

# Specification



**Redevelopment & Extension Of St Day AFC  
At Vogue, St Day**

## **PREAMBLE**

These drawings have been prepared under the supervision and instructions of the above named designer for the sole purpose of obtaining Local Authority Planning Permission and/or Building Regulation approval only and are not intended to be a complete working drawing. The Contractor / Builder shall assume full & complete responsibility for all and any works constructed as a result of obtaining these permissions / approvals whether the drawings are referred to or otherwise, all dimensions should be checked. The contractor/Builder should satisfy himself as to the suitability of all materials and details referred to and their intended use. The builder/contractor shall be responsible for including for all works described or being apparent on the drawings or can be reasonably inferred as being necessary for the proper execution of the works. All work is to comply with the Local Authorities requirements, Planning conditions, British Standards, the current Building Regulations & recognised good building practice. All material and workmanship is to be carried out in accordance with current British Standards and Codes of Practice, and Agreement Certificate where applicable. The contractor/builder shall be responsible for checking all dimensions and levels prior to commencement of work on site.

Where demolition of a building (or part) which is greater than 1750 cubic feet (50m<sup>3</sup>) will require the owner/builder/person undertaking the demolition work to serve a demolition notice as required by Section 80 of The Building Act 1984 at least six weeks before commencement. A copy of this notice must also be sent/given to occupiers of any building adjacent to the demolition works as well as the statutory undertakers. Demolition works shall not commence unless the council has served a counter notice under Section 81 of The Building Act 1984 or after six weeks having elapsed since the Section 80 notice was served on the council.

The contractor shall remove from site all debris relating to any demolition and any excavated/broken up material required in order to carry out the work. The contractor shall remove all rubbish, debris and surplus materials from the site as they accumulate.

On commencement of works the client/contractor must notify local authority building control service on 01872 224792 and agree an inspection plan for the project as these are tailored for each individual project. If works are carried out without the notifying the council when the works are ready at the defined inspection stages then the council has the right to refuse issuing a completion certificate at the end of the project.

Work on site should not commence until approved by the Local Authority. The contractor shall be responsible for ensuring that the approved drawing/specification are being followed. Any deviations shall be agreed with the client and the Local Authority prior to commencement of those works on site.

The position and depth of all services within the vicinity are to be checked prior to commencement of work on site and any relevant permission obtained before construction work commences.

Any deviations from the approved specification and details may also affect the energy efficiency aspects of the construction. This may result in costly remedial works being necessary to achieve compliance with the Building Regulations. Any deviations shall be agreed with the SAP energy assessor and the Local Authority prior to commencement of those works on site.

## **Health & Safety**

Contractor is to comply with all relevant Health and Safety legislation, which governs the provision of his duties, including: The Construction (Design & Management) Regulations 2015 (CDM Regulations), The Control of Substances Hazardous to Health (COSHH) Regulations, The Work Place Regulations, the Personal Protective Equipment Regulations, the Manual Handling Regulations, the Electricity at Work Regulations, the Abrasive Wheels Regulations, The Control of Asbestos at Work Regulations, the Control of Lead at Work Regulations, Scaffold Regulations, and all other controlling legislation relating to the construction work, plant on site and the handling, use, storage and disposal of materials.

The Workplace Health, Safety and Welfare Regulations: Any building or part of a building which will be used as a workplace must comply with the Workplace Health, Safety and Welfare Regulations.

This includes requirements for heating, lighting and ventilation, the provision of drinking water, hot water, sanitary and changing facilities, layout of work spaces for inclusive access/use etc.

It shall be the Client and/or the Principal contractor to employ a fully qualified CDM co-ordinator, or alternatively notify HSE to ensure the requirements of the current legislation are covered by The Construction (Design and Management) Regulations 2015 and the Health and Safety at Work Act are complied with by all site staff/suppliers etc during the various stages of the design and construction works.

The contractor must obtain all installation drawings, instructions or the like issued by manufacturers, suppliers and specialists of all materials or components specified on the drawings to ensure correct use and installation of such specified items.

The contractor is to ensure the stability of the works at all times with particular attention being paid to the temporary condition of the various structural elements of the works as well as any adjacent buildings/structures during construction and demolition.

This project comprises work for a commercial client, & is notifiable to the HSE if the construction phase will exceed more than 30 working days or involves more than 500 man days.

Summary of clients role/ duties:

- o Make suitable arrangements for managing a project, including making sure other duty holders are appointed as appropriate, and that sufficient time and resources are allocated to the project
- o Provide pre-construction information as soon as is practicable to every designer & contractor appointed/considered for appointment
- o Make sure that the principal designer and principal contractor carry out their duties
- o Make sure that welfare facilities are provided on this project our role as designer is to secure building regulation approval and, accordingly, we have fulfilled our duties under the CDM 2015 regulations up to that point. At this stage our role as principle designer will cease.

