Changes from TG20:13

The principal differences between the TG20:13 and TG20:21 Operational Guides are summarised by the following table. Note that minor editorial changes and changes to illustrations that do not have a material impact on the guidance have been omitted for clarity.

Section	Title	Changes in TG20:21
1.4	TG20 compliance sheets	The layout of the TG20:21 compliance sheet has been significantly revised since TG20:13. The compliance sheet now spans two pages, with an illustration of the scaffold and the principal compliance criteria on the first page and the detailed compliance criteria, similar to the contents of a TG20:13 compliance sheet, on the second page.
1.5	Types of TG20 scaffolding	The types of TG20 compliant scaffolding have been extended to include tube and fitting tied independent scaffolding with up to three inside boards, external birdcages, mobile towers and loading bays constructed without beams. TG20 compliant loading bays with beams have also been modified, replacing the 5 board wide loading bay from TG20:13 with two variants: a 6+2 board wide loading bay and a 3+4+3 board wide loading bay.
2.1 – 2.3	TG20 compliance sheets	These sections have been revised to explain the principal features of a TG20:21 compliance sheet. The TG20:13 Operational Guide contained a significant number of compliance sheets that have not been reproduced in TG20:21, other than some representative examples.
2.4	The effect of the site location	The illustration of the TG20 wind factor bands in Great Britain and Ireland has been retained, but the manual procedure for determining the site wind factor has been omitted from the Operational Guide. The TG20:21 wind factor is calculated automatically by the TG20:21 eGuide, with a manual procedure provided in the TG20:21 Design Guide.
3.1, 3.2	TG20 eGuide	This section of the guide has been revised to explain the operation of the TG20:21 eGuide, which has been updated significantly to display a visualisation of the scaffold. The eGuide has also been extended to include the TG20:21 compliant scaffold types and to support the selection of the number of boarded lifts, in comparison with TG20:13 that conservatively assumed a fully-boarded scaffold.
4.1	Tubes	The guidance for cold formed high-tensile steel tubes from TG20:13 Supplement 1 has been included.
4.2	Boards	The guidance for the maintenance of scaffold boards has been revised in line with TG6:17.
4.3	Couplers	Guidance for supplementary and check couplers has been provided from TG14:20. Clarification has been added that a wedge coupler may be used as a right-angle coupler.
4.4	Prefabricated beams	Additional guidance has been provided to assist with the identification of TG20 compliant aluminium lattice beams. Practical guidance has also been included for the use, transportation and storage of beams.
4.6	Ladders	Significant revisions have been made following the introduction of the BS EN131 Professional ladder class and the withdrawal of BS1129 and BS2037.
5.1	Scaffolding foundations	The guidance for when sole boards should be used in addition to high-visibility plastic plates has been clarified.
5.2	Scaffolding foundation loads	This section has been simplified to relate the minimum sole board requirements to the maximum leg load reported by the TG20 compliance sheet, rather than explicitly providing tables of leg loads.
6.2	Scaffold usage and load class	This section has been updated to permit up to three inside boards.
6.4	Platform widths	This section has been updated to permit up to three inside boards.
6.7	Joints in standards and ledgers	This guidance has been simplified to recommend sleeve couplers for TG20 compliant scaffolding and clarify that joint pins are not recommended. Clarification has been added that tube-lock connections may alternatively be used.
6.8	Transoms	The guidance for board bearing transoms has been extended to permit three inside boards, with guidance provided for minimising the deflection of the transoms in this case. The requirement for a minimum 25mm projection of the transom tube has been removed, provided that the tube projects past the coupler. The guidance for structural transoms has been clarified to state that they may be connected to the standards or to the ledgers.
6.12	Ledger bracing	Guidance has been provided to ledger brace below the first lift in the direction diagonally away from the façade, for stability when the scaffold is one lift tall. The ledger bracing may be in either direction for a tied scaffold.
6.15	Decking	Guidance from TG12 has been added for securing boards with small diameter ropes.
6.18	Inside boards and brackets	This section has been amended to permit up to three inside boards and to reference section 6.8 for the guidance for minimising the transom deflection with three inside boards.
6.19	Single-lift cantilevered platforms	The guidance for tying the lift supporting the cantilevered platform has been clarified.

