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## **Construction Policy, Benchmark Standards and Tools**

Version 3.1

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## Introduction

We work in some of the most complex environments around the world with the most vulnerable populations. To do this work effectively inevitably requires the construction of buildings that facilitate and house our vital programming for the communities we work with. In doing so, we have an opportunity to create exceptional spaces that significantly enhance the value of our programming and are delivered on time and on budget. Conversely, poor building design, implementation and maintenance can increase the vulnerability of the population not just for the lifetime of the grant but **critically** for the subsequent lifetime of the building.

**Save the Children** has primary responsibility for building quality, irrespective of whether the design is developed by others or implementation is accomplished with community involvement or the involvement of a building contractor.

### *Aims and Objectives*

The aim of these standards is to **promote a change in Save the Children's approach to construction programming**. It has been recognised following extensive review that a systematic process of change is needed to ensure that SC construction programmes are delivering responsibly on our commitment to children. The document draws on experience from past and present programming around the world and provides a basis for ensuring the safety of the children and families that we seek to support.

The **Construction Policies** describe the globally agreed standard that Save the Children set out to achieve in all of our global programming irrespective of local context.

The **Benchmark Standards** are a universal set of benchmarks that apply in all countries but must be interpreted for the local context. The benchmark standards set out in simple terms the activities that need to be done well for a construction programme to be safe and successful. They do not prescribe a construction process or standard set of designs since every operational context is different.

The **Tools and Guidelines** are a set of non-mandatory templates and reference material that are available in the [library](#) linked to this document to assist and guide construction project staff with meeting the benchmark standards.

Quality is never an accident;  
it is *always* the result of  
intelligent effort'



*The two images above are of high quality work undertaken by SC Infrastructure Teams (comprising local Engineers) for the Typhoon Haiyan response.*



*The image (above) of the collapsed roof of a school is sadly the result of employment of inadequate expertise coupled with inattention to necessary process and rigour in the planning and construction phase of a project.*

## Who are they for?

The guidelines have been developed for Country Office Senior Leadership Teams, Programme Managers and Construction Managers to facilitate implementation of rehabilitation and construction for humanitarian and development contexts. Whilst they represent a universal standard of good practice they need to be contextually adapted to respond to the local situation in terms of the needs, risks, vulnerabilities and capacities of the Country Office and beneficiary population.

## By referring to this document, the user will be able to:

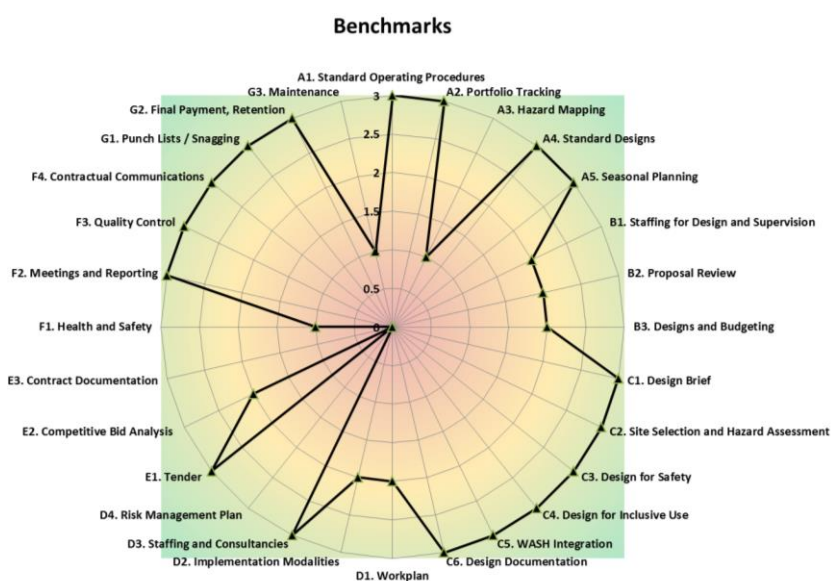
- Ensure that the programme of construction is in line with SC Construction Policy
- Assess the extent to which a programme or project is meeting the benchmark standards
- Put in place processes for all stages of construction that meet the benchmark standards
- Understand the key phases and activities involved in delivering a successful construction programme
- Establish the feasibility of proposed construction work
- Identify the human and financial resources needed to implement a construction programme
- Identify and produce key documents and access standard templates that correspond to the key phases in construction programming
- Mitigate key risks associated with the phases of construction
- Realise opportunities at every stage in the construction programme
- Request further support from the Shelter and Construction HTWG

By using this document as a reference point for rehabilitation and construction programmes, the user should be able to understand improvements in the way that construction is undertaken. Based on the given context, the user may need to make adjustments by adding or omitting certain steps required for successful implementation.

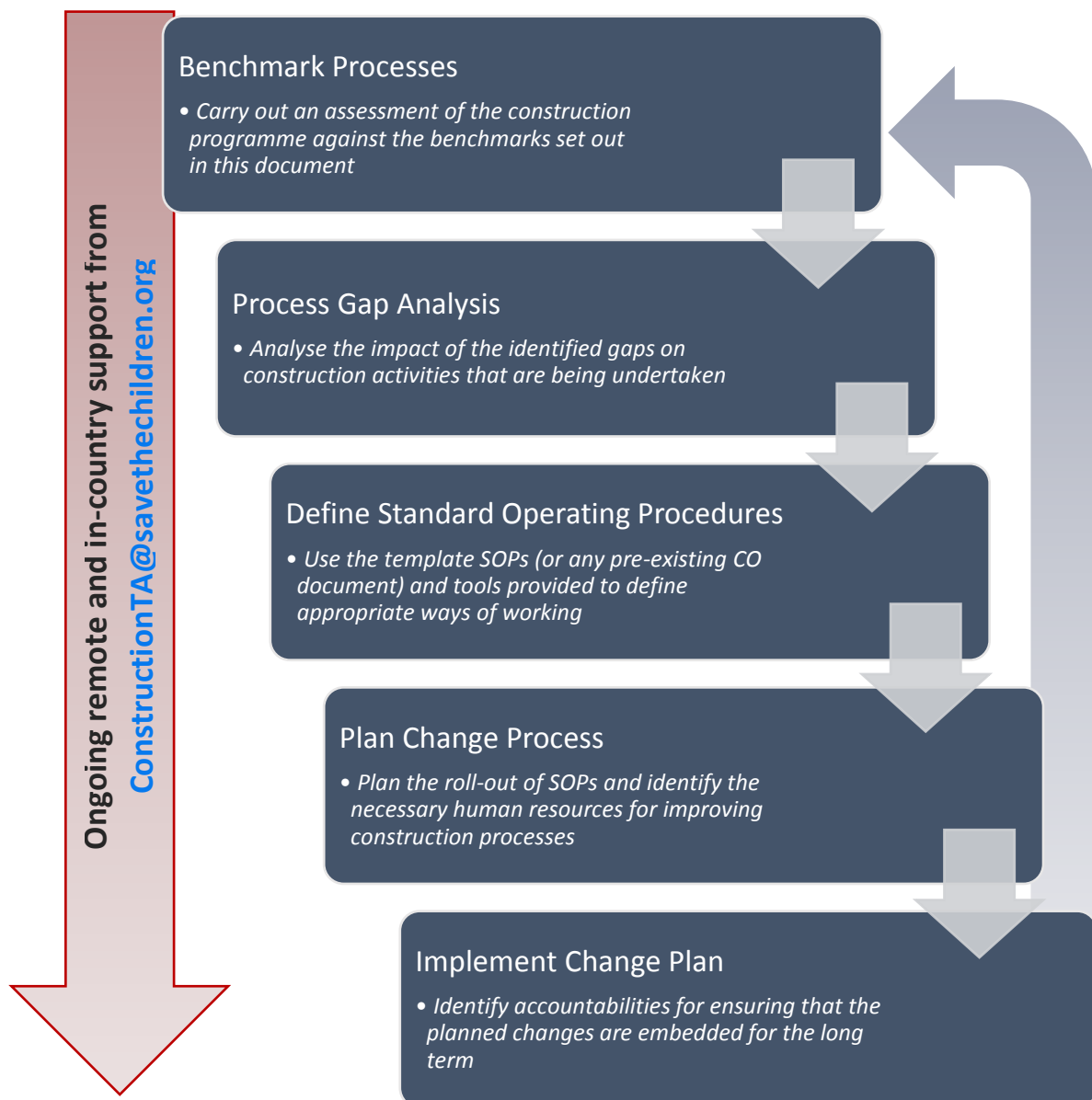
## How should they be used?