All relevant health and safety information will be passed to the client for distribution to the principle contractor. For the construction stage of this project all designers will have designer duties under the CDM Regulations 2015.

Designers include any person who as part of their business prepares or modifies a design arranges for, or instructs, any person under their control to do so, relating to a structure, or to a product or mechanical or electrical system.

Design hazard elimination & risk reduction - The scope of the works are clearly illustrated on the drawings. The following risks have been assessed and are judged to be no more stringent or unusual than a capable contractor would be expected to manage or to be aware of.

Risk	Action
Structural collapse	The superstructure design should be carried out in accordance with the relevant temporary works design guidance to ensure stability is maintained during the construction phase. Contractor/client to seek engineers advice prior to the commencement of those works on site.
Fire precautions and flammable/explosive materials	The contractor should carry out a risk assessment in accordance with HSG 168 - Fire Safety in Construction and take actions based on the outcome of this. Where timber frame construction is to be used follow the Structural Timber Association guidance taking into account the 16 steps to fire safety.
Noise & disturbance to neighbours	The contractor should have due regard for the neighbours privacy and maintain noise to a minimum level, or time period to reduce the impact. The working hours during which noisy operations can be undertaken shall be restricted to 9am to 5pm Monday to Saturday.
Health & respiratory injuries	The client/contractor must undertake a site specific survey of hazardous materials including asbestos prior to the commencement

	of works on site. Any hazards must be remediated and/or removed by a specialist removal/remediating contractor prior to any demolition/alteration works being undertaken. All demolition works should include suitable damping down to minimise dust
Site access & construction facilities	The site is directly accessed from the public highway. The contractor should layout the storage of materials and welfare facilities such that clear visibility is provided for vehicles accessing and leaving the site. The contractor should minimise the transfer of mud and dirt from the construction site onto the surrounding roads by laying hardcore across the area of the site which will become the car park at the commencement of the works on site. Access will need to be diverted during construction to the skate park at the rear of the building with suitable protection for access and signs as necessary to be provided and maintained.
Injury to trespassers	The contractor should provide suitable hoarding/fencing.
Falls from height	Contractor to provide suitable safe access. Check security of ladders, guard rails and scaffolding on a daily basis
Falling debris and objects	Contractor to provide suitable and adequate protection to operatives and occupants.
Manual handling of materials	Ensure all operatives have adequate training, provided with protective gear and warning signs.
Collapse of structure	Contractor to provide adequate temporary support as required. Liaise with the structural engineer regarding support of existing structure or potential collapse of excavated foundations/retaining wall/service trenches. Provide support of any unstable ground. Provide vehicle barriers to prevent overturning/surcharge of trenches and pedestrian barriers to prevent falls into excavation.
Buried services	A site specific survey has not been carried out of the buried services and this should be undertaken prior to works commencing on site by the main contractor. Services exposed during construction to be isolated/made safe by qualified person during which time the area shall be cordoned off until such time it is deemed to be made safe.
Mobile cranes, moving plant/machinery	Provide suitable protective gear, safety barriers along with warning signs.
Flammable and explosive materials	Risk assessments must also be undertaken of the materials being used on site considering the risks of fire and explosions from the substances used, considering ignition sources and method of storage on site. Provisions will also be necessary for the existing and/or the new tank.
On-site welding	Provide suitable protective gear.
Fire	Hot works can only be undertaken following an appropriate risk assessment by the contractor. All access/egress routes should remain free of obstructions at all times.
Employees, trades & sub-contractors	Ensure all work personnel have the necessary Health and safety training prior to starting work on site.

### The Party Wall Act

The Party Wall Act 1996 provides a framework for preventing and resolving disputes in relation to party walls, boundary walls and excavation near neighbouring buildings. Where a building owner is proposing to start work covered by the Act, notice must be given to adjoining owners of their intentions as set down in the Act. Adjoining owners can agree or disagree with what work is proposed. Where they disagree, the Act provides a mechanism for resolving disputes.

Before starting work you should check if you intend works will trigger the requirements of the Act. Generally the Part Wall Act will be required in the following situations:

- Building a free standing wall or wall of a building up to or astride the boundary wall with a neighbouring property.
- Work on an existing party wall or party structure
- Excavating near a neighbouring building

If the work falls within the Act, you must notify the adjoining owners. The Act covers:

- Various works that is to be carried out directly to an existing party wall or structure
- New building at or astride the boundary line between properties
- Excavation within 3 or 6 metres of a neighbouring building(s) or structure(s), depending on the depth of the hole or proposed foundations

A party wall agreement is to be in place prior to start of works on site. A copy of the Party Wall Act 1996 and explanatory notes can be viewed and downloaded from [www.gov.uk](http://www.gov.uk) website which also provides FAQ's and example templates. If you are not sure or in doubt whether the Act applies to the work you are planning, you may wish to seek professional advice from a Party Wall Surveyor.

