NORTH LONDON WASTE AUTHORITY

REPORT TITLE: NORTH LONDON HEAT AND POWER PROJECT – HEALTH, SAFETY AND WELLBEING REPORT

REPORT OF: PROGRAMME DIRECTOR

FOR SUBMISSION TO: AUTHORITY MEETING

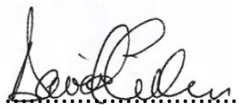
DATE: 24 SEPTEMBER 2020

SUMMARY OF REPORT:

This report provides the Authority Meeting with an update on progress of the North London Heat and Power Project (NLHPP) Health, Safety & Wellbeing status.

RECOMMENDATIONS:

The Authority is recommended to note the contents of this report.

SIGNED:  ..... **Programme Director**
DATE: 14 September 2020

1. PURPOSE OF THE PAPER

1.1. This paper has been produced to provide Members with an overview of health, safety and wellbeing performance of the North London Heat and Power Project (NLHPP), with an outline of developments catering for the increased future activities.

2. HEALTH, SAFETY & WELLBEING VISION

2.1. The North London Waste Authority (NLWA) Health, Safety & Wellbeing (HSW) vision for the project is defined as "Delivering an industry-leading project that achieves zero harm to everyone involved either working on it or living in the local community, by putting health, safety and wellbeing as the number one priority"

2.2. The NLWA influence a positive HSW culture through standard-setting as Client under the Construction, Design and Management (CDM) Regulations 2015 and for cultural engagement with all suppliers in order to drive high standards, values and behaviours in all matters of HSW. This is implemented through a number of initiatives that are detailed in this paper.

2.3. All contractors and consultants help develop, implement and maintain a positive HSW culture that remains dynamic, flexible and inclusive throughout the delivery of contracted work. Appointed parties work collaboratively with NLWA to establish and sustain a positive HSW culture and a safety-by-leadership approach that is worker-centric.

2.4. The goal for NLWA and the wider NLHPP is to provide a world class health, safety and wellbeing culture where safety does come first. This is upheld by the "Safety First" principle adopted by all parties involved with the programme.

3. HEALTH, SAFETY & WELLBEING PERFORMANCE

3.1. Since commencement of the programme there has been only one case of a loss time injury, in June 2019 which was of a minor nature and not reportable to the Health & Safety Executive.

3.2. Take into consideration the 167,000 hours worked on site, and this provides a whole time Accident Frequency Rate (AFR) of **0.06**. This is calculated by the number of accidents x 100,000 / person hours worked. This is significantly stronger than the construction average of 1.64, and other major projects such as Tideway which is currently running at 0.16, Crossrail at 0.11 and the Olympics 2012 project completed at 0.15. This is an encouraging performance so far. However, the project team will not be complacent in its continuing efforts to improve further as the construction workload increases.

3.3. There have unfortunately been two strikes of uncharted water mains on the project during excavation, classified as near misses with no injury to the workforce. Minor

disruption to waste management operations resulted from the strikes. Both incidents have been fully investigated. The frequent discovery of uncharted services is a challenge to safe working and intrusive and non-intrusive surveys have been undertaken to mitigate this hazard as far as possible. In addition, the introduction of an industry leading GIS (Geographical Information System) will support prevention of further incidents moving forward via a collaborative, live and open hazard record tool.

3.4. The constructive response to minor incidents is a reflection of the collaborative approaches the programme has taken. Specific forums have been engaging, ensuring liaisons between key parties and duty holders. Standards have been set and adhered to, ensuring compliance and continual improvement. HSW audits have been undertaken, identifying good practice and improvement actions on a weekly basis. Senior management Safety Tours have provided visible HSW leadership from NLWA.

3.5. COVID-19 has presented a challenge through most of the calendar year to date. After a considerable stand down period between March and May 2020, thorough review was undertaken and with a response plan in place, the project has managed to continue through the pandemic with best practice measures. Full mitigation measures have been implemented including: -

3.5.1. Coordination with the programme contractors to provide systems compliant with the Construction Leadership Council guidance for construction COVID measures, revisions 1 through 5.

3.5.2. Restricting of site personnel to those strictly necessary for the continuation of the programme.

3.5.3. EcoPark access and egress control measures supported by temperature checks and bus drop offs.

3.5.4. Communications and snapshots providing managers and operatives with clear and simple guidance on control measures.

3.5.5. Regular convene of COVID working group to review and update provisions through the pandemic.

3.6. HSW has formed a fundamental aspect of contract procurement. HSW input and assessments have been included through the procurement processes including tender wording, schedules, competence checks, scoring, interviews, and contractor management plan reviews.

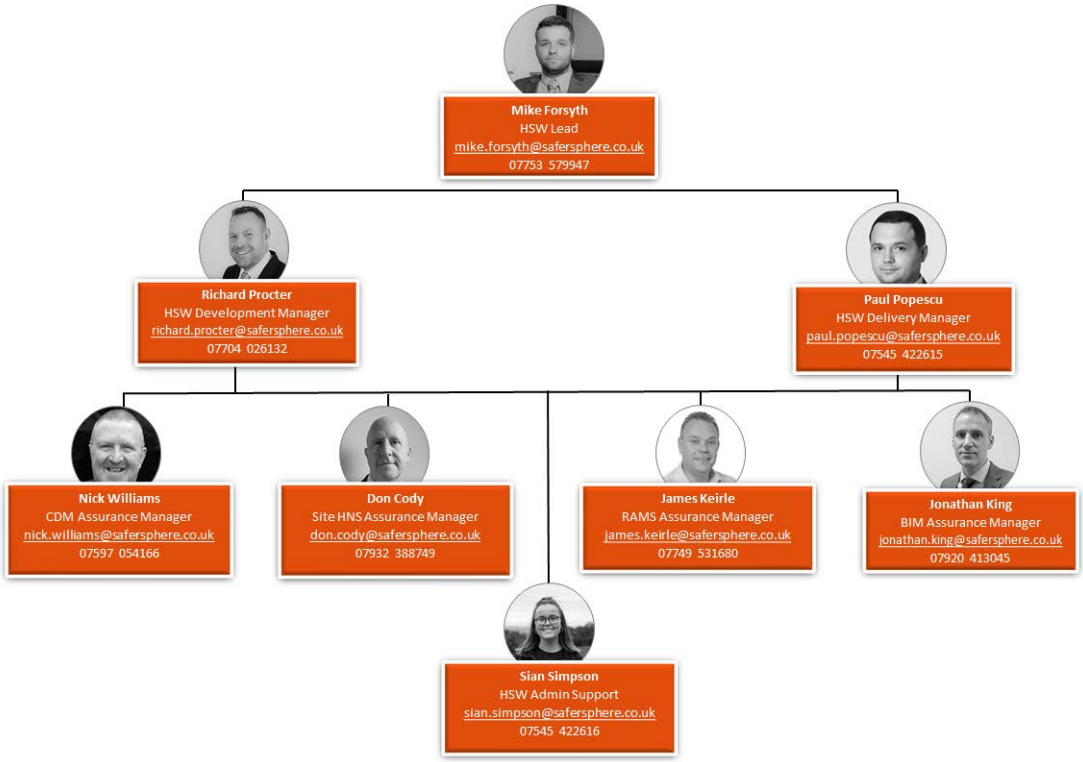
The project monthly reporting for HSW is provided in order that project leadership are fully abreast of performance and any issues, facilitating follow up actions accordingly.