By setting out policies and benchmark standards this document enables country programmes to assess their construction programming against established good practice. In doing so the SMT is able to identify gaps in process and resourcing that generate risks to the efficient delivery of safe buildings. Where gaps do exist the tools enable country programmes to respond to these gaps with appropriate processes. A typical Benchmarking Capacity Assessment and Country Office change process is described in the diagrams below.

The Construction Technical Working Group (CTWG) will use this document as the primary framework for working with Country Offices (COs) to improve construction practice. As part of a field visit the team can quickly assess the programme against the benchmarks and work with the CO team to put appropriate processes in place. To roll out these policies and benchmarks, the Shelter and Construction Working Group will deploy resources both at CO and national levels with a focus on ensuring that the benchmark standards are adopted across the movement.



*Benchmark scoring for a typical country office - See Capacity Planning Tool*



The Construction Technical Working Group can be contacted at [ConstructionTA@savethechildren.org](mailto:ConstructionTA@savethechildren.org) for support with the use of any part of this document.

**Under no circumstances should this, or any other document, be used as a substitute for professional technical input.**

## SC Construction Policy

Save the Children Construction projects are undertaken according to the following policy principles. The construction benchmarks contribute towards ensuring that these policies are achieved on every construction project that Save the Children undertakes.

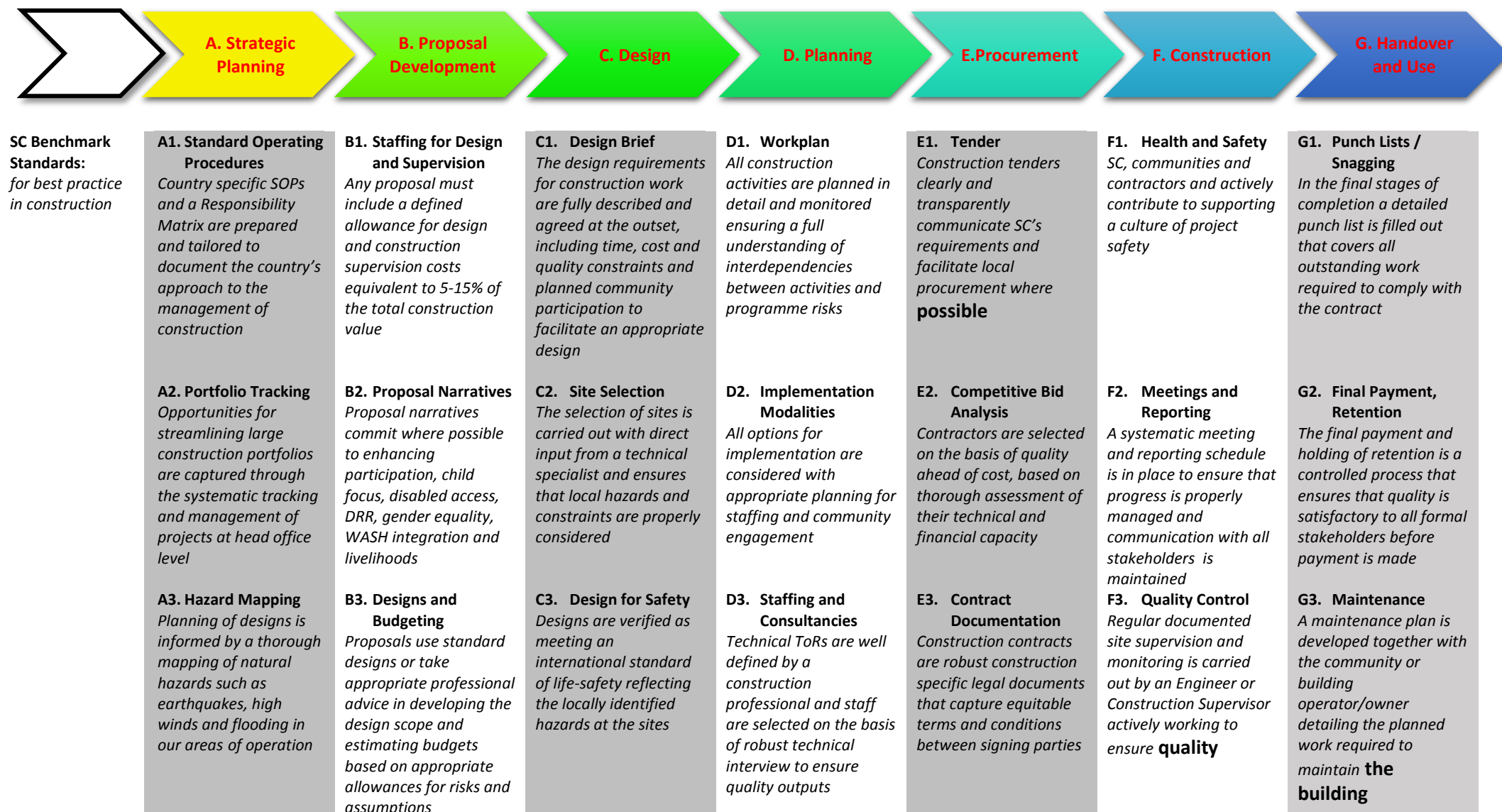
<p><b>1</b></p> <p><b>PROGRAMMING</b></p> <p>Construction projects do not exist in isolation but are undertaken to enable essential programming for the improvement of outcomes for children</p>	<p><b>2</b></p> <p><b>SAFETY STANDARDS</b></p> <p>Construction projects meet accepted local (government) or internationally accepted standards for structural life-safety, public health and WASH</p>	<p><b>3</b></p> <p><b>HAZARD ASSESSMENT</b></p> <p>Construction projects consider locally assessed multiple hazards; and incorporate hazard mitigation techniques</p>
<p><b>4</b></p> <p><b>COMMUNITY PARTICIPATION</b></p> <p>Communities are central to the process of building design, construction and maintenance. SC will engage as partners throughout the process.</p>	<p><b>5</b></p> <p><b>LOCAL PRACTICE</b></p> <p>Designs will build on local knowledge follow local practice, making only moderate adaptations to ensure safety, disabled access and gender appropriateness.</p>	<p><b>6</b></p> <p><b>LOCAL LIVELIHOODS</b></p> <p>Local procurement of materials and labour are encouraged where possible. Payments to suppliers will be timely and transparent.</p>
<p><b>7</b></p> <p><b>SITE SAFETY</b></p> <p>The Health and Safety of all stakeholders engaged in the construction project is central to all planning and decision-making</p>	<p><b>8</b></p> <p><b>MAINTENANCE</b></p> <p>Maintenance planning is considered early in the project cycle ensuring that community buy-in and ownership of the building in operation.</p>	<p><b>9</b></p> <p><b>SUSTAINABILITY</b></p> <p>The long term sustainability of the project including environmental and social impacts on the local area is considered and adverse effects appropriately mitigated</p>

