

## Scaffolding Specification

### REVISION HISTORY

1.3	02/09/19	Revised frequency of proof tests on ground anchors, fitting poles/rollers on OHL and headroom on SE	AL	PRT/REC	AL
1.2	09/04/19	Frequency of proof tests added and new document numbers used	AL	PRT	AL
1.1	19/11/18	Added: The anchor should be tested to a proof load which is typically 1.5 x the design load.	AL	PRT	AL
1.0	15/11/18	Amended to Include notes about pull out testing	AL	PRT	AL
B	14/09/18	Reviewed and updated	PRT	AL	AL
A	04/02/14	First Issue	HA	RP	RP
Rev	Date	Description of revision	Prepared by	Checked by	Authorised by

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## 1. SCOPE

The scope of this specification covers all types of scaffold supplied to BB Power T&D. General requirements are detailed, as well as specific requirements for certain types of specialist scaffolding.

## 2. GENERAL REQUIREMENTS

All work on scaffolds on BB Power T&D sites shall be carried out in line with this specification.

## 3. DEFINITIONS

Supplier:	The subcontracted scaffolding company who will design, supply and maintain the scaffolding
Designer:	The Supplier's Design Engineer
Third Party Checker:	An Independent Design Engineer
BB Power T&D:	Balfour Beatty Power Transmission & Distribution
TWD:	(BB Power T&D) Temporary Works Designer
TWC:	(BB Power T&D) Temporary Works Coordinator
NG	National Grid
SI	Site Investigation
CISRS	Construction Industry Scaffolders Record Scheme

## 4. SCAFFOLDING DESIGN BRIEF

A scaffold requirement will be identified by a BB Power T&D Project Engineer or TWC. An outline BB Power T&D Design Brief will be prepared by the TWC, (see Appendix A).

The outline design brief will state the basic requirements of the required scaffold, its duty, site specific design parameters, site restrictions & hazards.

This should include the requirement for rubbing poles and/or rollers on OHL scaffolds so that the subcontractor can include in their tender, designs and activity schedule.

The TWC will contact a supplier to inform them of the scaffold requirement, provide the outline design brief, and invite the supplier to carry out a site survey.

The TWC will arrange a site visit with the supplier where the outline Design Brief should be reviewed. During the visit the Supplier will raise any further queries relating to the required scaffolding, as well as identify any additional site specific design parameters, site restrictions and hazards. Scaffold foundation SI, underground & overhead utility data will be sought by the TWC so that a fully detailed design brief can be finalised. The design brief should identify proposed excavations that are planned in the footprint of the scaffold.

## 5. PROCUREMENT

The scaffolding design brief will define the scope of works. A quotation will be requested by the Project Engineer or TWC and will be submitted by the supplier for approval to the Project Engineer and BB Power T&D procurement department

If the project is to proceed, a Purchase Order will be raised with the Supplier by BB Power T&D procurement.

## **6. DESIGN**

### **6.1 General**

Design should be carried out using applicable British Standards & industry recognised guidance notes.

Independent tied scaffolds should be designed in accordance with the following:

- TG20 :13 'Good Practice Guidance for Tube and Fitting Scaffolding
- BS EN12811-1 Temporary works equipment. Scaffolds. Performance requirements and general design
- ENA TS 43-119 Design and use of temporary scaffold guards and conductor support systems

Best practice principles for all scaffold types should also be adopted from TG20.

All scaffolds except independent tied scaffolds should be designed as free standing; the designer should not make the assumption of any physical tie to adjacent support. This is unless express written permission has been provided by the asset owner clearing BB Power T&D of liability, as well as the TWD confirming the structure is sufficiently robust to tie to, which must be confirmed in writing by the TWD.

Stability should be maintained at all stages of construction. This may be achieved using temporary front/rear stays/anchors (ground anchors, kentledge or drill ties). Construction stage requirements for stays/anchorage should be identified and stated clearly in design drawing annotation.

Free standing structures shall have a factor of safety against overturning of no less than 1.5.

Moment transfer at connections of system scaffolds should be ignored, unless the arrangement complies with clause 10.2.3 of BS12811-1-2003 or moment resistance can be demonstrated via manufacturer's technical documentation.