The July 2020 monthly report is included for reference in Appendix A.

4. HEALTH, SAFETY & WELLBEING DEVELOPMENTS

Strengthening of HSW management

4.1. The NLHPP HSW resource structure was strengthened in June 2020, in preparation for the future increase in construction activities and associated challenges. The additional provision includes a new team of highly skilled and experienced professionals tasked with entrenching the highest standards of health, safety & welfare to the NLHPP. The HSW Lead reports directly to the Programme Director.



4.2. Through July and August, the additional HSW resource have been fully inducted to the project and have engaged with the project teams and key personnel for a smooth transition.

4.3. An impact has quickly been instigated by the fresh approach and the challenge laid before the wider project for HSW improvement. Some of the immediate successes and coming initiatives are highlighted in the following items.

Safety First

4.4. The “Safety First” principle and its promotion has been a key area of focus. This is considered the foundation from which the cultural health, safety and wellbeing model is based.

4.4.1. The principle has been extended to confirm its meaning for NLHPP and the workforce, included in the NLHPP HSW Coordination Manual (Appendix B) as follows: -

What to Expect from NLHPP Leadership!

- Health, safety & wellbeing is our number 1 priority with "Safety First".
- Aim is for zero incidents and to be injury free.
- Improvement to the working environment and mental health.
- Shared vision, we are **ALL** responsible for health, safety & wellbeing.

What Leadership expects from Everyone!

- If it is not safe, do not do it, and do not allow your colleagues to do it either.
- If you see something that is unsafe, speak up immediately and report it, there and then, no matter who – no matter what.
- If you are not sure of something (it does not look right, you do not understand the assignment or are unsure of how to do the job safely), speak up and ask.
- If it feels unsafe, it is unsafe! Challenge this and be open to change!
- "Safety First" is about….
- speaking up and expressing your concern when you see something that is unsafe.
- taking responsibility for your own safety and those that work with you and around you.
- an attitude of choosing to follow the safety rules and procedures (versus having to follow them).
- and ultimately it is about all workers going home healthy and safe every day.

4.4.2. Five "Golden" HSW rules have been established for the project using the NLHPP abbreviation, and again included in the NLHPP HSW Coordination Manual.

Never undertake a task if you think it isn't safe

Let us know immediately if you see a hazard

Help reduce risks by thinking about what you're doing and what could go wrong

Prevent issues by acting on lessons learned

Prepare for work by always having the right protective equipment

4.4.3. A “Safety First” induction has been developed. It has been prepared as a short message from NLHPP and the Programme Director, confirming the commitment to HSW and underlining what is expected from all involved in the pursuit of zero harm on the project. This induction will be delivered to all personnel involved with the project, professionals and operatives alike.

4.4.4. A programme of management safety tours for the project Senior Leadership Team (SLT) has been arranged for project construction sites. On a rota, each leader will visit each project on a monthly tour. The purpose of this is to enhance leadership visibility and commitment to HSW at site level, whilst providing opportunities for operative and leadership engagement on matters of health, safety and wellbeing. The first post COVID-19 lockdown visits have been arranged for 8 / 9 September 2020.

Standard Setting

4.5. To set the standards of health, safety and wellbeing in a coordinated fashion, a HSW Coordination Manual has been developed. The manual is enclosed in Appendix B.

4.6. The manual has been developed to supersede previous HSW plans, collating into a single point of reference. The manual is sectional in order that it directs requirements and standards to each workstream with specific HSW inputs.

4.7. The manual was approved by the senior leadership team on the 28 August and will now form part of future tenders and contracts, notably the Northern Area Clearance, EcoPark South and Energy Recovery Facility.

4.8. The manual outlines leading and lagging key performance indicators that are benchmarked against construction average performance alongside other large-scale UK projects. A leading indicator is a measure preceding or indicating a future event used to drive and measure activities carried out to prevent and control injury. Lagging indicators are the traditional safety metrics used to indicate progress toward compliance with safety rules. These are the bottom-line numbers that evaluate the overall effectiveness of safety at your facility. These Key Performance Indicators (KPI’s) now form part of the reporting mechanisms for NLHPP moving forward.

5. HEALTH, SAFETY AND WELLBEING NEXT STEPS

Action Plan & Collaboration

5.1. To ascertain the current HSW culture and maturity, a full gap analysis review of the incumbent processes, systems and protocols was undertaken. Alongside the outputs from the HSW Culture survey undertaken in March 2020, a HSW Action plan has been prepared in relation to HSW development and business as usual. This action plan has identified a programme of specific improvements and initiatives to be introduced over the short, medium and long term.

5.2. The HSW workstream is working in conjunction with the programme development areas of communications, digital and collaboration to ensure positive liaisons and joint improvement where the opportunity presents itself. Examples being engagement and communication at site level, where digital solutions are being pursued at the business case stage.

NLWA Training

5.3. The start of a programme of training commences with Institution of Occupational Safety and Health (IOSH) "Leading Safely" training in late September. This is aimed to support engagement with continual improvement, and what can be done to drive it further.

Reporting

5.4. Development of a HSW digital reporting tool has been commenced via the project document management system, Asite Field View, with expected completion for roll out by the end of September 2020. The reporting tool includes safety observations, incident management, contractor metrics, NLWA safety tours and a lesson learnt portal. This tool will come complete with dashboard reporting and direct export functionality to the PPM Data Hub. This work is being undertaken to provide a central digital position for engagement, reporting and feedback for HSW in a managed and engaging way.

Wellbeing 4 Life

5.5. NLHPP have developed a "Wellbeing 4 Life" programme to create and maintain a positive HSW culture that establishes continual improvement, becoming business as usual across the development and to ensure that everyone collaboratively meets the NLHPP "Safety First" principle. This HSW culture will strive for the highest performance in keeping all involved with and affected by the project, in the best possible wellbeing.

5.6. It is expected that all project consultants and contractors will participate in this programme from operatives up to and including those in management positions.

5.7. Mental Health will be a particular focus of the programme under these six core areas. Detrimental mental health impacts can be triggered by a wide range of work-related, domestic and social influences and stressors. Often the mental health issues can remain hidden and go unnoticed until harm is done, and there are many factors that prevent those suffering from addressing issues of mental health.

5.8. NLHPP therefore commit to and will be rolling out specific initiatives relating to 6 core areas of HSW wellbeing development.

5.8.1. **Good Health & Fit for Duty** – Our aim is for all personnel to go home safe and healthy each and every day. Welfare arrangements and wellbeing initiatives for the project will support this.

5.8.2. **Budgeting for Safety & Wellbeing** – Ensuring that budgets are available and suitably applied for the greatest benefit to safety & wellbeing

5.8.3. **Workforce Engagement, Reward & Recognition** – Ensuring involvement across all workers and management through engagement. Providing mechanisms for reward & recognition of those who significantly achieve.

5.8.4. **Safety & Wellbeing Training** – A "Wellbeing 4 Life" orientation will be developed and rolled out to the project through October 2020.

5.8.5. **Communication & Stakeholder Engagement** – NLHPP commit to engaging with and communicating back to all involved with the project. HSW forums and groups will be formed to engage at project level, including worker representatives. All safety observations will be actioned with feedback and improvements made.

5.8.6. **Incident Investigation & Planning** – All NLHPP incidents will be investigated, will feed into a lesson learnt module and will result in further planning for improvements.

