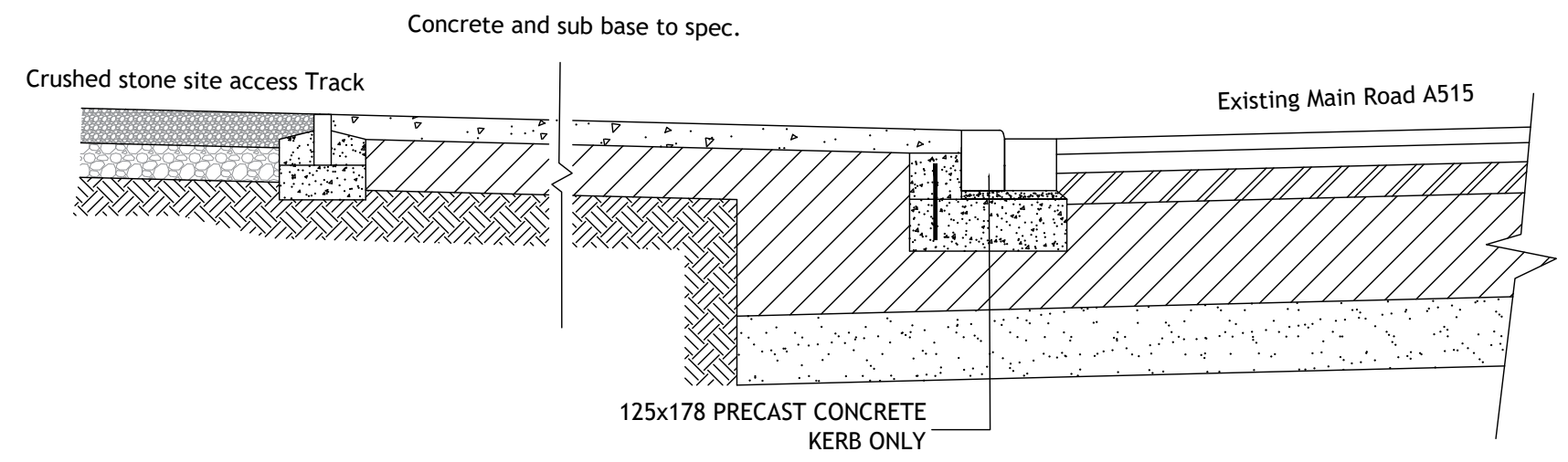
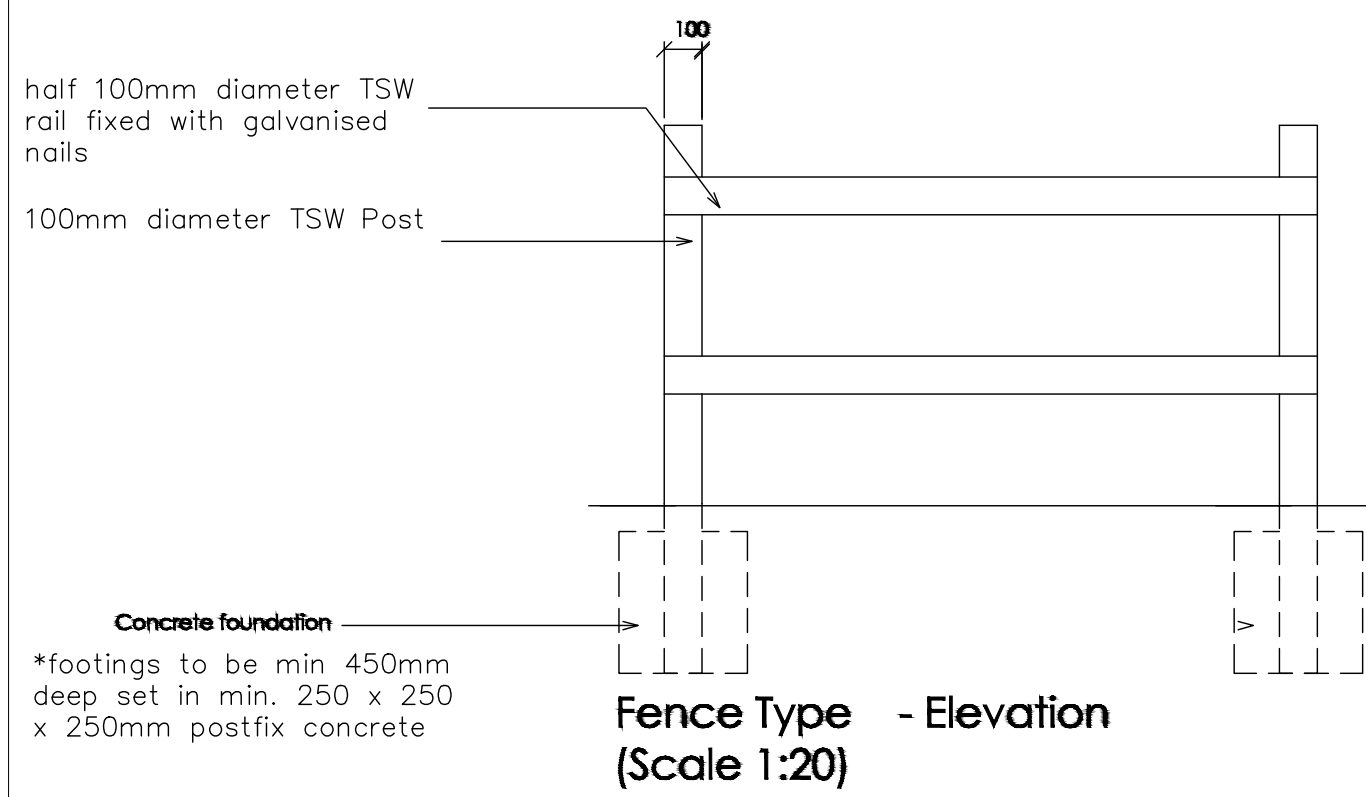




Detail 1: CONCRETE VERGE CROSSING CONSTRUCTION

SCALE 1:20

This specification provides a simplified guide for constructing a concrete driveway at a farm access point in North West England, focusing on essential elements without requiring specialized edgings or drains. It highlights the importance of crowning for water runoff and outlines appropriate depths for concrete and sub-courses suitable for farm vehicles.

1. Ground preparation
Clear the area of all vegetation and topsoil.
Dig to the required depth, accounting for the sub-base and concrete slab.
Compact the soil firmly using a roller or compactor.
Address any soft spots by excavating them and refilling with compacted sub-base material.
Consider treating the excavated sub-grade with a weed killer if weed problems are prevalent.

2. Sub-base
Material: Use a well-graded granular material such as MOT Type 1 (crushed rock graded from 40mm down to dust).
Depth: For farm driveways with heavy vehicle traffic, aim for a sub-base depth of at least 150mm. Consider increasing the depth to 200mm or more in areas with soft or unstable ground conditions.
Installation: Lay the sub-base material in layers of approximately 50mm and compact each layer thoroughly using a compactor or wacker plate.
Drainage (Optional): If the ground is prone to waterlogging, consider incorporating a geo-textile membrane (e.g., Terram) beneath the sub-base to aid drainage and prevent water from weakening the concrete structure.

3. Concrete slab
Material: Utilize a high-strength, agricultural-grade ready-mix concrete like Readymix Farmpave or Blue Circle High Strength Ready to Use Concrete (40N/mm²), designed for heavy loads and farm environments.
Thickness: Aim for a concrete slab thickness of at least 150mm. Increase the thickness to 200mm or more in areas with extremely heavy traffic or poor ground conditions.
Reinforcement: While crack control mesh is not always required with specialist agricultural concrete, consider using a steel mesh (e.g., Rom Grey Concrete Reinforcing Bar) for extra strength in areas subject to very heavy loads or where vehicles frequently cross the slabs.

4. Crowning for drainage
Shape the concrete slab with a gentle crown or hump along its length, creating a slight slope towards the sides.
The slope should be at least 1% (equivalent to 12.5mm per meter) to effectively direct rainwater off the driveway surface and into the surrounding ground.
Ensure that the crown is evenly distributed across the driveway's width, allowing water to flow off both sides.

5. Curing and finishing
Keep the concrete slab damp during the curing process for at least seven days, preferably by covering it with plastic sheeting.
Avoid placing heavy loads on the driveway until the concrete has fully cured, which typically takes 28 days.
Apply a textured finish (e.g., tamped or brushed) to the concrete surface to improve slip resistance.

6. Planning considerations
Permeable surfaces are preferred for driveways exceeding 5m² to avoid the need for separate drainage systems.
If using an impermeable surface and directing water towards the surrounding ground, assess the ground's ability to absorb water (percolation rate) according to LABC.
Ensure that the driveway's design does not impact existing infrastructure or neighboring properties, including drainage systems and access points.
Check local council regulations regarding permeable surfacing requirements and any other restrictions or conditions.
By following these specifications and carefully implementing the crowning technique, a durable and functional concrete driveway can be constructed at a farm access point in North West England, effectively managing water runoff while withstanding the demands of heavy farm vehicles.