*To help ensure that the above principles are consistently adhered to, SCI has mandated that a minimum of 5% of the construction budget should be allocated to resourcing of technical inputs including design, supervision and management of construction quality. See Benchmark Standard B1 below.*

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# Construction Benchmark Standards and Tools

The above policies are reflected in this section as **Benchmark Standards** that describe good practice at each stage of the construction process. Application of the Benchmark Standards will increase the likelihood of quality outcomes that mitigate risks and realise opportunities for children and their communities. They are supported by a range of tools that have been selected from good construction practice in different parts of the world.







**SC Benchmark Standards:**  
for best practice in construction

**A4. Standard Designs**  
*Standard designs for the key types of buildings are developed to a high standard based on government standards and include full construction details, specifications and bills of quantities*

**A5. Seasonal Planning**  
*Annual construction planning is on the basis of a sound understanding of access and market constraints resulting from seasonal and geographic variation*

**C4. Design for Inclusive Use**  
*Buildings are designed together with the community to ensure that they are child-friendly, gender sensitive and accessible to the disabled*

**C5. WASH Integration**  
*All projects ensure that adequate WASH facilities are provided in line with the relevant minimum standards*

**C6. Design Documentation**  
*Design Drawings, Specifications and Bills of Quantities are coordinated and of a high standard to include details that fully define the building*

**D4. Risk Management Plan and Award Risk Assessment**  
*Implementation risks including construction health and safety risks are captured in the risk management plan (RMP) and reflected in the award risk assessment (ARA)*

**F4. Contractual Communications**  
*All formal communications relating to the contract are recorded and signed off as appropriate to ensure that changes are properly managed*



SC Benchmark Standards: <i>for best practice in construction</i>	A1. Standard Operating Procedures A2. Portfolio Tracking A3. Hazard Mapping A4. Standard Designs A5. Seasonal Planning	B1. Staffing for Design and Supervision B2. Proposal Narratives B3. Designs and Budgeting	C1. Design Brief C2. Site Selection C3. Design for Safety C4. Design for Inclusive Use C5. WASH Integration C6. Design Documentation	D1. Workplan D2. Implementation Modalities D3. Staffing and Consultancies D4. Risk Management Plan	E1. Tender E2. Competitive Bid Analysis E3. Contract Documentation	F1. Health and Safety F2. Meetings and Reporting F3. Quality Control F4. Contractual Communications	G1. Punch Lists / Snagging G2. Final Payment, Retention G3. Maintenance
Tools and Sample Documents	A1. Standard Operating Procedure Template A1. Sample Team Structure A1. Responsibility matrix A2. Construction Portfolio Tracker A3. Example Hazard Map A3. UNEP Hazard Mapping Website A4. Document Naming Protocol A4. Drawing Issue Sheet A5. Access Constraints Map	B. Proposal review requirements for construction	C1. Design Brief Form C2. Site Assessment Template C3. School and Clinic Building Assessments C6. Sample Drawing Sets C6. BoQ Template C6. Sample material specifications	D1. Construction Workplan Tool D2. Example Job Descriptions D3. Sample Job Descriptions D3. Staffing master budget template D4. Risk Register Template	E1. Invitation to Tender E2. Bid Selection Criteria / Scoring (CBA) E3. Standard Form of Contract	F1. Health and Safety Inspection Checklist F2. Community MoU F2. Site Visit Record F2. Weekly Site Report F2. Daily site attendance sheet F3. Construction Inspection Records F4. Construction Standard Forms for Contractual Communication	G1. Snag-Punch List G3. Maintenance Manual G3. Maintenance Planning Guidelines for Schools G3. Maintenance Checklist
Reference Documents			<ul style="list-style-type: none"> <li>➤ UNICEF Compendium</li> <li>➤ UNICEF Child Safe School Design</li> <li>➤ Handicap International Guide</li> <li>➤ MSF Field Hospital Design</li> </ul>	<ul style="list-style-type: none"> <li>➤ 'The Built Environment Professions in DRR and Response: A Guide for Humanitarian Agencies'</li> </ul>	<ul style="list-style-type: none"> <li>➤ SCI Procurement Manual</li> <li>➤ Transparency International Guide to Avoiding Construction Fraud</li> </ul>	<ul style="list-style-type: none"> <li>➤ Health and Safety Guide RSA</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>
<ul style="list-style-type: none"> <li>➤ Towards Safer School Construction: A community based approach'</li> <li>➤ <a href="#">SC Technical Library</a></li> <li>➤ CRS Construction Guidelines</li> <li>➤ QSANDS</li> </ul>							
All of the above templates, tools and references are available on the OneNet Construction Page <a href="#">link</a>							