Programme Contracts

5.9. As further contracts are let and or tendered, HSW will be a focal point of negotiations, reviews, assessments and liaisons. Upcoming commencements of the Sewer Diversion works and EcoPark South contracted to Barhale and Taylor Woodrow respectively, will be subject to pre-commencement HSW liaisons including: -

5.9.1. Project Notification to HSE (Health & Safety Executive)

5.9.2. Pre-commencement HSW liaison meeting and review.

5.9.3. Review and acceptance of Construction Phase Plans.

5.9.4. Design Risk Management workshops / reviews

5.9.5. Safety First Inductions

5.9.6. Site setup and welfare facilities audit.

5.9.7. Weekly independent HSW site audits.

5.10. Review and finalisation of the Energy Recover Facility (ERF) contract inclusions for HSW is ongoing in conjunction with the IChemE Red Book Schedule 4 proposals, the contract provisions relating to Health, Safety & Wellbeing.

6. EQUALITIES IMPLICATIONS

6.1. There are no direct equality implications of this report. The approach to health, safety and wellbeing is an inclusive initiative associated with the protection of all the workforce and stakeholders to the project.

7. COMMENTS OF THE LEGAL ADVISER

7.1. The Legal Adviser has been consulted in the preparation of this report and comments have been incorporated.

8. COMMENTS OF THE FINANCIAL ADVISER

8.1. The Financial Adviser has been consulted in the preparation of this report and comments have been incorporated.

Contact officer:

Mike Forsyth
Unit 1b Berol House
25 Ashley Road
London N17 9LJ
07753 579 947
mike.forsyth@safersphere.co.uk

APPENDIX A HSW MONTHLY PROGRAMME STATUS HSW JULY 2020

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – A: Core Manual

VISION
To create a waste management facility
in which local communities take pride;
which demonstrates value;
and is a model for
public sector project delivery.

Document Details	
Document Number	NP-ARP-XXXX-XXX-HS-HS-090004
Confidentiality Level	Public once finalised (everyone can see the information)
Revision No:	P02

Assurance Record			
	Author	**Check & Review**	**Approval for Use**
Name	Mike Forsyth	Douglas Chisholm	David Cullen
Role	HSW Director	Delivery Lead	Programme Director
Signature			
Date	26/08/2020	28 August 2020	28/08/2020

Revision Record		
Revision No.	**Date**	**Description of Revision**
P01	26/08/2020	First Issue for approval
P02	28/08/2020	Approved as Shared
P03	03/09/2020	Minor amendments to Section 1.2 and 41 inserted.

Engagement Confirmation	
Function	**For Comment**
Programme Director	Yes
HSW	Yes
LEL	Yes
Technical Advisor	Yes
Technical Authority	Yes
Programme Office	Yes
Project Delivery	Yes
Finance	Yes
Legal & Governance	Yes
Commercial	Yes

Contents

Acronyms and Abbreviations

Abbreviation	Definition
AFR	Accident Frequency Rate
ALARA	As Low as Reasonably Achievable
BIM	Building Information Model
CDM	Construction, Design & Management
COSHH	Control of Substances Hazardous to Health
CMP	Construction Management Plan
CPP	Construction Phase Plan
DRM	Design Risk Management
DO	Dangerous Occurrence
HARM	Hazard and Risk Management
HASAWA	Health and Safety at Work Act
HSW	Health, Safety & Wellbeing
IOSH	Institute of Occupational Safety & Health
IP	Injured Person
KPI	Key Performance Indicator
LEL	LondonEnergy Limited
LOPA	Layer of Protection Analysis
LTI	Loss Time Incident
MPSR	Monthly Programme Status Review
NLHPP	North London Heat & Power Project
NLWA	North London Waste Authority
NM	Near Miss
PB	Positive Behaviour
PM	Project Manager
PPE	Personal Protective Equipment
QR	Quick Response
RAG	Red, Amber, Green
RAMS	Risk Assessments & Method Statements
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
SFAIRP	So Far as Is Reasonably Practicable
SHEQ	Safety, Health, Environmental, Quality
SLT	Senior Leadership Team
SO	Safety Observation
SSIP	Safety Scheme in Procurement
TB	Threatening Behaviour
UC	Undesired Condition
UXB	Unexploded Bombs

1 Introduction

1.1 North London Heat & Power Project Setting

North London Waste Authority manages waste transportation and disposal on behalf of seven London boroughs in the north London area, serving over two million people. They also manage the recycling collected by six of the seven boroughs.

The North London Heat and Power Project is North London Waste Authority's plan for a new energy recovery facility that will replace the existing energy from waste plant and enable the recovery of energy in the form of heat and power from north London's non-recyclable waste.

Over the next ten years we are building:

- A Resource Recovery Facility and Public Reuse and Recycling Centre, which represent major investments in new recycling facilities to help north London achieve 50% household recycling
- An Energy Recovery Facility to divert waste from landfill and generate low carbon energy from waste, in the form of heat and power.
- EcoPark House on River Lee Navigation including a visitor and education centre, where residents can learn more about the circular economy and how to reduce the carbon impact of their waste

Other documents and contract information provide detailed setting for the NLHPP with overview available on the project website http://www.northlondonheatandpower.london/

Organisation charts for the wider project and individual delivery teams are available on Asite.

1.2 Purpose & Use of the HSW Coordination Manual

In order to maintain the highest possible and industry leading health, Safety & Wellbeing (HSW) standards on the North London Health & Power Project (NLHPP), to comply with the Health & Safety at Work etc Act 1974 (HASAWA) and Regulations made under the HASAWA, including the Management of Health & Safety at Work Regulations 1999 (MHSWR), and specifically the Construction (Design & Management) Regulations 2015 (CDM 2015), it is imperative that all project partners and suppliers are committed to, fully comply with this HSW Coordination Manual ("HSW Manual") and commit to full participation in delivering its requirements.

This HSW Manual sets out the Client's aspirations and expectations for health, safety and wellbeing (HSW). In doing so, it seeks to encourage the entire project team to deliver the design and construction works by applying everyone involved with the project to industry leading HSW standards with a positive HSW culture that is open, inclusive and actively monitored to the delivery of the design and construction works.

This HSW Manual shall be included as a numbered document into all main contracts no matter what form of contract is being used i.e.: NEC, IChemE, etc. NLHPP must ensure that this HSW Manual and/or sections of it (as relevant) forms part of all design or construction contracts that are procured.

The standards contained in this HSW Manual form the mandatory minimum contractual health, safety and wellbeing requirements that NLWA wishes to impose as the CDM client and employer, however these requirements can be added to if necessary. Under no

circumstances must any of these minimum standards be altered or removed without the written authority of the NLHPP programme director.

In the event of any conflict between the contents of this document and the content of the documents that set out the Client's requirements for a particular part of the NLHPP or the contract clauses being proposed, the contents of this document will take precedence. This document does not however set out the Health & Safety requirements imposed by statute which will automatically apply and will take precedence over all others in the event of any conflict.

1.3 HSW Coordination Manual Review

The NLHPP programme director and NLHPP HSW team will facilitate a review and revise this HSW Manual as required for continuous improvement, and no less frequently than twice per calendar year. Some typical reasons to carry out further reviews and updates may include change in legislation, significant change to the scope of works required to deliver the NLHPP, appointment of new Principal Contractor(s) or Principal Designer(s), corrective actions from internal audit, incidents, near misses and lesson learnt.

Any revision of the HSW Manual will be communicated to all parties involved in the delivery of the NLHPP via the Asite document control system.

