



**TERRAPIN PROPOSAL**  
**Value building offering**



Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 1 of 10

**CONTENTS**

**1.0 RELEVANT DRAWINGS..... 3**

**2.0 SCOPE OF WORKS TO BE CARRIED OUT BY TERRAPIN..... 4**

2.1 PRELIMINARIES.....4

2.2 DELIVERY AND COMPLETION.....4

2.3 CRANE .....5

2.4 TRACKING.....5

2.5 LOCAL AND STATUTORY AUTHORITY REQUIREMENTS.....5

2.6 BREEAM ASSESSMENT.....5

2.7 CONSTRUCTION DESIGN AND MANAGEMENT .....5

2.8 FOUNDATIONS, EXTERNAL WORKS AND DRAINAGE .....5

2.9 SUPERSTRUCTURE.....5

2.10 EXTERNAL CLADDING.....5

2.11 ROOFING .....6

2.12 ROOF DRAINAGE .....6

2.13 STANDARD INTERNAL PARTITIONS.....6

2.14 DOORS.....6

2.15 WINDOWS.....6

2.16 CEILINGS .....6

2.17 FLOOR FINISHES .....7

2.18 DECORATIONS.....7

2.19 LIGHTING.....7

2.20 EMERGENCY LIGHTING INSTALLATION .....7

2.21 GENERAL POWER INSTALLATION.....8

2.22 FIRE ALARM INSTALLATION.....8

2.23 ELECTRICAL HEATING & WIRING TO MECHANICAL SERVICES .....9

2.24 SWITCHGEAR & DISTRIBUTION SYSTEMS.....9

2.25 INTRUDER ALARM PANEL.....9

2.26 MISCELLANEOUS ITEMS .....9

2.27 PLUMBING INSTALLATION .....9

2.28 MISCELLANEOUS ITEMS .....9

2.29 OPTION 1 – ADDITIONAL WINDOWS .....9

2.30 OPTION 2 – HEATING AND COOLING .....10

2.31 OPTION 3 – “B” ENERGY PERFORMANCE .....10

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 2 of 10

**1.0 Relevant Drawings**

Drawing No	Drawing Title	Revision	Date
xxxx	Floor Plan and Elevations	A	27.02.2009

**2.0 SCOPE OF WORKS TO BE CARRIED OUT BY TERRAPIN**

**2.1 PRELIMINARIES**

2.1.1 Terrapin have included the following preliminary items:

- Fire alarm
- Internal fit out
- Mechanical and Electrical services
- Site accommodation
- Site perimeter temporary fencing
- Site welfare, toilets, canteen etc
- Small tools and plant
- Waste management

2.1.2 Terrapin have NOT included for:

- Access control system
- Access tracking
- BREEAM assessment
- Building air test
- Building regulation fees
- Canopies
- CDM Co-ordinator
- Delivery
- Design works
- Energy performance certificate
- External works, car parking, drainage etc
- Foundations
- Ground Investigation
- Intruder Alarm
- Management of incoming services, water and electric
- Panic Alarm
- Performance Bond
- Planning Application and fees
- Site management
- Site preparation
- Site security
- Soil test
- Solar shading

**2.2 DELIVERY AND COMPLETION**

2.2.1 Terrapin estimate that from receipt of an order and confirmation of final specifications Terrapin should be able to provide handover of the building within approximately 5 weeks. This includes an onsite construction period of 2 weeks. The price of delivery is NOT included.

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 4 of 10

## **2.3 CRANE**

2.3.1 The size of the crane required to lift the building modules onto the foundations has been established on the basis of being positioned alongside the building.

## **2.4 TRACKING**

2.4.1 At this stage Terrapin have assumed that tracking to provide additional ground support for our crane and transporters are NOT required.

## **2.5 LOCAL AND STATUTORY AUTHORITY REQUIREMENTS**

2.5.1 It may be necessary to amend our costing once the exact requirements of the Local Authority and statutory bodies have been established.

## **2.6 BREEAM ASSESSMENT**

2.6.1 Terrapin have NOT undertaken an assessment of the building. However Terrapin can undertake an initial assessment utilising the 2008 Pre Assessment Estimator spreadsheet.

## **2.7 CONSTRUCTION DESIGN AND MANAGEMENT**

2.7.1 Terrapin have NOT made an allowance within our quote to conform to the 2007 CDM Regulations as a Principal Contractor. The role of CDM-Coordinator is currently excluded.