## **FOUNDATIONS**

All excavations shall be adequately supported, protected and kept free from water at all times. All excavated surfaces shall be cleaned of any loose and/or disturbed materials prior to and during pouring concrete.

Foundation design to be carried out by structural engineer allowing for the retaining walls and anticipated traditional strip foundations for the remaining walls by CCP. Sub-structure masonry trench block to suit width of superstructure walls above. No ground investigation has been undertaken and it is assumed that the strata will be weathered shale. Any depth of foundation indicated is indicative only.

As the work is being carried out in a known former mining area a desk top mining report must be carried out prior to the commencement of works on the extension. Conditional approval for this requested.

## **GROUND FLOOR**

Prior to preparing oversite remove all topsoil, vegetable matter from the area of the proposed construction. 75mm sand / cement screed or liquid screed on 500 gauge visqueen separating layer on 75mm Celotex GA4000 on RIW Sheetseal 226 over 150mm edge bearing concrete floor slab with minimum A142 anti crack mesh on dpm to prevent concrete drying out to quick on 150mm well consolidated and compacted hardcore.

Radon sump provided by forming a chamber with a 600mm x 600mm x 50mm paving slab with loose laid bricks or blocks under the edge of slab in honeycomb bond. 1 sump per 250 sq.m, max 15m from the furthest point of area served. 110mm pipe to be taken from sump to outside the building and terminated with a suitable screw cap to prevent rodent infestation.

## **STRUCTURAL CALCULATIONS**

Any structural engineer's details and calculations that may be required for the project to be read in conjunction with construction notes. Any deviations to calculations and/or details to be referred to engineer for their approval.

## **EXISTING STEELWORK**

Existing steelwork exposed through demolition of ground floor to be painted with intumescent paint product 83 to provided minimum 60 minutes fire resistance.

## **EXTERNAL WALLS**

Proprietary Thermowall precast twin concrete walls with intrgrated insulation supplied by CCP with U-value of 0.15Wm<sup>2</sup>k. Structural calculations and details to be provided (Conditional approval requested). Thermowall fixed to sub structure in accordance with manufacturers instructions. CCP will be supplying and erecting structure on site.

Walls externally finished with two coat sand and cement render to ground floor level. First floor wall finish to be vertical timber cedar or similar planks on 38 x 25mm horizontal tanalised battens on 38 x 25mm vertical tanalised battens fixed to precast proprietary wall panels.

Piers to outside of structure to match existing building with concrete blockwork tied to structure using stainless steel starter wall ties drilled at angle as required by manufacturer and bent back to correct position so that the tie will be central with blockwork and provided at maximum every other course.

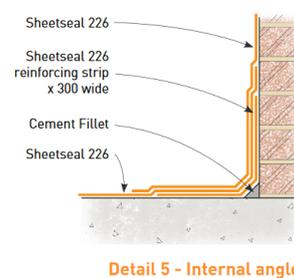
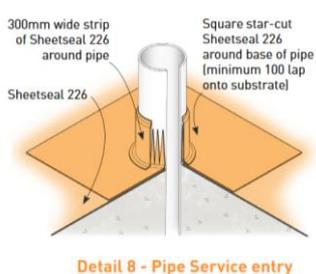
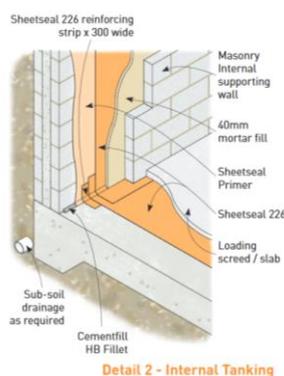
## RETAINING WALLS

Proprietary twin wall retaining wall construction to be read in conjunction with CCP and structural engineers details. To internal face of CCP twin wall with concrete infill to be applied with RIW Sheetseal Primer and then apply RIW Sheetseal 226. Sheetseal to be taken up height of ground floor wall and taken out through wall before first floor wall installed. Ensure all necessary laps, fillets etc with Sheetseal also applied to floor and taken out through external wall.

To inside of twin wall construct 100mm non load bearing dense concrete block wall minimum 100mm off twin wall. Keep a minimum gap of 40mm then 60mm Celotex finished with 100mm dense concrete block. Backfill void between Sheetseal and Celotex with mortar fill. Finish internally with render and plaster skim.

