

HIGH STREET, YIEWSLEY

HARD LANDSCAPE SPECIFICATION

prepared for
HESTER ARCHITECTS

by
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NB	All landscape specification and design proposals for High Street Yiewsley are to be read in conjunction with broader architectural and development proposals, project preliminaries and specifications prepared by Hester Architects and other project team consultants. If any overlap or conflict is noted this should be addressed to Hester Architects and Adams Habermehl Landscape Architects for clarification.

D20 Excavating and filling

To be read with Preliminaries/General conditions

GENERALLY/THE SITE

Refer to demolitions contract

370 UNDERGROUND STRUCTURES IN LANDSCAPE AREAS

- Generally: Remove walls, roads, foundations, disused services, drains, manholes and the like to minimum depth.
- Minimum depth below finished levels:
 - Grass, ground cover and perennial planting: 500 mm.
 - Shrub planting: 750 mm.
 - Within 2 m of tree planting: 1000 mm.
- Walls and slabs remaining: In every 10 m² of wall or slab, make a drainage hole at least 600 mm diameter.

DISPOSAL OF MATERIALS

415 EXCAVATED TOPSOIL REMOVAL

- General: Remove from site.

441 SURPLUS SUBSOIL

- General: Remove from site.

FILLING

Refer to engineer's proposals

F10 Brick/ block walling

Low brick planter – Adams Habermehl plan 0811 1.4, item R for location and 0811.1.7 for section. Brick type, brick on edge coping (with square specials for corners), mortar type, colour and striking finish, dpc below coping, internal bituminous tanking, expansion joints et. All to match adjoining building. Refer to brickwork specification for main building contract works.

Q10 Kerbs/ edgings/ channels/ paving accessories

To be read with Preliminaries/General conditions.

TYPES OF KERBS/EDGINGS AND CHANNELS

110 PROPRIETARY PRECAST CONCRETE PIN KERB. Design edging type Y2

- Standard: To BS EN 1340.
- Manufacturer: Contractors choice.
- Designations:
- Size 50 x 150 x 900
- Special shapes: Square Section
- Finish: smooth pressed concrete
- Colour: silver grey

- Bedding: 150 deep x200 wide ST2 concrete bed and haunch strip, over 100 deep x 200 wide hardcore, subject to engineers specification / confirmation
- Joints generally: butted.
- Sealant movement joints:NA.

120 STONE SETT EDGING. EDGING TYPE Y1 Silver grey granite sett paving in sawn and bush hammered finish as 'Silva Vilar', 'Alpendurada' or 'Silva Montemuro Cinza' by Hardscape, or equal product.

- Standard: To BS EN 134:2012.
- Supplier:Hardscape

<https://hardscape.co.uk/select/materials/?fwpcategory=granite&fwpcolour=silver-grey> •

- Types: silver grey.
- Stone type: granite
- Size (width x height): 100MM CUBE.
- Freeze/ Thaw resistance: resistant
- Special shapes: NA.
- Finish: sawn and bush hammered
- Bedding: Strip foundations ST2, 300 wide x 150 deep bed and haunch over 100mm hardcore – subject to construction build up to engineer's details.
- Joints generally: Recessed flat struck 10mm mortar joint to engineer's details.
- Sealant movement joints: to engineer's details.

151 KINSLEY SYSTEMS ALUExcel Design edging type Y3

- Manufacturer: Kinsley Systems - Kinley Systems T: +44 (0)1580 830688 E: sales@kinley.co.uk
Product reference: 120mm Aluexcel aluminium edging in 'rigid' (ref 101026) or 'flexible' (ref 101024) type according to location
- Size: 120 mm depth.
- Finish: self finished milled aluminium
- Installed as flush finish, all to manufacturers materials specification and installation guidance.

151B Galvanised steel 'L' section edging to roof deck paving and artificial turf bedding. Detail to match Hester Architects proposals provisionally 20 x 120 x 3mm section, set and haunched on a 50 x 200mm mortar bed .

151C TIMBER EDGING TO INFILL GRAVEL AREAS Pressure treated sawn softwood 200 x 25mm. Galvanized nail fixing to pegs 50 x 50 x 450mm @ max 900mm centres. All in pressure treated softwood.

