ELEMENT
ARCHITECTURE

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# Specification Notes

## PREPARATION WORKS

**GENERAL:**
It is the client's responsibility to ensure that all civil and party wall agreements are in place and the correct periods of notice given before any works commence.

Client/Main Contractor to ensure all conditions attached to the Planning and/or Building Regulations approval documents are met. After demolition, the existing remaining building must be left in a safe and watertight condition. All buildings and the entire site shall be securely fenced off to protect the general public. All buildings shall be kept free of mud and dust. A building site where there are unfinished or partially completed works must be kept safe and secure.

If significant unsuspected contamination is found then all works shall cease until appropriate investigation to determine the nature, extent and potential impacts of the contamination has been undertaken and a Remediation Method Statement *(agreed with the Local Authority Contamination Section)* has been produced.

**GENERAL EXCAVATIONS & PREPARATION OF SITE:**
The appointed contractor is responsible for correct dimensional layout and setting out. All sizes to be checked/ confirmed prior to manufacturing/construction process begins. **DO NOT SCALE OFF DRAWINGS, IF IN DOUBT ASK**. Unsuitable material including turf, vegetable matter, wood, roots and topsoil to be removed from the ground to be covered by the building, and the ground immediately adjoining the building, to a depth of at least that which will prevent later growth that could damage the building.

## FOUNDATIONS AND UNDERBUILDING

**FOUNDATIONS:**
Foundation dimensions to suit ground conditions and to be agreed with the building inspector prior to any construction. Unless advised otherwise by structural engineer/ building inspector, all foundations to be C35 concrete trench fill foundations. Foundations to be min 750mm below finished ground level *(or to load bearing strata or to be taken to the invert level of any adjacent drains if lower than specified depth - whichever is greater)*. Any stepped foundations should be designed so that the height of any steps should be no greater than the foundation thickness. Any overlap should be greater than twice the step height, foundation thickness or at least 300mm. Foundation concrete to be in accordance with BS 8110 and BS EN 1992-2, Eurocode 2:Design of Concrete structures. Allow at least 7 days curing time after foundations have been poured before building work commences.

**UNDERBUILDING *(Cavity Block)*:**

External walls to be **100mm dense concrete blockwork** outer leaf with minimum **100mm cavity** filled to ground level with a weak mortar mix. The mortar used below ground level is to be a 1/3 mix to BS 5628-3 : 2005. Inner leaf to be **100mm dense concrete blockwork**. Sleeper walls to be **100mm dense concrete blockwork** *(as shown on foundation plan)*. Blockwork compressive strength: 7N/mm² *(10N/m² below ground level)*, Density: 2050kg/m3 in accordance with BS 6073. All blockwork to be constructed in accordance with BS 5628 Part 3, BS 8000 Part 3 and BS EN 771-3. Blockwork cavity ties to be vertical twist stainless steel to BS 1243 at 900mm horizontal centres and 450mm vertical centres.

## FLOOR CONSTRUCTION

**CONCRETE GROUND FLOOR CONSTRUCTION:**

Floor finish throughout to be to clients choice on **150mm insitu concrete slab** on **polythene sheet** *(not less than 125 micron/ 500 gauge, to prevent the wet concrete penetrating the joints between the boards, and to act as a vapour control layer. Ensure the polythene sheet has 150mm overlaps, taped at the joints, and is turned up at a 100mm at the walls)* on **60mm EcoTherm Eco-Versal** rigid insulation on **Visqueen 1200 *(300µm)* DPM**. 50mm minimum sand blinding on minimum 150mm consolidated hardcore. 50mm EcoTherm Eco-Versal rigid insulation to perimeter of slab, vertically placed against the inner depth of the 100mm concrete slab. All concrete laid in accordance with BS 8110 and BS EN 1992-2, Eurocode 2:Design of Concrete structures.

