

CLAIMS

1. An anchoring assembly for fastening a railway rail to an underlying foundation; the anchoring assembly
5 comprising:
 - a base plate configured to receive the rail;
 - a fastener configured to fasten the base plate to the underlying foundation; and
 - a rigid sleeve defining a passage through which a stem
10 of the fastener passes,
 - wherein the base plate comprises an opening and the sleeve is configured to extend through the base plate opening,
 - wherein the sleeve extends a distance greater than a
15 thickness of the base plate such that the sleeve extends from a top surface of the base plate and beyond a bottom surface of the base plate when installed, and
 - wherein the sleeve is configured such that a compressive load applied by the fastener when installed is
20 transmitted through the sleeve to the underlying foundation.
2. The anchoring assembly of claim 1, wherein the anchoring assembly further comprises a resilient pad
25 provided between the base plate and the underlying foundation.
3. The anchoring assembly of claim 2, wherein the compressive load transmitted through the sleeve
30 substantially bypasses the resilient pad.
4. The anchoring assembly of claim 2 or 3, wherein the sleeve passes through an opening in the resilient pad.

5. The anchoring assembly of any of the preceding claims, wherein the fastener comprises a head at one end of the stem.

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6. The anchoring assembly of claim 5, wherein the fastener clamps the sleeve between the underlying foundation and the head of the fastener.

10 7. The anchoring assembly of claim 5 or 6, wherein the anchoring assembly further comprises a spreader plate provided between the fastener head and the sleeve.

15 8. The anchoring assembly of any of the preceding claims, wherein the sleeve comprises a lip extending around at least a portion of a perimeter of the sleeve, wherein the sleeve lip exceeds the dimensions of the opening in the base plate.

20 9. The anchoring assembly of any of the preceding claims, wherein the anchoring assembly further comprises an insulator configured to insulate the sleeve from the base plate.

25 10. The anchoring assembly of claim 9, wherein the insulator comprises an opening configured to receive the sleeve.

30 11. The anchoring assembly of claim 9 or 10, wherein the sleeve extends below the insulator when installed.

12. The anchoring assembly of any of claims 9 to 11, wherein the insulator comprises a lip extending around at

least a portion of a perimeter of the insulator, wherein the insulator lip exceeds the dimensions of the opening in the base plate.

5 13. The anchoring assembly of claim 12 when dependent on claim 8, wherein the sleeve lip rests on the insulator lip when installed.

10 14. The anchoring assembly of any of the preceding claims, wherein the sleeve passage extends in a direction perpendicular to a longitudinal axis of the fastener when installed such that the lateral position of the sleeve and base plate relative to the underlying foundation is adjustable.

15 15. The anchoring assembly of any of the preceding claims, wherein a top surface of the sleeve is substantially flat.

20 16. The anchoring assembly of any of the preceding claims, wherein the base plate has a substantially flat top surface in the region of the opening.

25 17. The anchoring assembly of any of the preceding claims, wherein the fastener is tightened with a torque of between 400 NM and 500 Nm.

18. The anchoring assembly of any of the preceding claims, wherein the base plate is configured to extend beneath the rail.

30 19. The anchoring assembly of claim 18, wherein the anchoring assembly comprises a further fastener and a further rigid sleeve and the base plate comprises a further

opening, and wherein the fastener passes through the rigid sleeve and base plate opening on one side of the rail and the further fastener passes through the further rigid sleeve and base plate further opening on the other side of

5 the rail.