Section	Title	Changes in TG20:21
6.20	Internal edge protection	The definition of the maximum service gap dimension has been clarified to note that it is measured from the inner face of the standards where an inner platform is not present.
6.23	Rakers	An alternative layout of rakers has been provided that does not require ground anchors. The external raker configuration has been modified to no longer require plan or façade bracing. A new requirement has been specified that structural transoms should be connected to each pair of standards if an untied single-lift scaffold is not supported by rakers.
7.2	TG20 tie compliance	This section has been revised to reference the contents of the TG20:21 compliance sheets.
7.5	TG20 tie patterns	The guidance for laying out ties is unchanged, but has been rephrased now that a TG20 tie pattern is shown on the illustration on the first page of a TG20:21 compliance sheet.
7.6	Rules for spacing ties	This guidance is unchanged, but has been rephrased to state that it is used where the idealised tie pattern from a compliance sheet cannot be followed due to site conditions.
7.7	Tying returns	The qualifying criteria for adjacent returns have been revised to clarify that the adjacent elevation must be tied.
7.8	Tie assemblies	Guidance has been provided for the use of 'K-bracing' where a tie tube is more than 300mm from a standard.
7.9	Tying principles	Table 7.1 (guidance for additional sway resistance) has been updated for three inside boards.
7.11	Girder couplers	An illustration has been provided of a typical tie assembly to steelwork with girder couplers.
8.3	Staircase towers	The guidance for the use of compliance sheets with proprietary staircase towers has been clarified with additional details of the information required from the manufacturer or supplier. The guidance for erecting tube and fitting stairs without a design has been clarified.
8.4	Ladder-access towers	The maximum recommended vertical distance between landings has been reduced from 9.0m to 6.0m in line with SG25:20. The edge protection guidance has been updated to state that additional guard rails may be provided to maintain a maximum 470mm vertical gap if deemed necessary.
8.5	Other methods of ladder access	Guard rails have been shown around the external ladder in figure 8.12.
8.6	Landing platforms	The maximum recommended vertical distance between landings has been reduced to 6.0m for internal ladders and 4.7m (two lifts) in line with SG25:20.
8.7	Use of ladders	The safety guidance has been updated in line with SG25:20.
9.2	Beam specification	Examples of typical TG20 compliant aluminium beams have been added.
9.3	Fixing the beams	A clarification has been added that beams should not be connected at the 'horn ends'. It has also been clarified that the bearer transoms act as lacing tubes and supplementary couplers.
9.4	Lacing and bracing the beams	It is now recommended that section bracing is always provided, including the case where steel ladder beams are used.
9.5	Repeating the beam system	Table 9.2 (the number of beam systems required) has been updated for three inside boards.
10	Protection of the public	The cover image has been updated to show a single guard rail to prevent the risk of tripping over the traffic barrier. All illustrations have been updated to show representative safety coverings over the couplers, whereas TG20:13 provided a note to this effect.
10.2	Pavement lifts	A note has been provided that suitable breaks in the handrail and baulk may be required to provide an access or escape route. The requirement for the client to provide lighting has been qualified to be where deemed necessary in line with SG34:17.
10.3	Stabilising a pavement lift	Figures 10.6 – 10.8 have been corrected to remove the ties from the rightmost standards.
11.1	Gin wheels	The guidance for the safe use, inspection and handover of gin wheels has been revised in accordance with SG9:21. The examples of maximum loads that can be lifted have been increased while remaining within the 50kg limit.
11.2	Other lifting methods	The maximum permitted weight for a hand line has been increased from 20kg to 28kg, in line with SG9:21, to permit a 21' tube to be lifted.
11.3	Rubbish chutes	A maximum vertical height of 10m is recommended in accordance with TG3:19.
12	Loading bays	This chapter has been rewritten to provide guidance for TG20:21 compliant loading bays, which may be 6+2 or 3+4+3 boards wide, constructed with or without beams.
13	Birdcages	Guidance has been provided for external birdcages, in addition to the internal birdcage definition from TG20:13. TG20:21 compliant birdcages may be fully boarded at multiple lifts if required. The maximum height-to-base ratio for free-standing internal birdcages has been conservatively reduced from 4:1 to 3:1.
15.2	Free-standing or mobile towers	Guidance has been provided for TG20:21 compliant mobile towers.
15.3	Lift shaft towers	The guidance has been updated to permit a second lift to be very lightly loaded.
17.2	The client brief	Additional criteria for consideration in the client brief have been included from TG21:20.
17.4, 17.5	Risk assessments. Method statements	These sections have been updated in line with SG7:19.
17.6	Training	This section has been updated to reference CPD (Continuing Professional Development) and the CISRS card checker.
18.2	Handover certificates	The sample handover certificate has been updated to match SG35:21.