



◀ HEALTH & SAFETY STANDARD FOR CONTRACTORS AND INDUSTRY PARTNERS

2015 Edition



MOVING HEALTH & SAFETY FORWARD





**WE ALL HAVE THE RIGHT TO GO
HOME UNHARMED EVERY DAY**

**WE BELIEVE THAT ALL HARM IS
PREVENTABLE**

**WE MUST ALL WORK TOGETHER
TO ACHIEVE THIS**

FOREWORD BY CROSSRAIL CEO

At Crossrail, we believe that exemplary health and safety management is critical to successfully deliver a world-class railway. Health and safety is so important that we have incorporated it into our vision and values. It is paramount to success and therefore demands our attention daily.

This Standard sets out our expectations. It represents our commitment, along with the commitment we expect from everyone involved with the delivery of Crossrail. This Standard will help ensure all those involved on Crossrail, whether directly or indirectly, benefit from the highest levels of health and safety provision as well as the protection of existing assets.

We expect those involved in the project to embrace the spirit and intent of this Standard as a minimum for all works undertaken on Crossrail.

We encourage our contractors, industry partners, stakeholders and utility providers to use this Standard as a reference guide to set benchmarks for health and safety. In doing so, it will drive collective commitment to deliver Crossrail's health and safety policy.

Andrew Wolstenholme,
Chief Executive of Crossrail Ltd



CONTENTS ▶

INTRODUCTION	1
PILLAR 1: LEADERSHIP AND BEHAVIOUR	6
STANDARD	7
GUIDANCE	7
PILLAR 2: DESIGNING FOR HEALTH AND SAFETY	14
STANDARD	15
GUIDANCE	15
PILLAR 3: COMMUNICATION	21
STANDARD	22
GUIDANCE	23
PILLAR 4: WORKPLACE HEALTH	25
STANDARD	26
GUIDANCE	27
PILLAR 5: WORKPLACE SAFETY	32
STANDARD	33
GUIDANCE	34
PILLAR 6: PERFORMANCE IMPROVEMENT	41
STANDARD	42
GUIDANCE	43
APPENDICES	45

INTRODUCTION

A Crossrail Health and Safety Charter has been developed alongside industry partners and stakeholders to set out our expected standards for health and safety.

The Agreement (see Appendix A) sets out a number of key leadership behaviours and values, which underpin our shared determination to deliver health and safety excellence across the project.

Our intention is that each of the key parties ^(1, 2, 3 right), including our contractors, sign the Agreement and fulfill its requirements to ensure Crossrail will be built in a way that achieves health and safety excellence through our Target Zero aspirations. To highlight this shared commitment, Target Zero will be proudly displayed at all Crossrail sites.

Every new contractor joining the programme should sign up to the agreement and we expect the behaviours and values of the agreement to be embedded within their own organisational culture.

The Crossrail Health and Safety Policy Statement (see Appendix B) sets out our commitment to excellent health and safety. It includes a responsibility to work with Transport for London in delivering its Health and Safety Policy.

To help us deliver world-class levels of health and safety we created 'Target Zero - A State of Mind' that symbolises our commitment to making the prevention of accidents a reality.

To us Target Zero reflects how we think and work. It helps protect our workplaces from factors that could stop us from keeping each other safe. There are three Target Zero principles as can be seen on Page 2.

These principles are not just abstract concepts. We need them to be alive in everything we do, in every decision we make and in every piece of work we undertake. These principles must guide our behaviour at all times, wherever we work and whatever our responsibility.

Target Zero is the glue that binds Crossrail's health and safety requirements together. It drives us to continually raise standards so that today's 'world class' becomes tomorrow's norm.

1

Industry partners include Crossrail Central, London Underground, Network Rail, DLR, Canary Wharf Group and Berkeley Homes

2

Stakeholders include the Department for Transport, Transport for London, London Development Agency, City of London Corporation, British Waterways Board, Rail for London and over site development partners

3

Utility providers include BT, EDF, National Grid and Thames Water



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MOVING SAFETY FORWARD



Our commitment

We are committed to delivering exemplary levels of health and safety. When excellent examples are identified, we will communicate them extensively so that everyone can benefit during the Crossrail project and after its completion.

We take our commitment to avoiding injuries and illnesses very seriously, learning from any incident, including near miss events, to improve performance. To demonstrate this we have explicit accident and ill health management aims.

To highlight the importance we place on health and safety, we expect every part of our supply chain to send a senior representative (typically a director identified as responsible for the work) as quickly as possible if we request a meeting.

Reasons for such a request may include notifiable or reportable events, positive or adverse trends, evidence of a breach of this Standard or to share 'best practice' learning opportunities.

Similarly, we will meet with any Director from our supply chain if they have any health or safety matters they wish to raise with us. This can be done at our regular meetings ^(see 1 and 2 right) or on a one-to-one basis.

1

The Crossrail Industry Group is held bi-monthly and brings together the Crossrail Board and our contractors' directors to share best practice to raise performance

2

The Safety and Health Leadership Team is held monthly with the same make-up as the Crossrail Industry Group and focuses on Healthy and Safety leadership issues.

The six pillars of Target Zero

The diagram on page 4 illustrates how a framework of requirements supports Target Zero. The framework consists of six pillars, each setting out minimum standards and expectations for the delivery of health and safety. In practice, the pillars overlap but our intention is to organise the Target Zero elements into manageable areas of focus. It is our expectation that all of our supply chain will use this as the basis for their own health and safety programmes. The Six Pillars are explained in more detail throughout this standard providing guidance and best practice examples.

Aligning existing programmes with Target Zero

At Crossrail we understand that a project of this size demands a substantial number of contractors and supply chain partners to work together, each bringing their own health and safety programmes and standards.

We need these programmes to align with our framework so that Target Zero becomes a common goal for us all. Our Health and Safety Collaboration Model illustrates this on page 5.

The model shows how we want our contractors to integrate their programmes with Target Zero. We believe the model encourages early collaboration rather than

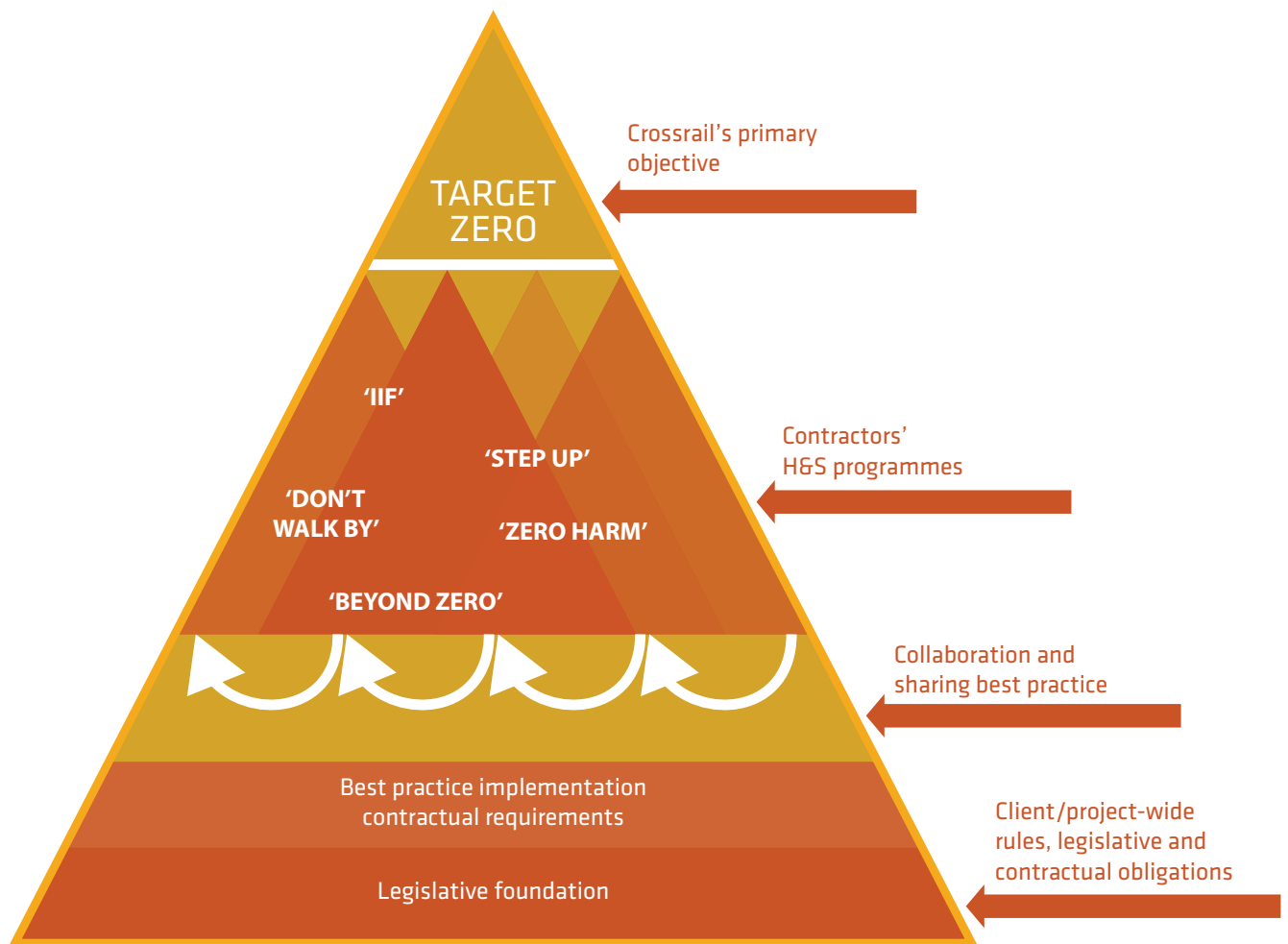
a reactive approach, thereby allowing us to achieve our goals for a safe and healthy work environment.