Outside of retaining wall to have 100mm land drain bedded in pea gravel positioned at the base of the retaining wall at foundation level taken to a suitable point of discharge e.g. Soakaway. Ensure tanking system is installed in strict accordance with manufacturers recommendations

RIW representative to visit site when existing retaining wall is opened up to advise on detail tying new retaining wall tanking to existing. RIW Technical Department 01344 397777 [www.riw.co.uk](http://www.riw.co.uk).



## LINTELS

Lintels to new extension external walls are incorporated with the pre manufactured wall structure by CCP.

New openings in existing blockwork internal walls to be formed by 100 x 150mm reinforced concrete lintels.

New opening formed in existing external walls to be designed by structural engineer.

## INTERNAL WALLS

It is understood the existing internal walls being removed are non loadbearing. Structural engineer to inspect prior to demolition works undertaken to ensure this is the case. If walls are found to be loadbearing structural engineer to provide remediation scheme and forward copy to building control.

New partitions metal stud in accordance with manufacturers instructions. 9mm Magply or equal cement board and skim to each side of wall on 70mm x 32mm metal studs with 70mm mineral wool between. Construction will provide over 60 minutes fire resistance and integrity.

## **FIRST FLOOR CONSTRUCTION**

75mm sand / cement screed or liquid screed on Precast reinforced concrete floor structure free spanning between external walls by CCP. Conditional approval requested.

## **ROOF STRUCTURE**

Insulated standing seam sandwich roof panels to match existing to provide minimum  $0.16W.m^2k$  on roof structure to structural engineers design and details (Conditional approval requested). Roof structure will provide warm roof construction and therefore ventilation of the roof void will not be required. Underside to be finished with 12.5mm plasterboard and skim.

Paving slabs on plastic adjustable paving support risers in accordance with manufacturers details to sit on GRP or equally approved flat roof decking.

GRP flat roof In accordance with manufacturers details of minimum 600g CSM fibreglass matting or equally approved with any additional layers or materials to allow for the positioning of adjustable paving support risers as required by roof covering manufacturer finished with colour topcoat to achieve a minimum AA, AB or AC fire rating on concrete screed cast to form fleet to hidden box gutter formed in concrete on Precast reinforced concrete floor structure free spanning between external walls by CCP. Conditional approval requested.

Underside of flat roof structure to be 12mm Cement based board or equal and either skim finish (Provide cover strips over joints to garage ceiling if preferred..

## **LEAD WORK**

Pitched roof to have proprietary flashings and valleys as required in accordance with roof manufacturers instructions / details.

Provide Code 4 lead flashings, soakers and through trays where necessary to all junctions of roof and walls. All leadwork to be in accordance with Lead Development Association written specification and details.

To avoid staining, all new leadwork shall be coated with plantation oil at completion of those works.

## **NOTCHES, RECESSES AND HOLES etc**

Vertical chases should not be deeper than  $1/3^{rd}$  of the wall thickness or, in the cavity walls,  $1/3^{rd}$  the thickness of one leaf. Horizontal chases should not be deeper than  $1/6^{th}$  the thickness of the wall leaf. Chases should not be positioned as to impair the stability of the wall, particularly if hollow blocks are to be used.

Notches and holes in simply supported floor and ceiling joists should be within the following limits:

Notches should not be deeper than 0.125 times the depth of the joist and should not be cut closer to the support than 0.07 of the span, nor further than 0.25 times the span.

Holes should have a diameter not greater than 0.25 the depth of a joist and should be drilled at the joist centreline. They should not be less than 3 diameters (centre to centre) apart and should be located between 0.25 and 0.4 times the span from the support.

Notches or holes should not be cut in rafters, purlins or binders unless approved by an engineer.

Rafters retained by ceiling ties at eaves level may be birds mouthed at supports to a depth not exceeding  $1/3^{rd}$  of the rafter depth.

## **TIMBER TREATMENT**

All existing timberwork to be examined once the building work is underway and opened up. Examine for signs of wet/dry rot and wood boring insects and if any of these are discovered a specialist contractor should undertake the necessary inspection and treatment. A 25 year guarantee by the specialist for the work must be provided for the client.

## **INSULATION**

The building fabric should be constructed so that there are no reasonable thermal bridges in the insulation layers caused by gaps within the various elements such as those around windows and door openings. Reasonable provision should also be made to reduce unwanted air leakage through all elements of the proposed works. Insulation material to be protected from moisture damage during construction.

## **MECHANICAL VENTILATION**

Extension and alterations to be fitted with continuous mechanical ventilation and heat recovery system (MVHR) to be designed and installed by specialist contractor. Provide any fire collars that may be required where any ducts etc pass through structural elements of structure or protected corridors etc. Mechanical ventilation systems upon installation to have air flow rates etc measured and system effectiveness tested on site and a copy of the results and commissioning certificate to be given to Building Control. Conditional approval required for the design of the MVHR system.