## EXTERNAL WALLS - MASONRY CONSTRUCTION

**CAVITY BLOCKWORK WALL CONSTRUCTION:**

20mm cement render (colour to clients choice) on **100mm blockwork** outer leaf with a clear **50mm cavity** with **50mm EcoTherm Eco-Cavity** fixed back to the internal leaf of **100mm dense blockwork** finished with **hygienic PVC wall paneling** OR **13mm plasterboard with a 3mm skim coat** ready for decoration. Blockwork compressive strength: 7N/mm2; Density: 2050kg/m3. Vertical DPCs to be incorporated at abutments between new works and existing masonry. Wall weep vents to be incorporated at maximum 1200mm centres. Vents to ventilate cavity below DPC, ceiling level, above and below floor level, eaves, above openings and verge level. Cavity trays to be installed above all openings/ roof abutments with any masonry above. Outer leaf to be tied to inner leaf with stainless steel cavity wall ties *(to BS1243)* at maximum 450mm centres vertically and maximum 750mm centres horizontally and a minimum embedment of 75mm *(alternative leaves staggered)*. At openings wall ties should be incorporated at a maximum of 225mm from the edge of opening, and a maximum of 225mm vertically. Proprietary cavity closers are to be provided to close all wall heads and built into the jambs of all external openings and behind all cills and thresholds. Wall plates retained with 30x2.5.1000mm *(100mm top leg)* galvanised straps at max 1800mm centers with 6No 12x50 sheradised screw fixings to walls. Additional straps fixed at side of window openings.

## EXTERNAL WALLS - ALL

**MOVEMENT JOINTS IN BLOCKWORK:**

12mm movement joints must be provided in the outer leaf of the external masonry walls at intervals not exceeding 6m *(12m for brickwork)* and continue 2 courses below DPC level. To comprise 6mm mastic sealed joint formed with render stop beads.

**D.P.C's:**

To be 'Visqueen 2000' or similar to be incorporated under wall plates and outer walls minimum 150mm above finished ground level. DPCs around inside faces of cills, lintels, and all openings to be pitch free Xtra Load Elite or similar.

## ROOF CONSTRUCTION

### ROOF CONSTRUCTION - BREATHABLE ROOF:

**Metal profiled roof sheeting** on **38x25mm treated horizontal battens** on **38x19mm treated counter battens** on **Daltex Roofshield breathable roofing membrane** underlay *(to BS 5250 code of practice for the control of condensation in buildings)* fixed to roof structure *(i.e. proprietary roof trusses or rafters)*. The installation of Daltex Roofshield must be strictly in accordance with the relevant requirements of BS 5534, the suppliers instructions and requirements of BRE Certificate 072/00. Trusses and rafters to be fixed to timber wall head with proprietary truss clips. Lateral restraint straps to be incorporated at high and low level spanning at least 3No. members and securely fixed into structure. Straps to comply with BS 5268 Part 3 2006 Appendix B. Fix straps to rafters with not less than 4 no.50x8 gauge sherardised screws evenly spaced, locate at least one screw 150mm off bottom end of strap. Bracing to be in accordance with BS 5268.

### ROOF INSULATION - PITCHED ROOF:

Insulation to pitched ceiling to be **100mm EcoTherm Eco-Versal** rigid insulation board *(min 50mm clear ventilated cavity maintained between insulation and underside of roof membrane)* between trusses/rafters with **13mm plasterboard** finished across inside face of rafters with taped joints to form a continuous VCL finished with a **3mm plaster skim** ready for decoration.

## INTERNAL PARTITIONS

### TIMBER PARTITIONS:

Partition formed with **100x50mm C16 reg treated studs** at 600mm centres with 2no 100x50mm C16 reg and treated top and bottom rails. Minimum **50mm mineral wool** *(min density of 10Kg/m³)* insulation between studs. Single layer of **12.5mm plain plasterboard** *(min density of 10Kg/m³)* finished both sides with a plaster skim ready for decoration.