All elements of a sheeted or debris netted scaffold – specifically the 'sheeting', 'sheeting clips', 'sheeting hooks' and 'sheeting rails' (as defined in NASC TG20 and BS EN12811-1') – shall be subject to design.

The loadings on individual scaffolding component members (live loads, environmental loads & specific load consideration detailed in the design brief or relevant standard) shall be determined by analytical means and their suitable capacities proven.

If the site is located on a slope or adjacent to a retaining structure or slope, the Supplier should note this as a residual risk on their drawing for BB Power T&D to review.

Anchor bolts must be tested, if bolt groups are used only a single bolt is required to be tested. When bolts are tested NO benefit is to be gained from the self-weight of scaffolding and tests should be carried out prior to scaffold erection.

Bolt anchors and ground anchors should be tested to a proof load of 1.5 x the design load. See Section 13 below for frequency of proof testing.

### **6.2 Standard Design Solutions**

Standard Design Solutions are provided for typical access scaffold applications in NASC TG20.

BB Power T&D encourage the development of Standard Design Solutions for OHL & Cabling works and scaffold types not considered in TG:20.

All Standard Design Solutions should follow normal design procedural approach & checking

appropriate to the complexity of design.

Standard Design Solutions may be site specific for repeated construction.

Non site specific standard design solutions should make allowance for geographic flexibility, seasonal environmental load variation and difference in foundation type. Designs may incorporate separate detail for typical adaptations or modifications and alternative arrangements (e.g. proprietary modular beam support to a scaffold standard over a cable trough excavation).

### **6.3 Loading**

Scaffold platform load class should be defined in the Design Brief. The Supplier should establish the intended use at the time of the site visit and advise the TWC if an alternative load class is appropriate. Platforms required to accommodate additional loading, such as Loading bays, should be identified in the Design Brief by position and load (nominally 10kN/m<sup>2</sup>).

Wind loading should be in accordance with BSEN 1991-1-4:2005+A1:2010 & NA.1 or the simplified approach of BS 5975:2008+A1:2011.

Scaffold faces shall be considered to the prevailing wind direction. No shielding of individual scaffold members shall be assumed. No significant obstructions shall be considered.

Should the structure be due to be erected between 1st November & 31st March snow loading should be accounted for in the design for exposed platforms and roofs (for encapsulated structures). Inclusive snow loading should be determined from BS EN 1991-1-3:2003 & NA.1.

### **6.4 Ground Support**

On inspecting the site, the type of ground the scaffold is to be founded upon should be noted in the Design Brief. If more detailed assessments are unavailable, the following values should be used as the allowable bearing capacity:

- Hard standings & firm ground: 100kN/m<sup>2</sup>
- Non-water logged Soils : 50kN/m<sup>2</sup>
- Other ground & water logged sites : seek advice from the nominated BB Power T&D Temporary Works Designer prior to undertaking the design

Suitable sole board arrangements should be included in the design to ensure these pressures are not exceeded. Design calculations should be produced to confirm appropriate strength for the sole pad material & correct load distribution area to produce acceptable bearing pressure.

Where excavation is intended within the footprint of the scaffold, the designer should attempt to offset scaffold standards a distance equal to the excavation depth from the edge of the excavation. Where scaffold standards must be closer to trenches, trench support will be provided, alternatively the excavation should be extended to allow the scaffold to be founded at formation level.

### **6.5 Components**

The use of system scaffolds is preferred, although not mandatory.

### **6.6 Access**

Ladders may only be used if other methods cannot be justified. The hierarchy of access and

egress to and from scaffold is:

1. Use of existing structure (if available)
2. Staircases (secondary emergency ladder exit should also be provided)
3. Ladder access bays with single lift ladders
4. Ladder access bays with multiple lift ladders
5. Internal ladder access with a protected trap
6. External ladder access using a safety gate

If a lower risk access method cannot be used, such as staircases, then justification for the chosen access method should be noted within the design.

## 7. DESIGN CHECKING & APPROVAL

### 7.1 General

Design checks shall be carried out by the Supplier and where applicable by an independent organisation prior to design submission to a BB Power T&D TWD.

Design checks will be undertaken with the appropriate level of independence as detailed in BS5975-2008.