## **WINDOWS AND DOORS**

All windows and doors to match those indicated on the Planning Approved drawings and documents.

All external windows and doors to be double glazed with Low E glass and achieve a minimum u-value of 1.6 w/m<sup>2</sup>k. All external openings to be fitted with draught seals for severe rated performance to BS 6375 for air and water penetration. Non-setting silicone seals to external joints between frames and reveals. All dimensions for doors and window sizes to be checked on site prior to ordering.

Windows to habitable rooms where continuous mechanical ventilation system not provided to have purge ventilation provided by openings equal to 1/20<sup>th</sup> of the floor area of the room they serve to incorporate a controllable trickle ventilator providing background ventilation. If the window opens less than 30° the minimum opening area should be a minimum 1/10<sup>th</sup> of the room floor area. Windows to non-habitable rooms to be provided with 5000mm<sup>2</sup> of background ventilation.

Background ventilation to habitable rooms to be via trickle vents in window heads giving 5000mm<sup>2</sup> vent area per room. Background ventilation to kitchen, utility, bathroom and wc to be 2500mm<sup>2</sup> per room. Total equivalent area should be at least that given in Table 5.2(a) of AD Part F. Similar equivalent background ventilators on opposite (or adjacent) sides of a building. Minimum 0.5m distance between background ventilator and mechanical extract fan. Background ventilators should be located to avoid draughts and typically a minimum 1.7m above floor level. Trickle ventilators should be marked by manufacturer with actual ventilation area.

Safety glass (toughened or laminated) to glazing within 800mm above finished floor level and all glazing to doors less than 1500mm above finished floor level and within 300mm either side of doors. Glazing to comply with BS 6206 and BS EN 12600.

Proprietary upvc window/door cills with a Dpc/lead tray with stop ends beneath.

As we are in an area of the county with exposure zone 4 for driving rain all window and door reveals should be set back behind render with a minimum 25mm overlap.

Safe access has to be provided for cleaning windows. Glazing to the ground floor must have a suitably surfaced standing area adjacent to the window to allow cleaning of the glazed surfaces. Alternatively, windows of a size and design that allows people to clean the outside of the window

from inside the building providing a suitable mechanism that holds the window in the reverse position in accordance with BS 8213-1.

Glazing above ground floor level should have an area that will allow space for a scaffold tower or provide a suitable mechanism as specified above.

On upward opening doors (Garage area), fit a suitable device to stop it falling in a way that may cause injury.

Any power operated doors must be fitted with a pressure sensitive door edge which operates the power switch to prevent injury to people who are stuck or trapped. A readily identifiable and accessible stop switch must also be provided. In the event of a power failure the door must have the ability to open manually or open automatically.

Level access to be provided to ground floor extension main door with aco drain outside. Doors to have minimum 300mm between leading edge of door and any adjacent wall.

## **STAIRCASE**

Reconstruct bottom three steps of existing staircase as indicated to the same rise and going as the rest of the flight. Ensure the handrail is also adjusted to remain continuous between 900 and 1000mm above the pitch line of the stairs.

External concrete stairs by CCP with rise between 150 and 170mm with goings between 280 and 425mm. Handrail to be provided each side of stair between 900 and 1000mm measured above the pitch line of the stairs and landings. Handrail to be slip resistant and not cold to touch to extend minimum 300mm beyond the top and bottom nosing of the flight. Circular handrail between 32 and 50mm diameter with at least 50mm between handrail and any adjacent surface.

Floor to floor dimensions to be checked on site prior to manufacture of the staircase. Ensure the stairs are fitted and supported in accordance with manufacturers recommendations.

## **LIGHTING**

Provide at least 75% energy efficient internal light fittings and lamps throughout to be capable of taking lamps having a luminous efficiency greater than 40 lumens per circuit-Watt. Energy efficient external security lighting to be a maximum wattage of 150w and fitted with movement detecting (PIR) and daylight cut-off devices. External lighting should be designed to only accommodate compact fluorescent (CFL) luminaries or strip lights and to be switchable from inside the house.

## **MANHOLES**

To be 300/450mm dia. pre-formed plastic manhole bases and chambers on concrete base. Where in vehicular area suitable heavy duty covers to be provided with sides surrounded in concrete in accordance with manufacturers details.

Any manhole or inspection chamber located within the building to have a double sealed airtight screw down cover and frame suitable to accept the desired floor finish treatment.

## **FOUL WATER DRAINAGE**

Following demolition of internals to ground floor area existing drain runs can be investigated to see if these can be adapted for use in the proposed scheme. It has been assumed these are not suitable for re use with the suggested layout plan provided.