### STRUCTURAL TIMBER:

All structural timber to be grade C24 unless noted otherwise. All roof trusses to be in timber grade TR26. All timber to be preservative treated with double vacuum process with organic solvent in accordance with the requirements of the British Wood Preservative Association. Timber frame construction materials and workmanship to be in accordance with BS 5268 and current TRADA recommendations. Studs should as far as possible line through with floor joist and roof trusses above

## GENERAL CONSTRUCTION

### AIR INFILTRATION:

The details shown contain measures designed to reduce air infiltration. Ways of preventing air infiltration should be considered at every penetration of this barrier. Particular care on site should be paid to:

· joints between structural components e.g. wall to floors
· joints around components and opening within walls
· service penetrations plumbing, electrical and ventilation.

Insulated and sealed loft hatches to be fitted

### GENERAL:

· close any vertical ducts at the top and bottom where they meet the air barrier *(e.g. boxing round soil vent pipe's)*
· seal any service penetrations through the air barrier
· select the appropriate sealant or gap filler for the size of gap and degree of movement anticipated

### MASONRY CONSTRUCTION:

· ensure continuous ribbons of adhesive are used to fix to dry lining at perimeters of external walls, openings, and services on external walls. The importance of correct sealing of dry lining on dabs needs to be stressed, as this is a key area of infiltration and can seriously affect the overall ventilation rate
· use joist hangers to support floor joists
· seal under skirting boards where dry lining is used, or on suspended floors.

**THERMAL BRIDGING:**

Construction to be in such a way that there are no substantial thermal bridges or gaps where the layers of insulation occur within building elements, at the junction between building elements and at the edges of building elements where openings in the structure are formed.

## DOORS AND WINDOWS

### DOOR & WINDOW SECURITY SPECIFICATIONS:

**General**

**ALL WINDOWS, DOORS & GLAZING TO BE COMPLIANT WITH PART K OF THE BUILDING REGULATIONS**

External doors should be designed and installed to resist forced entry by:

1) by meeting the recommendations for physical security in Section 2 of Secured by Design' *(ACPO, 2009)*; or

2) by use of door sets and windows which are tested and certified by a notified body as meeting a recognised standard for security such as BS PAS 24: 2007 for door sets or BS 7950: 1997 for windows

3) by use of door sets and windows manufactured to meet recognised product standards and defined component performance as follows

• BS 7412: 2007, for PVCu units;

• BS 644: 2009, for timber window units;

• BS 4873: 2009, for aluminium alloy units;

• BS 6510: 2005, for steel-framed units

Vulnerable windows should be constructed to resist attempts to force frames and, if openable, ironmongery. Windows which can be opened should befitted with either:

• a keyed locking system that uses a removable key; or

• a keyless locking system, together with glazing which incorporates laminated glass or a similarly robust glazing material.

**Laminated Glazing:**

Any door with glazing and every pane of glass within 400mm of any door to have one pane of glass *(of the double glazing)* to be laminated as per BS EN 356:2000 class P1A.

**Hinges**

If single swing the door set should be fitted with at least one and a half pairs of hinges meeting the recommendations of BS EN 1935: 2002 for hinge grade 11 or above. Hinges fitted to an outward-opening door should be of a type that does not permit the hinge pin to be removed unless the door is open. Otherwise, hinge bolts should be fitted to ensure the door leaf will remain secure when closed.

**Locking**

A door set should include a single-point locking device to BS 3621: 2007 *(for keyed egress)* or to BS 8621: 2007 *(for keyless egress)* or a multipoint locking system. A deadlocking facility should be provided. Any lock cylinder should be in accordance with BS EN 1303: 2005, grade 5 key security and grade 2 attack resistance as a minimum.

**Sliding Doors**

A sliding door should have a multi-point deadlocking system with 3 or more hook or similar bolts. To prevent removal of the door, an anti-lift device should be fitted. Shoot bolts, if used, should locate into the head of the frame.

**Multiple Leaf Doors**

A door set with more than one door leaf should include a means of securing any secondary leaf at head and foot to allow the primary leaf to be securely locked.

**Installation and fixing of doors and windows**

To ensure a robust installation, fixing of a door set or window should be in accordance with:

• the recommendations given in section 8 of BS 8213-4: 2007; or

• manufacturer's written instructions where these meet or exceed the recommendation within this British Standard.

