls on corridor. The Cann special school also gets a new single storey classroom extension and some minor room reconfigurations, whilst Tor Bridge primary get a new kitchen / servery to allow pupils to have lunch in the hall. Other minor alterations include reconfiguring internal toilets layouts and removing the existing entrance canopy.



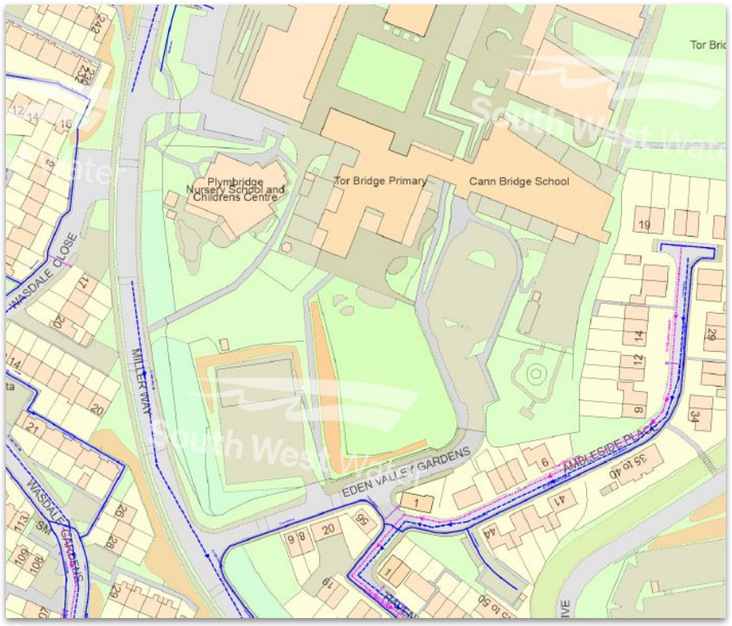
First floor plan

Proposal - first floor

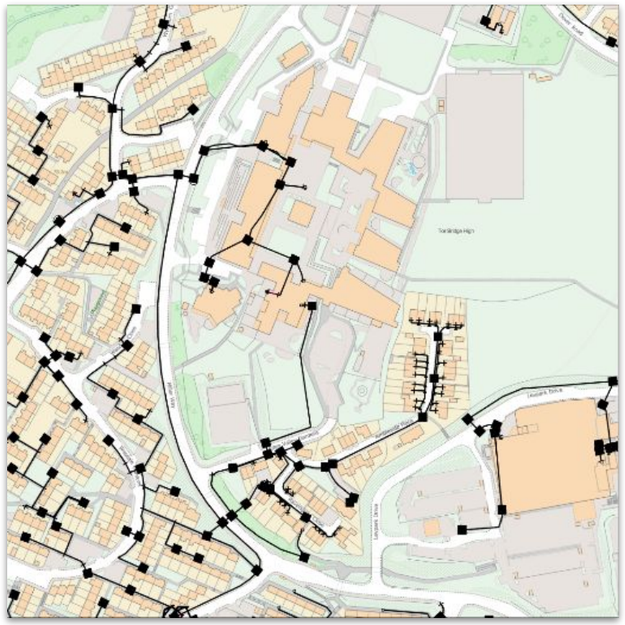
At first floor there are less changes. The two schools are again separated by infilling existing openings and doors on access controls. One existing classrooms gets reconfigured for Heads office, conference space by simple internal partitions.

Section 2

Site Analysis



Southwest water



Openreach

Western Power Distribution

Site constraints - Services

Southwest Water - No issues

Western Power Distribution - No Issues

BT Openreach - No Issues

Summary - Services do not run under the school building or under the area of playground to be used for the extension.