At its base the model represents the legislative foundation set out for Crossrail. It outlines the responsibilities and duties for all those involved to deliver a consistent project-wide standard for health and safety.

Working within the framework, our contractors apply their own existing policies and systems in line with the guidelines we have set out. This will ensure that Target Zero is the common focus throughout the project.



Health and safety collaboration model



Gateway scheme

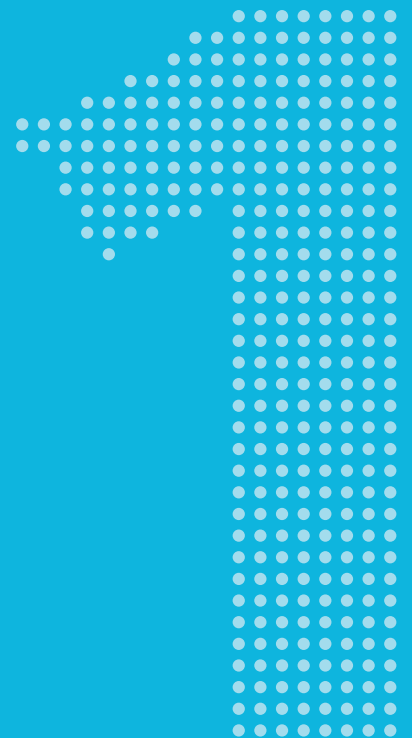
The Gateway scheme recognises and rewards exceptional health and safety practice. It is construction-focussed and is used to assess our contractors, promoting best practice as part of our aspiration to create a world-class supply chain.

The scheme itself promotes the six pillars of Target Zero. All principal contractors should take part in the scheme and learn from each other.

PILLAR 1

LEADERSHIP

AND BEHAVIOUR



STANDARD

Pillar 1 focuses on leadership and behaviour. We see strong leadership as essential to creating a world-class health and safety culture. Working together, we must clearly define and communicate roles and responsibilities enabling everyone to understand what is expected of them.

Leadership of Target Zero is not only about leading from the top but also about setting examples through behaviour that reflects the Target Zero principles at all levels of the supply chain.

If everyone takes the opportunity to be a leader of Target Zero for his or her team, or for a specific topic area or issue, we can build on making the prevention of accidents and harm a reality.

At Crossrail we expect every organisation we work with to:

- Have strong field leadership in place
- Have strong management leadership in place
- Engender a culture of personal responsibility
- Ensure competent employees
- Ensure competent contractors
- Implement an effective behaviour-based safety programme
- Have an effective consequence management programme including reward, recognition and disciplinary enforcement programmes.



GUIDANCE

Strong field leadership

On site, we expect our contractors to provide competent supervision at all times. Organisational arrangements should identify specific requirements for supervisors to display strong leadership by:

- Planning work so that colleagues are able to work without harm
- Identifying high-risk activities and ensuring control measures are adequate
- Explaining activities clearly, so that staff can work safely
- Encouraging staff to make suggestions and raise any health and safety concerns
- Giving recognition to safe working and those who take a stand for Target Zero
- Taking immediate action if witness to any at-risk behaviour or condition so that such behaviour is not otherwise condoned
- Supervising personnel new to site
- Supervising foreseeable emergencies
- Ensuring the safety of any lone or isolated worker.

Organisations should:

- Provide supervision, formal training and ensure competency to lead the workforce in a safe and incident-free manner
- Obtain feedback in order to generate innovative ideas and suggestions for continuous improvement
- Monitor and test supervisor performance and where necessary provide supplementary or refresher training that is tested to maintain our standards
- Ensure supervisors participate in Crossrail steering forums when relevant
- Support Crossrail in verifying, auditing and visiting sites for which they have responsibility.

Crossrail has, in collaboration with our contractors, developed the Leadership Programme, a training and mentoring programme designed to address the gap in leadership skills for front line supervision. Organisations involved in Crossrail should encourage their supervisors to take part in this programme.

Strong management leadership

Senior management should display strong leadership by:

- Creating and maintaining a strong culture for health and safety that enables staff to work without harm
- Ensuring there are adequate resources and competence to fully understand and control the conditions that lead to harm
- Ensuring staff are given adequate resources, including time to work safely
- Responding firmly and justly when things go wrong and addressing the root cause to avoid recurrence.

It is important to us that the Target Zero culture is visibly cascaded throughout the organisation. Visible leadership and commitment to health and safety can be demonstrated by:

- Reviewing health and safety while conducting leadership tours
- Leading by example by complying with all site rules
- Ensuring leaders receive site inductions and ask for an induction if one is not offered
- Engaging with the workforce on health and safety matters
- Ensuring health and safety is discussed in all progress meetings
- Giving health and safety briefings/toolbox talks when the opportunity arises.

Target Zero example

As part of their ongoing Behavioural Safety campaign, managers throughout Ringway Jacobs (Crossrail Traffic Signage contract) took part in a 'Back to the Floor' exercise.

The exercise involved senior managers from all the Ringway Jacobs' contracts spending the day with staff from various areas of the operation.

Directors and managers carried out activities such as:

- Setting up traffic management around the work area, breaking out damaged road material and making good the repairs
- Assisting with the emergency response units
- Day working with a patching crew and a footway gang laying paving stones.

The days spent with staff helped give the directors and managers first-hand experience of the jobs field staff do on a daily basis, along with the opportunity to see how health and safety is managed in other areas of the business.

All the elements of the campaign were designed to help refresh employees' attitudes towards safety, sending a clear message that everyone is dedicated to making sure that everyone goes home unharmed.

Personal responsibility

To deliver exemplary performance we encourage everyone working for and with Crossrail to take personal responsibility for their own health and safety and for those affected by their actions and inactions. Therefore, we expect our partner organisations to engender a culture whereby staff:

- Take time to consider the activity to be undertaken and its impact should something go wrong
- Plan work so that it can be carried out without harm to themselves or others
- Report all incidents, including near misses, unsafe acts and unsafe conditions
- Only undertake work when it is safe to do so
- Support colleagues and leaders in working without harm
- Share expertise and knowledge in an open way
- Respect other people, including not using foul, abusive, racist or aggressive language
- Stop others carrying out work if it is unsafe
- Respect site rules and avoid horseplay when on site.

Individuals should be briefed on their health and safety responsibilities during their induction and general training. In particular, they should be told of their responsibility to stop others from carrying out unsafe practices and that Crossrail expects this of them. Giving appropriate recognition and reward to individuals that stop unsafe practices is also strongly encouraged.

Competent employees

Employers should provide sufficient information, instruction and training to ensure that all employees and agency/seconded staff are competent in their health and safety duties.

As a minimum, Crossrail expects to see a training programme produced and implemented that takes account of tasks, environment, behavioural and cultural influences, language, and best practice/lessons learned.

The training programme should include a comprehensive process that ensures the briefing of all personnel on the task risks and controls prior to beginning any work. It should ensure that employees sufficiently understand the risk controls and behaviours expected of them. Therefore work should only be allocated which they are competent to undertake.



To maximise its effect, the programme should be interactive and interesting so as to encourage everyone to be fully involved with making the prevention of accidents a reality. Training should allow those attending to gain the right understanding and the competencies required to carry out their roles safely.

Such training should also encourage workers to show initiative and go beyond their instructions on a particular task. Everyone should have the correct responsibilities aligned to their role, and Target Zero should be integrated into their day-to-day responsibilities and activities, including encouraging staff to speak up and support the Target Zero practices of others.

Individuals whose duties involve the direction and supervision of others should be trained on their health and safety responsibilities and how to discharge them.

Construction managers (includes section engineers, works managers, sub agents, agents, site managers and project managers) should hold a Site Managers Safety Training Scheme qualification.

Supervisors (including gangers and foreman) on Crossrail should hold a current Site Safety Supervisor Training Scheme qualification.

We expect senior site staff to use the knowledge gained through these certifications along with their personal experience to give useful and engaging briefings on safe systems of work to individuals for whom they are responsible. Briefings should always be recorded.