1.4 Sections of the HSW Coordination Manual

The HSW Manual is split into sections to the identify standards, requirements & protocols in relation to Health, Safety & Wellbeing that are applicable to each type of NLHPP delivery partner independently. The Core Manual applies to all partners.

Section A: Core Manual

Section B: NLHPP Senior Leadership Team

Section C: LondonEnergy Limited

Section D: Project Managers & Supervisors

Section E: Health, Safety & Wellbeing Team

Section F: Principal Designers & Designers

Section G: Principal Contractors & Contractors

2 Safety First for NLHPP

2.1 Safety First Principle

The NLHPP Programme is an ambitious and challenging scheme, and a primary measure of its success is maintaining the health, safety and wellbeing of everyone involved, at every stage. The vision for the scheme is:

"Delivering an industry-leading project that achieves zero harm to everyone involved either working on it or living in the local community, by putting health, safety and wellbeing as the number one priority"

2.1.1 What to Expect from NLHPP Leadership!

- Health, safety & wellbeing is our number 1 priority with "Safety First".
- Aim is for zero incidents and to be injury free.
- Improvement to the working environment and mental health.
- Shared vision, we are **ALL** responsible for health, safety & wellbeing.

2.1.2 What Leadership expects from Everyone!

- If it is not safe, do not do it, and do not allow your colleagues to do it either.
- If you see something that is unsafe, speak up immediately and report it, there and then, no matter who – no matter what.
- If you are not sure of something (it does not look right, you do not understand the assignment or are unsure of how to do the job safely), speak up and ask.
- If it feels unsafe, it is unsafe! Challenge this and be open to change!

"Safety First" is about….

- speaking up and expressing your concern when you see something that is unsafe.
- taking responsibility for your own safety and those that work with you and around you.
- an attitude of choosing to follow the safety rules and procedures (versus having to follow them).
- and ultimately it is about all workers going home healthy and safe every day.

2.1.3 NLHPP HSW 'Golden Rules'

Help yourself and others keep safe by following these simple steps (our five "Golden Rules"):

- **N**ever undertake a task if you think it isn't safe
- **L**et us know immediately if you see a hazard
- **H**elp reduce risks by thinking about what you're doing and what could go wrong
- **P**revent issues by acting on lessons learned
- **P**repare for work by always having the right protective equipment

3 NLHPP Safety Inductions, Access & CMP

3.1 Safety First Induction

NLHPP have developed a short introductory HSW “Safety First” site induction which sets out the CDM client’s, North London Waste Authority, commitment to health, safety and wellbeing. This Client “Safety First” induction must be incorporated into all principal contractor health & safety inductions.

Suppliers must also ensure that everyone working for them, including their contractors, consultants, and visitors have completed the NLHPP induction

A copy of the PowerPoint Induction for dissemination shall be issued to all Principal Contractor(s) upon appointment. Requests for the induction file shall be addressed to the HSW Administrator.

3.2 LondonEnergy Limited (LEL) Induction & Access

NLHPP takes place within the EcoPark that is managed by LEL, therefore all site operatives, construction design and management staff, and site visitors to the EcoPark are required to complete the LEL site induction. This involves watching the relevant LEL video prior to induction, completing face-to-face induction with written assessment based on induction video content. Access is also on an approval basis with a set protocol.

Please refer to details of the “EcoPark Access & Induction Protocol” within Appendix A.

3.3 Site Wide Construction Management Plan

Reference should be made to the Side Wide Construction Management provided in the tender and or contract documentation NP-NLW-XXXX-XXX-PL-PM-090001

When working on the NLHPP project, there will likely be occasions where operatives, management and visitors need to access areas outside of the NLHPP construction sites. Examples would be pedestrian and vehicular access through part of the LEL demise, access to LEL offices, surveys, inspections, visits, etc.

On such occasions all NLHPP workers and visitors must take cognisance of the LEL Contractor & Visitor rules located in the Side Wide Construction Management Plan.

Where operatives, management and visitors are within a CDM project site boundary, the Principal Contractor for that site shall determine the applicable contractor & visitor rules.

4 Wellbeing 4 Life Programme

NLHPP have developed a “Wellbeing 4 Life” programme to create and maintain a positive HSW culture that establishes continual improvement, becoming business as usual across the development and to ensure that everyone collaboratively meets the NLHPP “Safety First” principle. This HSW culture will strive for the highest performance in keeping all involved with and affected by the project, in the best possible wellbeing.

It is expected that all project partners will participate in this programme from operatives up to and including those in management positions.

NLHPP therefore commit to and will be rolling out initiatives relating to 6 core areas of wellbeing development.

Good Health & Fit for Duty – Our aim is for all personnel to go home safe and healthy each and every day. Welfare arrangements and wellbeing initiatives for the project will support this.

Mental Health will be a particular focus of the programme under these 6 core areas. Detrimental mental health impacts can be triggered by a wide range of work-related, domestic and social influences and stressors. Often the mental health issues can remain hidden and go unnoticed until harm is done, and there are many factors that prevent those suffering from addressing issues of mental health.

Mental health first-aiders in the workplace can be a focal point to discreetly and confidentially support those who seek help on mental concerns guiding them to the right avenues of counsel and advice.

The Contractor in conjunction with their Occupational Health Specialist should develop a strategy to raise the awareness of mental health challenges, issues and causes. Mental health should be an integral part of the health programme implemented on the project, with appropriate educational material, resources and access to professional counselling support. The Contractor should ensure that all mental health issues raised are dealt with in a confidential and just manner.

Budgeting for Safety & Wellbeing – Ensuring that budgets are available and suitably applied for the greatest benefit to safety & wellbeing

Workforce Engagement, Reward & Recognition – Ensuring involvement across all workers and management through engagement. Providing mechanisms for reward & recognition of those who significantly achieve.

Safety & Wellbeing Training – A ½ day "Wellbeing 4 Life" orientation will be rolled out to all existing personnel involved with the scheme through October 2020, and to all new personnel inducted onto the project thereafter. Additional training will be rolled out in areas such as mental health, occupational health and safety critical hazards.

Communication & Stakeholder Engagement – NLHPP commit to engaging with and communicating back to all involved with the project. HSW forums and groups will be formed to engage at project level, including worker representatives. All safety observations will be actioned with feedback and improvements made.

Incident Investigation & Planning – All NLHPP incidents will be investigated, will feed into a lessons learnt module and will result in further planning for improvements.

The "Wellbeing 4 Life" programme will only succeed if everyone plays their part. NLWA expects full cooperation from all partners in its pursuit of a leading HSW culture.

5 NLHPP Safety Observations, Incident Reporting, KPIs and Forums

5.1 Safety Observations

Safety Observations ("SO's") are encouraged from all persons working on the NLHPP project and form part of the project leading KPI's. They will support lessons learnt feedback and assist the project in providing the highest standards of continual improvement.

The following link will direct to the "Safety Observation" submission form.

NLHPP Safety Observation Form

QR codes will be displayed around the site in order that everyone from operatives up to and including management will be able to submit details of SOs (to draw attention to issues) and also details of positive behaviours ("PB's") via mobile phones and tablets for consideration and action.

NLHPP Safety Observation QR Code

All Principal Contractors shall ensure that the above QR code is displayed within the site welfare facilities at suitable locations, on hoardings, notice boards and other suitable / visible positions.