BB Power T&D classify their scaffolds, in terms of temporary works checking requirements as follows in Table 1

Table 1 : Scaffolding Temporary Works Categories

Type of Scaffold	Temporary Works Category
Scaffolding - Haki stair / towers, mobile access towers	0
Scaffolding - Standard Designs e.g. TG20	0
Scaffolding - Requiring design	1-2
Laydown access on sealing end platform – tube, fitting and boards.	1
Joint Bay Scaffold with or without lifting beam	2
Access scaffold to sealing end (sheeted or un-sheeted) - No lifting beam	2
OHL Protection scaffold on single track/footpath	2
Access scaffold to sealing ends, Sheeted with Lifting Beam	3
OHL Protection scaffold - netted structures over road / railway / Power line / navigable waterway	3
Complex or innovative designs or with abnormal parameters	3

CAT 1 designs may be checked by another member of the design team. The checker should sign the drawing and supporting calculation to indicate the design documents have been checked. Design drawing & calculations should be submitted to BB Power T&D TWD.

CAT 2 designs may be checked by another member of the design team without reference to the designer's calculations, who must produce his/her own calculations to demonstrate

adequacy & correctness. The checker should sign the drawing and his/her own calculations to indicate the design documents have been checked. Design drawing, calculations, and check calculations should be submitted to BB Power T&D TWD.

CAT 3 designs should be checked by another organisation (this may be a BB Power T&D Temporary Works Designer) without reference to the designer's calculation, and must produce his/her own calculations to demonstrate adequacy & correctness. The checker should sign his/her own calculations. Design drawing, calculations, and third party organisation check calculations should be submitted to BB Power T&D TWD.

Design Check Certificate ENG-SF-0101c shall be included with all design submissions to BB Power T&D TWD.

For Category 1-3 designs, the Supplier's Designer & Internal Checker should complete Sections (A & B) of the design check certificate form ENG-SF-0101c (see Appendix B). For Category 3 designs the Third Party Checker shall also complete the last part of Section B.

BB Power T&D Temporary Works Designer will review the design submission and will complete Part C of form ENG-SF-0101c to signify design approval.

Construction activity shall not commence until a site specific design has been approved by the BB Power T&D TWD.

## **7.2 Emergency Work**

For emergency/reactive works, pre-designed and approved Standard Scaffold Designs may be utilised. The Supplier is responsible for ensuring that the scaffold is constructed in accordance with the standard design.

BB's TWC will make a note in their site records / diary of the decision and considerations in adopting a standard solution.

Where there is a requirement to deviate from a standard design, approval must be sought from a BB Power T&D TWD before proceeding.

## **8. DETAILING & DOCUMENTATION**

The supplier should submit the following design documents for review / checking to the nominated BB Power T&D Temporary Works Designer (as detailed in the Scaffold Design Brief):

- 1) BB Power T&D Design Brief ENG-TF-0101e (see Appendix A)
- 2) Calculations
- 3) Site specific Construction Drawing at minimum scale 1:200
- 4) Design Check Certificate (BB Power T&D Form ENG-SF-0101c, see Appendix B)
- 5) Site Specific Design Risk Assessment

Documents shall include a unique Title, Drawing Number, Revision & Issue Status.

### ***Site Specific Construction Drawings***

The construction drawing should illustrate the scaffolding arrangement in full plan, section & elevation (i.e. no part plan / elevation), tubular scaffold components and bracing shall be easily identified along with check couplers, stays, lifting beams, anchorage, catenaries & netting.

The geographic position should be identifiable by either grid squares or land mark features.

- Set out dimensions should be detailed.
- Site demarcation boundaries and segregation/protection and Anti Climb Device measures should be illustrated.
- Ground bearing loads, sole board details, stay rope size & stay loads should be shown. Anchor types, size & required anchor holding capacities should be shown. Fixing arrangements for stays, & anchorage should also be illustrated.
- Temporary Stays/Anchors arrangements and stage requirement should be clearly illustrated
- Earthing arrangements should be shown.
- Access arrangements should be shown.
- Seasonal Load consideration should be clearly stated (Summer or Winter)

Scaffold sheeting arrangements (type and the fixing/tying details) is a 'Designer' duty as defined in CDM Regulations 2015. It is not acceptable to leave such decisions to the discretion of those responsible for erecting/installing a sheeted scaffold system.