Target Zero example

There is clear alignment between Crossrail Limited (CRL) Target Zero and Laing O'Rourke Mission Zero. Both have a common message that everyone gets home safely every day. To this end, the leadership team at Farringdon introduced compulsory pre-start, one-to-one safety commitment interviews as part of the induction process.

Pre-start interviews open direct lines of communication and engagement between the project leadership and workforce, so that all new starters:

- Understand the behaviour expected of them and what they, in turn, can expect from leaders on the project
- Have an opportunity to ask any questions they may have in relation to health and safety
- Confirm their commitment to the project's safety values by signing the one-to-one interview commitment document.

The interviewer sends a powerful message to all new starters that the project leadership is committed to health and safety and opens avenues for open and honest dialogue. Critically, the interviewer satisfies themselves that the interviewee is committed to upholding the safety values, which they were briefed on during their induction. The project one-to-one interviews are carried out personally by the project director with support from senior team members.

CSCS IS
THE
CONSTRUCTION
SKILLS
CERTIFICATION
SCHEME

CPCS IS THE
CONSTRUCTION
PLANT
COMPETENCE
SCHEME

During the induction process, individuals' current and valid Construction Skills Certification Scheme (CSCS) or affiliate scheme certification and Constructing Better Health fitness for work cards should be verified. As a minimum, individuals on a Crossrail site should hold:

- CSCS/CPCS (or Crossrail approved affiliated card) suitable for the task to be undertaken. Staff entering tunnels, deep excavations, deep shafts, or compensation grouting shafts or conducting underground activity must hold a valid Tunnel Safety Card.
- Induction training
- Behavioural safety training
- Technical competence for the task to be undertaken.

Competent contractors

Organisations should establish a rigorous supply chain selection process that will assess and challenge health and safety credentials and ensure everyone has the skills, training and experience necessary to discharge their responsibilities.



Behaviour-based Safety

There are a number of different behavioural programmes run on construction sites at Crossrail. These programmes are all based around similar philosophies to Target Zero and therefore have the same goal of preventing harm by influencing behaviour.

Crossrail expects organisations to involve subcontractors in delivering the behavioural programme.

We will report and share any lessons learned from these programmes and expect organisations to cooperate, support and participate in this process.

A behavioural programme should incorporate the following critical success criteria:

- Be planned specifically for the scope of the project
- Be supported top-down through the organisation

- Be clearly defined through training, induction and briefings
- Involve subcontractors on site
- Be measured at all levels
- Be integrated within the rest of the programme (i.e. not a 'bolt on')
- Identify critical behaviours that should be influenced
- Provide feedback to the workforce on these behaviours
- Influence the modification of systems or the working environment
- Include a review of the critical behaviours to ensure the focus is in the right area.

The organisation should also have a safety 'stop work' process, which provides employees with an opportunity to engage with their management and resolve unsafe activities at source.



Reward and recognition

It is expected that good Target Zero behaviour is rewarded through praise, feedback and other reward and recognition schemes for everyone, regardless of level and company. Role models and others setting examples will encourage everyone to participate and practice Target Zero throughout the project.

Disciplinary enforcement

Organisations should take appropriate action to prevent and eliminate unacceptable behaviour or conduct. This includes, where necessary, removing people from site and having the necessary fair and just disciplinary process in place to enable this to happen.

We expect the process to address repeated violations of site safety rules. This process should be based on a phased escalation approach and communicated to all employees. It should be promoted as part of the induction, giving a full understanding of the site rules and consequences for non-compliance, which can result in employees not being permitted onto a site.

Where applicable, the arrangements should ensure the site security team is kept informed so that their site access restrictions are enforced.

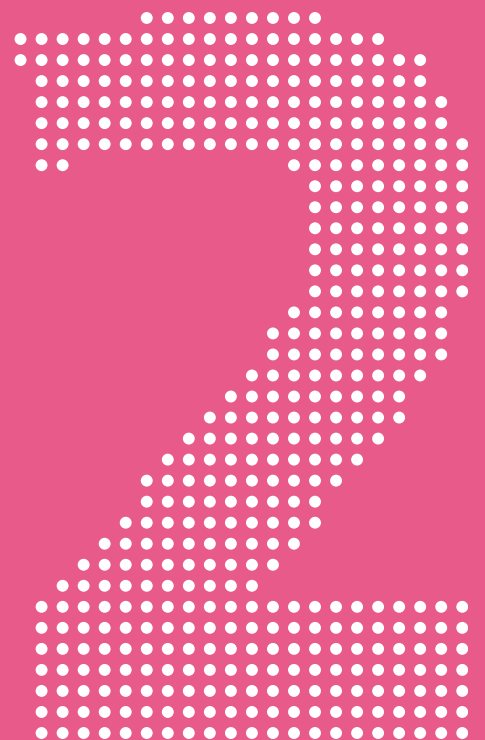
It should be remembered that ignoring unsafe behaviour is effectively condoning it. We know this is a challenge but having a clearly understood and adhered-to disciplinary process is an essential tool for achieving Target Zero performance.

We reserve the right to object to and, where appropriate, immediately expel individuals from our sites and to prohibit entry/re-entry, and only take such actions in the most serious cases.



PILLAR 2

DESIGNING FOR HEALTH AND SAFETY



STANDARD

As Crossrail is a complex project, there can potentially be multiple organisations that undertake design work.

To help us achieve the Target Zero principles we expect every organisation involved in the design process to work together.

Design teams should not hesitate to seek advice, assistance or support from us to achieve exemplary standards of risk reduction.

The design team should develop and participate in effective communication with the appointed Construction Design and Management (CDM) duty holders, our appointed contractors and other members of the team.

In addition to the duties set out within the regulations and associated approved code of practice, we at Crossrail expect all organisations to:

- Provide design information
- Follow a robust design process
- Communicate hazards in design
- Co-operate and co-ordinate with each other
- Participate in Engineering Safety Management processes (where relevant)
- Ensure management of temporary works design.

GUIDANCE

Providing design information

When undertaking design work, we expect health and safety requirements to be fully incorporated into the design.

We also expect formal, documented systems and procedures that assist in identifying and evaluating design options to be in place. These should help document reductions in health and safety risks. In addition, incorporating lessons learned into designs and carrying out workshops or forums should help to generate ideas and solutions to hazards so as to eliminate and reduce risk.

Every organisation involved in design for Crossrail should appoint a competent 'lead health and safety co-ordinator' whose role will be to liaise with the Crossrail project management team.

Crossrail will make available information about known site conditions and other relevant matters. This should ensure that any factors that could represent a risk are drawn to the attention of the design teams (and contractors). This information should be provided in the pre-construction information.

The design process

Early planning is essential in the design management process.

Design is an iterative process: it usually involves refinement or changes as a result of further discussion and consideration given by the designer, other team members, the client, contractor, or others.

It also becomes more detailed as time passes, starting as an outline concept and finishing as fully-detailed proposals.

A design element (for example design-and-build type procurement routes) can involve more than one party over a significant timescale. It can involve specialist contractors whose detailed design may necessitate returning to the scheme designers for changes to the basic design assumption.

Designers should review their designs with the following factors in mind:

- Achieving a significant contribution to the reduction of risk by taking careful consideration of hazards at the earliest

opportunity, especially during planning, construction, operation, maintenance and subsequent demolition

- Eliminating poorly-considered designs and site processes that create risks, such as excessive noise, vibration, manual handling and built facilities where future maintenance is difficult to undertake safely
- Hazards that may create risks to construction personnel engaged in executing the design
- Using a robust design review methodology so that such significant hazards can be recorded in a risk register and that all reasonable efforts are made to eliminate and/or reduce and/or mitigate such hazards through elimination and substitution
- Identifying and eliminating, reducing and/or mitigating hazards, which may create risks to users of the designed and constructed works
- Hazards that may create risks, including occupational health, to personnel engaged in servicing, maintenance, repair activities or demolition
- Undertaking design interdisciplinary reviews and interdisciplinary checks
- Creating documentation showing how risks have been mitigated or where residual risks remain, identifying them in a way that can be communicated to those that need to know
- Any hazards associated with the future operation and maintenance of the railway should be dealt with under the EC regulation on Common Safety Method, which is part of good management, and should be transferred to the Crossrail Project-wide Hazard Record Process.



Communicating hazards in design

A designer is required to take all reasonable steps to provide information about their design to help other duty holders comply with their duties under Construction Design and Management (CDM) 2015, that is to identify and manage the remaining risks. All information regarding residual risks should be communicated in a clear and precise manner and important messages should not be buried beneath irrelevances. Notes on drawings such as 'safety' notes are analogous to the accepted 'technical' notes. These are the recommended option since drawings are used in the site office and at the 'coal face'.

The work of design teams includes creating and providing adequate information, available through reasonable enquiries and the proper consideration of hazards associated with the nature of the site and design execution. This information should focus on those aspects that it would not be reasonable to expect a competent contractor, engaged to execute the design or construction, to know and

understand. A hazard and risk register should be included in this transfer/sharing of information, such that the contractor may contribute to its development.