## **2.8 FOUNDATIONS, EXTERNAL WORKS AND DRAINAGE**

2.8.1 Terrapin have NOT made an allowance for:

- 2.8.1.1 Excavating and concreting pad foundations and erecting blockwork piers on each pad.
- 2.8.1.2 Constructing a foul drainage system.
- 2.8.1.3 Constructing a storm drainage system.
- 2.8.1.4 Construct timber steps and ramps.
- 2.8.1.5 Reinstating ground.

## **2.9 SUPERSTRUCTURE**

2.9.1 The building will be based upon using our standard Terrapin Unitrex III flat roof, single storey units providing an internal ceiling height of 2.4 metres.

2.9.2 The building is provided with a suspended timber ground floor.

2.9.3 The building and internal layout will be arranged approximately as shown on preliminary drawing attached.

2.9.4 Terrapin buildings are manufactured and built in accordance with Building Regulations.

## **2.10 EXTERNAL CLADDING**

2.10.1 The external cladding consists of a glass fibre mat reinforced polyester resin board with a surface finish of natural stone aggregate.

<b>Document</b>	<b>Version</b>	<b>Approved</b>	<b>Date</b>	<b>Page</b>
Proposal Document	1.0	CE	17.02.2009	Page 5 of 10

## **2.11 ROOFING**

- 2.11.1 The flat roof is formed by solid timber laminated beams supporting timber roof joists laid to fall, overlaid with a 'warm' roof decking consisting of plywood, thermal insulation and a continuous vapour check.
- 2.11.2 The first layer of factory applied felt is a partially bonded high performance roof felt. This is covered by mineral surfaced bituminous roofing felt reinforced with a non-woven spun bonded polyester mat, all bonded with hot bitumen in the factory.
- 2.11.3 The capping flashing over the abutting upstands of the units will be formed on site using a high performance polyester based torching membrane. This system gives a fire designation of AB.

## **2.12 ROOF DRAINAGE**

- 2.12.1 The roof drainage will be a rectilinear profile UPVC rainwater system.

## **2.13 STANDARD INTERNAL PARTITIONS**

- 2.13.1 Partitions will be constructed using steel studs at 600 centres covered with plasterboard both sides.
- 2.13.2 Half hour fire resistance will be provided by using masking strips to the partitions where indicated on the attached drawing.
- 2.13.3 Additional sound insulation in the form of mineral wool quilt infill

## **2.14 DOORS**

- 2.14.1 External aluminium glazed doors will be glazed in safety glass.
- 2.14.2 All internal doors will be Koto hardwood veneered solid core flush doors fitted with mortice latches or locks and powder coated handles.
- 2.14.3 Clear safety glass vision panels will be inserted in the doors where marked on the attached drawing.
- 2.14.4 Door closers, kicking plates, pull handles and push plates, panic latches, emergency exit signs and 'Push bar to open' signs will be supplied and fitted as shown on the attached drawing.

## **2.15 WINDOWS**

- 2.15.1 All windows will be double glazed with sealed units, with both panes of clear sheet glass, to white UPVC thermally broken frames.
- 2.15.2 All opening windows will be fitted with trickle vents, restrictors and locks.
- 2.15.3 As standard the classrooms are installed with 4no. windows. An option to upgrade to 8no. is detailed in 2.29.

## **2.16 CEILINGS**

- 2.16.1 The ceiling will be pre-finished in white vinyl coated plasterboard, wrapped edges, Dresden White.

<b>Document</b>	<b>Version</b>	<b>Approved</b>	<b>Date</b>	<b>Page</b>
Proposal Document	1.0	CE	17.02.2009	Page 6 of 10

## **2.17 FLOOR FINISHES**

- 2.17.1 The floor covering to the entrance doors will be Heckmondwike Hipo, approx 6m2.
- 2.17.2 Toilets and kitchen areas will be vinyl safety flooring, welded joints approx 37m2. Integral coving to perimeter.
- 2.17.3 Remaining areas will be Cordial carpet tiles approx 210m2

## **2.18 DECORATIONS**

- 2.18.1 Decorations will consist of vinyl faced plasterboard, wrapped edges, Tektura 62532 on the walls internally.
- 2.18.2 Internal doors are finished as per 4.14.2.
- 2.18.3 Primer, undercoat and gloss top coat will be applied to all exposed timber frames and skirting.