A specific Designer's Risk Assessment shall be completed for each scaffold, generic risk assessments are not acceptable. Risks shall be mitigated as far as is reasonably practicable. Residual Risks are to be identified on the drawing.

## **9. OHL SCAFFOLD SPECIFIC REQUIREMENTS**

### **9.1 Standards & Guidance Notes**

Scaffolds should be designed to comply with the requirements of ENA TS 43-119.

### **9.2 Circuits & Electrical Clearances**

Circuits should be identifiable both in name & ID symbols/colours. Operating Voltages, Live Zone & Vicinity Zone clearances should be shown.

Swing clearances to live circuits should be illustrated where vicinity zone clearances are not achieved from conductor to top of scaffold. Swing clearances should be relative to the conductor type/configuration of the adjacent live circuit & for the appropriate stage status.

Conductor Type (existing & proposed) and mass per metre should be stated.

Clearance form ENG-SF-0101d-OHL (Appendix C shows version current in April, 2019) should be completed to properly identify electrical clearances.

### **9.3 Specific Load Consideration**

Static & impact loads should be considered for the worst case conductor type/configuration

(existing/proposed)

## **10. JOINT BAY SCAFFOLD SPECIFIC REQUIREMENTS**

### **10.1 Position**

Joint Bays are erected in proximity to cable trough excavations. Scaffold faces adjacent to excavations should be positioned a minimum horizontal distance equal to or greater than the depth of the excavation where possible (see section 6.3).

Proposed cable excavation under and in the vicinity of the scaffold footprint should be detailed in the design brief.

### **10.2 Specific Load Consideration**

Unless specified otherwise, the Designer should assume a lifting beam of 0.5 tonne SWL for joint bays up to and including 132kV and a lifting beam of 1.0 tonne SWL for joint bays over 132kV is required.

Multiple lifting beams may be required. Quantity and position should be defined in the Design Brief.

## **11. Sealing End Scaffold Specific Requirements**

### **11.1 Position & Arrangement**

Design Briefs shall clearly identify the spatial requirements of the construction operations. If this has not been detailed in the outline Scaffold Design Brief, the Supplier should confirm this with the TWC and record this in the detailed Design Brief.

Sealing end scaffolds are often erected in proximity to cable trough excavations. Scaffold faces adjacent to excavations should be positioned a minimum horizontal distance equal to or greater than the depth of the excavation where possible. Alternative beamed bridge sections shall also be considered (see section 6.3).

### **11.2 Headroom**

Clear head height on working platforms and access/egress routes should be a minimum of 2.0m, where feasible.

### **11.3 Encapsulation**

Should cladding or encapsulation be requested, the scaffolding should be encapsulated to provide a weathertight, but not air tight, working environment.

The roof should be covered using a suitable material.

The encapsulation should provide a suitable number of translucent sheets/panels in order for natural light to penetrate into the working area.

The sheeting provided should be fire retardant.

Allowances for ventilation should be made to prevent condensation issues or the creation of a confined space.

### **11.4 Openings & Lifting Wells**

An unobstructed access should be provided in the form of an opening at ground level, BB Power T&D must be able to seal off the access if necessary. The access should be located within the footprint of the structure.

An opening should be provided to allow materials, lifted via the lifting beam, to enter the scaffold. This opening should have the ability to be closed.

A designated area is to be provided within the scaffold in which to lower the load and contain it whilst the encapsulation is opened & closed.

All openings to the floor including stairwells should have suitable edge protection, with toe boards, to prevent materials or tools falling from height.

The floor decking will consist of fire & slip resistant boards.

### **11.5 Loading**

Unless specified otherwise in the Design Brief, the designer should assume a lifting beam of 0.5 tonne SWL for sealing ends up to and including 132kV and a lifting beam of 1 tonne SWL for sealing ends over 132kV. If site operations require a higher capacity lifting beam this should be identified within the scaffolding design brief.

Platform loading should be stated within the Design Brief.

## **12. ERECTION & DISMANTLING**

In general BB Power T&D will adopt TG20 guidance as good practice for erection and dismantling.

Gangs erecting/adjusting/dismantling Category 2 or 3 scaffolds shall have at least one Advanced Scaffolders.

All scaffolding operatives are to be CISRS trained.