The design teams should co-operate with the project management team to facilitate the compilation of pre-construction health and safety information, providing the information required by the principal contractor to develop the Construction Phase Plan. This should include information on hazards that have the potential for creating significant risks. Similar co-operation should be required to identify and communicate information of relevance to the development of the Health and Safety File.



Co-operation and co-ordination

No project would be successful if all parties could not co-operate fully. Good co-operation should benefit everyone; strong relationships mean problems should be resolved more quickly.

Co-operation with contractors and designers employed by (sub) contractors could be difficult if the means of communication were not established in the early stages of the project. It is recommended that designers discuss this with the client upon commencement of the project.

The use of team sessions should enhance co-operation and could be used to agree a common approach to risk management (specifically health and safety risk) and a means by which project risk (including safety risk) can be adequately considered, for example through design reviews.

Engineering safety management

In addition to the standard construction regulations, Crossrail conforms to railway specific regulations. The principal railway-specific regulations governing the management of engineering change on the mainline railway system are:

- The Railways and Other Guided Transport Systems (Safety) Regulations 2006, as amended 2013.
- The Railways (Interoperability) Regulations 2011 as ammended 2014
- The EC regulation on Common Safety Method on risk evaluation and assessment.

The overall strategy and approach for the reduction of safety risks in design, construction, testing and potential future operation of the railway to as low as reasonably practicable is laid out in the Crossrail Engineering System Safety Plan. This will enable the completed railway to be handed over and accepted so that it can be put into service. This plan also identifies the Crossrail Engineering Safety Management arrangements and the responsibilities for their delivery.

Compliance with the railway-related safety regulations above are the primary means of assuring to the Office of Rail Regulation the safety of future railway operations and maintenance, including normal, abnormal and emergency situations.

For this reason the application of CDM and engineering safety management processes will run in parallel with railway safety regulations taking precedence over CDM in railway system operation and maintenance.

Permanent works designer and temporary works designer

The permanent works designer should be satisfied that the permanent works design allows for a reasonably safe system of work in respect of temporary works. They should have regard to hazard elimination and risk reduction which would be implemented by the temporary works designer and subsequently the contractor.

One common cause of incidents in construction has been poor temporary works design that did not adequately consider risk to construction personnel. Specific attention should therefore be paid to managing risk during any temporary works design.





Target Zero example



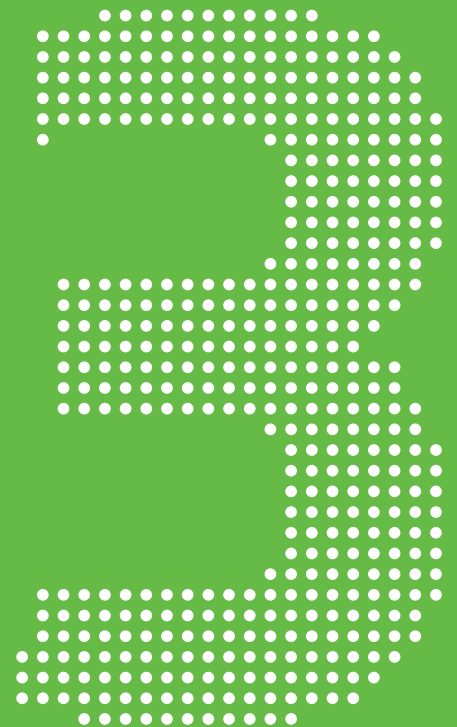
Original Tremie key weighing circa 70kg

A 'Tremie key' is used to lock off Tremie pipes. Historically the key was a heavy cumbersome piece of kit that presented risk of injury to the workforce.

After extensive consultation with the workforce at the Farringdon Advanced Works and the Crossrail design team, the key was redesigned and manufactured from a lighter material. The feedback from the workforce was very positive, especially as they had been involved in the process from the start. Its appeal was in the simple engineering changes that ensured that safety was not compromised.

PILLAR 3

COMMUNICATION



STANDARD

Pillar 3 focuses on good communication. The Target Zero message should be communicated by all organisations involved with Crossrail and, as such, we all need to check that the message is delivered consistently and is easily understood. This means considering language, style of delivery, the audience and motivating the recipients to adopt a personal commitment to making the prevention of accidents a reality.

We expect organisations on Crossrail to embrace a culture of learning and open information sharing, helping us all to improve together. With this in mind, all stakeholders should be engaged in Target Zero.

At Crossrail we expect all organisations to communicate the Target Zero message by:

- Having an effective induction process
- Having communication between stakeholders
- Engaging with the workforce, including non-English speaking workers
- Communicating externally
- Participating in the Considerate Constructors Scheme
- Engaging with the supply chain.

Induction

Regardless of affiliation, everyone should have completed appropriate training and an induction before entering site.

There are three levels of induction for Crossrail:

- Programme wide induction: This should cover the Crossrail health and safety requirements including this Standard, the Target Zero philosophy and approach and Crossrail's Golden Rules for Health and Safety (see page 35).
- Site induction: Essential before starting work at Crossrail locations/sites, the site induction should cover the site-specific health and safety controls including first aid, fire, emergency and accident procedures, welfare facilities and other relevant procedures and controls.
- Visitor induction: Crossrail sites attract several visitors every day from a variety of backgrounds. The safety of visitors to Crossrail locations is as important as the safety of staff working on the project. Contractors must ensure that an effective health and safety induction for visitors.

The induction content should be modified accordingly for visitors, who should be escorted, but the induction should always include reference to Target Zero and its principles.

Communication between stakeholders

Crossrail makes use of a range of communication tools, including newsletters, bulletins, safety alerts, Crossrail's Gateway Inspiration Awards, notice boards, toolbox talks and briefings, all of which are shared with our stakeholders and contractors.

Crossrail also encourages organisations to participate in regular discussions on lessons learned from incidents and to join Target Zero forums to share experience.



GUIDANCE

Workforce engagement

Positive engagement with the workforce on health and safety matters is necessary to achieve the high standards set for Crossrail. Effective consultation and engagement is fundamental to the delivery of Target Zero. We must develop effective mechanisms to engage all site personnel in the development and implementation of effective health and safety arrangements.

Communication systems should be in place to inform all site personnel of key health and safety information. This includes project progress, lessons learnt from incidents, health and safety campaigns and initiatives.

Communication arrangements should ensure that recognised trade unions and appointed health and safety representatives are consulted in the development of robust and deliverable communications systems.

- Consultation is a mechanism for anyone working on Crossrail to discuss concerns, issues or feedback on the project. This should be an opportunity for honesty, support and encouragement.
- Information about incidents and lessons learned are freely and openly shared in order to promote learning and prevention.
- Reporting all incidents and near misses is strongly encouraged and seen as an opportunity for learning and continuous improvement.
- The workforce at all levels should be consulted for their views and suggestions so as to continually improve health and safety.
- Toolbox talks, stand downs, safety forums and daily task briefings are used to communicate health and safety issues and required actions across the organisation.
- Sharing identified best practice that can be inspirational to others is encouraged.

Consideration of the language skills of those employed should be given to ensure the workforce understands all site health and safety requirements and uses both oral and written communication.

Supply chain engagement

We can only achieve Target Zero if our requirements and expectations are understood by all levels of the supply chain and they are competent to achieve them.

As supply chain employees are expected to be most at risk it is paramount that everybody who interacts with them drives the Target Zero Message home, by:

- Speaking about Target Zero with them at site
- Ensuring they are involved and have an understanding of our commitments
- Intervening when at-risk behaviour or conditions are observed, making sure all involved understand the reason for the intervention.

Once selected the supply chain should be actively engaged in health and safety campaigns via regular:

- Supply chain conferences
- Subject matter forums that help in problem solving and the elimination of construction hazards and, in particular, fatal risk.

One such example is engagement in the Crossrail Vehicle Safety Programme. All goods vehicle drivers should attend the Driver Safety Awareness course

All public communications should conform with our communications policies and procedures, including those applicable in the event of an incident or accident.

It should be noted that information on health and safety matters should only be provided directly to the media or other third parties (other than regulators) when specifically authorised by us.



We expect our contractors to co-operate with and participate in arrangements to liaise with local communities by:

- Ensuring their health and safety plans support Crossrail commitments to local communities
- Engaging in projects designed to encourage a positive attitude towards construction activity and the promotion of employment opportunities for the communities that will be served by the railway once it is commissioned
- Providing responses to received complaints and suggestions

Target Zero example

Ringway Jacobs developed and wrote the Cyclists at Road Works – Guidance Document, the document was written following pan-London workshops with Transport for London, Aecom, Amey and Enterprise Mouchel. Ringway Jacobs now uses this document as guidance when designing and implementing its traffic management on the road network.

The document provides guidance to those planning, designing and operating temporary traffic management associated with construction activities on the highway. This ensures the convenience and safety of cyclists is fully considered alongside the needs of other road users, as well as those undertaking the works. The guidance relates to works being undertaken on the Transport for London road network but may be applicable for works on similar urban roads.