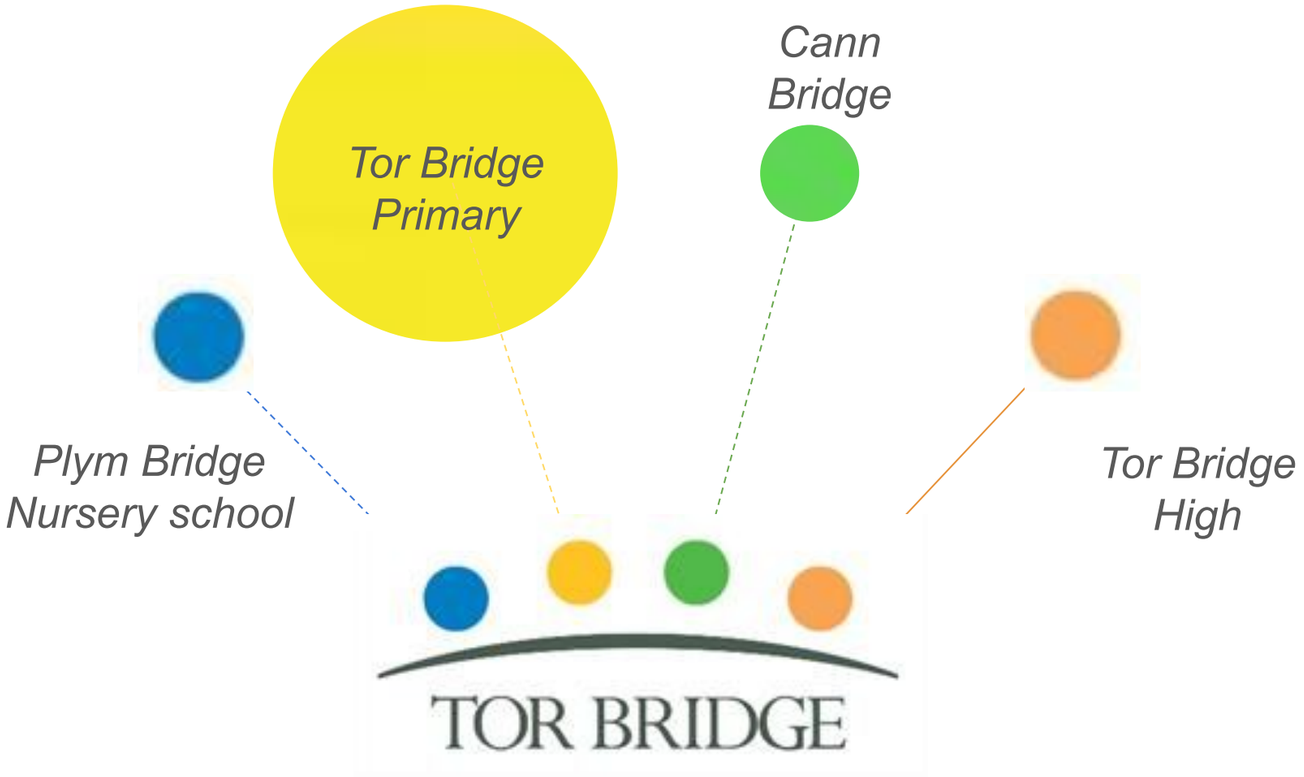
Existing uses and Shared spaces

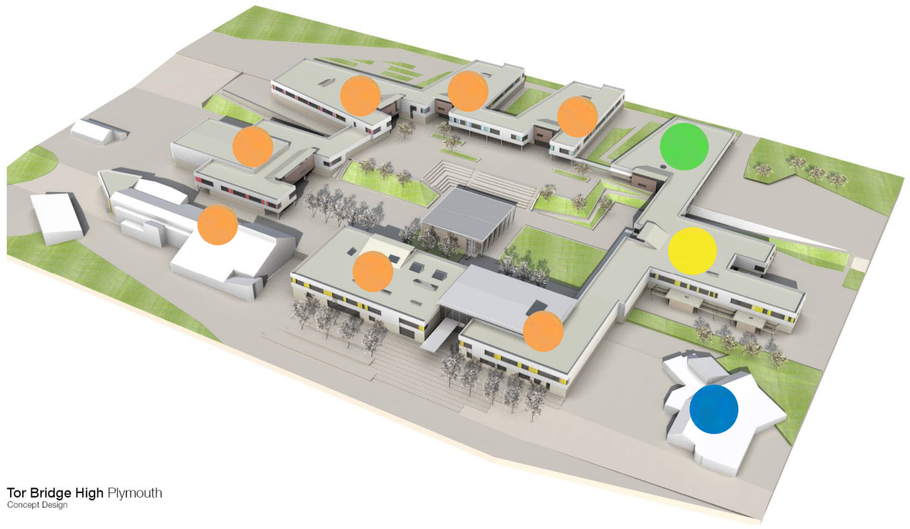
The school campus incorporates a high school, a Nursery, Cann Bridge Special School and Tor Bridge Primary School.

The full campus utilises the dining hall with staggered lunch times. There are also multiple elements of the school such as meeting rooms, halls, specialist teaching spaces etc. that are all bookable by any of the schools - this is difficult to characterise in BB103 or BB104 analysis, however it does offer additionally beneficial spaces to both schools. Advanced timetabling is key for this to be effective. Halls are often used for exams for long periods and alternative halls need to be planned for and booked.

The dining arrangement is generally considered functional, with the only noted issue being the lack of a covered canopy to connect the buildings and offer shelter. This has been looked into by the schools previously but not yet actioned upon.

Tor Bridge and Cann Bridge have a part-shared building at the South of the site. The Cann KS2 and above teaching areas are clearly defined in their own block, however the Cann primary pupils, and Tor Primary pupils as well as staff for both schools have an overlapping shared spaces arrangement in the rest of the building.





Tor Bridge High Plymouth
Concept Design

Site Analysis - Tor Bridge Primary

Location, Access and Description – Cann Bridge

Tor Bridge is located in the southern centre of the campus site and has use of a large wing shared in-part with Cann Bridge. Classrooms are over two floors with the ground floor classrooms having direct access to external play space.