5.2 Incident Reporting

NLHPP shall oversee and report on incidents across all sites and the wider development. Each Principal Contractor must submit an incident report in line with the below incident categorisations.

Classification	Definition
Serious Incident (SI)	Death, Major Injury (RIDDOR), Fire, Significant (EA Reportable) release to environment
Lost Time Injury (LTI)	IP is removed from site for treatment or recovery.
Dangerous Occurrence (DO)	As defined in RIDDOR
Near Miss / Close Call (NM)	An event not causing harm, but has the potential to cause injury or ill health
Undesired Circumstance (UC)	A set of conditions or circumstances that have the potential to cause injury of ill health, including poor procedures
Threatening Behaviour (TB)	Abuse, physical threats or actions short of violence
First Aid Injury (FA)	Minor injury treated on the site with basic first aid
External Event with Impact (EXT)	Something outside project control that causes us to take action e.g. nearby fire, flood, site protest, UXB

All incidents must be reported via the NLHPP incident reporting system within 5 working days in the incident taking place. A link for reporting is provided below.

NLHPP Incident Report Form

For SI, LTI, DO, & NM classifications, the Principal Contractor will be required to upload a full incident investigation report within the form.

It is acknowledged that the Principal Contractors will have their own reporting systems, however this reporting mechanism must be adhered to in addition to those systems.

5.3 Lesson Learnt Outputs

A lesson learnt portal is available in order that all partners can access these outputs from the safety observations & incident reports. The lesson learnt portal will be used by NLHPP to instigate continual improvements, whilst also acting as a central point of reference for all project partners. The portal can be access by the following link.

Lessons Learnt Portal

5.4 NLHPP HSW Key Performance Indicators (KPIs)

NLHPP shall report each month against HSW KPI's set for the project. These HSW KPIs will help NLHPP identify if it is on the right track for success—and if it is not, where to focus attention on improving. The aim is to bring about improvement and identify areas where KPI goals are not being met.

The measured KPI's for health, safety and wellbeing on NLHPP are identified below.

Key Performance Indicator (KPI)	Monthly Target
Leading Indicators	
Occupational Health Engagements (Surveillance, Checks, Mental Health Training, Visits, Surgeries, Promotions, etc)	>5
Safe Start or Point of Work Briefings (Each Site)	>5
% of inducted personnel undertaken "Wellbeing 4 Life" Orientation	>95%
HSW RAMS Approval Rate – Pass 1st Time	>75%
Lessons Learnt additions to portal	>5
Safety Observation submitted (SO & PB)	>30
SLT Safety Tour Visits (No of Persons and Feedback Forms)	5
Health & Safety Working Group Meetings	1
NLHPP Audits of Construction Sites (per live site)	4
Design Risk Management – Red items in live RAG List	<20
Lagging Indicators	

Key Performance Indicator (KPI)	Monthly Target
Serious Incidents (SI)	0
Lost Time Injury (LTI)	0
Dangerous Occurrence (DO)	0
Near Miss / Close Call (NM)	<2
Undesired Circumstance (UC)	<10
Threatening Behaviour (TB)	0
First Aid Injury (FA)	<1
External Event with Impact (EXT)	<1
Statutory Notices from Health & Safety Executive	0
12 Month Rolling Average Accident Frequency Rate (AFR) below Construction Average & other Projects	Construction <1.64 Tideway <0.16 Olympics <0.15 Crossrail <0.11

The measurement against the KPI's will be reported monthly, colour coded as identified below.

Target not Achieved	Target Achieved	Target Exceeded

As part of the aspiration to continually improve, where targets are consistently met, new targets will be set to raise the bar.

Monitoring against these KPI's will require some monthly submission of information from project partners. Where applicable this is identified in the individual sections of this manual.

6 Health & Safety Working Group

A "Health & Safety Working Group" will convene monthly against the terms of reference provided in Appendix B.

The purpose of this forum is to identify HSW improvements, actions and deliverables, reporting back to the SLT on any decisions required as part of the process.

The SLT are not expected to attend this forum, however their input is welcomed. All NLHPP partners are expected to be represented as set out in the terms of reference.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – B: NLHPP Senior Leadership Team

7 Setting the Standard

The most effective way for a client to influence a positive HSW culture is through standard setting. It is an explicit requirement on all members of the SLT to uphold a positive health, safety & wellbeing culture, throughout all project phases. Each SLT member has a personal responsibility to uphold high standards, values and behaviours in all matters of HSW.

Everyone, regardless of seniority or project position is expected to: -

- 'walk the talk' in promoting a positive safety culture.
- 'not walk by' when observed standards and behaviours fall short, and
- be fully familiar with and promote the HSW vision.

It is an expectation that all contractors and partners help develop, implement and maintain a positive HSW culture that remains dynamic, flexible and inclusive throughout the delivery of contracted work. It is also a requirement placed on the appointed partners to work collaboratively with the SLT to establish and sustain a positive HSW culture and safety by leadership approach that is worker centric.

8 SLT HSW Support & Mentoring

Every member of the NLHPP SLT is advised to complete the "IOSH Leading Safely" course aimed at understanding behavioural traits and characteristics, attitudes and values, personality types and sub-group identities, and approaches to engagement and dealing with resistance. Arrangements will be made by the HSW team to facilitate this upskilling.

The NLHPP HSW team shall support and mentor the SLT in all aspects of health, safety and wellbeing. This will consist of focused training where identified (e.g. CDM 2015 "Client Training") alongside the provision of HSW surgeries where the HSW Delivery Manager shall provide open support availability via Microsoft "teams" and or at Berol House.

9 SLT Safety Tours

9.1 Purpose of Safety Tours

NLHPP already has formal HSW visits from specialist team members, the SLT visits are not intended to replicate these to any significant degree.

The intent is to retain a focus on HSW, rather than combine these visits with other topics unless relevant to health and safety. However, whilst the NLHPP project should maintain a good level of scrutiny over HSW activity, this must be balanced with allowing the contractors to progress without overloading them. Receiving a visit is a time and resource commitment for the contractor.

Regular HSW focussed visits by the SLT will establish with contractors that the messages delivered on HSW come from the top. Culturally this is important in eliminating any doubt about the seriousness with which NLHPP takes the subject.

In summary the main purposes of the SLT Safety tours are outlined as follows:

1) Demonstrate commitment at the highest levels of the project to our HSW Vision.
2) Allow senior management to engage with the work and workers on the sites.
3) Assist with testing our compliance with client duties under CDM 2015.

9.2 Safety Tour Programme

The programme is a formal requirement and will be tested for completion monthly, contributing to HSW KPI's. Each visit should be planned and executed, with outputs, in accordance with this procedure, supported by the NLHPP HSW team.

9.2.1 Safety Tour Rota

Each visit will be planned in accordance with the rota below.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
NLHPP	DCu	DCu	DCu	DCu	DCu	DCu	DCu	DCu	DCu	DCu	DCu	DCu
SLT	DCh	DCh	DCh	DCh	DCh	DCh	DCh	DCh	DCh	DCh	DCh	DCh
	SB	PG	UT	SB	PG	UT	SB	PG	UT	SB	PG	UT
	RS	EL	MC	RS	EL	MC	RS	EL	MC	RS	EL	MC
LEL	MB	JK	MB	JK	MB	JK	MB	JK	MB	JK	MB	JK
HSW	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP

DCu – David Cullen, DCh – Douglas Chisholm, UT – Ursula Taylor, RS – Robert Sedgman, SB – Scott Borthwick, EL – Euston Ling, PG – Paul Gulliford, MC – Martin Capstick, MB – Mark Beattie, JK – Jim Kendall, PP – Paul Popescu

HSW administration support will make all arrangements for the visits, alignment of dates and timing.