The document tackles the sort of issues that can often affect cyclists at roadworks. A number of measures are recommended including dedicated cycle lanes, minimising the length of roadworks, reducing pinch points, changing traffic signal timings, maintaining access and installing temporary route signs.

Elsewhere the Crossrail Lorry Driver Safety Awareness course has proved a success with participants and local authorities alike.

PILLAR 4

WORKPLACE HEALTH



STANDARD

Pillar 4 focuses on workplace health and the belief that everyone has the right to a healthy workplace, as good health will have a positive effect on employees and the delivery of the project. Our target is to promote workplace health and raise standards in the construction industry.

At Crossrail we expect every organisation to appoint and consult an occupational health service provider. In addition, Crossrail has adopted the Constructing Better Health Industry Standard for Workplace Health which is consistently applied across the project. Both the contractors involved in construction site works and occupational health providers working on the project should be members of this scheme. An effective occupational health service should be one that goes beyond providing a clinical and emergency response service. We expect organisations to provide this by meeting the Crossrail occupational health standards in each of the three focus areas below.

Focus on the worker, to reduce the negative impact of health on work and to ensure individual and group safety by:

- Assessing workers' fitness for work as part of the induction process
- Enforcing a strict drug and alcohol policy across the contract
- Adopting a policy whereby individuals take responsibility for informing their employer of any health issues.

Focus on the workplace, to ensure that work is designed in order to reduce the impact of work on health so far as reasonably practicable by:

- Applying principles of risk avoidance during the design phase to specifically address occupational health risks
- Communicating health risks and their controls to all employees and to the other organisations working on Crossrail
- Having in place management arrangements to address fatigue
- Having in place a health monitoring process
- Reducing absence due to work-related illness and rehabilitating workers after long-term illness or injury
- Investigating all incidents involving exposure to health hazards.

Focus on employee wellbeing by:

- Having in place reactive occupational health service provision in the event of an incident
- Educating employees through health awareness and promotional programmes
- Enhancing wellbeing through lifestyle screening
- Providing on-site treatment services for employees.

CONSTRUCTING BETTER HEALTH (CBH) IS A NOT-FOR-PROFIT INDUSTRY-WIDE ORGANISATION COMMITTED TO RAISING AWARENESS OF WORK RELATED HEALTH ISSUES. ITS SYSTEMS ENABLE THE CONTINUOUS TRACKING OF CONSTRUCTION WORKERS' HEALTH AS THEY MOVE BETWEEN EMPLOYERS.

GUIDANCE

Occupational health service provider

In appointing an occupational health service provider the following responsibilities should be considered:

- Working with the contractor to develop strategies to reduce exposure to health risks
- Retaining the appropriate medical and surveillance records that comply with the principles of the Data Protection Act and specifically with records required under health and safety legislation, e.g. health records under the Control of Substances Hazardous to Health (COSHH)
- Ensuring regular service-level agreement meetings
- Providing regular agreed summary reports to the employing organisation, stating all activities and results of health check outcomes
- Conforming to the Constructing Better Health industry standards for occupational health matters
- Providing guidance on monitoring performance.

In addition to the fulfilment of the necessary legal requirements for the employment of clinical staff, occupational health staff must possess the competence requirements detailed in

the The Safe Effective Quality Occupational Health Service (SEQOHS) standards and current CBH industry standards.

Assessing fitness for work

It is our expectation that all organisations should have processes in place to identify pre-existing health conditions and control the impact work activities may have on them.

As a component of the recruitment or induction process, all workers should complete a pre-placement health questionnaire administered and screened by a competent person of the appointed occupational health service provider. Individuals would then be classified as 'safety critical' or 'non-safety critical' and then be subjected to a health check and further assessment as per the health assessment matrix contained in the CBH standards. For example, further assessment would be required for night workers.

During the induction process an individual's previous health check results would be reviewed via CBH's CHAT 2 database 'Check a Card System' using their unique reference number.

Any individuals undertaking railway-related safety critical work as listed in London Underground (LU) Standard 1-548 Safety Critical Work would be subject to a health assessment in accordance

with the LU Standard 1-601 Management Arrangements to ensure Medical fitness.

These assessments should be repeated at the intervals set out in the CBH and LU standards respectively.

There are a number of legal and lay terms for the different types of medicals that workers should have, depending on the risk, exposure and legislation. For the purpose of this standard and for simplification, health and medical surveillance, health screening, health monitoring, fitness for task medicals and personal lifestyle tests (cholesterol and blood pressure) use the umbrella term 'health check' where differentiation is not required.

To meet the focus on workplace requirements further health monitoring should be completed:

A process should be in place that identifies those workers who require ongoing health checks to monitor how work activities could impact on their health. The frequency and nature of the health checks would be defined by the occupational health provider and CBH standards.

The assessment would need to take into account the nature of work and associated risks and any individual personal health circumstances. Providing statutory medicals should be required under the relevant approved code of practice.

Drugs and alcohol

Organisations should operate a comprehensive drugs and alcohol testing programme and should ensure that everyone engaged on the works make themselves immediately available on request for a test when required.

Organisations should ensure that everyone undergoing a test has given explicit consent to testing and processing of such data by signing a consent form. The consent form should state that the outcome of the testing could be shared with Crossrail and other organisations engaged on the project, thereby ensuring that those failing or refusing a test are excluded from the project on grounds of safety.

Individual responsibility

We can only achieve Target Zero if all levels of the supply chain understand our requirements and expectations and are competent to achieve them.

All individuals on the Crossrail programme should be required to:

- Report potential negative work-related health issues to their line or site managers
- Report any changes in personal health which may compromise health and safety.

Design

Designers should ensure that the occupational health risks to construction, maintenance and operations staff are controlled in accordance with the hierarchy of risk control.

Any organisation with responsibility and authority in design should ensure that design teams consider health aspects of work, particularly in relation to musculoskeletal issues, ergonomics, posture, manual handling and disability.

They should have a copy of and understand the Crossrail document '*Healthy by Design*', and ensure occupational health considerations are included within design risk registers and procurement specifications.



Health risk management

Organisations should have systems and controls in place to ensure that occupational health issues are identified, eliminated where possible and/or mitigated where necessary so as not to import additional risk into the project through materials, equipment or work processes.

This also applies to contractors within the supply chain to help them to comply with Crossrail occupational health standards. The relevant systems should be:

- Workplace/site health risk assessments should be carried out and reviewed on a regular basis
- Occupational hygiene services which can anticipate, recognise, evaluate and control health hazards in the workplace should be available to support and help in the management of ill-health prevention
- Line managers and supervisors should be provided with time and resources to implement guidance given by the occupational health providers
- Periodic health surveillance fitness for work assessments should be carried out to provide assurance that the controls in place are adequate
- All individuals on Crossrail should have access to competent health advice and guidance and occupational health provision via an occupational health service provider
- Suitable records should be kept and necessary information compiled to meet Crossrail occupational health reporting requirements.

Communicate

All employees should be made aware of:

- Significant risks to health in the workplace and how health checks fit into the need to monitor health
- The risk controls that are in place and how to comply with them (eg the proper wearing of personal protective equipment and correct use of local exhaust ventilation)
- How poor health can compromise safety
- The facilities and support available from the occupational health provider
- How to report health concerns to management.

Health risk issues and control best practice should also be shared amongst organisations. Crossrail will host principal contractor forums where occupational health will be discussed and wellbeing campaigns agreed.

In addition, organisations should contribute to the development and continuous improvement of the occupational health strategy through involvement with CBH forums.

Fatigue management

We have identified fatigue to be a specific health risk on Crossrail. We expect suitable management arrangements to be in place to assess and control shift patterns to address and manage the risk of fatigue. This includes the rotation of workers, restrictions on overtime, identified maximum working hours, localised welfare provisions and mandated weekends off.

Reference should be made to Health and Safety Executive (HSE) report reference RR446 entitled '*The Development of a Fatigue and Risk Index for Shift workers*'.

Rehabilitation and referrals

The occupational health programme should cover attendance management and in particular should ensure that rehabilitation is available to workers in the form of phased return to work (where appropriate) and onward referral to other health professionals, eg physiotherapy.

Incident investigation

Just as with injuries, incidents that lead to exposure to health hazards should be investigated with the same rigour so as to evaluate existing exposure controls, identify missing controls and provide valuable data for trending purposes.

Specific support from the occupational health provider should be sought where required.

Reactive occupational health services

Emergency response plans will need to include first aid arrangements and reactive occupational health services, as appropriate. They should include:

- Trained first aiders (emergency medical staff) at defined locations during defined times when work is being undertaken
- Provision of sufficient first aiders (medical staff) based on the risks associated with the work being undertaken and the availability and response times of NHS emergency services
- Weekly inspection and replenishment of first-aid kits
- Site-based first aid and emergency response services appropriate to each work location

- A treatment service for those likely to have difficulty accessing medical care locally
- Drugs and alcohol testing services.

All approved occupational health emergency response processes should take into account and be compatible with:

- The London Ambulance Service
- The Helicopter Emergency Medical Services
- The Hazard Area Response Team guidelines and requirements.