250 MATERIAL SAMPLES

- Samples representative of colour and appearance of designated materials: Submit before placing orders.
Designated materials: granite setts.

ROADS/PAVING ACCESSORIES/MARKING

LAYING Generally refer to engineer's highway proposals for all paving laying requirements

Q20 Granular sub-bases to roads/pavings

To be read with Preliminaries/ General conditions.

All to Engineer's design.

Q22 Coated macadam/asphalt roads/pavings

To be read with Preliminaries/ General conditions.

Macadam areas required to reinstate pedestrian pavement at site margins – see Area H on plan 0811.1.4. Highway build-up with base course and wearing course to match highway works specification, and to Engineer's design.

Q23 Gravel/ hoggin/ woodchip roads/ pavings

To be read with Preliminaries/ General conditions.

TYPES OF SURFACING

170 LOOSE GRAVEL OVERLAY- Occurring in rain-shadow areas below balconies and stairs (plan 0811.1.4 area Z)

- Base: Terram 1000 geotextile
Preparation: reduce levels top ensure that finished level matches adjacent planting bed.
- Gravel: Loose laid and raked to uniform thickness:
 - Type: 6mm pea shingle
 - Source: Contractor's choice
 - Colour: golden buff
 - Size: 6mm
 - Thickness: 75mm

226 PROPRIETARY RESIN BOUND GRAVEL Paving to vehicular and pedestrian areas as shown, including as component of diamond paved pattern

- Base: to Engineer's design
 - Surface course:
 - Manufacturer: Sureset
 - Product reference: Sureset 'Barley Butter' natural aggregate permeable resin bound gravel paving
 - Colour: Barley Butter
 - Application: to Sureset specification
 - RBG paving laying details to Engineers specification,
- By SureSet UK Ltd. 32 Deverill Road Trading Estate, Sutton Veny, Warminster, Wiltshire, BA12 7BZ. Tel: 0800 612 6501 or Email website@sureset.co.uk

Q24 Interlocking brick/block roads/pavings

To be read with Preliminaries/ General conditions

TYPES OF PAVING

110 CONVENTIONAL CONCRETE BLOCK PAVING Paving area I plan 0811.1.4 - Marshalls 'Keyblok', pencil edge, Charcoal colour, laid to herringbone pattern.

<https://www.marshalls.co.uk/commercial/product/keyblok-paving#gallery-text-13>

- Foundations and build-up to Engineers detail
- Blocks: To BS EN 1338:
- Manufacturer: Marshall.
- Product reference: Keyblock

- Sizes: 200 x 100 x 60mm.
- Colour/ Finish: Charcoal
- Jointing: kiln dried jointing sand
 - Material: In accordance with BS 7533-3.
 - Joint width: 2-5 mm.
- Setting out:
 - Bond: herringbone.

Q25 Slab/brick/sett/cobble pavings

To be read with Preliminaries/ General conditions.

- 120a STONE SETTS- Paving Area C - silver grey granite sett paving in sawn and bush hammered finish as 'Silva Vilar', 'Alpendurada' or 'Silva Montemuro Cinza' by Hardscape, or equal product.

- Standard: To BS EN 134:2012.
- Supplier:Hardscape

https://hardscape.co.uk/select/materials/?fwc_category=granite&fwc_colour=silver-grey •

- Types: silver grey.
- Stone type: granite
- Size (width x height): 100MM CUBE.
- Freeze/ Thaw resistance: resistant
- Special shapes: NA.
- Finish: sawn and bush hammered
- Bedding: construction build up to engineer's details.
- Joints generally: to engineer's details.
- Sealant movement joints: to engineer's details.

- 120b STONE SETTS- Paving Area G Charcoal grey granite sett paving in sawn and bush hammered finish as 'National Basalt' or 'Pencil Black' by Hardscape, or equal product. •
- Standard: To BS EN 134:2012.

- Supplier:Hardscape

https://hardscape.co.uk/select/materials/?fwc_category=granite&fwc_colour=dark-grey

- Types: silver grey.
- Stone type: granite
- Size (width x height): 100MM CUBE.
- Freeze/ Thaw resistance: resistant
- Special shapes: NA.
- Finish: sawn and bush hammered
- Bedding: construction build up to engineer's details.
- Joints generally: to engineer's details.
- Sealant movement joints: to engineer's details.

120C CONCRETE FLAG PAVING SYSTEM Area D1 – Marshalls Conservation x smooth, square edge, silver grey paving, 900 x 300mm and (cut) 450 x 300mm units laid as 'broken bond' paving.

<https://www.marshalls.co.uk/commercial/product/conservation-x-paving>

- Granular sub-base and build up to Engineers detail.
- Laid on semi-dry mix bed 6 parts coarse sand Gf 85 0/4 (MP) Fine Aggregate to BS EN 12620:2002 to 1 part ordinary Portland cement
- Paving units: Marshalls Conservation x smooth, square edge, silver grey paving, 900 x 300mm and (cut) 450 x 300mm units
- Jointing: dry mix

Bond :broken bond

120D CONCRETE FLAG PAVING SYSTEM Area D2 – Marshalls Conservation x smooth, square edge, silver grey paving, 900 x 300mm and 300 x 300mm units laid as 'broken bond' paving.
<https://www.marshalls.co.uk/commercial/product/conservation-x-paving>

- Granular sub-base and build up to Engineers detail.

Laid on semi-dry mix bed 6 parts coarse sand Gf 85 0/4 (MP) Fine Aggregate to BS EN

12620:2002)to 1 part ordinary Portland cement

- Paving units:. Marshalls Conservation x smooth, square edge, silver grey paving, 900 x 300mm and 300 x 300mm units

- Jointing: dry mix

Bond :broken bond

120E CONCRETE FLAG PAVING SYSTEM Area F1 Surfaces fronting Morrisons entrance. Marshalls Perfecta smooth ground paving, 400 x 400 units in 'Natural' finish, chamfered edge TBC, laid to grid pattern and jointing aligned with established High Street paving.

<https://www.marshalls.co.uk/commercial/product/perfecta-paving>

- Granular sub-base and build up to Engineers detail.

Laid on semi-dry mix bed 6 parts coarse sand Gf 85 0/4 (MP) Fine Aggregate to BS EN

12620:2002)to 1 part ordinary Portland cement

- Paving units:. Marshalls Perfecta smooth ground paving, 400 x 400 units in 'Natural' finish, chamfered edge TBC, I

- Jointing: dry mix

Bond square grid pattern

120G TACTILE PAVING WITHIN CONCRETE FLAG PAVING SYSTEM Area K Corduroy hazard markers to steps: Shackerley 400mm x 400mm corduroy / ridged ceramic tiles, with raised ribs of 6mm in T3 Beige and T14 Anthracite. Or equal fine cast proprietary ceramic product.

Build up, mortar bed and mortar jointing to engineers specification

120H CONCRETE PAVING – STEPS - Area F2 Steps with Marshalls Perfecta step tread units in 'Natural' finish with 'Standard Visibility Strip' inset into unit.

<https://www.marshalls.co.uk/commercial/product/perfecta-paving>.

Foundation, bed and laying to engineer's specification.

120G CONCRETE FLAG PAVING SYSTEM Roof deck terrace Area J

Marshalls Urbex Textured Natural colour paving. 600 x 600 x 35mm

<https://www.marshalls.co.uk/commercial/product/urbex-paving#gallery-text-4>

Build up and bedding as per Hester Architects roof deck detailsSub base • Granular sub-base and build up to Engineers detail.

Jointing: kiln dried sand joint

Bond square grid pattern

615 CONTROL SAMPLES

- Sample areas: Complete as part of the finished work.
 - Types of paving flag paving types
 - Size (minimum): 1m2
 - Included features:
- Approval of appearance: Obtain before proceeding.

All aspects of paving laying to engineer's specification

INSET MANHOLE COVERS

Allow for inset manhole covers where manholes occur in any proposed or revised paved areas, ensuring that the paving pattern and material continues through the cover. Cover depth and paving laying detail to be adapted to suit materials and traffic / performance requirements of location.

Q26 Special surfacings/ pavings for sport/ general amenity

To be read with Preliminaries/ General conditions.

- 340 RUBBER MAT AND TILE SURFACING: Area B – Play Area. Rubber grass mats by Playground Tiles UK
- Sub-base: - laid over grass finish.
 - Surface course: Impact absorbing EPDM rubber mats and/ or tiles.
 - Standard: To BS 7188.
 - Manufacturer: Playground tiles UK - Express Matting Services Limited, Unit 1B, The Summit, Manchester Road, Burnley, BB11B5NS
 - Product reference: 'Rubber grass mats' grass integrated rubber playground tiles
 - Colour: Black
 - Mat thickness: 16mm
 - Critical fall height when tested to BS EN 1177: 2.2m.
 - Submit:
 - Resistance to abrasive wear, slip resistance, resistance to indentation and ease of ignition: Evidence of testing to BS 7188.
 - Critical fall height: Evidence of testing to BS EN 1177.
- 350 SYNTHETIC GRASS SURFACING – SYNTHETIC LAWN TO ROOF TERRACE – Area L. Roof deck artificial turf finish to be 'Neograss Tempo'. Specially designed for balconies, roof gardens, patios and terraces,
- Sub-base: roof deck build up as per Hester Architects details and Adams Habermehl detail drawing 0811.1.7. Roof deck – 100mm Type 3 base, plus 30mm grit sand, plus 30mm 'Granno' crushed granite dust to Neograss Spec.
- Technical Specification:
- Pile Height - 22mm
- Fibre material - Polyethylene
- Fibre thickness - 190/99 microns
- Decitex - 8800/8 PE + 5000/8 PE
- Stitches per m2 - 48,294
- Tested for Harmful Substances Yes
- Warranty 8 years
- Fire Resistant Yes
- Permeable Yes
- Supplier NeoGrass Ltd, Unit 17, Redhills Industrial Estate, South Woodham Ferrers; Chelmsford Essex; CM3 5UL
- All to be installed entirely as per supplier's recommendations, including base / build-up layer installation, jointing, peg fixing (note – reduce length of fixing pegs from 150 to 125mm to avoid potential impact on roof geotextile layer). Surface spread 5kg / m2 kiln dried sand on surface as Neograss specification.

Q28 Topsoil and growing media

See soft landscape specification.

Q40 Fencing

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS

410A PURPOSE MADE 1.8M STEEL FENCING AND MATCHING GATE drawing 0811.1.7

- Standard: To BS 1722- except as varied on drawings and below.
- Height: 1.8M
- Materials: Galvanised and powdercoated mild steel

1800mm freestanding railings and gate. Railings include end panels fixed to walls (where owned by client), or free-standing end posts /gate posts and without an integral extension section. Intermediate panels have an extended end 'foot' section, connecting to the adjoining panel and forming a post .

Railing frame and infill of 50 x 8mm mild steel with intermediate panels 2540mm long and other panels (infill to gates or adjoining buildings) fabricated to fit. The main railing is 1700mm tall, set with a 100mm base gap to give an 1800mm barrier. Panel sections connect with matching 50 x 10mm fixing lugs to 75mm square, capped, box section posts. Posts extend 600mm below ground level, with 300 x 300 x 450mm ST 2 concrete foundation, subject to engineer's specification.

Gate framed and infilled to match railing, with a clear opening width of 950mm. Gate to have rising butt hinges with tamper proof pivot fixing to prevent gate removal. Subject to confirmation, gate is to have keypad / digi-lock type secure locking system, to end-client specification.

410B PURPOSE MADE 0.9M STEEL FENCING AND MATCHING GATES drawing 0811.1.7

- Standard: To BS 1722- except as varied on drawings and below.
- Height: 0.9M
- Materials: Galvanised and powdercoated mild steel

900mm freestanding railings and gates. Railings panels 800mm high x 1952mm long, with the base rail set 100 mm above gl to give 900mm railing barrier. Each panel section is to have a post extending by 600mm (500mm below gl), with a concrete surround foundation, and connected to the adjoining section so that the end flats collectively form a post section. Ends, corners and gates to have a 50mm square capped box section post, extending 500mm below GL with a 250x 250 x 400mm st2 concrete surround foundation. Gates are to match railings, have a clear opening width of 950mm, are to have a proprietary latch, but shall not be lockable.

410C PURPOSE MADE 0.45M STEEL KNEE RAIL FENCING drawing 0811.1.7

- Standard: To BS 1722- except as varied on drawings and below.
- Height: 0.45M
- Materials: Galvanised and powdercoated mild steel

Knee rail. Knee rail barrier in 10 x 50mm section galvanised mild steel, powder coated. 900mm panels, finished height 450, with legs and corner posts extending 450 below gl. Corner posts 50 x 50 x 900mm square capped box section post. Legs and posts with a 250 x 250 x 350mm st2 concrete surround foundation. Knee rail protects a rectangular bed - long sides require 4 panels plus corners, short sides require 2 panels plus corners

General: railing and gates in galvanised mild steel, powder coated to RAL 7016 : Anthracite Grey. Rail gaps shall not exceed 100mm. Connecting fittings are to be in stainless or sheradised steel.

Junction of panels are to be secured with flush countersunk socket bolts to face sections and anti-tamper countersunk or rounded snap-head security nuts, with fixing detail chosen to minimise visual weight of junction and to minimise unauthorised removal.

Gates to have self-closing rising butt hinges, tamper proof hinge nut to prevent gate removal, and simple rubber grommet type stop pads at top and bottom to reduce slamming noise. 1800mm gate to have a proprietary hinge fitting to allow hanging adjustment.

Foundations subject to engineer's specification. Steel dimensions, post wall thicknesses etc are subject to further detail design recommendation by specialist fabricator. All railing lengths are to be subject to detailed site measurement by the railing fabricator.

EXECUTION

710 INSTALLATION OF ALL GATES, FENCES, POSTS GENERALLY

- Set out and erect:
 - Alignment: Straight lines or smoothly flowing curves.
 - Tops of posts: Following profile of the ground.
 - Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
- Fixings: All components securely fixed.

715 COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Qualifications: Submit certification of training.

720 SETTING POSTS IN CONCRETE

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
- Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
- Admixtures: Do not use.
- Holes: Excavate neatly and with vertical sides.
- Filling: Position post/ strut and fill hole with concrete to not less than the specified depth, well rammed as filling proceeds and consolidated.
- Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

780 DAMAGE TO GALVANIZED SURFACES

- Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
- Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

790 DAMAGE TO POWDER COAT - SITE PAINTING

- If any touching up of powder coating is required, prepare surfaces and apply finishes as soon as possible after fixing.

COMPLETION

910 CLEANING

- General: Leave the works in a clean, tidy condition.
- Surfaces: Clean immediately before handover.

920 FIXINGS

- All components: Tighten.
- Timing: Before handover.

930 GATES

- Hinges, latches and closers: Adjust to provide smooth operation. Lubricate where necessary. -
- Timing: Before handover.

Q50 Site/street furniture/equipment

To be read with Preliminaries/ General conditions.

GATES, BARRIERS AND PARKING CONTROLS

190 BOLLARDS

- Manufacturer: Furnitubes
 - Product reference:: Zenith anti ram raid stainless steel bollards ZEN 702 SC
- Material: stainless Steel 304 grade
 - Finish: bright polished
 - Colour: stainless steel - silver
- Height above ground: 900mm.
- Special features: anti-ram raid
- Method of fixing: root fix in ground in concrete foundation to manufacturers detail.

SITE AND STREET FURNITURE

210 CYCLE STANDS

- Manufacturer:: Furnitubes_____.
- Product reference: _ Sheffield Stand pattern 'College' root fixed stainless steel CSS 650 B BP
 - Material:Stainless Steel.
 - Finish: Bright polished.
 - Method of fixing: root fixed into concrete foundation

220 BENCHES

DW Windsor 'Alena' benches are set out in Hester Architects drawings

Furnitubes benches are included in play area proposals Section Q 52

220A PLANTERS

Raised planters for the roof garden are set out in detail in Hester Architectst proposals and are 'Kinley Systems planterline bespoke':

<https://www.kinley.co.uk/products/planters/planterline-bespoke>

INSTALLATION

510 CONCRETE FOUNDATIONS GENERALLY

- Standard: To BS 8500-2.
- Mix: Designated concrete not less than GEN 1 or standard prescribed concrete not less than ST2.
- Admixtures: Do not use.
- Foundation holes: Neat vertical sides.
- Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

515 SETTING COMPONENTS IN CONCRETE

- Holes: to foundation specification
- Components: Accurately positioned and securely supported.

- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

530 PRESERVATIVE TREATED TIMBER

All pressure treated timber proposed within the landscape works is to be vacuum pressure treated with clear preservative to achieve a 25 year in-ground design life. Supply all treatment certification.

- Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
- Heavily worked sections: Re-treat.

545 ERECTION OF TIMBER AND METAL PREFABRICATED STRUCTURES

- Checking: 5 days (minimum) before proposed erection date, check foundations, holding down bolts, etc.
- Inaccuracies or defects in prepared bases or supplied structures: Report immediately. Obtain instructions before proceeding.

550 DAMAGE TO GALVANIZED SURFACES

- Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - Material: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zinc-rich paint to BS 4652.
 - Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

Q52 Play and sports equipment systems

To be read with Preliminaries/ General conditions.

GENERAL

115 PLAYGROUND_- SEE DRAWING O811.1.5

- Equipment:

Play equipment to be supplied by 'Caloo'

- A CI 670 Play-Panel Playhouse;
- B Fox Springer RE 237 12;
- C Chicken Springer RE 239;
- D Robinia Platform And Slide RB1301;
- E Robinia 2 X Balance Beam RB1256;
- F Robinia Balance Bars RB 1264;

Supplier: Caloo Ltd
Unit 9A, Triangle Business Park, Wendover Road, Stoke Mandeville
Buckinghamshire, HP22 5BL, United Kingdom

Further play space elements:

G Timber Seating - Broxap Hatton Rustic 4 Slat

Ref BX17 4055 <https://www.broxap.com/hatton-rustic-4-slat.html>

Four slat timber seat constructed from softwood

Dimensions:

- Length: 2000mm
- Width: 580mm

- Height: 770mm
- Root Length: 300mm
- Weight: 86kg

Broxap Ltd. Rowhurst Industrial Estate, Chesterton, Newcastle-under-Lyme, Staffordshire, ST5 6BD. 01782 564411

H Rubber Tile Reinforced Grass Play Surface By Playground Tiles Uk. Also Provides Emergency Exit Route Surfacing; See Spec: Q28.

EXECUTION

710 PLAY EQUIPMENT INSTALLATION GENERALLY

- Standard: To manufacturer's written instructions provided in accordance with BS EN 1176-1.

720 CONCRETE FOUNDATIONS GENERALLY

- Standard: To BS 8500-2.
- Concrete: Designated, not less than GEN 1 or Standard prescribed, not less than ST2.
- Admixtures: Do not use.
- Foundation holes: Neat vertical sides.
- Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

725 SETTING COMPONENTS IN CONCRETE

- Holes: _____.
- Components: Accurately positioned and securely supported.
- Concrete fill: Fully compacted as filling proceeds.
- Concrete foundations exposed to view: Finished to weathering profile to shed water and trowel smooth.
- Temporary component support: Maintain undisturbed for minimum 48 hours.

730 SETTING COMPONENTS IN EARTH

- Holes: As small as practicable.
- Components being fixed: Accurately positioned and securely supported.
- Buried depth (minimum): _____.
- Earth refilling: Well rammed as filling proceeds.

740 PRESERVATIVE TREATED TIMBER

- Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood Coats

750 DAMAGE TO GALVANIZED SURFACES

- Minor damage in areas up to 40 mm² (including on fixings and fittings): Make good.
 - Materials: Low melting point zinc alloy repair rods or powders made for this purpose or at least two coats of zinc-rich paint to BS 4652.
 - Thickness: Sufficient to provide a zinc coating at least equal to the original layer.

760 SITE PAINTING

- Timing: Prepare surfaces and apply finishes as soon as possible after installing components.

COMPLETION

910 INSPECTION TBC

- Standard:
- Timing:
- Period of notice (minimum): 3 working days.

920 CLEANING

- General: Leave the works in a clean, tidy condition.
- Surfaces: Clean immediately before handover.

- 930 TESTING
 - Standard: To BS EN 1176-1.
- 940 LABELS
 - Labels: Provide permanent labelling on all types of play equipment.
 - Location: Where visible when erected on site.
- 950 DOCUMENTATION
 - Contents:
 - Copies of test reports.
 - General product information.
 - Installation information.
 - Inspection and maintenance information.
 - Number of copies. 1
 - Submission: project manager.
- 960 SPARES
 - General: At completion provide the following: TBC.
- 970 OPERATING TOOLS
 - Tools: Supply tools required for operation, maintenance and cleaning purposes.

Q55 External decks, boardwalks and pergolas

To be read with Preliminaries/ General conditions.

GENERAL

- 130 PERGOLA SEE DETAILS BY HESTER ARCHITECTS

S14 Irrigation

To be read with Preliminaries/ General conditions.

General

Adams Habermehl Plan 0811.1. shows areas likely to require irrigation and is prepared as a briefing document for a specialist irrigation contractor to prepare proposals for the contract works.

The soils used in the planting proposals will be Bauder intensive substrate light weight soils, with a water storage capacity of 45%. The soils will be supplemented with ameliorants of milled seaweed, biochar and micorrhizal fungi to improve the soil's water retentive capacity and, in time, the plants' root network and capacity to utilise available moisture. Plant choice criteria include varying degrees of drought tolerance.

Subject to specialist design input it is proposed that:

- The system is based on an automated drip irrigation system, with the irrigation coming on once a day or as required for general plant health, between spring and autumn.
- Provide rain sensors for greater control and management of water supply,
- The drip lines are to be set into the plant beds and hidden by a mulch layer.

- Allow for ducts below paving between beds, ensuring no drip lines or other pipes are set above ground or open to view.
- Allow for a break tank in the plant room, plus a pump with weir overflow and all other elements required for system function and effective low-key irrigation.
- Allow for installation of 1 bib tap per terrace with proprietary frost protection and tamper proof cover, plus drainage gully. All for additional irrigation, maintenance wash-down etc.
- All irrigation design proposals are to be submitted for review against client requirements.

The contractor is to provide detailed design, supply and installation of irrigation elements to be provided by 'Access Irrigation Ltd or equal irrigation specialist. Access irrigation - <https://www.access-irrigation.co.uk/>

Z20 Fixings and adhesives

To be read with Preliminaries/ General conditions.

PRODUCTS

310 FASTENERS GENERALLY

- Materials: To have:
 - Bimetallic corrosion resistance appropriate to items being fixed.
 - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

320 PACKINGS

- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

340 MASONRY FIXINGS

- Light duty: Plugs and screws.
- Heavy duty: Expansion anchors or proprietary chemical anchors.

350 PLUGS

- Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

390 ADHESIVES GENERALLY

- Standards:
 - Hot-setting phenolic and aminoplastic: To BS 1203.
 - Threomsetting wood adhesives: To BS EN 12765.
 - Polyvinyl acetate thermoplastic adhesive: To BS 4071.

410 POWDER ACTUATED FIXING SYSTEMS

- Types of fastener, accessories and consumables: As recommended by tool manufacturer.

EXECUTION

610 FIXING GENERALLY

- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
- Appearance: Fixings to be in straight lines at regular centres.

- 620 **FIXING THROUGH FINISHES**
- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.
- 630 **FIXING PACKINGS**
- Function: To take up tolerances and prevent distortion of materials and components.
 - Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
 - Locations: Not within zones to be filled with sealant.
- 670 **PELLETED COUNTERSUNK SCREW FIXING**
- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
 - Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
 - Finished level of pellets: Flush with surface.
- 680 **PLUGGED COUNTERSUNK SCREW FIXING**
- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
 - Plugs: Glue in to full depth of hole.
 - Finished level of plugs: Projecting above surface.
- 690 **USING POWDER ACTUATED FIXING SYSTEMS**
- Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.
 - Operatives: Trained and certified as competent by tool manufacturer.
- 700 **APPLYING ADHESIVES**
- Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
 - Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
 - Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Z21 Mortars

To be read with Preliminaries/ General conditions.

Where required within paving systems, mortars are to be to engineer's specification

Z31 Powder coatings

To be read with Preliminaries/ General conditions.

COLOUR - Powder coated elements to be powder coated to RAL 7006 'Beige-grey'

- 210 **WORKING PROCEDURES**
- Comply with the follow following standards.
 - Aluminium components: To BS 6496 or BS EN 12206-1.
 - Steel components: To BS EN 13438.
 - Safety standards: To British Coatings Federation 'Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying'.
- 220 **POWDER COATING APPLICATORS**
- Applicator requirements:
 - Approved by powder coating manufacturer.
 - Currently certified to BS EN ISO 9001.
 - Comply with quality procedures, guarantee conditions, standards and tests required by

powder coating manufacturer.

- Applicator to use only one plant.
- Selected applicator: Submit details before commencement of powder coating including:
Name and contact details.
Details of accreditation schemes.

225 GUARANTEES

- Powder coating manufacturer and applicator guarantees:
 - Submit sample copies before commencement of powder coating.
 - Submit signed project specific copies on completion of work.

230 CONTROL SAMPLES

- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
 - Powder coated samples: Of various grades and forms of background metal to be used, showing any colour, texture and gloss variation.
 - Fabrication samples: Showing joint assembly, how powder coating is affected and how any cut metal edges are finished and protected.
- Samples to include the following information:
 - Product reference.
 - Colour.
 - Reference number.
 - Name.
 - Gloss level.

240 QUALITY ASSURANCE SYSTEM

- Requirement: Powder and coating application to the following designated components is to be tested and approved in accordance with the Qualicoat system.
 - Designated components: _____.

310 PRETREATMENT OF ALUMINIUM COMPONENTS

- Condition of components to be pretreated:
 - Free from corrosion and damage.
 - All welding and jointing completed and finish off as specified.
 - Free from impurities including soil, grease, oil.
 - Suitable for and compatible with the pretreatment process.
- Conversion coating requirements:
 - Chromate system: To BS 6496 or BS EN 12206-1.
 - Chromate-free system: To BS EN 12206-1. Submit details before using.
- Rinsing requirements: Use demineralized water. Drain and dry.

320 PRETREATMENT OF STEEL COMPONENTS

- Condition of components to be pretreated:
 - Free from corrosion and damage.
 - All welding and jointing completed and finish off as specified.
 - Free from impurities including soil, grease, oil.
 - Suitable for and compatible with the pretreatment process.
- Conversion coating requirements: To BS EN 13438.
- Rinsing requirements: Use demineralized water. Drain and dry.

430 EXTENT OF POWDER COATINGS

- Application: To visible component surfaces, and concealed surfaces requiring protection.
Coated surfaces will be deemed 'significant surfaces' for relevant BS 6496 or BS EN 13438 performance requirements.

435 APPLICATION OF POWDER COATINGS

- Surfaces to receive powder coatings: Free from dust or powder deposits.
- Powder colours: Obtain from one batch of one manufacturer.
- Commencement of powder coating: To be continuous from pretreatment.
- Jig points: Not visible on coated components.
- Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.

- Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements.
- Overcoating of components: Not acceptable.

440 PERFORMANCE AND APPEARANCE OF POWDER COATINGS

- For aluminium components:
 - Standard: To BS 6496 or BS EN 12206-1.
- For steel components:
 - Standard: To BS EN 13438.
- Visual inspection after powder coating: Significant surface viewing distances to be as specified in the relevant Standard, unless specified otherwise.
- Colour and gloss levels: To conform with approved samples.

450 ALUMINIUM ALLOY FABRICATIONS

- Units may be assembled:
 - Before powder coating.
 - From components powder coated after cutting to size.
 - Where approved, from components powder coated before cutting to size.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

460 STEEL FABRICATIONS

- Unit assembly: Wherever practical, before powder coating.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

470 FIXINGS

- Exposed metal fixings: Powder coat together with components, or coat with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.

480 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT

- Before delivery to site: Check all components for damage to powder coatings. Replace damaged components.
- Site damage: Submit proposals for repair or replacement.

510 PROTECTION

- Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
- Protective coverings: Must be:
 - Resistant to weather conditions.
 - Partially removable to suit building in and access to fixing points.
- Protective tapes in contact with powder coatings: Must be:
 - Low tack, self adhesive and light in colour.
 - Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues as these are detrimental to the coating.
- Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.

535 DOCUMENTATION

- Submit the following information for each batch of powder coated components:
 - Supplier.
 - Trade name.
 - Colour.
 - Type of powder.
 - Method of application.
 - Batch and reference number.
 - Statutory requirements.

- Test certificates.
- Maintenance instructions.

540 COMPLETION

- Protection: Remove.
- Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.