9.2.2 Timings

The SLT safety visits would be planned over half a day and would include two to three of the live NLHPP projects, or however many the time permits. These will be arranged on a rotating basis to ensure engagement across all projects in the wider NLHPP development.

With reference to the PM, and the programme, a sensible approach to timing should be achievable in which visits will coincide with meaningful activity on site and not interfere unduly with site operations. For example, if the contractor is undertaking an external audit it would be prudent to stagger the SLT visit to avoid this.

9.2.3 Conduct of visit

Good care should be taken to ensure the SLT member acts as an ambassador and an exemplar for the project. Practicalities include:

- Correct PPE – hard had, light eye protection (safety glasses or over glasses for those who wear spectacles), high visibility jacket/vest, high visibility trousers, safety boots, and gloves. Ear protection if it needed, and contractors will supply disposable earplugs if required. The SLT should check in good time with the PM or HSW team member so that current site expectations are clearly understood.
- Induction – the Principal Contractor (PC) requires any visitor to undertake a formal induction to its site. Once completed, this is not required again, but should be allowed for. Remember this is a PC function and the HSW Lead will arrange it through the PC.
- A record of the visit is to be completed by each attendee, which also acts as a preparation aide memoire. The form to use for this can be viewed & completed by following the link below.

NLHPP SLT Safety Tour Form

The SLT may wish to consider the following topics as part of their tours and feedback following the visits.

- Induction standard
- Perception of HSW by operatives \, supervisors and managers engagement
- Protection of the public
- Traffic & vehicle management
- Safe behaviour
- Welfare facilities are in good order
- Housekeeping
- Contractors HSW Initiatives
- Other

9.2.4 Outputs

Outputs from SLT safety visit will likely generate follow up actions for others. It is not envisaged that the SLT need to be involved directly in these follow ups, which will be captured by the NLHPP HSW team.

10 CDM Client - NLWA

As CDM client for the development and projects within, the NLWA attract the following main duties under CDM 2015.

1) Make suitable arrangements for managing a project including:
    a. making sure duty holders are appointed and competent for those activities.
    b. ensuring sufficient time and resources are allocated.
2) Make sure:
    a. relevant pre-construction information is prepared and provided to other duty holders.
    b. that the principal designer and principal contractor carry out their duties compliantly.
    c. a construction phase plan and welfare facilities are provided before construction works commence.

The NLHPP HSW team in conjunction with the PMs & Principal Designer manage and monitor compliance with these duties on behalf of NLWA. Please refer to Section E Health, Safety & Wellbeing Team for more details of the HSW team roles and responsibilities in this regard.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – C: LondonEnergy Limited

11 Liaison & Cooperation

Under the Management of Health & Safety at Work Regulations 1999 approved code of practice, LondonEnergy Limited and the NLHPP programme have duties to cooperate and coordinate their activities in relation to their operations. This includes sharing of hazard and risk information, together with the control measures and other precautions adopted.

With the above in mind it is imperative that HSW liaisons between NLHPP and LEL are maintained throughout the contract, with the project recognising LEL input and cooperation.

This coordination is already in place and developed as part of the project delivery model, inclusive of LEL licenses for site works, LEL induction, contractor & visitor rules identified in 3.2 & 3.3 of this document, along with the LEL "Property License Process".

The NLHPP HSW team also hold fortnightly liaison meetings with the LEL HSQE team.

12 Existing Information

LEL are the custodians of existing recorded information for the EcoPark and as such inform the NLWA client duty regarding provision of pre-construction information.

LEL have made all recorded information to date available to the NLHPP via the Asite document control system. As the NLHPP delivery programme progresses, further information may be requested along with knowledge support from key LEL individuals. Such information may include, but not be limited to, the following

- Record drawings.
- Operation and maintenance ("O&M") manuals / health and safety ("H&S") files.
- Buried services information.
- Asbestos management records.
- Plant / equipment data.
- Commissioning / decommissioning data.

13 Traffic & Logistics Management

Operational traffic and logistics are a major priority for LEL to ensure the continued operability of its facilities for the duration of the NLHPP project. However, the NLHPP construction logistics must also work within the current identified restrictions.

Forums are in place to facilitate liaison between NLHPP and LEL on this important operational aspect for the EcoPark. These forums form part of the wider NHLPP project coordination, which allows for the development between NLHPP and LEL of logistics phasing and protocols.

14 Design Input

The Design Risk Management ("DRM") process is outlined in Item 33. LEL can play a vital part in the process of risk mitigation by design in their role as the current energy from waste ("EfW") delivery team. Their input into the process design in relation to usability and maintainability will be invaluable in ensuring that the best possible facility is designed with HSW in mind. To this end getting LEL involved in these DRM processes and in cooperating with the principal designer is encouraged.

15 Incident Notification & Investigations

NLHPP incident management and investigations will be managed as set out in Item 5.2. As part of this workflow process, the LEL HSQE team shall receive notification of reported incidents with a request that they provide any comments and details of any actions they require to be taken. LEL can then conduct their own investigations where they deem it appropriate, working in conjunction with the NLHPP HSW team.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – D: Client Project Managers & Supervisors

16 Contract HSW Inclusions

Please refer to item 1.2 of this document for the contractual standing and inclusion requirements for this document.

It is imperative for the success of the HSW culture and programme for NLHPP that the requirements of this manual are imposed contractually on all parties. This is to ensure that suitable resource and allowances are made by all parties to deliver the client's HSW vision.

17 CDM Duty Holder Competencies

NLWA have a duty to ensure the competency of all those they appoint as duty holders under CDM2015. As such the procurement of any such appointments must ensure that the standards of PAS 91:2017 are applied in relation to health and safety specifically, PAS 91: 2017 section C4.

It is important to note that where a potential appointee has Safety Scheme in Procurement ("SSIP") 3rd party accreditation or ISO-18001/45001 (occupational health and safety) accreditation, the additional requirements for evidence of competence are significantly reduced. Such accreditation should therefore be encouraged to reduce the bureaucratic burden of health and safety on the procurement process.

The HSW team shall be consulted to undertake PAS 91:2017-C4 assessments on behalf of NLHPP as part of the tender and appointment processes.

18 Tender Reviews / Interviews

In addition to the previous section, the HSW team shall support the tender review and interview processes for appointment of the project Principal Contractors.

The HSW Delivery Manager will review the tender submissions in relation to HSW and score appropriately in accordance with the processes set out in the procurement documentation developed by others. The HSW Manager shall also attend tender interviews with a specifically developed set of questions where requested / invited to do so by the procurement team.

19 Change Management

Change management processes are already developed and embedded within NLHPP project and incorporate HSW consultation as part of this process.

The HSW Delivery Manager shall be available where requested to advise, from a health and safety perspective, on any potential HSW impacts arising from proposed changes alongside the Principal Designer for the individual project.

20 Construction Phase Plan & RAMS

CPP

The NLHPP PM / supervisor for any particular NLHPP project must ensure that the Principal Contractor's initial Construction Phase Plan ("CPP") is issued to the HSW CDM Assurance Manager not less than 10 working days prior to commencement of planned works on site. This allows time for review and comment processes to be carried out prior to acceptance that the CPP is suitable and sufficient for works to commence in accordance with CDM2015.