To meet the wellbeing focus, area onsite treatment services should ensure:

- The medical care available is suitable to prevent workers from having to travel to their registered GP unless absolutely necessary
- The time taken to gain medical treatment from local Walk in Centres or Accident and Emergency departments is minimised where possible.

Early advice should be available to reduce the effects of any illness or occupational health issue by:

- Providing health-related advice and support to help staff remain in work or return to work as soon as possible
- Maintaining a healthy workforce
- Ensuring local Walk in Centres, clinics and A&E departments have been identified and are within close proximity to the work site in locations where onsite treatment services are not provided by the onsite occupational health provider.

Educate

Organisations should have processes or guidance in place that promote health and wellbeing. The occupational health provider should assist by raising awareness of work and lifestyle-related health issues, including advice and education to workers on preventing work-related ill health.

Organisations should use campaigns and targeted health education to reduce the risk of occupational disease and raise awareness of health trends and the benefits of a healthy lifestyle. Health promotion programmes should be applicable to the specific workplace and lifestyle of the workers and should incorporate the supply chain.

This education will include monthly construction site-based campaigns tackling site-specific health issues identified through risk assessment or trend analysis.

Lifestyle screening

Lifestyle screening should be available to all staff working on Crossrail to enable early detection and intervention of health issues such as cardiovascular risk factors.

All staff should receive a lifestyle assessment every 2 years



Target Zero example

Dragados-Sisk Joint Venture (DSJV), at the Eastern Running Tunnels - Thames Project, focused one of its health and wellbeing campaigns on bowel cancer awareness.

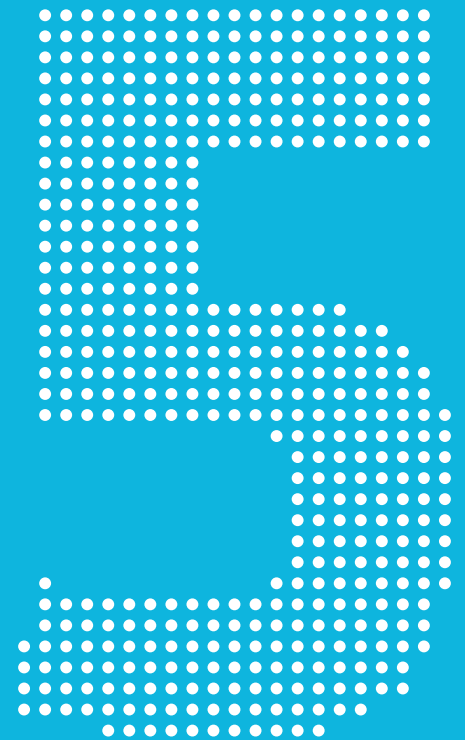
This campaign was chosen as one of the senior managers on the project was undergoing treatment for the disease and wanted to raise awareness of the illness with colleagues.

The campaign involved project-wide talks by a charity called Beating Bowel Cancer. These 30-minute presentations by people with bowel cancer highlighted the signs and symptoms of the condition and the importance of seeking help early. Following the talks, DSJV decided to set up a bowel cancer screening programme so that as many people as possible could be screened and the disease detected as early as possible.

The money for the programme was raised by a generous donation from the DSJV board as well as various fundraising activities. The campaign has been well received and will hopefully impact the lives of many people across the project.

PILLAR 5

WORKPLACE SAFETY



STANDARD

Pillar 5 focuses on workplace safety. All of the other pillars influence the health and safety culture on site but there are additional activities that focus specifically on safety. In addition to those activities mentioned elsewhere in this Standard, we expect all organisations to achieve a safe workplace by:

- Making suitable and sufficient assessment of the risks involved in work
- Ensuring all risk-management information is effectively communicated to all relevant persons at the worksite
- Including focus on Crossrail's Golden Rules (page 38)
- Developing and enforcing site-specific rules
- Ensuring emergency arrangements are in place
- Proactively reporting and investigating all health and safety incidents
- Controlling access to our sites such that it is limited to people we have approved
- Following Crossrail requirements when accessing work sites controlled by others
- Ensuring the safety of visitors
- Controlling the impact deliveries and vehicle movements have on worksite safety and on the public
- Providing and ensuring the wearing of appropriate personal protective equipment.



GUIDANCE

Safety risk management

Employers are required by legislation to make a suitable and sufficient assessment of the risks involved in work activities and to implement appropriate control measures.

Organisations should submit risk assessments, work package plans and method statements for review for work that either impacts on sites owned by other parties, or members of the public, or where the activities are assessed as being of high potential health or safety risk.

For works at sites owned by other parties, the organisation undertaking the work should submit the risk assessment and safe system of work documentation to Crossrail for review and comment.

Risk management information

Health and safety records relevant to the works, including permits, risk assessments, work package plans/method statements, training and equipment records, should be kept and communicated effectively to all relevant people at the work site at an appropriate time. This includes, where relevant, sub-tier contractors.

All too often, documentation is in place but the message has not been conveyed to the team conducting the work. Copies of all health and safety information relevant to specific site tasks should be held by the team carrying out the work, including work package plans/method statements, risk assessments, permits and written briefings

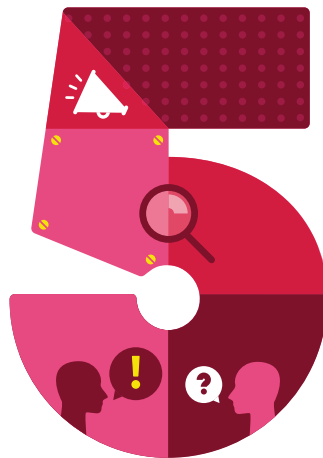
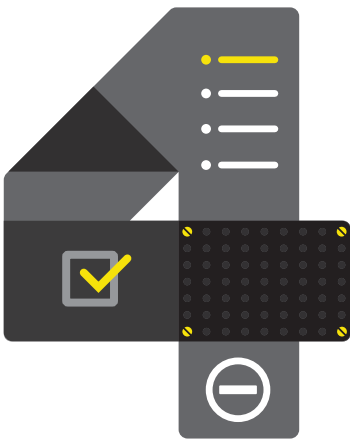
Site safety briefings should be an essential part of communicating information to workers and should be carried out so that everyone understands the risks and required control measures. Written records of briefings signed by all persons carrying out the tasks should be maintained.

Golden Rules

Crossrail has developed a suite of Golden Rules for everyone involved in the project. The rules focus on the behaviours we expect staff to adopt and demonstrate at all times when working on Crossrail. We expect everyone on the project to understand and comply with the rules, as their purpose is to create a safe working environment. The Crossrail Golden Rules can be found overleaf.

Site supervisors, line managers, senior managers and directors should make sure that our Golden Rules form a key part of inductions and the on-going training of their workforce. They should routinely check that their staff know the rules and reinforce them by setting a good example.

We want the Crossrail Golden rules to be applied firmly and fairly. Breaking the rules represents a serious issue and could lead to those responsible being removed from our worksites.



RESPECT THE BASICS

- ▶ Turn up fit and ready for work
- ▶ Plan and prepare for your task safely
- ▶ Observe pedestrian routes and signage

ASSESS THE RISKS

- ▶ Know your evacuation routes
- ▶ Stop, report and discuss if things change
- ▶ Consider the health impacts of every task

CHECK THE SITE

- ▶ Keep all walkways clear
- ▶ Look out for hazards – don't walk by
- ▶ Keep your work area tidy

FOLLOW SITE REQUIREMENTS

- ▶ Follow all site rules
- ▶ Stick to safe systems of work
- ▶ Do not enter exclusion zones

SUPPORT EACH OTHER

- ▶ Speak up, if you see anything wrong
- ▶ Share your observations at daily briefings
- ▶ Always watch out for everyone on site

Site rules

In addition to the Golden Rules, the following rules should be enforced on Crossrail sites:

- Smoking and the use of mobile phones is prohibited other than in designated areas
- Personal radios and portable audio equipment are prohibited on any Crossrail worksite unless specifically authorised by the Crossrail project manager
- Semi automatic quick hitches should not be used.

Emergency preparedness and response

The arrangements for emergency preparedness and response should cover all reasonably foreseeable contingencies and include:

- Notifications and reporting, including notification to Crossrail
- Arrangements to mitigate both health and safety incidents thus minimising harm
- Recovery arrangements
- Investigation arrangements
- Training exercises, drills and on-line learning to ensure effective emergency response preparedness
- Making sure the arrangements are known and are readily available to those who need them.

The above arrangements should take into account our business continuity and resilience management processes.

Target Zero example

The BBMV team at Liverpool Street/Whitechapel SCL works developed a plant tag system to ensure a clear and easy way of identifying that the correct user/operator checks had been carried out prior to plant operation. It also identified whether the plant had been signed off as being ready to use and highlighted any issues preventing safe operation or use.