Tor Bridge was designed with integration and spatial overlaps at the forefront of the design. The pupils generally dine in the main school dining block, and the Cann Bridge primary pupils have their classrooms in amongst Tor Bridge Primary.

Tor Bridge Primary (shared with Cann Bridge) has its own car parking area on its southeast side. This has multiple larger bays that although not marked as disabled, are sized as such to accommodate multiple transport requirements. There is a long drop-off loop barrier controlled, off a small roundabout. There are 12 fixed bays. Staff are generally encouraged to park next to the MUGA.

Tor Bridge Primary & Cann Bridge share a large two-storey entrance lobby where the Tor Bridge reception is on the ground floor and the Cann Bridge on the first.

The school also use the main playing fields, and multiple other useful facilities around the site to offer a diverse learning environment.

Section 3

Proposal

Existing Materials

The existing Tor bridge primary and Cann special school building uses a palette of buff brick, white render, grey window frames and randomised accent yellow panels. The roof is flat and set behind a parapet wall. The render at 1st floor varies, stepping to align with tops of windows at 1st floors and tops of windows at ground floor. The playground / footpaths are asphalt.

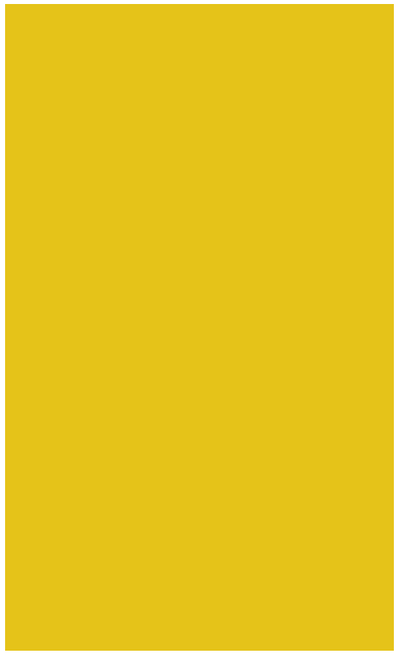
Existing

Proposed

Proposed extension

The extension will be single storey and protrude out into the existing playground. It has been designed to replicate the look of the current school, through using the same material palette of buff brick, white render, grey window frames and yellow accent panels.