## FIRE

### FIRE STRATEGY - Approved Document Part B: Volume 2

**B1 - Means of Warning and escape**

The building is a small toilet block which has 3 escape exits - the central emergency escape door and the turnstiles at either end of the building. This means that any occupant is never more than 7m away from an escape door and they will always have multiple options to exit. The turnstiles would allow unabated escape out of the building. The maintenance corridor is for very occasional maintenance use of the toilets by a trained staff member and so it is not a space where anyone will be dwelling and there will not be any flammable or dangerous substances being stored. As this is a Teignmouth Town Council facility and they are keen to prevent any potential antisocial behavior within the property it will be monitored remotely (CCTV etc) which means any fire situation will be dealt with even if no one is in the building.

**B2 - Internal fire spread (linings)**

All internal wall linings are to have 12.5mm plasterboard. The ceilings throughout will be finished with 2No layers of 12.5mm plasterboard.

**B3 - Internal fire spread (structure)**

Any exposed steel elements are to be finished with 2No layers of 12.5mm plasterboard (staggered joints) or 1 layer of 12.5mm fireline plasterboard to provide 1 hour fire resistance. 30 minute cavity barriers are to be fitted at all cavities to prevent spread of flame.

**B4 - External fire spread**

The clients are in ownership of all land within 25m therefore there is no risk of spread of flames to a neighbouring building. The external skin is blockwork and therefore non combustible.

**B5 - Access and facilities for the fire service**

The building is classified as a small building (less than 2000m2 with a top storey no more than 11m above ground level) therefore a pump appliance must be able to access every point of the building from within 45m. This is easily possible as the carriageway is directly to the South of the building.

### BUILDING OWNERS RESPONSIBILITIES REGARDING FIRE SAFETY

These premises are subject to the Regulatory Reform (Fire Safety) Order 2005 for which a Fire Risk Assessment must be carried out by the employer or responsible person. This may result in the requirement of other Fire Safety provisions.

For technical detail and guidance you are strongly advised to obtain the appropriate publication that has been published by HM Government, details of these publications are available at https://www.gov.uk/workplace-fire-safety-your-responsibilities for purchase or free download. When purchasing or installing equipment, compliance with the relevant British Standard is normally taken as being adequate. Should the issues set out in this report require major changes or costs then you are advised to take professional advice before proceeding.

Under Regulation 38 of the Building Regulations, it is a requirement to supply information relating to the design and construction of the building or extension and the services, fittings and equipment provided in or in connection with the building, which will assist the responsible person to operate and maintain the building with reasonable safety. Such information should be kept and incorporated with the Fire Risk Assessment (where appropriate) and be available to the Inspecting Officer when the premises are subjected to a Fire Safety Audit under the Regulatory Reform (Fire Safety) Order 2005.

The building owner must comply with the Regulatory Reform (Fire Safety) Order 2005 / Approved Document B (Fire safety - Volume 2 - Buildings other than dwellings (2019 edition) and:

1. Assess the fire risks in the workplace by undertaking a review of your fire risk assessment and establish whether this policy raises any new significant findings that may impact upon you, your staff and other persons who may occupy your premises.
2. Implement the necessary controls that will effectively deal with and mitigate the issues that have been raised.
3. Ensure that there is a responsible person or persons that have a working knowledge of the fire alarm system
4. Check that a fire can be detected in a reasonable time and that people can be warned.
5. Check that people who may be in the building can get out safely.
6. Provide reasonable fire fighting equipment
7. Check that those in the building know what to do in the event of a fire
8. Check and maintain the fire safety equipment.

The Building Owner should prepare a fire action plan to include provision for the safe evacuation of disabled people via alternative routes.

**PORTABLE FIRE FIGHTING EQUIPMENT**

A Fire Risk Assessment should be carried out to identify the number and type of extinguishers required for the premises (IF REQUIRED).
Fire fighting equipment should be provided in the premises and installed in accordance with BS 5306-8:2012.
Paragraph 6 of the British Standard deals particularly with distribution of extinguishers according to classification and rating. It is recommended that a reputable fire protection engineer be consulted.

