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Understanding CC201 and Highways Specification for Ground Stabilisation

Highways are in the process of creating another whole can of worms, similar to the one that now exists between Series 600 and HA74/007 (that no longer exists) for bulk earthworks and It would seem I'm not alone in my concerns, as the use of CC201 is currently confusing quite a few designers and contractors since the rollout of the new DMRB/CC-series specifications.

CC 201 does *not* fully replace Series 600 or 800, but it **supersedes them for pavement foundation construction** (including stabilised capping and sub-base layers) **where a performance-based foundation design (CD 225/CD 226)** is adopted.

In practical terms:

- **Series 600** still governs **general earthworks and soil improvement/stabilisation** (formation, capping, Class 6–9 materials, lime/cement treatment, sulphate assessment, etc.);
- **Series 800** still governs **unbound, hydraulically bound, and cementitious mixtures** for roadbase and above (structural pavement layers);
- **CC 201** steps in **between** them — for the **pavement foundation zone** — and replaces the older prescriptive clauses in 600 / 800 that used to define "capping", "Type 1 sub-base", etc, with a new performance-based specification framework tied to DMRB CD 225.

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The structural hierarchy in the current Highways England system:

Zone	*Typical layer*	*Governing specification (as of 2024/25)*	*Notes*
1. Formation / general earthworks	Bulk fill, improvement, stabilised capping, working platforms, sub-formation	**MCHW Vol 1 Series 600 ("Earthworks")**	Still fully current. Clauses 612–619 (earthworks, improvement, stabilisation) and 630 (ground improvement) remain authoritative. Sulphate risk, TPS, BRE SD1 limits, etc., still apply.
2. Pavement foundation	Capping (unbound / bound / stabilised), sub-base (unbound, HBM, foamed concrete)	**CC 201 "Pavement Foundation Construction"**	**Supersedes parts of Series 600/800** dealing with capping & sub-base *where* a performance or restricted foundation option (per CD 225) is used. Introduces "WSR 201/005 Bound Capping", etc.
3. Roadbase and surfacing	HBM base, bituminous base, CBGM, asphalt layers	**Series 800 ("Road Pavements – Unbound/CBGM")** and **CC 202 – Bituminous mixtures**	Series 800 still live for unbound & HBM base; CC 202 supersedes parts for bituminous.
4. Design control	Foundation class selection, performance testing	**CD 225 & CD 226** (DMRB)	Design method; CC 201 provides construction spec to match.

How they interact in practice

1. Stabilising of natural sub-grade or bulk fill

→ Use **Series 600** (Clauses 613 to 619).
CC 201 does **not** apply — it begins *above* the finished formation level defined in Series 600.
You still need to reference BRE SD1, Britpave, BS EN 13286 mix design, and sulphate/TPS limits per Series 600 Table 6/1.

2. Constructing a capping or sub-base that forms part of a pavement foundation

→ Use **CC 201** instead of the corresponding Series 600 / 800 clauses.
It contains:

- Restricted options (FC1–FC3) replicating "traditional" Type 1/2 materials.
- Performance options (PF1–PF4) allowing bound or stabilised foundations.
- Bound capping section (7.2 etc) covering lime/cement stabilisation, binder rates, sulphate tests (TPS/WS/OS), and compliance to BS EN 13286 - 47/49.

3. If the project predates or opts not to use CD 225/CD 226

→ Then **Series 600 / 800 still apply in full**.
Some local authorities and even National Highways framework contracts still specify Series 600 earthworks & Series 800 pavement works directly rather than adopting CC 201.

National Highways position (summarised from CC 201 "Instructions for Specifiers")

"This Clause supersedes relevant parts of SHW Series 600, 700, 800 and 1000 for pavement foundation construction."
"Series 600 remains applicable for earthworks below the formation."
"Specifiers shall reference CC 201 for all pavement foundations designed in accordance with CD 225."

(Source: CC 201 Instructions for Specifiers, National Highways 2023–2024.)

Practical guidance for you (civil / stabilisation consultant)

1. **Use Series 600** for:
    - Assessing soil suitability, TPS/OS/WS testing, heave risk (BRE SD1 DS-1–DS-5).
    - Mix design feasibility for lime/cement improvement.
    - General earthworks fill classification and compaction control.
2. **Use CC 201** for:
    - Specifying *bound or stabilised capping* forming part of the pavement foundation.
    - Defining foundation class (restricted / performance) under CD 225.
    - Stiffness, surface modulus, trafficking demonstration, performance verification.
3. **Cross-reference Series 800** where hydraulically bound mixtures transition upward into the structural base.
4. **Never treat CC 201 as a full replacement for Series 600** — it does *not* cover the wider earthworks scope, nor deep improvement/stabilisation below formation.

Conclusion

"CC 201 – Pavement Foundation Construction supersedes the relevant pavement foundation clauses within Series 600 and 800 of the MCHW where a foundation is designed in accordance with DMRB CD 225 and CD 226.
Series 600 remains applicable for general earthworks and soil improvement/stabilisation below formation level, while Series 800 continues to govern the road base and above.
Therefore, CC 201 operates *in conjunction with* Series 600 / 800, not as a wholesale replacement."