## Guidance and Approaches

A Strategic Portfolio Planning		
Benchmark Standard		
Approach		Relevant Tool/Guideline
A1	<p><b>Standard Operating Procedures (SOPs) and Responsibility Matrix</b></p> <p><i>Country specific SOPs and a Responsibility Matrix are prepared and tailored to document the country's approach to the management of construction</i></p>	
	<p>A clearly documented Standard Operating Procedure and Responsibility Matrix will ensure that all team members' roles and ways of working are fully understood. It also documents key country-wide design and implementation constraints and opportunities. It forms the repository for documentation relating to the majority of the Benchmark Standards set out in this document.</p> <p>The SOP template identifies the key sections and information that should be included in each section with best practice examples drawn from various country programmes. SOPs are not prescribed by SCI but will need to be tailored to local ways of working and appropriate approaches to meeting the Benchmark Standards.</p> <p>In emergency contexts, the SOPs set out the default ways of working for stand-alone construction teams.</p>	<ul style="list-style-type: none"> <li>- <b>A1. Standard Operating Procedure Template</b></li> <li>- <b>A1. Sample Team Structure</b></li> <li>- <b>A1. Responsibility matrix</b></li> </ul>
A2	<p><b>Portfolio Tracking</b></p> <p><i>Opportunities for streamlining large construction portfolios are captured through the systematic tracking and management of projects at head office level</i></p>	
	<p>Portfolio tracking facilitates the management of multiple construction projects and locations as a centrally controlled programme of work. This allows efficient senior management reporting and clear prioritisation of actions by a national construction team and other construction stakeholders such as Education, Health and Logistics teams. Viewing the series of projects as a portfolio should identify opportunities for streamlining procurement and HR functions.</p> <p>The template provides automated reporting functions designed for large portfolio teams. A guide for the use of the tool is included in the first tab.</p> <p>Contact <a href="mailto:ConstructionTA@savethechildren.org.uk">ConstructionTA@savethechildren.org.uk</a> for support in setting up portfolio tracking.</p>	<ul style="list-style-type: none"> <li>- <b>A2. Construction Portfolio Tracker</b></li> </ul>

A3	<p><b>Hazard Mapping</b>  <i>Planning of designs is informed by a thorough mapping of natural hazards such as earthquakes, high winds and flooding in our areas of operation</i></p> <p>A sound understanding of hazard maps as they relate to areas of operation will inform the development of <b>proposals and designs</b>.</p> <p>Not all government's standard designs adequately consider natural hazards present in the country, particularly if hazards are localised to specific regions. The UNEP Global Risk Data Platform allows you to generate relevant hazard maps for your country.</p> <p>Where implementation is at scale, SC should employ further advice to be satisfied of a safe design</p>	<ul style="list-style-type: none"> <li>- <b>A3. Example Hazard Map</b></li> <li>- <b><a href="#">A3. UNEP Hazard Mapping Web Resources [link]</a></b></li> </ul> <p><i>Request assistance at: <a href="mailto:ConstructionTA@savethechildren.org">ConstructionTA@savethechildren.org</a> for identification and appointment of the appropriate third party advice.</i></p>
A4	<p><b>Standard Designs</b>  <i>Standard designs for the key types of buildings are developed to a high standard based on government standards and include full construction details, specifications and bills of quantities</i></p> <p>A library of <b>standard designs</b> based on government standards for community buildings such as schools and health centres will help ensure consistency of projects and facilitate the learning of lessons from one project to the next.</p> <p>Where these are not complete drawing sets with detailed designs comparable to those in <b>Benchmark Standard C6</b> they should be developed as detailed drawing sets that describe every element of the building to allow robust quality assurance.</p> <p>Notes accompanying these drawings should include an understanding of the <b>local regulatory environment</b> with respect to <b>building codes</b> and <b>planning law</b>. Note any required timeframes for agreements and submissions to be made which could impact on construction programme planning.</p> <p>These should be routinely reviewed, particularly as projects close out to capture lessons learned and opportunities for the incorporation of child-friendly, disabled accessible and locally appropriate construction techniques [see Benchmark Standard C4].</p> <p>A Bill of Quantities updated with the recent material and labour costs and accompanying notes detailing how these vary seasonally and geographically will ensure that lessons from previous projects are captured and there is a sound basis for budgeting in proposals.</p>	<ul style="list-style-type: none"> <li>- <b>A4. Document Naming Protocol</b></li> <li>- <b>A4. Drawing Issue Sheet</b></li> </ul>
A5	<p><b>Seasonal Planning</b>  <i>Annual construction planning is on the basis of a sound understanding of access and market constraints resulting from seasonal and geographic variations</i></p> <p>A clear documentation of how seasons and geographies affect construction on an annual basis will help ensure that all team members have a common understanding of the constraints when designing, planning and implementing construction work. It also</p>	<ul style="list-style-type: none"> <li>- <b>A5. Access Constraints Map</b></li> </ul>

provides useful tools for communicating planning constraints to donors when developing proposals.

## B Proposal development

### Benchmark Standard

#### Approach

#### Relevant Tool/Guideline

B1

### Staffing for Design and Supervision

*Any proposal must include a defined allowance for design and construction supervision costs equivalent to 5-15% of the total construction value*

Lack of human resources for design and supervision of construction is a primary reason for poor construction delivery. The necessary staffing level will vary depending on various factors relating to the building type, implementation method and external factors.

To inform this crucial aspect of construction delivery SCI has set a mandatory minimum of 5% of the construction value but this can be as much as 15% for challenging contexts and buildings.

- **B. Proposal Review requirements for construction**

Proposal Stage Construction Supervision Allocation (as %-age of construction value)		Building Type	
		Straightforward construction to previously used design templates	<ul style="list-style-type: none"> <li>• Retrofitting</li> <li>• Multi-storey or unusual buildings</li> <li>• High risks identified by a hazard risk assessment</li> <li>• Community driven process</li> </ul>
External Factors	Stable, well established country programme in a functioning construction market	5%	10%
	<ul style="list-style-type: none"> <li>• Political, regulatory or economic environment makes high quality construction challenging</li> <li>• Emergency context</li> <li>• Construction has been infrequent or problematic in the past</li> <li>• Diverse project locations.</li> </ul>	10%	15%

**B2****Proposal Narratives and Risk Management**

*Proposal narratives commit where possible to enhancing participation, child focus, disabled access, DRR, gender equality, WASH integration and livelihoods*

A well described construction narrative is an opportunity to demonstrate how the quality of construction can contribute to the overall aims and objectives of the project. Committing to these construction objectives at an early stage will be attractive to donors whilst ensuring that resources are adequately directed towards quality outcomes.

The proposal review requirements provide a useful checklist of the key opportunities for improving construction proposals. These are also mirrored in the SCI Standard Risk Template as a Specialist Risk.