**EMERGENCY ESCAPE LIGHTING**

Emergency escape lighting system to be provided throughout the premises
including the external escape routes. Installation of emergency lighting to be in accordance with BS 5266-1:2016 as read in association with BS EN 1838:2013

**FIRE EXIT SIGNS**

Fire exit signs conforming to BS 5499: Part 1 or The Health & Safety (Safety Signs & Signals) Regulations 1996 should be provided. Signs provided to indicate exit doors should be sited either immediately above the door or at the highest practical level but not below the top third of the door.

**CERTIFICATION**

All equipment should be certified and documentation made available for inspection by an authorised Officer of the Fire and Rescue Service on request.

**GENERAL PROVISIONS IN ALL SANITARY ACCOMMODATION**

Following provisions should be made within all sanitary accommodation:
- sanitary facilities, fittings and surface finishes should be easily cleanable, to allow a hygienic environment to be maintained; and
- to allow space for general use, where a door opens into a space containing a sanitary facility, there should be an unobstructed space of at least 450mm in diameter between the sanitary facility and the door swing; and
- a door fitted with a privacy lock should have an emergency release, operable from the outside and, if not sliding or opening outward, offer an alternate means of removal, to permit access in an emergency; and
- a sanitary facility and any associated aid or fitting, such as a grab rail, should contrast visually with surrounding surfaces to assist in use by a person with a visual impairment.

### ACCESSIBLE SANITARY ACCOMMODATION

Sanitary accommodation should:

· be clearly identified by signage as accessible sanitary accommodation; and contain a maneuvering space of at least 1.5 m by 1.5 m, clear of any obstruction, including a door swing, other than a wall-mounted wash hand basin which may project not more than 300 mm into this space; and

· be fitted with fixed and folding grab rails, as shown in the relevant diagram below. Rails should be securely fixed to walls and capable of accommodating the transfer weight of an adult; and

· be fitted with an assistance alarm which can be operated or reset when using a sanitary facility and which is also operable from floor level. The alarm should have an audible tone, distinguishable from any fire alarm, together with a visual indicator, both within the sanitary accommodation and outside in a location that will alert building occupants to the call; and

· where more than one accessible sanitary facility of a type is provided within a building, offer both left- and right-hand transfer layouts to allow choice in use by a person who favours a particular transfer method.

## SERVICES

### M&E GENERAL

Detailed design of all systems are developed by the contractor.

### ELECTRICAL INSTALLATION

The electrical installation will comply with BS 7671:2008. Requirements for electrical installations (17th Edition IEE Wiring Regulations).

### GENERAL LIGHTING

The general lighting installation shall comply with BS 7671:2008, requirements for electrical installations (17th edition IEE wiring regulations).

### LIGHTING CONTROL

Lighting controls will comply fully with artificial and display lighting, of the current building regulations.

- Areas where daylight is present shall be controlled be photoelectric switching with overide control.
- Areas which are general unoccupied such as stores, toilets and the like will be controlled by PIR sensors with no manual switching.
- Office areas and small workshops will be switched manually at the door with additional presence/ abscece dectection.
- The lighting design will be in full compliance with the CIBSE guide.

### VENTILATION

Mechanical ventilation to comply with BS 5720: 1979 or CIBSE Guide B : 1986 installation and equipment data Section B2. Ventilation and air conditioning (requirements). Shower rooms to be capable of 10000mm$^2$ trickle ventilation & 15 litres/ sec mechanical ventilation. Toilets to be capable of 10000mm$^2$ trickle ventilation & 3 air changes per hour mechanical ventilation.

Natural ventilation to comply with Section 3 of BS 5925: 1991 (1995) or CIBSE Guide A 1986 Design Data. Section A4. Air infiltration and natural ventilation.

### NOTES

1. Layouts shown are indicative only and are not assumed to be compliant with the relevant standards. The contractor has a responsability to carry out all designs and calculations to the appropriate standards/ regulations/ codes before sumitting their tender.