Under no circumstances should works be permitted to commence, inclusive of enabling works, site setup or any other construction activities, until the HSW CDM Assurance Manager has communicated acceptance of the CPP.

RAMS

Risk assessment and method statement ("RAMS") review processes are already developed and embedded within NLHPP as part of the LEL "Property License Process" set out in Appendix C

The HSW RAMS Assurance Manager is responsible for supporting this process and for the checking, reviewing, commenting on and acceptance of RAMS that are submitted for activities that are identified as "High Risk". Packages of work identified as "High Risk" include, but are not limited to, the following.

- Temporary works activities.
- Earthworks:
    - Deep trenches, excavations / breaking ground, temporary slopes and stockpiles.
    - Trenchless construction, including headings, thrust bores, mini tunnels.
- Structural:
    - formwork, falsework, propping, façade retention, needling, shoring, temporary bridges.
    - crane erection and major lifting activities.
- Demolition of an element of any structure, temporary or otherwise.
- Removal or disturbance of asbestos (inclusive of surveying).
- Piling operations.
- High risk work at height (e.g. rope access, leading edge works).
- Confined space activities.
- Underground / above ground utilities / services.
- Tasks involving hot work.
- Work near pressurised gas distribution mains or piping (pressurised systems), chemical, fuel lines.
- Work on or near energised electrical installations or services.
- Use of abnormal high risk COSHH / hazardous substances.
- Working on or over water.
- Working in the vicinity of live operations (LEL traffic / plant etc.); and
- Works outside of the EcoPark requiring increased security measures.

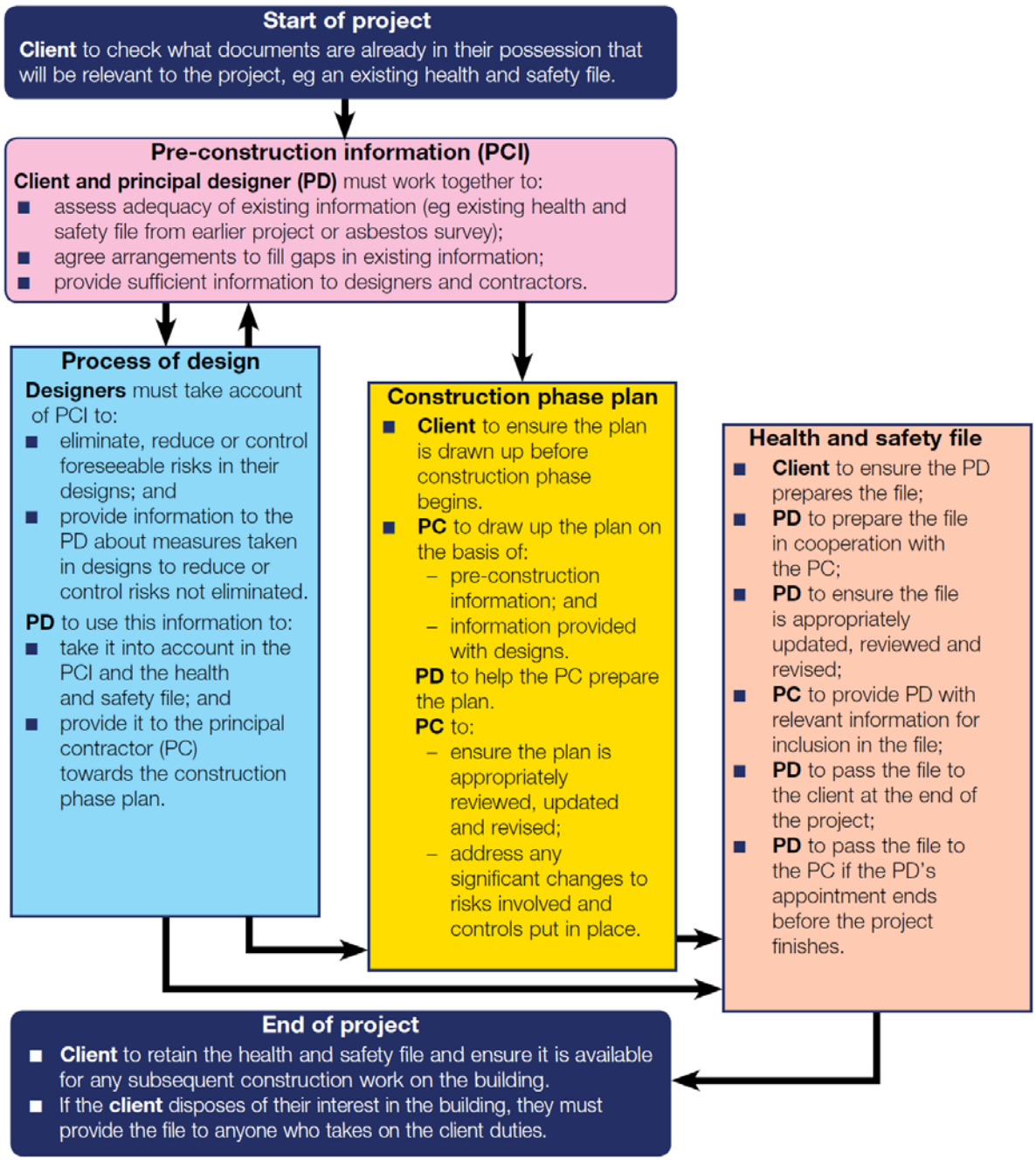
21 HSW Site Audit Visits

The HSW Site H&S Assurance Manager shall undertake weekly audit visits to each NLHPP project / site. The NLHPP PM / supervisors have an open invitation to attend and participate in these audits. In any event they will be issued with a copy of the relevant audit report(s) on completion.

22 Client CDM Advisor, PD & PC Cooperation

The PM / supervisor, whilst not holding specific duties under CDM2015, are effectively a limb of the CDM client because of their project role. With this in mind, it is essential that these parties facilitate the coordination and cooperation necessary for compliance with and the implementation of the best practice principles outlined by this HSW Manual, considering the

required CDM ethos in this regard. In doing so, cooperation with the HSW CDM Assurance Manager, Principal Designer and Principal Contractor should facilitate the following process.