- **B. Proposal Review requirements for construction**

**B3****Designs and Budgeting**

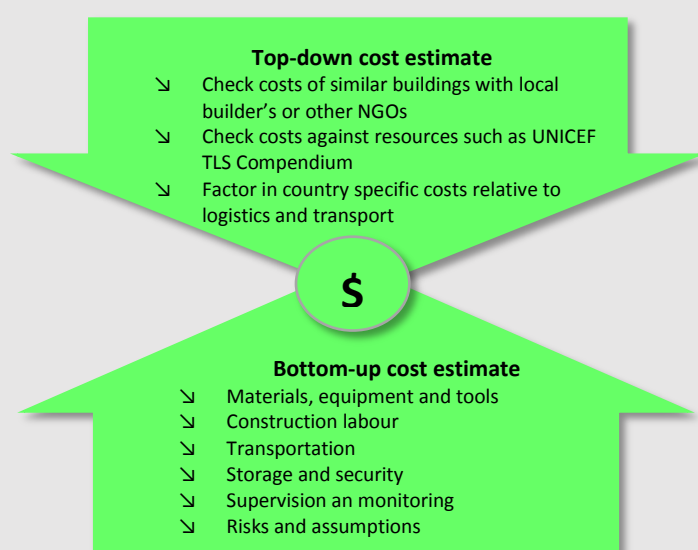
*Proposals use standard designs or take appropriate professional advice in developing the design scope and estimating budgets based on appropriate allowances for risks and assumptions*

Budgeting for appropriate designs requires an understanding of numerous inputs to the standard designs set out in Section A above. Adjust the standard design budget to allow for ground conditions; hazard mitigation, seasonal cost variations and access constraints.

Bottom-up estimates based on the above should be complemented with a top down estimate comparing similar buildings in various locations and contexts or a rate per m<sup>2</sup>.

Where no detailed design information exists for the proposal, a budget based on top down estimation can be used provided that additional contingency (up to 15%) is included to allow for unforeseen circumstances and likely design developments.

- **B. Proposal Review requirements for construction**



C Design Stage		
Benchmark Standard		
	Approach	Relevant Tool/Guideline
C1	<b>Design Brief</b> <i>The design requirements for construction work are fully described and agreed at the outset, including time, cost and quality constraints and planned community participation to facilitate an appropriate design and approach</i>	
	<p>The Design Brief must clearly note spatial necessities, constraints, functional requirements (including WASH), community participation, material preferences, accessibility needs, gender needs, energy supply, maintenance responsibilities as well as consider the time available for delivery, the cost and quality standards to be achieved.</p> <p>Early dialogue will establish the feasibility of the project proposal and requisite sign-off, in order that resources are mobilised and ensure effective and timely delivery of the project. Subsequent changes to the brief can then be recorded to track the likely impact of these on the project.</p>	<p>- <b>C1. Design Brief Form</b></p>
C2	<b>Site Selection</b> <i>The selection of sites is carried out with direct input from a technical specialist and ensures that local hazards and constraints are properly considered</i>	
	<p>The Site Selection Checklist helps to ensure that all aspects of the site are considered and recorded at the point of site selection. This includes physical and environmental hazards, land tenure, access constraints, ground conditions, material and labour availability etc.</p> <p>A properly documented site selection process will inform the detailed design and cost development; improve procurement outcomes and support programmatic decision making.</p> <p>Site selection is the earliest opportunity to address land tenure for which standard templates will help ensure that agreements are as legally binding as possible.</p>	<p>- <b>C2. Site Assessment Template</b></p>
C3	<b>Design for Safety</b> <i>Designs are verified as meeting an international standard of life-safety reflecting the locally identified hazards at the sites</i>	
	<p>Quality design reflects evaluation of threats and likely future events relative to natural or human-induced hazards and vulnerable conditions. It includes simple engineering analysis to design building elements that mitigate the worst effects of identified risks. Locally appropriate good construction practice is often sufficient where extreme events are not expected or deemed likely.</p> <p>However, in seismically active terrain, areas prone to cyclone or flood events, SC must be sure that hazards have been fully considered in the design process. This may go beyond the scope of</p>	<p>- <b>C3. School and Clinic Building Assessments</b></p> <p><b>SC Construction Library</b>  <i>Includes guidance on:</i></p> <ul style="list-style-type: none"> <li>- Common materials such as concrete, timber and bamboo</li> <li>- common hazards such as earthquakes</li> </ul>

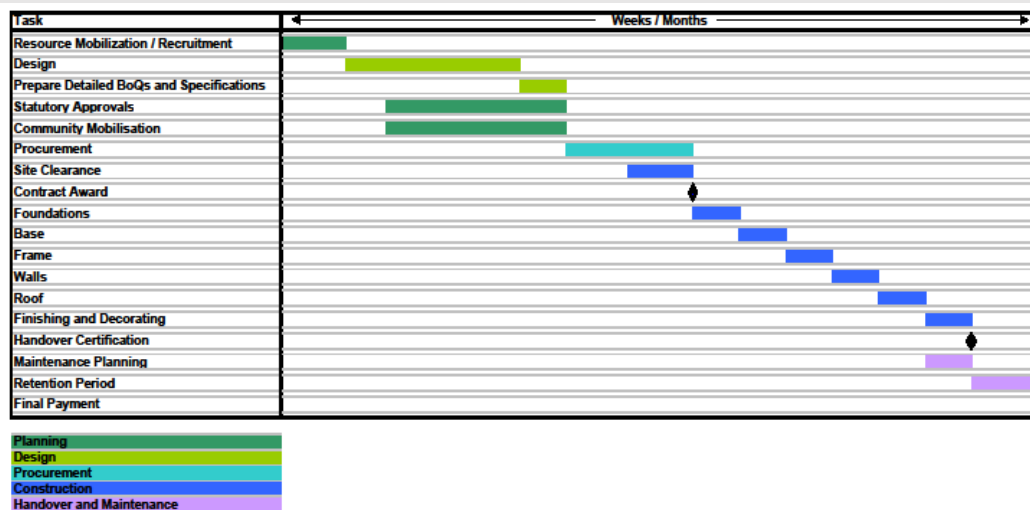
	<p>some government standards. It may therefore require employing engineers to verify, enhance or develop designs to ensure that respond to the relevant hazards in line with an internationally recognised building code.</p> <p>Many standard designs exist but they are rarely ideal for every context. The skill level of available labour and available materials need to be considered when applying existing template designs to new locations. Where resources are scarce, modifications of the design to make them feasible need to consider how this impacts on the building safety.</p> <p>In most countries, designs of buildings need to be formally signed off by a professional with locally recognised qualifications.</p> <p>The library of technical guidance on particular hazards and building materials will help ensure that key connections and building details are hazard resistant. For buildings that may be used as evacuation centres, more stringent design requirements will apply.</p>	
C4	<p><b>Design for Inclusive Use</b></p> <p><i>Buildings are designed together with the community to ensure that they are child-friendly, gender sensitive and accessible to the disabled</i></p> <div><div><p>Various guidelines can assist with ensuring that buildings are designed appropriately for all users including the most vulnerable. Simple, low cost modifications can make a difference to how buildings can enhance programmatic outcomes and acceptance by users and their communities. The involvement of the community and user groups (including children) in the design process is critical to being able to apply these modifications appropriately and innovatively.</p><p>Facilities can be adjusted for children by avoiding dangerous features such open edges without the required barrier/guardrail for protection from falling. The design of gender-sensitive facilities such as showers and latrines must be oriented and positioned to ensure maximum privacy and dignity of women and girls. Health clinics can be designed to ensure that patient flow minimises the risk of infection. Schools sites can be planned to minimise areas where children are unsupervised.</p></div><div><p><b>Key documents from the SC Library:</b></p><ul style="list-style-type: none"><li>- MSF Hospital Design</li><li>- UNICEF Child Friendly Schools Manual</li><li>- UNICEF Schools compendium</li><li>- Handicap International Design Guidance</li><li>- Child Friendly Schools Guidelines - Rwanda</li></ul></div></div>	