All below ground drainage in accordance with BS 8301 to existing system. Lay 100mm dia. flexible jointed pipes and fittings laid to a minimum fall of 1 in 60 on with 150mm granular surround of 10mm nominal single sized aggregate or 14mm to 5mm graded. Where drains have less than 450mm cover, provide 100mm thick reinforced concrete over to prevent crushing. Provide 65 x 100mm pre-stressed concrete lintels where drains pass through walls with minimum 50mm clearance around pipe. Mask around all pipe entries to protect against fill and vermin entry.

Drainage trenches should not be lower than the foundations of any building unless a trench within 1m of a foundation is filled with concrete up to the underside of the foundation. Where the foundation is further than 1m from the building the trench is filled with concrete to a level below the lowest level for the building equal to the distance of the building less 150mm.

Drains under driveway with less than 900mm cover to have minimum 150mm minimum granular pea gravel surround and 100mm reinforced spanning over trench and supported either side of trench.

ABS solvent welded wastepipes to BS EN 12056. Branch pipe diameter to wash hand basin and bidet 32mm. Bath, shower, urinal bowl, sink, dishwasher and washing machine 40mm diameter. Unvented bath, shower, urinal bowl, sink, dishwasher and washing machine branch pipes to be 40mm for maximum 3m run and 50mm for maximum 4m run. Fall of pipe should be between 18 and 90 mm/m. Unvented wash hand basin branch pipe 32mm for maximum 1.7m run and 40mm for maximum 3m run. Fall of pipe should be between 20 and 120mm/m depending on length of branch (see diagram 3(b) of AD Part H). 100mm diameter wc branch maximum 6m run with minimum fall 18mm/m. No branch pipe to connect to stack less than 450mm above drain invert. All wastes to have 50/75mm deep seal traps(See table below). If waste pipe exceeds the maximum permitted lengths either fit anti-siphon traps or anti-siphon valve at head of run. Showers to be fitted with easy access lift out traps for maintenance purposes. Cleaning access to provided on all changes in directions.

100mm diameter soil vent pipe (SVP) to be provided at head of run and taken up through roof and fitted with proprietary balloon cage terminal or fitted with proprietary roof tile/ridge vent. SVP to terminate minimum 900mm above any opening window within 3m. Other than head of run SVP's can be fitted with air admittance valve (AAV) and should be fitted above the highest flood level eg Overflow to wash hand basin.

<b>BRANCH CONNECTIONS</b>			
<b>Appliance</b>	<b>Diameter/max length pipe</b>	<b>Gradient</b>	<b>Trap depth</b>
Sink	3m max for 40mm pipe 4m max for 50mm pipe	18 to 90mm per m	75mm
Washbasin	1.7m max for 32mm pipe 3m max for 40mm pipe	20 to 120mm per m See graph AD part H	75mm
WC	6m max for 100mm pipe	18 to 90mm per m	50mm
Shower	3m max for 40mm pipe 4m max for 50mm pipe	18 to 90mm per m	50mm
Bath	3m max for 40mm pipe 4m max for 50mm pipe	18 to 90mm per m	50mm
Washing machine	3m max for 40mm pipe 4m max for 50mm pipe	18 to 90mm per m	75mm
Dishwasher	3m max for 40mm pipe 4m max for 50mm pipe	18 to 90mm per m	75mm

Ensure all pipes, fittings and joints are capable of withstanding an air test of positive pressure of at least 38mm water gauge for at least 3 minutes. Every trap should maintain a water seal of at least 25mm.

Trapped floor gully where indicated to shower areas.

SVP to be encased in duct of 2 x 12.5mm plasterboard and skim on sw batten framing with insulation quilt surrounding SVP.

WC cisterns to be fitted with an internal overflow.

Ensure boxing and services where they pass through walls, floors and ceilings are sealed where they penetrate to limit outside air infiltration.

## **SURFACE WATER DRAINAGE**

All new rainwater goods to match existing. Gutter incorporated into roof structure and to be made continuous with downpipes discharging to roddable gullies to a soakaway minimum 5m from buildings, roads or areas of unstable ground. Soakaway should be rubble filled with Terram or equivalent above. The actual size of the soakaway should be determined by a percolation test. Below ground surface water pipes to have a minimum fall of 1 in 80 on 9mm granular bed with 150mm granular surround, with drains being provided with 100mm thick (1:2:4 mix) reinforced concrete cover where they have less than 450mm cover. Provide ACO or similar profile channel against external wall wherever the ground to dpc clearance is less than 150mm. If water butts are to be provided the rainwater down pipes should be fitted with an automatic overflow connecting into the rainwater system.

## **HOT WATER & HEATING SYSTEM**

Boiler was recently replaced and understood designed with the capability of catering the proposed extension. Existing hot water/heating system to be altered and extended by an appropriate competent registered installer in accordance with the Domestic Services Compliance Guide.

## **OIL TANK**

Existing oil tank may need to be relocated with proposed works and if so oil tank to be positioned to clients choice. It is necessary to replace tank it is recommended that only bunded tanks are used. Tank to be positioned on a concrete base or paving slabs at least 42mm thick extending at least 300mm beyond the perimeter of the tank. Where the position of the tank is less than 760mm from a boundary a fire wall must be provided between the tank and the boundary having a minimum 30 minutes fire resistance. The fire wall or boundary wall should extend at least 300mm higher and wider than the tank.

Where the tank is situated within 1800mm of a building, the wall and eaves must be imperforate and achieve at least 30 minutes fire resistance or alternatively provide a fire wall between the tank and building having a minimum fire resistance of 30 minutes. The wall should extend at least 300mm higher and wider than the tank.

## **CARBON MONOXIDE ALARM**

In any room containing a fixed solid fuel, gas or oil fired appliance fit a carbon monoxide detector installed in accordance with manufacturers instructions.

## **BALCONY**

Guarding to balcony area to be construction should be such that a 100mm diameter sphere cannot pass through any opening in the guarding and so that it is not readily climbable by children. Horizontal rails for such guarding should be avoided. Guarding should be capable of resisting a force of at least the horizontal force required in BS 6399: Part1: 1996. Guarding should be at least 1100mm high above finished floor level. Handrail and support posts to be marine grade stainless steel with safety glass infill panels to be designed by specialist supplier or structural engineer.

## **NON DOMESTIC DEVELOPMENTS**

The waste collection authority should be consulted for guidance on resolving the requirements taking into consideration to the volumes of waste, storage containers, location of storage areas, collection points, vehicle access, fire hazards and protection etc.

## **FIRE ALARM SYSTEM**

The building should be provided with a suitable electronically operated automatic fire warning system, existing system to be extd, designed and installed in accordance with BS5839. A commissioning certificate must be provided to the Local Authority prior to the occupation of the building.

## **ESCAPE ROUTE**

Doors on escape route should be a minimum FD30s unless otherwise stated and these doors be fitted with smoke seals and self closing devices. Doors on escape routes (whether or not should the doors are fire doors), should either not be fitted with a lock, latch or bolt fastenings, or they should be fitted with a simple fastening that can be readily operated in the direction of escape without the use of a key. The operation of these fastenings should be readily apparent and not have to manipulate more than one mechanism).

Exit doors on escape routes onto stairs and from stairs to have a minimum of 850mm clear opening (allowing up 110 people).

In non-residential buildings it may also be appropriate to accept on some final exit doors locks for security purposes that are used only when the building is empty. In these cases the emphasis for the safe use of these locks must be placed on management procedures.

## **EXIT SIGNAGE**

Fire exit signage to be provided throughout the building directing occupants to final exits of the building in accordance with BS5499.

## **EMERGENCY LIGHTING**

All escape routes internally and externally (Whole of building due to use class) to have emergency lighting which illuminates in the event of a mains supply failure to be designed and installed in accordance with BS5266. If the building is to be used in periods of darkness, this will include external emergency lighting.

## **WATER SUPPLY**

The existing water supply to be adapted and extended as necessary to serve the altered and extended works. All works are to be carried out by a certified plumber and in accordance with all current water authority regulations.

## **PRINCIPAL ENTRANCE DOORS**

The access to the principal entrance doors of the building are considered level. The new doorway will have a overall clear opening width of 800mm.

## **DOORS TO ACCESSIBLE ENTRANCES**

Maximum 20N force required at the leading edge of the door

Clear widths as Table 2 below.

Ideally vision panels should be provided

## **MANUALLY OPERATED NON-POWERED ENTRANCE DOORS**

300mm unobstructed space on pull door side of door.

Contrasting door furniture that can be operated with a closed fist (ie. Lever)

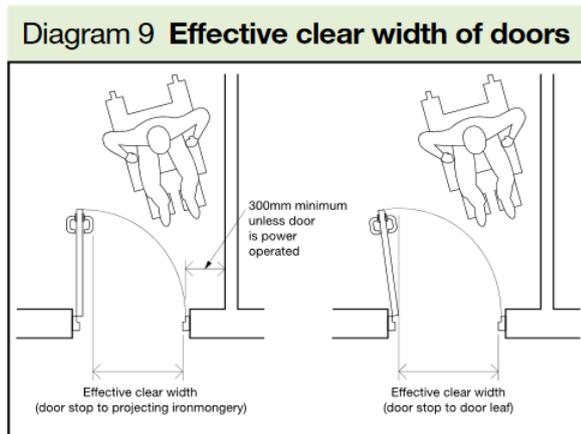
## **INTERNAL DOORS**

Where internal doors are opened manually the opening force required at the leading edge of the door must not exceed 29N.