Buff brick to match existing



Yellow infill panels to match existing

White render to match existing

Grey window frames to match existing

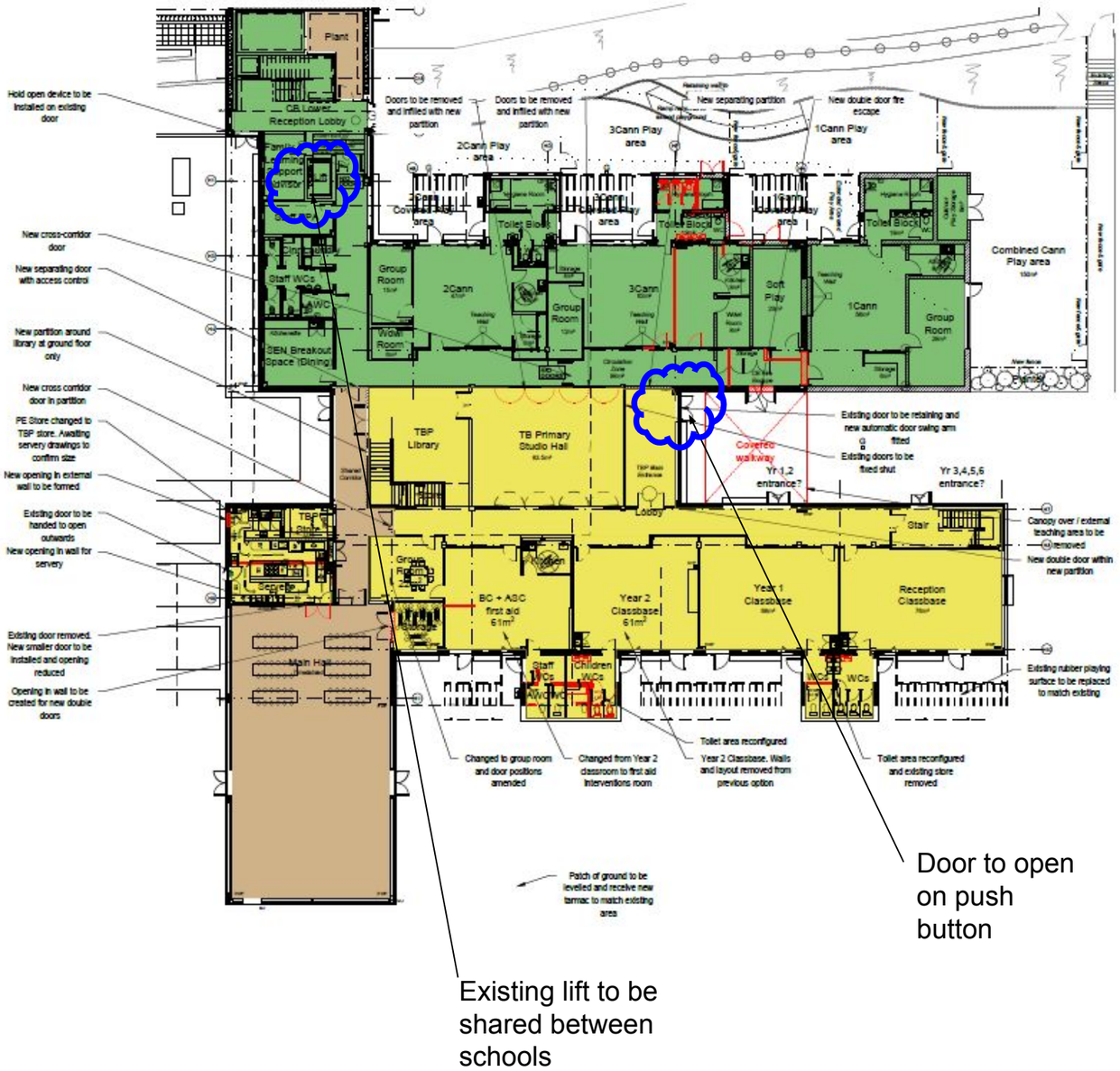
Proposed extension

Material selection to be used on the new extension. Materials chosen are to match the existing school building so that it blends seamlessly into the current school building.

Proposed

Section 4

Access



Accessibility

The levels closely around the school building are flat, with entrances and external doors level with the external surface.

However the school would like to improve the entrance door for Tor Bridge so that it can open with a push button for wheelchair users

Lift

There is a internal lift within the Cann special school side with an agreement between the schools that the Tor bridge primary school can have access to the lift when required to enable wheelchair pupils access the first floor.

Extension

Door width will be Part M compliant. Internal levels will match existing floor finish levels. New external doors will be level with the external ground finish.

Section 5

MEP

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Domestic Services

The mains cold water supply serving existing outlets throughout the school buildings will be retained and modified to suit the new subdivided arrangements.

Submetering of domestic cold water service is to be introduced to afford independent metering of Cann and Torbridge mains cold water usage.

Domestic hot water is generated within two calorifiers these located within the shared Ground Floor Plant Room. Distribution is generally split with pumped secondary return circuits serving North and South zones respectively.

At Ground floor the North / South demarcation works well for the Cann / Torbridge sub-division.

On First Floor where Torbridge accommodation is located above the Cann classrooms, separation of existing water services distribution routes becomes necessary to facilitate independent metering via the BMS and thereby appropriate consumption.

North / South distribution pipework shall be modified such that the North circuit distributes to Cann only whilst extension of the South zone picks up First Floor Torbridge classrooms and all accomodation South of the demarcation line at Ground Floor.

All domestic pipework modifications will be installed in copper throughout and will be fully insulated with a suitable phenolic or closed cell insulation which shall achieve a medium BRE Green Guide rating of A+. All valves shall be located such that they are in an accessible location in compliance with BREEAM Compliance Note CN3.5.

Automatic isolation shall be provided to modified mains water supplies to the toilet areas in compliance with BREEAM Wat 03. The system shall comprise WRAS approved ‘normally closed’ electric solenoid valves which shall be operated by a local ceiling mounted PIR detectors.

Above Ground Drainage

Above ground drainage is provided from all sanitaryware, appliances, mechanical plant and drainage outlets to convey waste to the below ground system.

Generally above ground drainage pipework is solvent welded ABS, with suitable provision for expansion, rodding, testing and inspection. The above ground drainage layout remains largely unchanged and therefore unaffected the separation works requiring localised modification only to reflect revised internal arrangements.

Space Heating

Space heating is by low temperature hot water (LTHW) derived from a centralised plant located within the Energy Centre. LTHW mains serving both Cann and Torbridge Primary Schools enters the shared Ground Floor Plant Room where it is pumped from a primary low loss header arrangement to serve independent North and South heating circuits.

Within Torbridge Primary the LTHW heating circuits serve steel panel radiators across Ground and First floors with underfloor heating to the Main Hall, Library and Primary Studio Hall. It is not envisaged the proposed remodelling and subdivision works will affect the existing underfloor heating installation.

The North / South zoning of the heating system works well for the Cann / Torbridge demarcation at Ground Floor with only minor pipework modifications necessary to a single radiator and overdoor heater required to separate the schools.

At First Floor where Torbridge accommodation is located above Cann classrooms the modification of existing LTHW distribution is required to independently serve radiators within the Conference Room, Heads Office, SLT Office, HR Office, Hygiene Room and Year 6 Classroom.