C5	<b>WASH Integration</b> <i>All projects ensure that adequate WASH facilities are provided in line with the relevant minimum standards</i>
	<p>Most buildings will not function without well designed WASH facilities. WASH programming must be integral to the design process and call on the relevant experts to develop the design. Subsequent planning will ensure that implementation is carried out under a single package of work.</p> <p>Sphere and government standards for WASH apply to all new buildings and SC must ensure that the quantity and quality is adequate and environmentally safe. The SC WASH Library has relevant design guidance for water treatment storage and sanitation facilities.</p> <p><b>Medical buildings</b> need to be designed with WASH facilities that specifically minimise disease transmission and facilitate the clean operation of the building.</p> <p><a href="#">SC WASH Library</a></p> <p><b>MSF Field Hospital Design Guide</b></p>
C6	<b>Design Documentation</b> <i>Design Drawings, Specifications and Bills of Quantities are coordinated and of a high standard to include details that fully define the building</i>
	<p>Good quality and coordinated Drawings, Bills of Quantities and Specifications set out the detail of how a finished building should appear. Beyond architectural layout, it includes precise construction details and exact descriptions of the materials and workmanship that is required to ensure the quality and safety of the design. These documents also technically underpin the contractual agreement and allow SC to hold contractors to account.</p> <p>Examples of good quality design documentation are included in the tools as an illustration of the quality that should be expected so that all aspects of the design are fully defined.</p> <ul style="list-style-type: none"> <li>- <b>C6. Sample Drawing Sets</b></li> <li>- <b>C6. BoQ Template</b></li> <li>- <b>C6. Sample material specifications</b></li> </ul> <p><b>Note:</b> CAD Software licences are available on a shared basis. Please contact: <a href="mailto:ConstructionTA@savethechildren.org">ConstructionTA@savethechildren.org</a></p>

## D Construction Planning

Benchmark Standard		
Approach		Relevant Tool/Guideline
D1	<b>Workplan</b> <i>All construction activities are planned in detail and monitored ensuring a full understanding of interdependencies between activities and programme risks</i>	
	<p>A detailed construction workplan aims to present the general sequence and duration of both pre-construction and construction related activities. This allows the identification of key dependencies between activities that relate to the critical path that, if followed, means the project will complete on time. If agreed with the contractor, by close monitoring of progress, this tool will provide early warning of delays, be used to drive progress and report on progress to senior management.</p>	<p>- <b>D1. Construction Workplan Tool</b></p>



**D2****Implementation Modalities**

*All options for implementation are considered with appropriate planning for staffing and community engagement*

Selection of the appropriate implementation modality is informed by an understanding of numerous factors that include:

- The operational context
- Team capacity
- Community engagement
- Building complexity

Ideally this is decided as early on in the planning process as possible as the path chosen will have significant implications on timeframe, supervisory responsibility and levels of staffing. Implementation can be broken down into three basic modalities:

- a. Community led construction
- b. Lump sum contract – Building Contractor
- c. Direct implementation by SC

***All three modalities require the frequent SC site presence of qualified construction staff to control and monitor quality, safety and progress.***

**Community led construction** covers a spectrum of possible community involvement, from making informed programmatic planning and design decisions to directly taking part in its construction. Community led has the potential to deliver inclusive and quality outcomes, but requires significant planning and oversight to ensure that the design and safety targets are achieved. The “Towards Safer School Construction” guideline sets out the ideal methodology for achieving excellent buildings constructed within a community.


**A Lump sum contract** is the traditional way of procuring construction. It is appropriate for more complex buildings or contexts with an active construction market that routinely engage in building construction.

**Direct implementation** is only appropriate when all other options have been explored and are deemed unsuitable. It must be noted that Direct Implementation will put *significant demands on SC logistics* and must be identified as the required option early to allow significant planning/staffing to be agreed to meet the milestones outlined in the construction workplan.

- **D2. Example Job Descriptions**

- [‘Towards safer schools construction: a community based approach’](#)

- [Community Construction MoU](#)

<b>D3</b>	<b>Staffing and Consultancies</b> <i>Technical ToRs are well defined by a construction professional and staff are selected on the basis of robust technical interview to ensure quality outputs</i>
	<div> <p>Definition of required capacities and recruitment of a capable construction team requires some initial technical understanding to design job descriptions and identify properly qualified staff.</p> <p>Template job descriptions are provided in the tools based on experience from multiple country programmes. These should be tailored to the country context and ‘ways of working’, as well as local capacity.</p> <p>For one-off design and construction of more complex buildings an external consultant may be required. In these cases support from the construction technical working group is strongly recommended.</p> </div> <div> <ul style="list-style-type: none"> <li>- <b>D3. Sample Job Descriptions</b></li> <li>- <b>D3. Construction Team Budget</b></li> </ul> <p><b>Reference</b></p> <ul style="list-style-type: none"> <li>- <b>The Built Environment Professions in DRR and Response: A Guide for Humanitarian Agencies’</b></li> </ul> </div>
	<p><i>If specialist skills for staffing are required and none exist in-country; contact <a href="mailto:ConstructionTA@savethechildren.org.uk">ConstructionTA@savethechildren.org.uk</a> for further advice and support for the recruitment of required expertise or recommend local built environment professionals.</i></p> <p><i>Request assistance at: <a href="mailto:ConstructionTA@savethechildren.org">ConstructionTA@savethechildren.org</a></i></p>
<b>D4</b>	<b>Risk Management Plan and Award Risk Assessment</b> <i>Implementation risks including construction health and safety risks are captured in the risk management plan (RMP) and reflected in the award risk assessment (ARA)</i>
	<div> <p>Implementation risks including health and safety risks are captured in the risk management plan (RMP) with an appropriate mitigation plan in place. Where the risk threatens our obligations under the award or requires extra resources relating to an award, it should also be declared in the award risk assessment (ARA).</p> <p>The risk management guidance on OneNet and in the award risk assessment guidance tabs identify typical construction risks that need to be actively managed to ensure a successful programme. Modified for the local context this will cover implementation delays, site safety, fraud, and poor quality works.</p> </div> <div> <ul style="list-style-type: none"> <li>- <b>D4. Construction Risk Register Template</b></li> <li>- <b><a href="#">SCI OneNet Construction Risk WebPage</a></b></li> </ul> </div>