For work in proximity to overhead lines, substations or cable termination equipment, operatives should have demonstrable electrical safety competence. Additional competence will be required to work under limited access or isolation permits.

Scaffolders working with system scaffolding shall have the relevant training for the specific system type, which should be recorded on their card.

Scaffold erection should be supervised at all times. Supervisors should be competent in reading construction drawings to the complexity of the work being carried out.

All scaffolds should be erected and dismantled in accordance with approved site specific design documentation, Risk Assessment & Method Statements.

Methodology & design drawing annotation shall clearly define controls for scaffold stability and the stages at which the controls should be applied.

All work will be carried out in compliance with BB Health and Safety Procedures, specifically HSF-PR-0063 "Working at Height"

All work will be carried out in accordance with SG4 (Preventing falls in scaffolding). All tools shall be tethered. Work areas should be segregated from other site operatives & the public.

Good housekeeping shall be demonstrated at all times. Work areas should be free of obstruction.

Scaffolds shall be earthed as soon as the base has been installed. The scaffolder's staff shall measure the resistance to earth to ensure within the client's current specification, take a photograph of the reading and send it to the designated BB site engineer.

Rubbing poles and/or rollers for OHL scaffolds will be provided by BB and fitted to the scaffold by the subcontractor prior to carrying out the formal handover check and fitting the Scafftag.

Formal handover shall be signified by Scafftag or similar. Joint handover inspection shall be carried out where possible with the TWC to ensure compliance of the scaffold with approved design documentation and the site has been left in a satisfactory condition.

### **13. TESTING**

Anchors should be proof tested as described in Section 6.1

A minimum of 3 bolts or 1 in 20 (whichever is greater) should be tested on any single scaffold.

Proof testing will be carried out on a minimum of 3 No. ground anchors (other than kentledge) or one anchor for every three rows of standards on each side (for fall protection scaffolds, whichever is the greater). Tests to be evenly spread across the site.

### **14. MAINTENANCE**

The supplier will be responsible for undertaking weekly inspection.

The Scafftag should be signed following inspection to inform continued conformity to the design.

### **15. SITE CLEARANCE**

Following completion of dismantling, all materials shall be cleared from site. Site shall be thoroughly inspected. Metal detectors should be used in areas of vegetation growth.

The Scafftag (or photocopy) shall be surrendered by the supplier to the BB Power T&D TWC for their records.

The supplier should issue a site clearance certificate to signify site clearance completion

### **16. WELFARE FACILITIES**

The scaffolding contractor may use BB Power T&D site welfare facilities where available, to be discussed on a project by project basis.

## 17. Appendix A – Scaffold Design Brief (example only)

Balfour Beatty

Temporary Works Design Brief  
Template Form: ENG-TF-0101e

Project Name		Project Number	
TW Register Ref No.		Revision	

Location/Description:	
Management Class:	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/>

\*Complete below section if necessary

Client *		BB Project Manager *	
Site Contact Name*		Site Contact Tel*	
Sector *		Task Code*	

Brief Description of Temporary Works to be Designed:	Required Information
<p><i>Design Notes: All information necessary to enable a Designer to produce the design must be included. Any information that is omitted may have adverse effects on the design.</i></p>	<p><b>Risk Information:</b> Slopes, structures, services, public interface</p> <p><b>Loading Information:</b> Plant loads, structural use, personnel</p> <p><b>Ground Conditions:</b> BH logs, trial pits, in situ testing (DOP's, PBT's), visual description i.e. cohesive (strength)/ granular (density)</p> <p><b>Preferences:</b> Materials, Methods</p> <p><b>Other:</b> Approvals (3<sup>rd</sup> party) Access, sketches, specifications, levels</p>

Completed By:			
Position:		Submission to Designer date:	
Date:		Design Required by date:	

Approved By:	(TWC)		
Signed:		Date:	

Note: Working days' notice given for design items – 10 days (minor), 20 days (major).

Document Authoriser:  
Date of Issue:Grant Tolley  
12/12/2018

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Version: 2.0

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### Design Brief Information Required for Common Temporary Works Items:

#### I. Excavation Support

Type of support preferred e.g. trench box, drag box, cofferdam, preferred materials  
Minimum excavation size, length, width, clear opening required, cantilever or propped solution, knee braces, etc.  
Duration of excavation  
Details of adjacent buildings/ structures, e.g. foundation type, levels, distance from excavation  
Services near or crossing excavation  
Method of groundwater control, e.g. sump pumps, well points, deep wells, etc.  
Ground investigation report, bore hole log and plan, ground water monitoring, adjacent water courses, etc.  
Surcharge loading from plant, stored materials, spoil  
Proposed installation method, e.g. pre drive, dig and push, push and dig, slit trench  
Sketch showing work sequence

#### II. Mobile Crane Platform

Outrigger loads (provided by the crane supplier. Ensure the correct load(s), radius(s) and jib length(s) are used (for larger mobile cranes, rigging outrigger loads must also be checked)  
Outrigger mat size and construction material (e.g. ~~cylacast~~ mats timber sleepers, proprietary steel crane mats, piled foundations, RC slab, etc.)  
Crane platform material e.g. crushed concrete, type 1, etc.

#### III. Façade Retention / Needling

As-built information of supported structure  
Imposed loadings from proposed construction works  
Preferred materials incl. manufacturer's data sheets  
Foundations / back propping / raking struts

#### IV. Crawler Crane / Piling Platform

Ground bearing pressures, usually in the BRE format. Where tracked plant isn't in the BRE format, load cases must be supplied for working and standing/travelling (unloaded conditions generally more onerous than working).  
Crane platform material e.g. crushed concrete, type 1, etc.  
Required finished levels for working platform

#### V. Formwork / Falsework

Height / shape of structure  
Rate of rise of concrete, mix design  
Relevant permanent works drawings and specification  
Preferred materials e.g. timber, RMD, ~~Acrow~~ Mabe components  
Access requirements  
Propping requirements, e.g. existing slab, structure etc.

#### VI. Scaffolding

Design loading / No of boards / sheeting  
Duration of structure  
Location of site / structure (for calculating wind loading)  
Loading bay / hoist loadings and supplier  
Materials e.g. tube and fitting, proprietary systems  
Preferred materials incl. manufacturer's data sheets  
Preferred ties

#### VII. Foundations (Scaffolding / Falsework / Propping)

Design loading, size of sole plate/bearer  
Duration of loading

#### VIII. Tower Crane

Location  
Ground bearing/ ~~piledcap~~  
Loadings  
Crane details, e.g. height, boom, swing limits, etc.

## 18. Appendix B – Design Check Certificate (example only)

Balfour Beatty		Temporary Works Design & Check Certificate	
		Standard Form: ENG-SF-0101c	
Project Name			
Project No			
TW Register Ref No		Check Category	
Document No			
PART A: to be completed by the Designer	Scheme Description		
	Reference Documents: (Drawings, risk assessments, calculations; including document number and revision)		
	Signed		Design Organisation
Print		Date	
PART B: to be completed by the Design Checker	Comments:		
	Approved subject to the following conditions ...		
	Signed		Check Organisation
Print		Date	

\*In signing this document I certify that reasonable professional skill and care have been used in the preparation and checking of the design of the temporary works. This design is in accordance with the relevant principles set out in current British and European Standards, Codes of Practice and Industry Specifications.

## 19. Appendix C – Scaffold Clearance Form (example only)

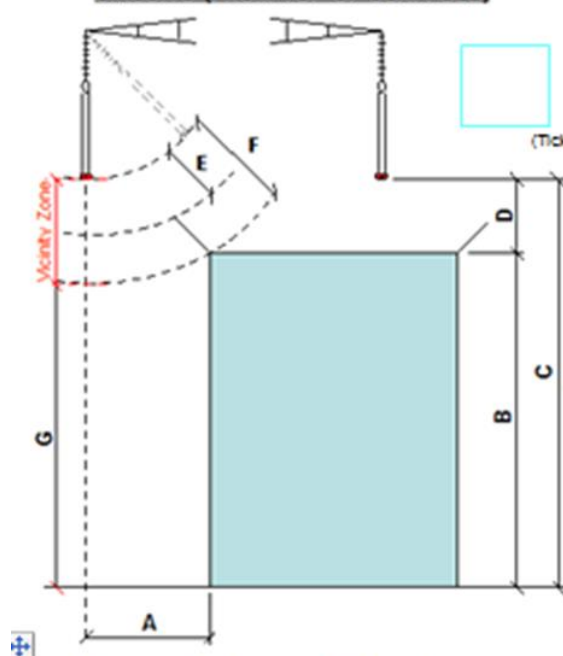
**Balfour Beatty**

Scaffold Guard Clearances  
Template Form: ENG-TF-0101d-OHL

Scheme title		Scaffold Design Ref.	
Span		Profile Drg No.	
Item No. / Description		Location / Chainage	
Side of crossing (Tower)		Live Zone* 132/275/400kV	
Circuit Colours (symbols)		Vicinity Zone* 132/275/400kV	
Circuit		Assessed by and date	
		Subcontractor	
		Verified by and date	
		BB Engineer	

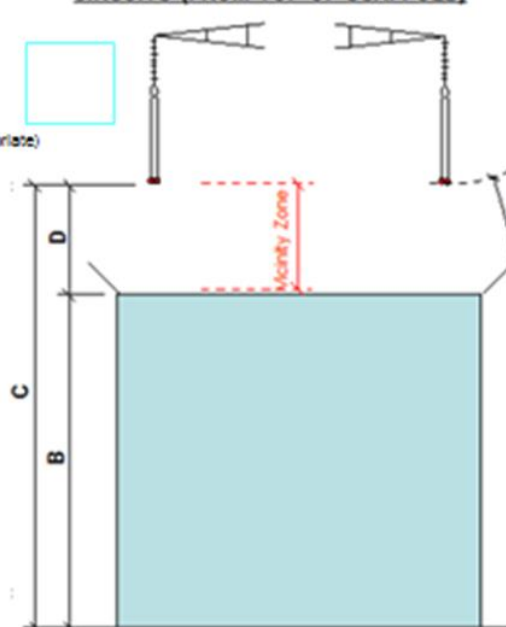
\* Delete as necessary

**TYPICAL ARRANGEMENT WHEN THERE IS INSUFFICIENT VICINITY CLEARANCE TO CIRCUITS (FROM TOP OF SCAFFOLD)**



- A – Distance from Scaffold to Live Cct (BC scaffold)
- B – Scaffold Height
- C – Ground to conductor
- D – Scaffold to conductor

**TYPICAL ARRANGEMENT WHEN THERE IS SUFFICIENT VICINITY CLEARANCE TO CIRCUITS (FROM TOP OF SCAFFOLD)**



- E – Outrigger to adjacent conductor
- F – Corner of scaffold to adjacent cct conductor
- G – Safe working height whilst overhead cct is live

ADD EXTRA ROW & COLUMN TO TABLE WHEN CIRCUITS AT DIFFERENT VOLTAGES  
CLEARANCE NEED TO BE CHECKED FOR OLD AND NEW CONDUCTORS

A	B	C	D	E	F	G

When there is sufficient vicinity clearance to circuits (from top of scaffold) dimensions 'A', 'F' and 'G' are not required.

All work which may encroach safety clearances on or near overhead lines must be carried out under an appropriate safety document. If this assessment identifies that the safety distances identified in the ENO's Safety Rules are infringed then a Permit for Work is required.

Balfour Beatty Person responsible for implementing on site (Engineer, TWC or TWS):

Safety Document Required	Yes	No
Signature & name		

## 20. Appendix D - Scaffold Ground Anchor Proof Test Record (example only)

Balfour Beatty

Scaffold Ground Anchor Proof Test Record  
Standard Form: ENG-TF-0101h-OHL

## Record of Scaffold Ground Anchor Tests

Line:			
Client Ref:		BB Ref:	
Item No. / Location			
Instrument Serial Nos.	1. 2.	Calibration Dates:	1. 2.
Design <del>Dwg.</del> No.			

Date of Tests:				<i>Proof testing will be carried out on a minimum of 3 No. ground anchors (other than kentledge) or one anchor for every three rows of standards on each side (for fall protection scaffolds), whichever is greater. Tests to be evenly spread across the site. Specification ENG-RM-0101d-PTD refers</i>		
Test No.	Guys (kN)		Back of scaffold (kN):		Front of scaffold (kN):	
	Pass (✓) or Load at Failure		Pass (✓) or Load at Failure		Pass (✓) or Load at Failure	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

	Name	Signature	Date
Tests carried out by:			
Company			
Witnessed by (BB):			