All modified pipework will be fully insulated with a suitable phenolic or closed cell insulation which shall achieve a medium BRE Green Guide rating of A+.

Independent heat metering of both Cann and Torbridge LTHW circuits is to be provided, and monitored by the BMS to appropriate energy usage.

Ventilation

The school buildings are predominantly naturally ventilated via openable windows with localised mechanical ventilation systems serving WC's, Changing Rooms and cellurised spaces such as Laundry, Hygiene, Withdraw and Group Rooms.

Generally the mechanical ventilation systems are unaffected by the separation of Cann and Torbridge Primary schools with only limited localised modification of ductwork required to suit revised architectural layouts.

The proposal to introduce a kitchen and servery within Torbridge Primary school requires further consideration through the detailed design process. At Stage 3 it is envisaged that a mechanical extract system will be required sized commensurate for the equipment detailed on the Catering Contractors drawings to be developed with the school and their Catering Manager. Supply / make up air will be either natural via facade louvre arrangement or mechanical with heat recovered from the exhaust air stream to preheat incoming fresh air.

Sprinkler System

Both Cann and Torbridge Primary Schools are provided sprinkler protection by the sitewide centralised sprinkler system.

As a life safety system the sprinkler water supply does not require metering and therefore this unaffected by proposed separation works.

Internally it is not envisaged that any significant modification of sprinkler pipework distribution routes will be required.

An allowance for the relocation of ten individual sprinkler heads has been identified for Stage 3 costing purposes, this to be rationalised as far as practicable through the detailed design process.

LV Distribution

The LV sub-distribution to Block H consists of a sub-main distribution panel located in the ground floor Plant space, which it turn serve final distribution boards serving Block H ground and first floors as follows:-

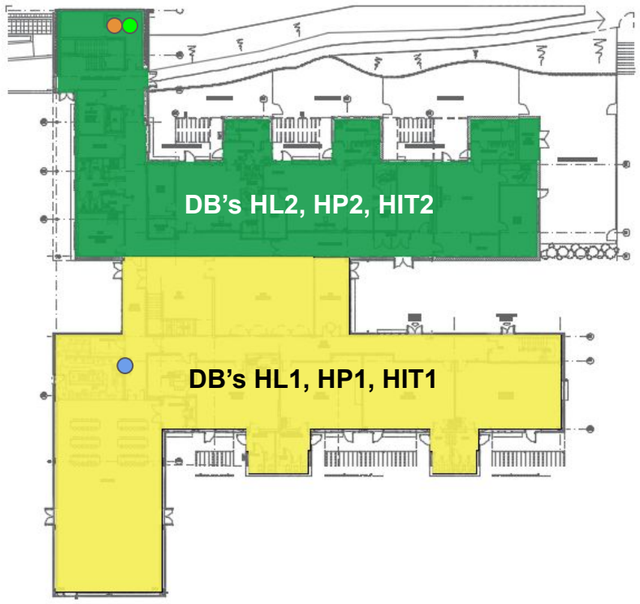
(The following DB's located in GF Electrical Cupboard)
DB HL1 (Serving GF & FF Lighting Tor side)
DB HP1 (Serving GF & FF Power Tor side)
DB HIT1 (IT Power Tor side)
(The following DB's located in FF Plant Room)
DB HL2 (Serving GF & FF Lighting Cann side)
DB HP2 (Serving GF & FF Power Cann side)
DB HIT2 (Serving GF & FF IT Power Cann side)
(The following DB located in GF Plant Room)
DB H-EXT (Serving exterior lighting to both Tor and Cann)

There exists lighting and power circuits that serve Tor side, originating from final distribution boards within Cann, so these circuits will be re-supplied from Tor, so that there will be an 'electrical' separation in terms of final circuit distribution, between the two schools.

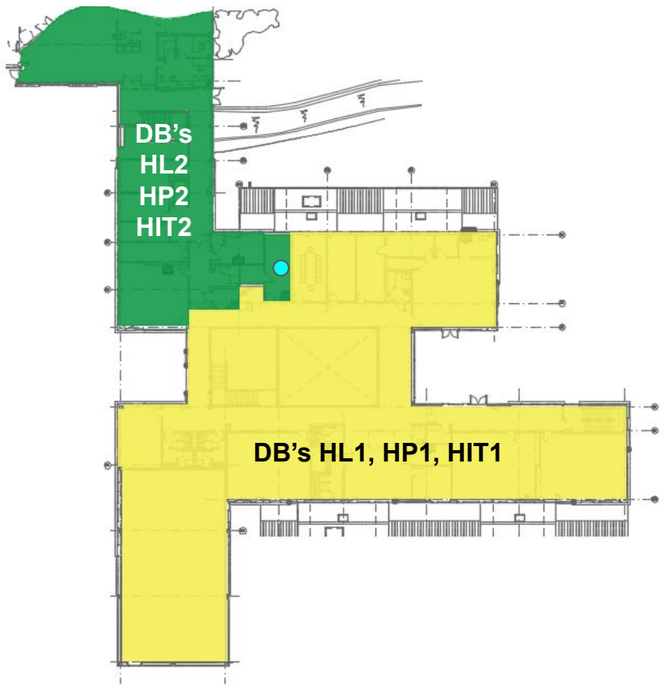
Where shared spaces occur, e.g. ground floor Plant, first floor Plant and first floor Server rooms, these shall remain served (lighting & power) from Cann. The shared Main Hall and its serving Corridor, will remain served (lighting & power) from Tor.