2. Wiring shall be flat multi-core XLPE cables with grey LSF oversheath installed in metal conduit where they pass down walls (within partitions or externally).

3. All conduit shall be recessed where possible, with accessories flush mounted, except in the workshop ares where containment shall be surface mountained.

4. Data outlets shall be wired by the sub-contractor from the patch panel to the RJ45 outlets utilising CAT 6 data cables. Connection at the RJ45 outlets and patch panel shall be by the sub-contractor. All cables must be labelled to correspond to their respective outlets, with the contractors working drawings indicating the reference numbers for all outlets on each level. Allow all neccessary conduit drops, back boxes, front plates, etc. Telephone cabling shall be made via the CAT 6 cabling. Allow for seperate patch panels and adaptors at RJ45 outlets.

5. Dado/ skirting trunking shall be served by recessed conduits for power and data cables into the back of the trunking.

6. All sockets, accessories, etc. shall be white, except where metal clad.

7. Socket outlets in offices shall have dual earth connectors to comply with section 607 of the IEE regulations. Double earth bars shall also be provided at the distribution board to satisfy the requirements.

8. Layouts shown on this drawing apply to general power/ data required for workstations, etc. and are shown only to ensure the correct positioning is used. Power supplies for fixed equipment or plant, etc. are not shown on this drawing and should be installed as required and in the position best suited to the equipment/ plant being served.

9. All outlets shall be labelled with their full circuit reference.

10. Wiring between isolators and fixed plant or machinery shall be carried out by the electrical sub-contractor. Wiring shall be contained in flexible metallised conduit with PVC oversheath (KOPEX). If the supply is small from a spur outlet, then install suitable flexible cable. If the supply cable is too large, XLPE/ SWA/ LSF cables shall be fitted . The contractor must liase with the equipments suppliers/ installers before connection proceeds and before power-up to ensure they are satisfied. Ultimately they may insist on carrying this out themselves.

**ELECTRICAL:**

Electrical installation to be designed, constructed, installed and tested as such to comply with recommendations of BS 7671:2008, current IEE regs and Building Regulations. Electrical work to be certified by a member of SELECT or NICEIC only.

All fixed light fittings and lamps installed within a building should be low energy type, with a min luminous efficacy of 75 lumens/circuit watt. Fixed light fittings include only the main light sources to a room; not display or feature lighting such as picture lights, kitchen wall cupboard lights, over mirror lights. A light fitting may contain one or more lamps and a group of lamps operated by the same switch could be counted as one fitting, e.g. a pair of wall lights.

Outlets and controls of electrical fixtures and systems should be positioned at least 350 mm from any internal corner, projecting wall or similar obstruction and, unless the need for a higher location can be demonstrated, not more than 1.2 m above floor level. This would include fixtures such as sockets,
switches, fire alarm call points and timer controls or programmers. Within this height range:

· light switches should be positioned at a height of between 900 mm and 1.1 m above floor level.

· standard switched or unswitched socket outlets and outlets for other services such as telephone or television should be positioned at least 400mm above floor level. Above an obstruction, such as a worktop, fixtures should be at least 150 mm above the projecting surface. Where socket outlets are concealed, such as to the rear of white goods in a kitchen , separate switching should be provided in an accessible position, to allow appliances to be isolated.

**HIGH-SPEED ELECTRONIC COMMUNICATIONS NETWORK INFRASTRUCTURE:**
Every building must be fitted with a BT telephone master socket or Fibre Optic cable point *(i.e. high-speed ready in-built physical infrastructure)* for connection to a high-speed electronic communication network. Additional telephone points or data points *(Cat 6 etc)* are to the clients discretion.

**ACCESS FOR MAINTENANCE:**
Reasonable access to be provided for maintaining ventilation systems, including all of the following:

- **a)** providing access to replace filters, fans and coils
- **b)** Providing access points for cleaning ductwork
- **c)** Providing access for the general maintenance of plant

**COMMON SPACE VENTILATION:**
Common spaces to be naturally ventilated by appropriately located ventilation openings with a total opening area of at least 1/50th of the floor area of the common space.