The effective clear width through a single leaf door to be a minimum 750mm in accordance with Table 2 of Approved Document Part M

Table 2 Minimum effective clear widths of doors		
Direction and width of approach	New buildings (mm)	Existing buildings (mm)
Straight-on (without a turn or oblique approach)	800	750
At right angles to an access route at least 1500mm wide	800	750
At right angles to an access route at least 1200mm wide	825	775
External doors to buildings used by the general public	1000	775

**Note:**  
The effective clear width is the width of the opening measured at right angles to the wall in which the door is situated from the outside of the door stop on the door closing side to any obstruction on the hinge side, whether this be projecting door opening furniture, a weather board, the door or the door stop (see Diagram 9). For specific guidance on the effective clear widths of doors in sports accommodation, refer to "accessible sports facilities".



There is an unobstructed space of at least 300mm on the pull side of the door between the leading edge of the door and any return wall, unless the door has power controlled opening

Where fitted with a latch, the door opening furniture can be operated with one hand using a closed fist (ie lever handle)

All door opening furniture contrasts visually with the door

The door frame contrasts visually with the surrounding wall

The surface of the leading edge of the door that is not self closing, or is likely to be held open, contrast visually with the other door surfaces and its surroundings

Where appropriate in door leaves or side panels wider than 400mm, vision panels towards the leading edge of the door have vertical dimensions which include at least the minimum zone, or zones of visibility between 500mm and 1500mm above floor level

Glass doors should be clearly defined with manifestation on the glass at two levels, 850mm to 1000mm and 1400 to 1600mm contrasting visually with the background seen through the glass

Where of glass or fully glazed, they are clearly differential from any adjacent glazed wall or partition by the provision of a high contrasting strip at the top and sides

Fire doors in corridors held open by an electro magnetic device must self close when activated by smoke detectors or fire alarm system or power failure or activated by a hand switch

Any low energy powered swing door system is capable of being operated in a manual mode

## TOILETS

Taps capable of being operated using a clenched fist eg lever type.

Light action privacy bolts that allow doors to open outward from outside in the case of emergency.

Fire alarm should emit a visual and audible warning.

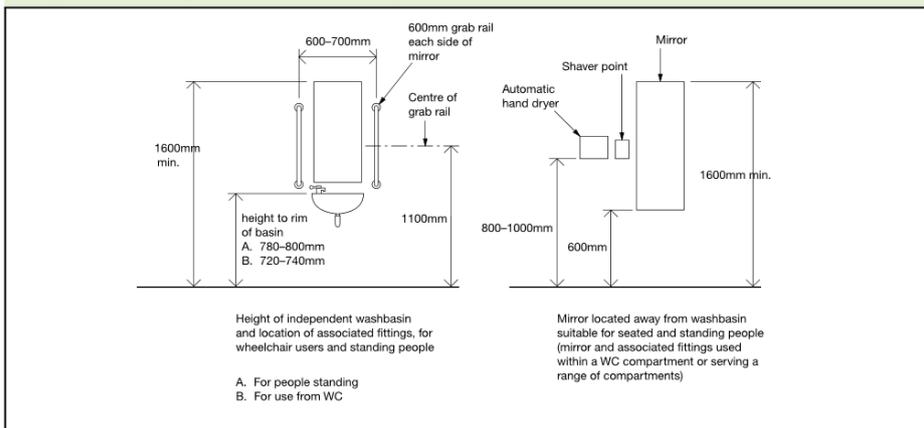
Heat emitters should be screened or have surfaces kept at a temperature below 43 degrees Centigrade.

Surface finish of sanitary fittings and grab bars should contrast with the wall and floor. Also there should be a visual contrast between the wall and floor.

Layout of WC and provision/arrangement of fittings should be in accordance with Diagram 18,19 and 20. Emergency assistance alarm system to be provided



**Diagram 20 Height of various fittings in toilet accommodation**



## SOCKETS & SWITCHES

Sockets to be located between 400 – 1000mm above floor level.

Switches for permanently wired appliances 400 – 1200mm height.

Switches/controls requiring precise hand movement 750 – 1200mm above floor level.

Pull cords for emergency alarms to be red with 50mm diameter bangles at 100mm and 800 – 1100mm height above floor level.

Sockets no closer than 350mm to corners of room.

General public use switches to have large push pads aligning with door handle between 900 – 1100mm above floor level.

Front plates to contrast with background.