The plant tag system was adapted from the established scaffold tag system. The plastic plant tag holder has a bespoke insert for the particular item of plant and is attached to the outside of the machine, thereby allowing anyone on site to see whether the operator has carried out the required checks before use and identify any risks that could prevent safe operation. The tags are used alongside a robust monitoring system that ensures those responsible for signing-off the plant tags and operating plant are competent to do so effectively.

Incident reporting and investigation

In addition to their duty to report accidents/incidents to enforcing authorities, organisations should:

- Notify the Crossrail incident desk of any significant accidents or incidents, and any incidents requiring our intervention
- Notify all accidents and incidents in accordance with the timescales set out in our Incident Management Plan
- Nominate a responsible person to inform the enforcing authorities and Crossrail of matters covered within Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)
- Carry out prompt investigations of any significant accidents and incidents and provide us with a copy of the investigation report within agreed timeframes
- Co-operate with Crossrail health and safety teams in incident investigation and follow-up in order to identify causes and lessons learned
- Provide us with any documentation, information and reports on request as part of any investigation and to an agreed timescale
- Fully utilise our incident management system (Rivo Safeguard) for recording health, safety and security information
- Respond to all our comments on investigation reports within a reasonable timeframe and implement agreed actions.

Security and identification of personnel

When in control of a site or premises, organisations should:

- Take reasonable steps to prevent unauthorised personnel from accessing worksites
- Provide hoardings or security fencing
- Maintain additional controls on access and egress for high-risk work areas, eg tunnelling areas
- Keep access gates secured when not in use
- Keep materials, tools and equipment secure at all times
- Make sure plant is secure to prevent unauthorised use
- Report suspicious people or activity immediately
- Report all incidents of damage or theft
- Protect project information
- Provide signage on site hoardings to inform the public of the helpline number for reporting security incidents or concerns
- Carry out site specific assessments of the security and trespass risk at worksites and implement appropriate control measures.

Access to work sites controlled by others

Where works are on sites under the control of others, (eg utilities and rail sites) access should be requested in accordance with Crossrail site access procedures.

At the same time, a risk assessment and documented safe system of work should be submitted, both of which we will review before submission to the site owner.

Safety of visitors

In general, a site should only be visited for project-related matters. If a visit is needed for other reasons, it will be granted at our discretion. Visits are potentially disruptive to normal site operations, and, even when carefully managed, construction sites represent a higher level of risk than most other workplaces. We recognise that there will be times when our site-based contractors will have bona fide visitors. Subject to the security controls in place, visitors will be required as a minimum to:

- Attend a visitors induction
- Wear appropriate PPE
- Have the appropriate fitness for work assessment
- Be accompanied at all times by a competent person, who is formally allocated responsibility for the visitor.

If visitors are non CSCS holders, our project manager can use their discretion for one-off visits or visits of an exceptional nature (eg a Member of Parliament).

Control of vehicle movements

Organisations should ensure that:

- A suitable and sufficient risk assessment has been conducted for activities being undertaken by delivery drivers
- Delivery times are scheduled where it is reasonable, so as to mitigate any risk of conflict with the programmed works, members of the public or other stakeholders
- Drivers are provided with briefings and a supporting document outlining their duties, site traffic control arrangements and related matters
- Drivers of large goods vehicles (LGVs) of 3.5 tonnes or greater, making five or more round trips to a Crossrail worksite in any 12 months should undergo Crossrail Lorry Driver Induction Training
- Drivers of LGVs of 3.5 tonnes or greater making fewer than five round trips to a Crossrail worksite in any 12-month period should be issued with a Driver Information Pack
- Delivery drivers have the appropriate competence certificate, eg Construction Plant Competence Scheme (CPCS)
- A traffic management plan is produced for each site and updated to maintain its accuracy and propriety
- The Crossrail Lorry Driver Safety Awareness Course and the Driver Information Pack cover important information for Crossrail drivers on sharing London's roads with vulnerable road users and protective security measures that help reduce the risks of a terrorist threat to the project.



We expect participating organisations to detail the following in their Vehicle Movement Planning System (VMPS) where applicable:

- A process for dynamic risk assessment to take account of any changing site conditions
- Implementation and status of traffic routes including low bridges and weight restrictions on the public highway
- How to deal with emergencies or deviations from the VMPS
- Vehicle and pedestrian segregation arrangements
- Specific consideration to the lorry interface with cyclist and powered two-wheelers
- Restricted use of vehicles by competent and authorised persons
- Use of one-way systems
- Safe access and loading/unloading/turning
- Management of the significant risks identified in the Health and Safety Executive publication entitled '*Protecting the Public*' (reference HSG 151).





Personal protective equipment (PPE)

We have set minimum standards for PPE to be worn on Crossrail sites. The specific type of PPE provided should be based on a risk assessment and the outcomes from consultation with the workforce. It is important to remember that PPE is the last resort and other risk reduction methods should be implemented, as well as providing appropriate PPE.

In the event of wet weather, the requirement to wear light eye protection goggles could be relaxed if wearing eye protection creates a greater risk to the individual. The process for determining when light eye protection can be relaxed should be documented in the Construction Phase Plan and agreed with the Crossrail project manager.

Additional PPE should also be provided for specific tasks and activities as detailed in risk assessments.

PPE should always meet the appropriate standard. However, due to the diversity of our workforce, individual compatibility should be considered when issuing and using PPE.

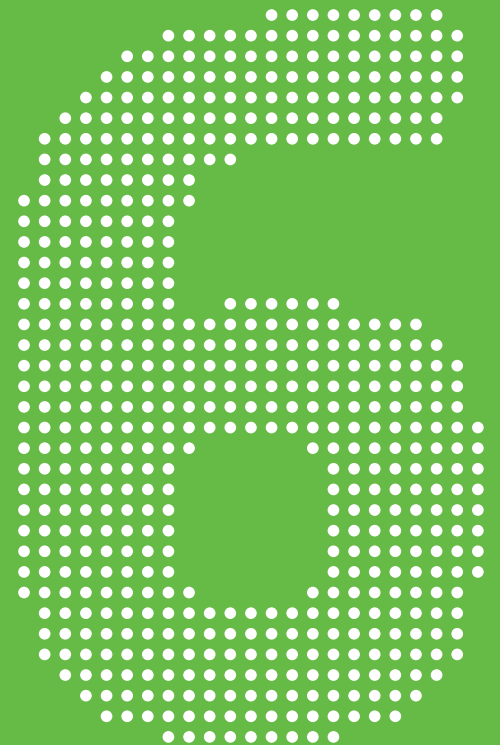
When setting up a site, organisations should provide suitable and sufficient storage and cleaning facilities for PPE and make sure people on the site are trained in the correct use of PPE.

Organisations should also ensure that appropriate arrangements are in place to inspect and maintain PPE as required by the manufacturer's instructions.

For harnesses and lanyards we require, as a minimum, a record showing weekly inspections and three-monthly thorough examinations are being carried out.

PILLAR 6

PERFORMANCE IMPROVEMENT



STANDARD

Pillar 6 focuses on performance improvement. Continuous improvement is necessary to achieve our ultimate goal of sending everyone home safely every day. At Crossrail we expect every organisation participating in the project to do this by:

- Implementing a programme of continuous improvement including, as a minimum, a health and safety improvement plan
- Having supervisors and management at all work sites. carry out regular health and safety inspections
- Having senior managers and directors demonstrate their commitment to health and safety during regular leadership tours
- Providing sufficient resources to report incidents and key performance indicator requirements via our incident management system, Rivo Safeguard, to monitor performance and analyse trends
- Implementing a proactive and reactive assurance programme
- Continually and systematically improving their health and safety programme.



GUIDANCE

Improvement plan

An organisation's health and safety improvement plan should include:

- Relevant parts of Crossrail's health and safety objectives
- Actions associated with initiatives agreed at Crossrail contractor forums
- Site and project-specific improvements
- Action to address issues raised by the contractor and Crossrail
- Quarterly reviews and updates as a minimum.

Progress in achieving the objectives in the improvement plan should be monitored and reported to Crossrail.

Where appropriate organisations should ensure that their major subcontractors also have Crossrail-specific health and safety objectives in place.

As part of the improvement process, both excellent and poor performance should be recognised and appropriate action taken. Action could be a small discussion of a near miss with a team, praise and reward for those taking the right action, or a full investigation of a serious incident. Whatever the action, it should be appropriate to the behaviour, occurrence or activity.

Inspections and monitoring

The frequency of inspections should take into account the nature and risk of the work being completed, previous results and any other relevant factors. The results should be used to raise corrective actions and perform trend analysis to proactively address health and safety issues.

A programme of Crossrail monitoring should also be established and maintained by delivery teams with findings included in period reports to Crossrail management. The results of both programmes should be compared to increase the opportunity for improvement.

Leadership tours

Leadership tours should include focus on:

- Work site condition
- Observed work practices
- Discussion with site operatives
- Providing an opportunity for individuals to raise and share any health or safety successes and concerns.

Target Zero example

Hochtief Murphy Joint Venture, at C310 Thames Tunnel, convenes an Operative Safety Committee on a fortnightly basis involving volunteers from five different work areas on site. There is no supervisory or management attendance at the meetings.

The committee discusses Crossrail developments, internal and external safety alerts and health and safety issues from the work areas on site. Comments, feedback and staff requests are recorded and escalated. Everyone on site has visibility of these issues as they are displayed on 'You Said, We Did' boards.

The meeting allows staff to take ownership of health and safety issues on site and it is recognised as an effective avenue to have their voices heard and make a difference.

Reporting

Crossrail monitors the health and safety performance of its contractors and industry partners through a number of proactive and reactive key performance indicators. These are reviewed on a periodic basis and form a baseline to measure the effectiveness of health and safety controls.

Crossrail has arrangements in place to collect and validate the required data from all organisations working across Crossrail and ensure its timely submission.

The data received will be converted into a Health and Safety Performance Index (HSPI) for each of the six pillars so that performance in each pillar can be monitored over time. Trends from the HSPI will show the management teams where to focus attention for improvement. The measures used in the HSPI may change over time to reflect the changing focus of the Crossrail project.

Partner assurance

At Crossrail, we recognise that it is not enough just to have safe systems of work in place – the systems need to be regularly reviewed to ensure they are relevant to the activity being carried out and are being worked to correctly. Crossrail expects organisations carrying out work on its behalf to have processes in place that provide assurance that activities are being carried out safely and that risk has been reduced as far as reasonably practicable.

Crossrail anticipates that contracted organisations would have a number of measures in place such as:

- Proactive safety assurance – this involves having in place a methodology for identifying safety risk through an analysis of the organisation’s activities. The aim of this process is to identify any hazards before they materialise into accidents or incidents and then implement appropriate risk mitigation measures

- Reactive safety assurance – this involves having processes in place to respond to system failures leading to events such as accidents and incidents. Thorough formal investigation processes will be followed to ensure that immediate, underlying and root causes are identified and appropriate measures are taken to ensure that system deficiencies are addressed.

Assurance activities should be fully recorded and records should be accessible and available for review by Crossrail. Findings should also be incorporated into improvement plans to ensure actions receive the appropriate level of visibility. Importantly, Crossrail takes a collaborative approach with every organisation working on the project. As such, it is expected that the Crossrail assurance team will work closely with organisations to support them in their efforts to align with both the project’s and their own aspirations for safety assurance.

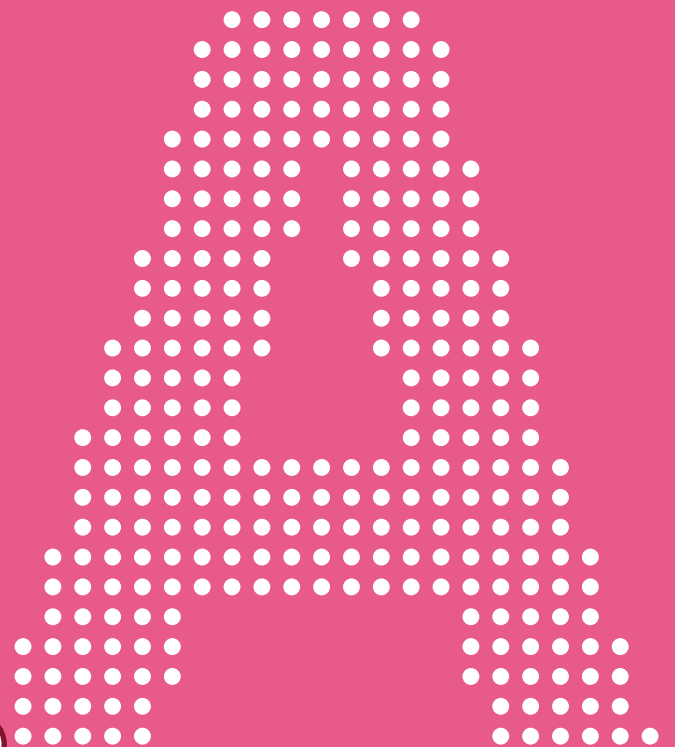
The level of assurance undertaken by us will be assessed on a case-by-case basis.

Systems improvement

Processes should be established and implemented which drive continual improvement in health and safety performance including:

- Regular reviews of management systems
- An active and effective design process that learns from construction and operational experience so that hazards and fatal risks can be eliminated through the design process.

APPENDICES



Appendix A: Crossrail Health and Safety Charter

The charter signed by the principal parties involved in delivering Crossrail sets out a number of key health and safety leadership behaviours and values that underpin a shared determination to work together to deliver health and safety excellence within the Crossrail programme.

We will commit to:

1. Policies: Work to meet the spirit and intent of the Crossrail Health and Safety Policy Statement
2. Commitments: Demonstrate our commitment to health and safety excellence, so that people on works under our control and influence go home safe
3. Best Practice: Innovate, share and adopt health and safety best practice so that together we may deliver a world class railway
4. Health: Promote occupational health and wellbeing as key areas
5. Arrangements: Work to the framework set out within the Crossrail publication 'Contractors and Industry Partners - Health and Safety Standard'.

We will regularly monitor progress against the above commitments and embed them within our organisational cultures.

The extent of our success will be made publicly available.



◀ HEALTH AND SAFETY POLICY ▶

Purpose

To create through the decisions, plans and actions of all staff, Industry Partners, Stakeholders, Consultants and Contractors a culture and work environment in which it is recognised that all harm is preventable and that ensures everyone associated with Crossrail goes home unharmed everyday.

Principles

Good health and safety management are critical to the success of Crossrail and will be achieved through compliance with the Health and Safety aspects of the TfL Group Health, Safety and Environment Policy by:

- Demonstrating the strategic importance of Health & Safety by the provision of visible leadership from the Chief Executive and Crossrail Board;
- Providing effective Health & Safety leadership on the Programme in order to promote a positive Health & Safety culture and engage management and workforces in decisions that affect their Health & Safety;
- Aiming for Health & Safety excellence in our own activities and promoting exemplary Health & Safety performance from consultants and contractors;
- Setting standards for Occupational Health and Wellbeing performance that reduce risks to health and that promote a healthy working environment;
- Continually seeking to further improve our Health & Safety performance in order to support the Programme objectives and to fulfil our obligations as a responsible employer;
- Setting progressive objectives and targets to improve Health and Safety management and performance in keeping with stakeholder expectations;
- Considering any material Health & Safety implications arising from the introduction of new processes, working practices and personnel;
- Providing proactive management and assurance of Health & Safety in design and construction;
- Ensuring that Health & Safety is a regular agenda item for Board meetings during which Health & Safety performance will be reviewed and decisions taken upon appropriate actions to address any weaknesses identified;
- Appraising the performance of our senior managers in a manner which includes an assessment of their contribution to Health & Safety performance;
- Continually assessing the competency of our staff, provide and support appropriate training and professional development;
- Providing competent Health & Safety advice and ensuring that procedures are in place to implement any new legal and TfL requirements; and
- Ensuring that adequate resources are provided to deliver these commitments and taking Board decisions which are consistent with them.

Health and Safety are a central responsibility of all those working on the programme.

Applicability, Implementation & Resources

This policy applies to all aspects of the Crossrail Programme. Implementation within the Crossrail Team being through the Crossrail Management System while implementation by suppliers and industry partners is achieved through contracts and agreements developed by the Crossrail Team in accordance with the Management System.

The Crossrail Team will ensure the availability of resources needed to implement this policy and ensure that it remains effective and relevant through regular reviews and updates.

Appendix C: Crossrail values

◀ SAFETY

We put safety first

You have the right to go home unharmed every day

◀ INSPIRATION

It's in our power to change things for the better

You get support to share your ideas and receive great leadership

◀ COLLABORATION

We're stronger together

The team works well and you can rely on it

◀ INTEGRITY

We keep our promises

You deliver on commitments with the highest quality work

◀ RESPECT

We treat people as we'd like to be treated

People treat you with dignity and respect

Glossary of terms

CBH	Constructing Better Health
CDM	Construction Design and Management
COSHH	Control of Substances Hazardous to Health
CPCS	Construction Plant Competence Scheme
CRL	Crossrail
CSCS	Construction Skills Certification Scheme
CSM	Common Safety Method
BBMV	Balfour Beatty, ALPINE BeMo Tunnelling, Morgan Sindall and VINCI C Construction Joint Venture
DSJV	Dragados Sisk Joint Venture
HSE	Health and Safety Executive
HSPI	Health and Safety Performance Index
IIF	Incident Injury Free (collaboration model)
LGV	Large Goods Vehicles
LU	London Underground
PPE	Personal Protective Equipment
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
ROGS	Railways and Other Guided Systems (Safety)
SCL	Sprayed Concrete Lining
SEQOHS	Safe Effective Quality Occupational Health Service
TFL	Transport for London
VMPS	Vehicle Movement Planning System





***‘Safety is our primary value,
nothing is so important that it
cannot be done safely’***

Steve Hails - Crossrail Health & Safety Director



MOVING LONDON FORWARD