## PLUMBING AND DRAINAGE

**PLUMBING:**
All supply pipes to be in copper piping with proprietary protected preformed insulation to BS5422:2009 Thermostatic Mixing Valve (anti scald valve) fitted at point of delivery to bath, bidets and shower heads and should not allow water temperature to exceed 48 degrees celsius in order to prevent scalding

**RAINWATER GOODS:**
Marley deepflow UPVC gutters with brackets at 600mm centres. 68mm diameter UPVC downpipes with holderbats at 1800mm centres. All rainwater pipework to be constructed and installed to BS EN 12056-3: 2000

**DRAINAGE:**
All new drains to be laid and tested to the satisfaction of the local authority. All drains to be a minimum of 450mm below finished ground level. All drains to have a min fall of 1:80. All pipes to be 110mm underground quality UPVC pipes and encased in pea-gravel before infilling. Any pipes passing under walls are to be haunched over. Access in drainage to be provided where any changes of direction occurs and at head of runs. Access to be provided on internal drainage where directional changes occur at head of drain and where waste pipe enters stack. Ensure shower traps are accessible. Bend at foot of vertical stack must have a radius of not less than 200mm or should consist of two of at least 45 degrees.
All drainage below concrete floor to be 110mm UPVC pipes. Connect to sanitary ware with appropriate reducers in order to comply with the following:
All sanitary pipework to be installed in accordance with BS EN 12056-2:2000
**SVP**: 110mm diameter UPVC vent pipe,
**Toilet**: 110mm diameter UPVC waste pipe,
**Sinks & Baths**: 40mm diameter waste pipe,
**WHB's & Showers**: 30mm diameter waste pipes
Drains which pass below foundations are to be protected by the provision of reinforcing within the strip foundation which pass over drains extending minimum 900mm beyond each side of drain track. Where a drain passes through a wall the wall will require to be provided with a lintel over the drain opening.
All drainage should be constructed and installed in accordance with the recommendations in BS EN 12056-1:2000, BS EN 752: 2008 and BS EN 1610:1998

**DISUSED DRAINS:**
Any former or disused drains to be disconnected from the drainage system as near as possible to the point of connection in a manner that does not damage any pipe that is still in use and ensures the sewer system is watertight. Where possible, the

redundant drains are to be removed. If this is not feasible, the disused drains are to be capped at both ends and at any additional point of connection.

**AIR ADMITTANCE VALVES:**
110mm dia Soil Vent Pipe *(SVP)* with air admittance value. Air Admittance valves to be installed:
a. accordance with the recommendations in BS EN 12380: 2002; or
b. in compliance with the conditions of certification of a notified body.
Removal access panel with ventilation grille to be fitted to allow access.

**SOIL VENT PIPES:**
110mm dia UPVC soil vent pipe drop and access located within 45mm x45mm timber boxing. Access to be min 1000mm above floor level. SVP ducted through ceiling and ducted through a proprietary ridge vent. Fully seal around ducting where it penetrates ceiling

**RAINWATER HARVESTING TANK:**
Rainwater harvesting tank to supply toilet cisterns and outside taps only. The rainwater harvesting system is to be designed, constructed and installed in accordance with the Water Byelaws 2004, the recommendations of the Water Regulations Advisory Scheme *(WRAS)* Information and Guidance Notes No. 9-02-04 and 9-02-05, 1999. BS 8515: 2009 'Rainwater harvesting systems - Code of Practice' and the CIRIA publication CIRIA C539; Rainwater and grey water use in *buildings',* provide good practice installation, design and maintenance advice. Prior to the storage of water in the tank a suitable filter is to be installed to remove leaves and other organic matter and dust or grit. Disinfection may be required if the catchment area is likely to be contaminated with animal faeces, extensive bird droppings, oils or soil.
Suitable underground 3400 litre GRP water storage tanks to be installed and sealed and protected against the corrosive effects of the stored water and to prevent the ingress of ground water.
Water for use in the dwelling should be extracted from just below the water surface in the tank to provide optimum water quality. All pipework carrying rainwater for use in the dwelling should be identified as such in accordance with the WRAS guidance notes and great care should be taken to avoid cross-connecting reclaimed water and mains water. Tanks should be accessible to allow for internal cleaning and the maintenance of inlet valves, sensors, filters or submersible pumps. An overflow should discharge to a soakaway or to mains drainage where it is not reasonably practicable to discharge to a soakaway. Backflow prevention devices should be incorporated to prevent contaminated water from entering the system.