## E Procurement and Logistics process

Benchmark Standard		
Approach		Relevant Tool/Guideline
E1	<b>Tender Process</b> <i>Construction tenders clearly and transparently communicate SC's requirements and facilitate local procurement where possible</i>	
	<p>Communication with potential bidders is critical to ensure that they are bidding on the basis of a sound knowledge of the construction risks. This requires a tender package that communicates the design and specification <b>in detail</b> along with site constraints identified in the site selection process. By holding a <b>pre-tender clarification meeting</b> where the details of the project are clearly explained (and contractors have the opportunity to ask questions) the quality of bids received and the ability of SC to identify competent contractors will be greatly improved.</p> <p>Construction is generally best procured as close to the location of the works as possible whilst still ensuring the necessary quality and financial compliances. This supports local livelihoods and helps to encourage community ownership of the work.</p> <p>Local procurement can be encouraged through careful stipulation of the selection criteria. The hiring of local staff can be one of the stated selection criteria in the invitation to tender. A cheaper but more local contractor's capacity can be compensated for by providing enhanced SC supervision at the site.</p>	<ul style="list-style-type: none"> <li>- <b>E1. Invitation to Tender</b></li> </ul> <p><b>Reference</b></p> <ul style="list-style-type: none"> <li>- <b>SCI Procurement Manual</b></li> <li>- <b>Transparency International Guide to Avoiding Construction Fraud</b></li> </ul>
E2	<b>Competitive Bid Analysis</b> <i>Contractors are selected on the basis of <b>quality ahead of cost</b>, based on thorough assessment of their technical and financial capacity</i>	
	<p>The CBA includes an assessment of the human, financial and physical resources that a contractor has at hand to deliver the project. Once non-compliant bidders have been eliminated, interviews with the identified site staff, visits to the construction yard and inspection of previous work and references, will all form part of the CBA alongside the usual assessment of cost and financial capacity. This will require a construction professional with relevant skills to advise on the process.</p> <p>The CBA can then be carried out using a contractor selection matrix that applies a weighted score to all of the criteria and documents a transparent selection process. The weighted scoring needs to be included as part of the tender documentation so that contractors are able to bid on a fair basis.</p>	<ul style="list-style-type: none"> <li>- <b>E2. Bid Selection Criteria / Scoring (CBA)</b></li> </ul>

**E3****Contract Documentation**

*Construction contracts are robust construction specific legal documents that capture equitable terms and conditions between signing parties*

Construction contracts should be written specifically for the purpose and include clauses that describe all the key contract management processes. A typical construction contract will include clauses such as:

- Payment schedule
- Advance Bank Guarantees
- Insurances
- Variations clauses
- Termination
- Completion and retention release

Where a construction contract exists that is standard in the local contexts (e.g. set by the department of labour or local engineering board) this should be the first choice of contract.

For locations where this does not exist or the contract is not satisfactory, SC has developed a standards form of contract for construction based on the International FIDIC contract for small works.

Whichever contract is used decisions will need to be made on the exact terms. Since contractors often have low contractual awareness it is important that the main terms are explained in the **pre-tender clarification meeting** (see D1)

- **E3. Standard Form of Contract**

F	<b>Construction Phase</b>	
	<b>Benchmark Standard</b>	
	<b>Approach</b>	<b>Relevant Tool/Guideline</b>
	<b>F1</b>	
	<b>Health and Safety and Child Safeguarding</b> <i>SC, communities and contractors and actively contribute to supporting a culture of project safety during construction</i>	
	<p>The culture of project safety starts with a contractual commitment to meet site safety standards as included in the standard contract template. In addition, contractors commit to ensuring that their supply chain is free of child labour.</p> <p>At the site kick-off meeting, potential site hazards such as, open excavations, standing water and falls from height are highlighted to the community, contractor and supervising staff.</p> <p>Once construction is underway, the SOP sets out a regular process of Health and Safety inspections to ensure that site safety is maintained on a regular basis. The <b>Health and Safety Inspection Form</b> includes a checklist of common hazards and documents mitigating actions that must be agreed with the site team. Inspections should also periodically visit the supply chain to ensure that children are not engaged in work at any stage in the construction process.</p>	<p>- <b>F1. Health and Safety Inspection Form</b></p> <p><u>Reference</u>  <b>Guidelines on Construction Health and Safety</b></p>
	<b>F2</b>	
	<b>Meetings and Reporting</b> <i>A systematic meeting and reporting schedule is in place to ensure that progress is properly managed and communication with all stakeholders is maintained</i>	
	<p>A schedule of meetings starts with the <b>kick-off meeting</b> where all stakeholders including building users, community leaders, government officials and contractors are invited in order to introduce the project and its objective. This is followed by regular site meetings to monitor progress and resolve issues.</p> <p>Site progress is carefully recorded with both written and photographic evidence by the site supervisor.</p> <p><b>Written reports</b> follow templates provided and are a clear record of progress against agreed specification and milestones on the construction workplan.</p> <p><b>Photographs</b> record a mixture of the full building (each elevation) plus a good selection of important details (to be focused in on) at key stages of construction. For instance, if earthquake detailing is required with concrete reinforcement, proof must be taken of the reinforcement layout as evidence of it having been connected according to the design intent.</p>	<p>- <b>F2. Community MoU</b></p> <p>- <b>F2. Site Visit Record</b></p> <p>- <b>F2. Weekly Site Report</b></p> <p>- <b>F2. Daily site attendance sheet</b></p> <p>-</p>

**F3****Quality Control**

*Regular documented site supervision and monitoring is carried out by an Engineer or Construction Supervisor actively working to ensure quality*

Site progress monitoring includes a record that the following key stages in the construction progress have been inspected and signed off before proceeding to the next stage. The sign-off includes an inspection of the structure against the drawing details and the materials/workmanship specification defined in the BoQ.

All **monitoring inspections** can utilise the SC templates to record daily progress, advice and instructions given to contractors and inspections of key elements of the work. All inspections and site visits are signed-off by the contractor. Key elements for inspection are set out below:

- **Foundations**
- **Wall Superstructure**
- **Reinforced Concrete / Steel Frame**
- **Roof Structure**
- **Screeding and Plastering**
- **Painting and Finishing**

Recommended inspection frequencies for different modalities is set out below:

Implementation Modality (See D2)	Inspection Frequency
a) Community led construction	2-4 visits / week
b) Building Contractor	1-2 visits / week
c) Direct implementation by SC	Daily

**Note:** Wherever **Government Engineers** are also available to support the supervision, SC construction team supervisors will produce a separate inspection report. **Any instructions given by the government engineer are not valid unless confirmed by the SC Engineer.**

- **F3. Construction Inspection Records**

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**F4****Contractual Communications**

*All formal communications relating to the contract are recorded and signed off as appropriate to ensure that changes are properly managed*

Communications that relate to clauses in the contract are formally issued with sign-off by the relevant authority going up to Country Director level where substantial financial changes are involved.