## **2.19 LIGHTING**

- 2.19.1 Lighting within the building is achieved utilizing a variety fluorescent luminaires (detailed below).
- 2.19.2 All lighting within the building has been designed to conform to the latest edition of the CIBSE guide to interior lighting and has been wired to conform to BS7671 17th Edition 2008.
- 2.19.3 All luminaires come complete with High Frequency control gear unless otherwise specified.
- 2.19.4 The luminaires are switched in a logical manner using wall mounted rocker switches unless otherwise specified in the details below.
- 2.19.5 All luminaires are hard wired into each individual light fitting.
- 2.19.6 Lighting circuits will be wired in PVC/PVC twin & earth and PVC/PVC single core cabling. (all cable sizes subject to electrical design).
- 2.19.7 All wiring associated with the lighting circuits will be hidden where possible. Where this is not possible; cabling will be contained within PVC conduit and trunking.
- 2.19.8 The light fittings/equipment we are proposing to use are listed below:
  - 1 No. 1 x 28w 2D HF Surface Mounted Compact Fluorescent Luminaire c/w Prismatic Diffuser from the Crompton Vienza Range for use externally
  - 4 No. 1500mm 1 x 58w HF surface mounted fluorescent luminaire c/w prismatic diffuser and triphosphor tubes from the Crompton Crompack 5 Range
  - 18 No. 1500mm 1 x 58w HF surface mounted fluorescent luminaire c/w category II louvre from the Crompton Chevin Range
  - 2no. PIR sensors to control the lighting within the store areas.

## **2.20 EMERGENCY LIGHTING INSTALLATION**

- 2.20.1 Emergency Lighting within the building is achieved utilizing a mixture of integral emergency conversion packs within in selected light fittings and external non-maintained emergency bulkheads.
- 2.20.2 All emergency lighting will be provided to meet the requirements of BS 5266 and wired in accordance with BS 7671 17th Edition 2008.
- 2.20.3 Internal and external emergency lighting will be provided above every final exit from the building.

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 7 of 10

- 2.20.4 The wiring on the emergency lighting will be as per the wiring for the lighting installation detailed above.
- 2.20.5 The type of emergency lighting we are proposing to use is listed below:
- 1 No. Illuminated EXIT signs c/w arrow legends from the Channel Lumen-Ex Range
  - 6 No. Emergency conversion packs to be installed within each luminaire to provide 3 hours of emergency lighting in the event of mains power failure

**2.21 GENERAL POWER INSTALLATION**

- 2.21.1 General power within this building will be provided utilizing a mixture of single and twin switched socket outlets in various locations throughout the building.
- 2.21.2 All socket outlets will be protected with an RCBO rated at 30mA.
- 2.21.3 Radial circuits will be provided to stand alone pieces of equipment as required which will come complete with a switched fused connection unit local to the fixed equipment.
- 2.21.4 Wiring to power circuits will generally be in PVC/PVC twin & earth cabling clipped directly to the fabric of the building (sizes will be determined at electrical design stage)
- 2.21.5 All wiring will be hidden where possible. If this is not possible then cabling will be contained within PVC conduit and trunking.
- 2.21.6 Socket outlets will generally be wired as part of a final ring circuit.
- 2.21.7 A list of the equipment we have allowed for in this building is shown below:
- 18 No. Twin socket outlets for general use
  - 48m of PVC 3 compartment dado trunking for LV cabling, Data cabling co-axial cabling etc from the Centaur ASD Range

**2.22 FIRE ALARM INSTALLATION**

- 2.22.1 Fire Alarm within this building has been designed to comply with BS5839 Part 1: 2002.
- 2.22.2 The fire alarm we have allowed for is a standard conventional automatic/manual fire alarm system to an L1/M grade.
- 2.22.3 The fire alarm system will come complete with detectors (if required), call points, sounders/bells, flashing beacons (if required) and the fire alarm panel.
- 2.22.4 The fire alarm system will be wired in 1.5mm FP200 which will be contained within PVC conduit and trunking.
- 2.22.5 Please Note that we have NOT allowed for linking this fire alarm system to any other system. We have allowed for a standalone system within this building.
- 2.22.6 Please Note that this fire alarm system is NOT an addressable system.
- 2.22.7 Please Note that fire alarm installation and commissioning certificates will be installed upon completion of the building.
- 2.22.8 A list of the fire alarm equipment we have allowed for is shown below:
- 1 No. Stand Alone Conventional 4 Zone Fire Alarm Panel
  - 1 No. Double pole key switch for fire alarm panel isolation
  - 2 No. 6 inch diameter electronic fire alarm bell
  - 1 No. Break glass points
  - 5 No. Ceiling mounted Smoke Detector