## ACCESSIBILITY

### ACCESSIBLE ROUTE

For safety and convenience in use, the surface of an accessible route should be firm, uniform, porous and of a material and finish that will permit ease in maneuvering. It should provide a degree of traction that will minimise the possibility of slipping. This should take into account both anticipated use and environmental conditions.

The surface of an accessible route, whether composed of modular paving units, formless materials such as tarmac, or another durable material, should have a profile that will not offer a trip hazard or result in standing water. It should be installed in accordance with a code of practice relevant to the material, where such exists.

Surface elements such as drainage gratings and manhole covers should be of a type that will not create a trip or entrapment hazard. Uneven surfaces, such as cobbles, or loose-laid materials, such as gravel, will present difficulties to many people and should not be used.

Route to be min 1m wide. 1200x1200mm Ramp landing provided at top and bottom of every flight. Land around ramp to be graded down from ramp edge. Building to have a raised DPC 150mm above the ramp.

## EXTERNAL ACCESS AND GROUNDWORKS

**PEDESTRIAN RAMPS**

Surfaces with a gradient of 1 in 20 to not more than 1 in 12 are considered to be ramps and recommendations are made on such surfaces to ensure the safety and amenity of users. Gradients of more than 1 in 12 are considered too steep to negotiate safely and are not recommended. Steep gradients require both greater effort to ascend and more care when descending. As a general principle, the steeper the gradient of a ramp, the shorter the flight should be. A pedestrian ramp should be constructed in accordance with the following table:

Gradient, length and rise of a flight in a pedestrian ramp:
Maximum gradient of flight 1 in 20, Maximum length of ramp 10m, Maximum rise of ramp 500mm
Maximum gradient of flight 1 in 15, Maximum length of ramp 5m, Maximum rise of ramp 333mm
Maximum gradient of flight 1 in 12, Maximum length of ramp 2m, Maximum rise of ramp 166mm

The maximum flight length for a particular gradient can be interpolated as follows: 3 m long for a gradient of 1 in 13, 4 m long for a gradient of 1 in 14, and so on. The width of a ramp should relate to the intensity of use. For example, an unobstructed width of 1.8 m is the minimum that will allow two wheelchair users to pass safely. As a ramp flight will normally be enclosed between flanking handrails or guarding, it is important that this width still offers safe and convenient passage. The effective width of a ramp flight should be at least 1.0 m. Effective width is measured between handrails, or where there are no handrails, the protective barrier or inside face of any wall or guarding kerb, and should be clear of any obstructions.

## COMPLETION SIGN OFF

Before completion from Building Control can be secured the following A4 document must be filled in and signed by the client, principal designer and principal contractor. Please note that without this document Building Control will not provide a completion certificate.

## BUILDING REGULATIONS SIGN OFF SHEET

**Client**

Name:
Address:
Site Address (if different):
Phone Number:
Email:

I can confirm that to the best of my knowledge as the client for this project the building work is complete and complies with all applicable requirements of the building regulations.

Signed:

**Principal Designer**

Name:
Address:
Phone Number:
Email:
Date Appointed:

I can confirm that to the best of my knowledge as the principal designer for this project the Part 2A (duty holders and competence) duties of the Building Regulations 2010 (Amended October 2023) as principal designer have been fulfilled.

Signed:

**Principal Contractor**
Name:
Address:
Phone Number:
Email:
Date Appointed:

I can confirm that to the best of my knowledge as the principal contractor for this project the Part 2A (duty holders and competence) duties of the Building Regulations 2010 (Amended October 2023) as principal contractor have been fulfilled.

Signed: