

# Primrose Community Nature Trust: New Path

## Specification: Floating Bitmac Pedestrian Pathway (1.5 m Wide) Through Natural Area and School Grounds

### 1. Purpose

To construct a durable, low-impact pedestrian pathway through a nature or woodland area that allows year-round access while preserving existing ground conditions. The pathway will have a smooth, firm surface suitable for pedestrians and maintenance access (light barrows or trolleys), with edge restraint to maintain shape and prevent edge breakdown.

### 2. General Arrangement

- Width: 1.5 metres
- Alignment: As shown on site layout plan or as directed by the landscape architect/ecologist to minimise tree root disturbance and protect habitats.
- Profile: Crossfall of 1:40 for surface drainage.
- Construction Type: Floating construction — laid directly on a geotextile separator over the existing ground or sub-base, without excavation where possible.

### 3. Subgrade Preparation

- Remove vegetation, large roots, and organic matter to form a level surface.
- Avoid excavation where possible to preserve natural ground levels and root systems.
- Compact subgrade lightly using a pedestrian roller or vibrating plate (maximum 2 passes).
- Apply a non-woven geotextile membrane (e.g., Terram 1000 or equivalent) over the prepared surface to prevent intermixing of subgrade and stone layer.

### 4. Sub-base Layer (Floating)

- Material: Type 3 open-graded aggregate (recycled crushed concrete or stone), compliant with Clause 805 of the Specification for Highway Works (SHW).
- Nominal size: 40 mm down to dust-free (no fines).
- Depth: 100 mm (minimum compacted thickness).
- Compaction: Vibrating plate or light roller in two passes, ensuring stability but allowing permeability.
- Note: If ground is soft or damp, increase sub-base to 150 mm or add geogrid reinforcement layer (e.g., Tensar TriAx TX160).

## 5. Surfacing Course (Bitmac)

- Material: Open-graded bituminous macadam (bitmac) for pedestrian use.
- Binder course: Dense bitumen macadam, 20 mm nominal aggregate, to BS EN 13108-1.
- Surface course: 6 mm nominal size close-graded bitmac, to BS 4987-1:2005, laid hot.
- Total thickness: 40 mm (25 mm binder + 15 mm surface).
- Compaction: Hand-rolled with pedestrian roller to achieve firm, even surface.
- Finish: Fine textured, non-slip, free-draining surface with no standing water.

## 6. Edge Restraints

- Type: In-situ or precast concrete edge kerbs, 50 mm x 150 mm, bullnosed or square-edged.
- Material: C35 concrete to BS 8500-1.
- Installation:
- Laid on 100 mm C20 concrete bed.
- Haunch both sides to half height of edging.
- Top of edging to finish 10 mm above finished bitmac level to retain material and prevent edge cracking.
- Colour: Natural grey or as specified.

## 7. Drainage

- The floating path construction relies on permeable sub-base and crossfall for drainage — no linear drains required.
- Where the path crosses low-lying or wet areas, install perforated land drain (Ø100 mm) under path centreline or local timber boardwalk sections as directed.

## 8. Environmental Protection

- All works to be undertaken in accordance with BS 42020:2013 (Biodiversity – Code of practice for planning and development).
- No fuel, oil, or bitumen mixing on the ground — all operations to be on sealed surfaces.
- Spoil or vegetation to be disposed of responsibly off-site or in designated composting areas.
- Tree roots over 50 mm diameter must not be cut or exposed; adjust path alignment if necessary.

## 9. Finishing and Tolerances

- Surface tolerance:  $\pm 6$  mm over 3 m straightedge.
- Crossfall: 1:40 ( $\pm 0.5\%$ ).

- Joints: Neat and tightly butted; cold joints sealed with bitumen emulsion.

## Section 2

### Fence and Gate Specification: School Boundary (Adjacent to Public Pathway)

#### 1. Purpose

To provide a secure, durable, and visually appropriate boundary between the school grounds and an adjacent public pathway. The fence must prevent unauthorised access while allowing controlled entry by teaching staff via a gated access point.

#### 2. Fence Type

System: Welded Mesh “Green Security Fence”

Type: 2.4m high welded mesh panel fencing system (e.g., CLD Securus, Zaun Duo8, or equivalent approved)

Colour: RAL 6005 (Moss Green) polyester powder-coated finish

Security Rating: Medium-security (typical for school perimeters)

Panel Mesh Size: 200mm x 50mm apertures (horizontal/vertical) with twin 8mm horizontal wires

Posts: RHS steel posts (60mm x 60mm minimum), hot-dip galvanised to BS EN ISO 1461, powder-coated green to match panels

Privacy screen: 2m high fence screening to be made from high density polyethylene and stabilised material to keep the raw material stable with a fabric weight of 130g/m<sup>2</sup> to provide 90% screening. Screening to be affixed to the external face (not on the path side) via eyelets and stainless-steel wire ties. Durability should be sufficient for a minimum of 5 years to allow for hedge screening.

Post Centres: Maximum 2.5m

Fixings: Tamper-resistant through-bolts or security clips

#### 3. Height

Overall height: 2.4 metres above finished ground level

Ground clearance not to exceed 50mm.

#### 4. Foundations

Posts to be set in concrete foundations:

- Minimum depth: 600mm (or to suit ground conditions)
- Minimum width: 300mm diameter
- Concrete mix: C20 (or equivalent)

#### 5. Gate Assembly

Type: Single leaf pedestrian access gate

Clear Opening Width: 1.0m

Height: To match fence (2.4m)

Construction: Welded mesh infill to match fencing panels

Frame: RHS steel section, 50mm x 50mm minimum, hot-dip galvanised and powder-coated RAL 6005

Hinges: Two heavy-duty, anti-lift galvanised hinges with greasing points

Stops: Rubber or neoprene closing stop to prevent slamming

#### 6. Locking Mechanism

Lock Type: Weatherproof mechanical combination lock (no keys required)

- Code to be known only to teaching and authorised staff
- Must operate latch bolt or magnetic catch from both sides
- Include internal thumb-turn or push-button release for emergency egress
- Example: Borg BL2601MG or equivalent (marine-grade finish recommended)

#### 7. Safety and Compliance

- Gate to swing inwards toward school grounds for safety.
- Gate to be self-closing with an adjustable hydraulic or spring closer.
- All sharp edges to be removed or capped.
- Fence and gate to comply with BS 1722-14:2017 (Fences — Specification for open mesh panel fences).

- Lock and gate to meet BS EN 1176 play area safety clearances if located near children's play zones.

## 8. Signage

Install a small sign (100x100mm minimum) on the gate stating:

STAFF ACCESS ONLY

(Gate secured for pupil safety)

## 9. Pedestrian access point

Cycle Restrictors

Contractors to install and where necessary design in line with industry best practice.

# Section 3

## Specification: Post and Wire Agricultural Style Fence

### 1. Purpose

To provide a durable and secure boundary for containing sheep and defining agricultural enclosures, using traditional timber posts and galvanised wire mesh to agricultural standards.

### 2. General Description

A stock-proof fence consisting of softwood timber posts and strainers supporting galvanised steel wire netting and plain line wires, suitable for general livestock enclosures and pasture boundaries.

### 3. Dimensions and Layout

- Overall Height: Approx. 1.05 m (top wire height above ground)
- Fence Line: As shown on site plan or pegged out by supervising officer.
- Post Spacing: Maximum 3.0 m centres between intermediate posts.

### 4. Materials

## Posts and Strainers

- Straining Posts:
- Size: Minimum 150 mm diameter x 2.1 m length
- Set at ends, corners, and changes in direction
- Driven or set in concrete (C20 mix) to 900 mm depth
- Strut Posts:
- Size: Minimum 100 mm diameter x 2.0 m length
- Installed at 45° angle to support each straining post
- Intermediate Posts:
- Size: Minimum 100 mm diameter x 1.8 m length
- Driven to 600 mm depth
- Material: Pressure-treated softwood (tanalised), UC4 treatment in accordance with

BS 8417

## Wire Netting

- Type: Galvanised steel hinged-joint stock fence (sheep netting)
- Specification:
- Height: 900 mm
- Wire gauge: 2.5 mm (top and bottom), 2.0 mm intermediates
- Mesh size: 150 mm horizontal spacing, 100 mm vertical spacing
- Conforms to BS EN 10223-5 (Steel wire fencing products)
- Example: Stock fence type HT8/80/15 or equivalent

## Line Wires

- Top Line Wire: One additional plain galvanised high-tensile wire above mesh, 2.5 mm diameter
- Bottom Line Wire: Optional plain wire 50 mm above ground to prevent small animal ingress (optional, site-dependent)
- Conformance: BS EN 10244-2 Class A galvanised

## Staples

- Material: Galvanised steel fencing staples
- Size: 30 mm to 40 mm long
- Fixing: Driven diagonally into posts, avoiding damage to galvanising

## 5. Straining and Tensioning

- Stock netting to be fixed starting from a straining post and tensioned using ratchet strainers or wire tensioning tools.
- Netting to be pulled taut but not over-stressed to prevent deformation.
- Vertical wires to remain evenly spaced without distortion.

## 6. Finishing and Alignment

- Fence to follow ground contours smoothly without abrupt changes in height.
- Posts to be vertically true and aligned.
- Wire to be evenly tensioned and fixed to all intermediate posts.
- No sharp wire ends to be left protruding.

## 8. Durability and Maintenance

- Expected service life: Minimum 15 years.