Final distribution boards will be retained, with existing final circuits modified to suit the proposed works and the proposed demarcation between the two schools. New circuits as required for the proposed reorganisation works and the new extension will be derived from the existing final distribution equipment.

Proposed LV Distribution Segregation



Ground Floor



First Floor

Containment

Existing containment systems serving both Tor Bridge Primary & Cann Bridge Schools will be retained, modified and extended as necessary to suit the proposed works.

New containment for the new Cann extension will be provided as necessary, mimicking the types of containment currently installed for the various services installations within Cann.

Wherever possible, containment will be installed within the building fabric and within available accessible voids, but where surface containment has to be employed, the locations and routing will be agreed at design stage 4.

Existing General & Emergency Lighting

Where modifications are to be made to existing lighting installations, generally existing luminaires, where possible, will be retained for re-use, re-lamping those luminaires that are reinstated.

Where new luminaires are required to be added to an area / space / room, to supplement existing installed luminaires, then if availability permits, new luminaires will be identical in type as those that exist. If the required luminaires are no longer available (due to the phasing-out of fluorescent lamps / inefficient control gear), then it is proposed that all luminaires associated within the area / space / room will be replaced with new LED luminaires of a style to match those that exist. Alternatively, if permissible, replacing the control gear / lamps of existing luminaires with LED control gear / lamps will also be considered.

New General & Emergency Lighting

For the proposed new extension to Cann, new LED lighting will be provided throughout, inclusive of emergency lighting. The style of luminaire(s) for the extension will mimic the style of the existing luminaires used in similar spaces / areas / rooms.

New lighting installations will be designed in accordance with best practice lighting guides to provide an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels.

Generally, luminaires will be recessed within plasterboard / suspended ceilings and surface mounted where ceiling voids are not available for recessed installation.

Control of the new lighting installations, will mimic the existing controls philosophy employed in the school. New controls will comprise microwave (MW) detectors in circulation spaces and passive infra-red (PIR) detectors in rooms to provide automatic control of lighting, via presence detection or via absence detection, the latter in conjunction with manually operated wall-mounted switches.

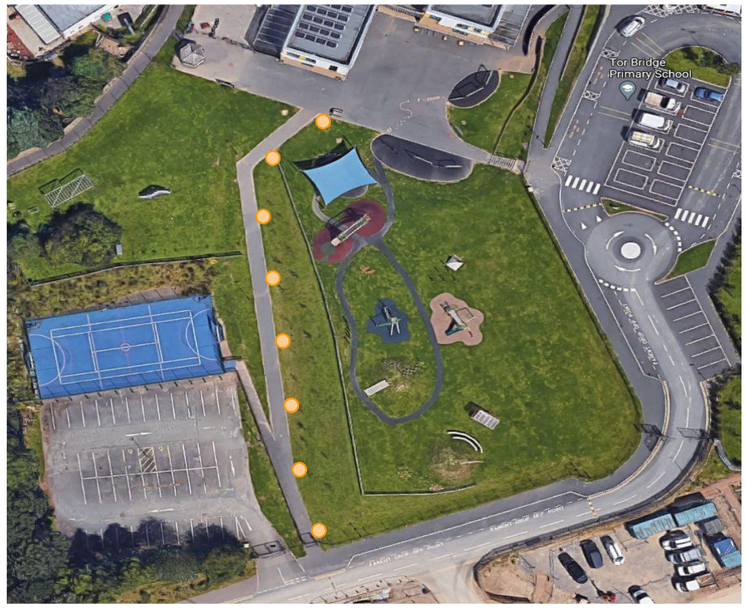
Finishes of new lighting control accessories will match those installed in the existing school.

Exterior Lighting

Existing exterior lighting mounted on the building will be modified as necessary to accommodate changes to the building elevations in terms of existing doors being removed or new doors provided. Where new external doors are proposed, new external lighting, inclusive of emergency lighting, will be provided.

New luminaires will be identical in type as those that exist. If the required luminaires are no longer available (due to the phasing-out of fluorescent lamps / inefficient control gear), then it is proposed that all luminaires associated within the area / space / room will be replaced with new LED luminaires of a style to match those that exist.

New bollard luminaires are to be provided to illuminate the pathway between the external play area of Tor Primary School and the pedestrian access gate, as detailed below.



Denotes 1000mm tall LED lighting bollard (Quantity indicative)

Small Power

Modifications to existing small power installations and associated final circuits will be required to accommodate the proposed reorganisation works.

New circuits required for the proposed extension in Cann will mimic the circuits provided for the existing parts of the school.

Finishes of new small power accessories will match those installed in the existing school.

Fire Detection & Alarm System (FDAS)

Subject to the recommendations of the fire strategy, to be confirmed during stage 4 design, it is intended that the existing FDAS will be modified to accommodate the proposed reorganisation works and extended to accommodate the new extension in Cann. It is proposed that the existing FDAS is not separated into two systems, one for each school.

Security (CCTV / Door Access / Intruder)

Modifications to all the existing security installations will be required to accommodate the proposed reorganisation works, with provision of new security services for the new extension in Cann, to mimic the current arrangements.

Information Technology (IT) & Audio Visual (AV)

A new IT rack is to be provided to the first floor shared Server Room, to allow the IT/AV system associated with TOR Bridge Primary School to be segregated from the IT services associated with CANN school, so far as reasonably practicable.

Modifications to existing IT data outlet provision and associated data cabling will be required to accommodate the proposed reorganisation works. New IT provision for the proposed extension in Cann will mimic the existing provision in Cann.

Modifications to existing AV services installations will be required to accommodate the proposed reorganisation works. New AV provision for the proposed extension in Cann will mimic the existing provision within Cann.

Public Address (PA)

Modifications to the existing PA installation will be required to accommodate the proposed reorganisation works, with provision of new PA services for the new extension in Cann, to mimic the current arrangements.

Photovoltaic (PV) Panels

Both schools have roof mounted PV panels and these connect into Cann DB's HIT2 & HL2, located in the first floor shared Plant space. Confirmation is required that the PV installation is to remain as existing as it appears that the current installation arrangement will not provide Tor with any PV electrical generation.