Templates are provided for the most common communications that include reference to the relevant clauses and help to ensure that all aspects of the communication are properly covered. The key communications are listed below:

- Variation Orders
- Delays
- Contractor Claims
- Retention
- Payment
- Stop Works Orders
- Handover

- **F4. Construction Standard Forms for Contractual Communication**

**G****Hand Over and Maintenance**

**Benchmark Standard**



	Outputs	Relevant Tool/Guideline
G1	<b>Punch Lists / Snagging</b> <i>In the final stages of completion a detailed punch list is filled out that covers all outstanding work required to comply with the contract</i>	
	<p>Snagging/Punch lists are produced in the final stages of construction to ensure that areas that still require completion or remediation are clearly communicated to the contractor. Completion of the snagging list by the contractor requires further inspection and sign off prior to preparation of the final payment certificate</p>	<ul style="list-style-type: none"> <li>- <b>G1. Snag-Punch List</b></li> <li>-</li> </ul>

<b>G2</b>	<p><b>Final Payment, Retention and Handover</b></p> <p><i>The final payment and holding of retention is a controlled process that ensures that quality is satisfactory to all formal stakeholders before payment is made</i></p>
	<div> <p>Once the snagging / punch list is closed-out <b>all</b> stakeholders have the opportunity to inspect and then sign-off final acceptance of the building on the handover form. Key stakeholders include but may not be limited to:</p> <ul style="list-style-type: none"> <li>- Government</li> <li>- Programme</li> <li>- Community / End Users</li> </ul> <p>Once all of the relevant stakeholders have signed off on completion of the building an MoU may be prepared to record the ownership expectations after handover. This may, for example need to describe the responsibilities between the Department of Education, School Management Committee and NGO in the ongoing ownership of the school. It also references the maintenance plan that has been agreed with the end user.</p> </div> <div> <p>- <b>See F4. Construction Standard Forms</b></p> </div>
<b>G3</b>	<p><b>Maintenance Plan</b></p> <p><i>A maintenance plan is developed together with the community or building operator/owner detailing the planned work required to maintain the building, alongside a realistic budget</i></p>
	<div> <p>Maintenance plans are prepared together with the community, as part of the handover process, in order to support a more sustainable outcome for the community.</p> <p>An outline of the maintenance commitments should be included in the MoU. In addition, on-going community involvement simplifies setting up an effective maintenance plan with sufficient financial support.</p> <p><b>The Maintenance Plan</b> should include the following information:</p> <ul style="list-style-type: none"> <li>• Responsibility for maintenance</li> <li>• Description and frequency of routine maintenance activities</li> <li>• Plan for reactive maintenance</li> <li>• Estimates on likely costs</li> </ul> <p><b>Maintenance activities</b> will depend on the building but might consist of: general cleaning; clearing vegetation / cutting grass; drainage clearance; general repairs (e.g. patch repairs to thatch or mud-brick walls); checking structural connections; painting / protecting timber against wood boring insects and rot; oiling / greasing hinges; re-fixing or replacing mosquito netting</p> </div> <div> <p>- <b>G3. Maintenance Manual</b></p> <p>- <b>G3. Maintenance Planning Guidelines for Schools</b></p> <p>- <b>G3. Maintenance ChecklistSnag / Punch List Completion Certificate</b></p> </div>

# ‘Earthquakes don’t kill people, buildings do’

## Key Construction Risks

**Physical Harm:** Construction activity poses many risks to the *health and safety* of both our staff, third parties and our beneficiaries and wider community.

- **Beneficiaries** – are at risk if employed in the construction activities and/or living in proximity to an SC building site. Adequate and appropriate protection is required of their person as well as protection (guarding) from entering building sites.
- **Construction workers** – employed by (third party) contractors or SC directly are at risk of injury, if personal protective clothing and close supervision and adequate training are not provided.
- **SC Staff** – also need to take great care when inspecting building work, wearing protective clothing where possible. Alerting hazards and risks to supervisors as necessary.
- **Building safety** – without adequate construction supervision that monitors material quality, construction practices and use of health and safety procedures on site; SC buildings are at risk of collapse (at worst) or (at best) potential failure that will require costly remedial action and potential reconstruction – resulting in delays to programming and higher costs.

**Programme delays:** Without adequate forecasting of likely threats or risks to programme delivery, the project risks being in delay through not having considered appropriate measures to mitigate identified risks. Delays to construction programming can prove costly, depending on the wording and agreements made within the construction contract utilised.

**Budget over-runs:** Project costs can escalate when there is no clear design linkage to BOQs and specification documentation. Mistakes or inadequacy in the design can escalate costs once implementation begins. Unforeseen hazards also pose a significant risk during implementation.

**Reputation:** Reputational risk is related to physical harm; any harm caused through construction activities to children and their families will damage our community acceptance, impact our funding and our relationships with donors as well as potentially disturbing the political context within which we operate.

**Fraud:** Tender ‘collusion’, sub-contracting chains, theft, materials replacement and quality reductions to increase margins are all commonplace in the construction sector.

**Security:** Procurement disputes can generate violence in many environments, as can incidents where we may cause harm to beneficiaries as a result of our activities.

**Legal liability:** as a result of poor construction is a potential risk in some of the environments within which we operate. We are wholly accountable to our beneficiaries - providing sub-standard buildings could put us at risk of endangering their lives.

## Key Construction Opportunities

- a. **Child friendly design** – can include simple child-specific features and, where possible, engage children in the design and planning process. This has the benefits of enhanced learning/satisfaction in an environment they have helped to shape.
- b. **Accessibility for all** - endeavour to include ramps for access to raised ground floor levels; think about WASH provision (including water supply and sanitation), access and use of toilets and wash stands for the disabled. Painting of doors and steps to contrast with surrounding walls and barriers can help with navigation of a building for those with sight impairment.
- c. **Culturally appropriate features**  
The proximity of male and female toilets needs careful consideration to ensure dignity for all users. Separate entrances to buildings may be required for males and females. Internal screens may be necessary for partition of certain activities. These all require early consultation with the community in order to allow their requirements to influence the design.
- d. **Disaster risk reduction** – hazard assessment, coupled with locally available materials and technology and the demonstration of hazard resistant methods for design and construction of community buildings can help to transform the local built environment. It can potentially influence the way in which communities build and maintain their own housing.
- e. **Educational opportunity** – there is a significant education opportunity in every building we construct which we must recognise and engage with fully. Demonstrations of how to mitigate hazard risk can help improve the local contractor's skills and community's experience and technical expertise. When linked to trainings offered in local training institutions these skills become saleable and benefit local livelihoods. We can effectively increase the ability of communities to construct safer buildings relative to their local environment.