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 8 of 10

**2.23 ELECTRICAL HEATING & WIRING TO MECHANICAL SERVICES**

- 2.23.1 The standard heating system within this building is NOT required to pass the requirements of Part L as it has been designed for less than a two year hire period. Upgrading to an air source heat pump system will make the building Part L compliant (see 2.30).
- 2.23.2 Electric heating shall be controlled by contactors and a time clock (installed within DB1) and generally wired as independent radial circuits.
- 2.23.3 A list of the equipment we have allowed for is shown below:
  - 9 No. 2kw wall mounted electric convector heaters
  - 9 No. 13A switched fused spurs for electric heaters and mechanical services

**2.24 SWITCHGEAR & DISTRIBUTION SYSTEMS**

- 2.24.1 The incoming mains supply into this building will be carried out by others.
- 2.24.2 We will provide maximum demand assessments when required.
- 2.24.3 The incoming mains supply shall terminate into our main MCB distribution board (ref DB1).
- 2.24.4 All distribution boards shall be 125A rated MCB boards.
- 2.24.5 The distribution boards shall be manufactured by Square D.
- 2.24.6 All distribution board shall come complete with printed circuit charts and correct labelling to satisfy the requirements of BS:7671 2008.
- 2.24.7 The equipment we have allowed for is listed below:
  - 1 No. 125A Three phase and neutral MCB distribution board to serve all circuits within the building
  - 10 No. Circuits protected by a 30mA RCBO

**2.25 INTRUDER ALARM PANEL**

- 2.25.1 We have NOT allowed for a standalone PIR activated alarm system, fitted by a NACOSS registered installer.

**2.26 MISCELLANEOUS ITEMS**

- 2.26.1 Please see the miscellaneous items we have allowed for within our quotation:
  - PVC conduit system
  - PVC trunking and mini trunking system

**2.27 PLUMBING INSTALLATION**

- 2.27.1 There is no plumbing required for the standard double classroom

**2.28 MISCELLANEOUS ITEMS**

- 2.28.1 Coat hooks

**2.29 OPTION 1 – ADDITIONAL WINDOWS**

- 2.29.1 As an upgrade option the building can be fitted with 8no. windows.

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 9 of 10

**2.30 OPTION 2 – HEATING AND COOLING**

- 2.30.1 As an upgrade option the building can be heated and cooled using an air source heat pump system. The system replaces the Electrical Heating described under 2.23.
- 2.30.2 The system would come complete with indoor and outdoor units. The indoor units are wall mounted and would provide heating and cooling to both classrooms.
- 2.30.3 The indoor units would be fed from external condenser units which would be mounted on the roof of the core module.
- 2.30.4 Each internal unit shall be independently controlled using either a remote or a wall mounted controller.
- 2.30.5 The system is manufactured by either Mitsubishi or Fujitsu.
- 2.30.6 All wiring and pipe work for the system would be contained within PVC trunking.
- 2.30.7 This system is very efficient and will guarantee compliance with Part L of the Building Regulations.

**2.31 OPTION 3 – “B” ENERGY PERFORMANCE**

- 2.31.1 As an upgrade option the building’s energy performance can be upgraded to a rating of “B”. This is achieved by:
  - 2.31.2 Replacing the lighting layout detailed in 2.19.8 with the following:
    - 1 No. 1 x 28w 2D HF Surface Mounted Compact Fluorescent Luminaire c/w Prismatic Diffuser from the Crompton Vienza Range for use externally
    - 4 No. 1500mm 1 x 58w HF surface mounted fluorescent luminaire c/w prismatic diffuser and triphosphor tubes from the Crompton Crompack 5 Range
    - 18 No. 1500mm 2 x 35w HF surface mounted fluorescent luminaire c/w category II louvre from the Crompton Wafer Range
    - 2no. PIR sensors to control the lighting within the store areas.
  - 2.31.3 Also; replacing the electrical heating system detailed in 2.23 with the following:
    - 2 No. PML.400.1150 mixed mode low level wall mounted natural ventilation, heating and cooling Passivair units provided by Xpelair per classroom.
    - 2 No. PML.400.1150 mixed mode high level wall mounted natural ventilation, heating and cooling Passivair units provided by per classroom.
    - 1 No. FX07 wall mounted control system, operating via a combination of CO2, temperature and time control.
  - 2.31.4 The use of the natural ventilation system means that the heating and cooling upgrade detailed in 2.30 is not compatible with this option.

Document	Version	Approved	Date	Page
Proposal Document	1.0	CE	17.02.2009	Page 10 of 10