Section 6

Programme

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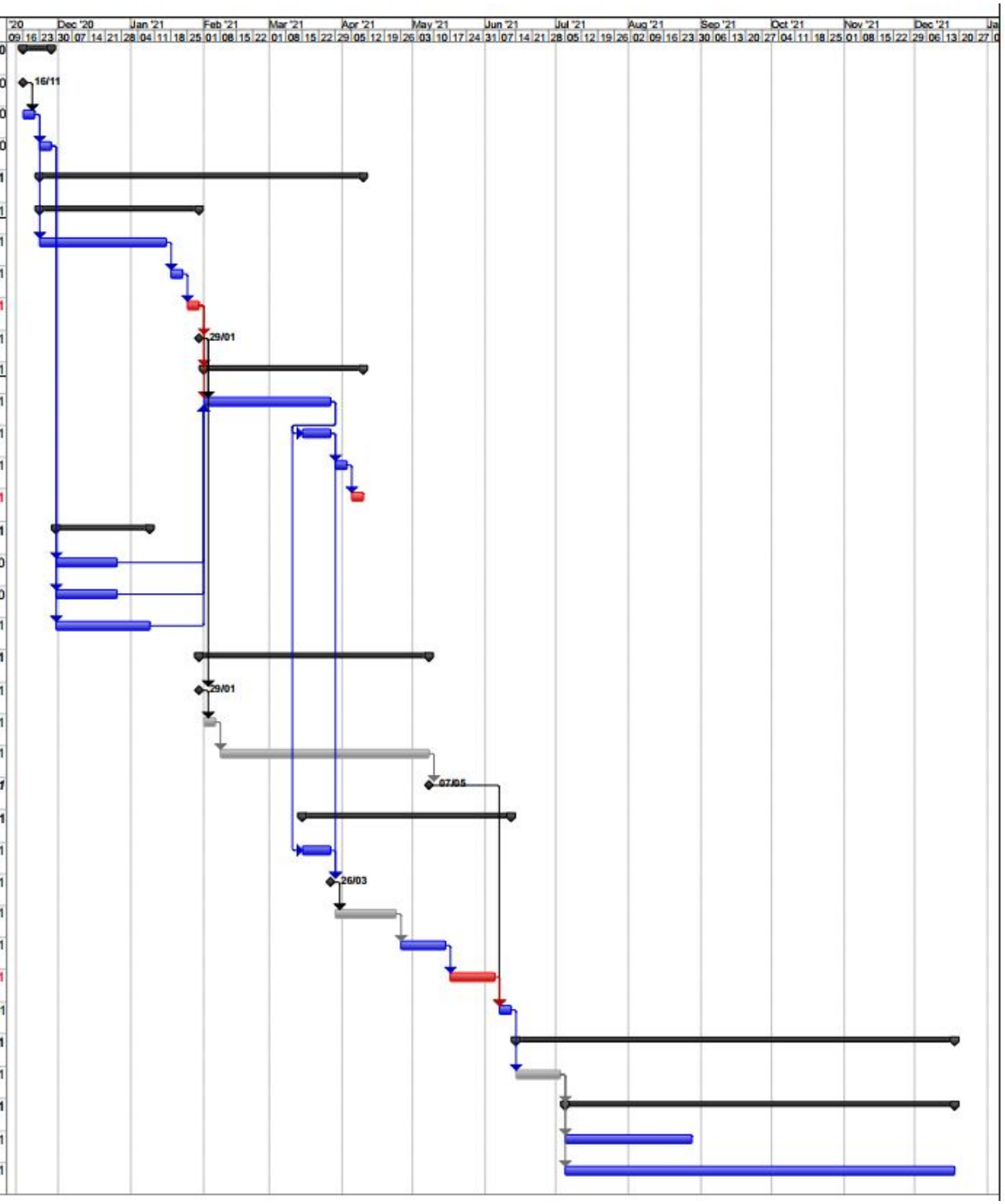
ID	Task Name	Duration	Start	Finish
1	**APPOINTMENT OF CONSULTANT**	**10 days**	**Mon 16/11/20**	**Fri 27/11/20**
2	Instruction to proceed	0 wks	Mon 16/11/20	Mon 16/11/20
3	Project Inception Meeting	1 wk	Mon 16/11/20	Fri 20/11/20
4	Develop Project Execution Plan / Project Plan	1 wk	Mon 23/11/20	Fri 27/11/20
5	**DESIGN STAGES**	**100 days**	**Mon 23/11/20**	**Fri 09/04/21**
6	RIBA STAGE 3 - DEVELOPED DESIGN	50 days	Mon 23/11/20	Fri 29/01/21
7	Prepare developed design proposals (Architectural, BSE & CSE)	8 wks	Mon 23/11/20	Fri 15/01/21
8	Formal Cost Plan 3	1 wk	Mon 18/01/21	Fri 22/01/21
9	**Client/Stakeholder Stage 3 review and sign off**	**1 wk**	**Mon 25/01/21**	**Fri 29/01/21**
10	Submit Planning Application	0 wks	Fri 29/01/21	Fri 29/01/21
11	RIBA STAGE 4 - TECHNICAL DESIGN	50 days	Mon 01/02/21	Fri 09/04/21
12	Prepare technical design proposals (Architectural, BSE & CSE)	8 wks	Mon 01/02/21	Fri 26/03/21
13	Prepare tender documents	2 wks	Mon 15/03/21	Fri 26/03/21
14	Pre Tender Estimate	1 wk	Mon 29/03/21	Fri 02/04/21
15	**Client/Stakeholder Stage 4 review and sign off**	**1 wk**	**Mon 05/04/21**	**Fri 09/04/21**
16	**SUPPLEMENTARY SURVEYS / REPORTS / PLANNING STUDIES**	**30 days**	**Mon 30/11/20**	**Fri 08/01/21**
17	Ground & drainage investigations	4 wks	Mon 30/11/20	Fri 25/12/20
18	Below ground services scan	4 wks	Mon 30/11/20	Fri 25/12/20
19	Acoustician	6 wks	Mon 30/11/20	Fri 08/01/21
20	**FULL PLANNING**	**70 days**	**Fri 29/01/21**	**Fri 07/05/21**
21	Submit full planning application to Local Authority	0 days	Fri 29/01/21	Fri 29/01/21
22	Validation	1 wk	Mon 01/02/21	Fri 05/02/21
23	Determination period	13 wks	Mon 08/02/21	Fri 07/05/21
24	***Planning Decision Notice***	***0 days***	***Fri 07/05/21***	***Fri 07/05/21***
25	**MAIN CONTRACTOR PROCUREMENT**	**65 days**	**Mon 15/03/21**	**Fri 11/06/21**
26	Market enquiries to develop tender list	2 wks	Mon 15/03/21	Fri 26/03/21
27	Issue ITT	0 days	Fri 26/03/21	Fri 26/03/21
28	Tender period	4 wks	Mon 29/03/21	Fri 23/04/21
29	Tender review and production of tender report (Contractor interviews if required)	3 wks	Mon 26/04/21	Fri 14/05/21
30	**Tender Report DFE Sign Off**	**3 wks**	**Mon 17/05/21**	**Fri 04/06/21**
31	Contract preparation	1 wk	Mon 07/06/21	Fri 11/06/21
32	**CONSTRUCTION**	**135 days**	**Mon 14/06/21**	**Fri 17/12/21**
33	Lead in period	3 wks	Mon 14/06/21	Fri 02/07/21
34	**Construction phase**	**120 days**	**Mon 05/07/21**	**Fri 17/12/21**
35	Phase 1 (Internal Alterations	8 wks	Mon 05/07/21	Fri 27/08/21
36	Phase 2 (New Build Extension)	24 wks	Mon 05/07/21	Fri 17/12/21



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