North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

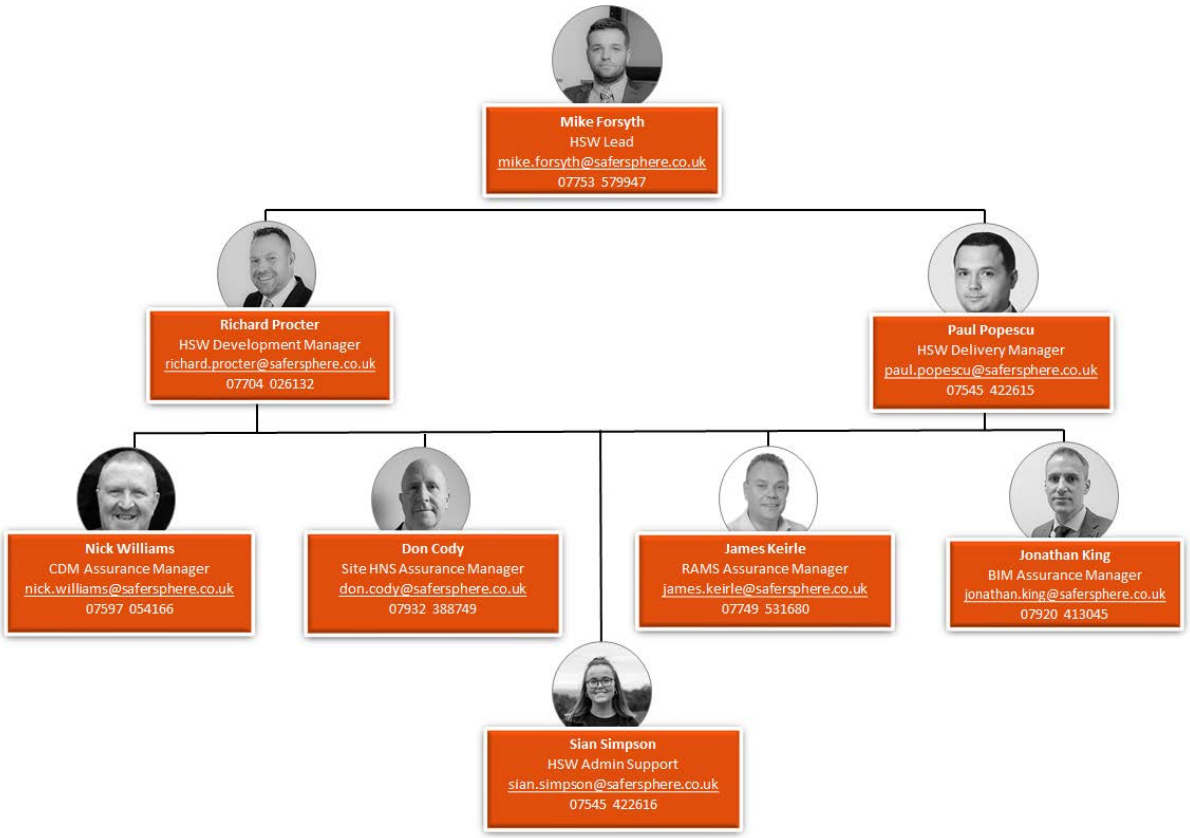
NLHPP HSW Manual – E: Health, Safety & Wellbeing Team

23 NLHPP HSW Team

The purpose of the NLHPP Health, Safety and Wellbeing ("HSW") team is to lead the establishment and maintenance of a world class health, safety, and wellbeing programme on the NLHPP project.

The NLWA as client for the NLHPP is establishing a HSW programme to put safety first and achieve its vision as a model for public sector project delivery. The health, safety and wellbeing of everyone working on the NLHPP is a management and leadership responsibility of the NLHPP leadership team which is led by the programme director. The HSW team are a support to the NLHPP leadership team and its guiding mind in health, safety, and wellbeing.

The team is accountable to the NLHPP programme director – David Cullen.



24 NLHPP HSW Roles & Responsibilities

24.1 Health, Safety & Wellbeing Lead

Mike Forsyth, mike.forsyth@safersphere.co.uk , Tel: 07753 579947

- Direct and oversee the HSW team in delivery of the project HSW aims and objectives in conjunction with all relevant contributors.
- Report and liaise with the SLT and relevant parties on continuing HSW resources to fulfil the needs of the development.
- Lead the HSW MPSR and committee reporting submissions to the project.

24.2 Health, Safety & Wellbeing Development Manager

Richard Procter, richard.procter@safersphere.co.uk , Tel: 07704 026132

- Promoting a health and safety culture ("Safety First") that engages all project participants and delivers continuous improvements in HSW management. Work in conjunction with all partners to mature the current NLHPP culture in line with the HSW culture survey output.
- Design and develop the initial programme HSW management systems to drive compliance with all aspects of the HSW strategy.
- Drive an improved HSW observation, incident reporting, audit / inspection and reporting system to replace the current manual system.
- Contribute to the MPSR report prepared by HSW Lead prior to submission.
- Monitor the HSW team development and report to HSW Lead on performance and issues.

24.3 Health, Safety & Wellbeing Delivery Manager

Paul Popescu, paul.popescu@safersphere.co.uk , Tel: 07545 422615

- Support the NLHPP senior leadership team (SLT), promote a health and safety culture that engages all project participants and delivers continuous improvements in HSW management.
- Deliver the monthly programme status review ("MPSR") report summary and participate in the monthly meeting.
- Support the NLHPP SLT as applicable in the review and decision-making process alongside the HSW Development Manager.
- Establishing and maintain the NLHPP HSW programme and management system that includes a centralised reporting function so that all observations and incidents are communicated and actioned effectively.
- Set and monitor results against leading and lagging KPI's.
- Provide specialist advice to the programme director and leadership team on health, safety and site wellbeing matters and legislation.
- Support the development, implementation and adoption of HSW objectives and targets including the "Keil Maturity Level 5" and ISO 45001.
- Promote HSW through bulletins / alerts best practice and lessons to be learnt.
- Establishing and maintaining systems to manage the HSW competence of the NLHPP project team including mental health systems.
- Initiate and manage HSW training initiatives, forums and standards.

- Contribute to the procurement activities by providing HSW requirements for contracts and assessment of tenders.
- Developing and managing the implementing an HSW audit / inspection plan that includes the assessment of documentation submitted by contractors for comment, review and/or acceptance (high-risk RAMS assurance). Manage integration with the LEL asbestos management system.
- Leading and managing the NLHPP HSW function which includes a team of HSW Assurance Managers. This includes forecasting the needs of the team and securing these resources from the NLHPP Assurance Managers, reporting on a monthly basis to the HSW Lead.
- Ensure the carrying out of accident / incident and near miss investigations, monitoring and closure complete with lessons learnt implementation.
- Ensure the timely close out of all HSW audit and inspection findings.
- Drive safety observations systems.
- Chair monthly HSW working group meetings which are held with representatives of project participating organisations including LEL.
- Attend regular development meetings including forums, weekly alignment meetings, project leadership weekly meetings, NLWA weekly staff and advisors briefing, HSW update to the SLT and lead internal HSW team meetings.
- Drive, with specialist input where appropriate from the HSW BIM assurance manager, HSW in BIM compliance aligned to PAS 1192-6:2018 – "Specification for collaborative sharing and use of structured Health and Safety information using BIM".
- Communicate and liaise with wider development programme work streams including digital, communications, collaboration and reporting work streams.

24.4 Health, Safety & Wellbeing CDM Assurance Manager

Nick Williams, nick.williams@safersphere.co.uk , Tel: 07597 054166

- Make the client aware of their duties under CDM 2015 with relevance to the particular NLHPP project.
- Assist in the development of the project specific CDM briefs.
- Advise on competency of CDM appointments. Advise the SLT on the appointment of Principal Contractors and Principal Designers under CDM 2015.
- Review projects to carry out a full pre-start assessment and review with respect to health and safety considerations required during the design, build and end use.
- Work with the client, PM, Principal Designer and other parties to obtain, review and profile the required CDM pre-construction safety information. Identify any gaps or information requirements in respect to the CDM pre-construction information
- Monitor and assist the Principal Designer in pursuance of design best practice associated with CDM 2015 compliance.
- Provide safety advice and support for the NLHPP team. Contributing to the procurement activities by providing HSW requirements and assessment of tenders.
- Advise NLWA on the suitability of the construction phase plan and welfare facilities before commencement and during the NLHPP.
- Issue and update F10's with further particulars prior to and throughout projects.
- Agree the formatting of O&M / H&S file information collations with Principal Designers / Contractors, monitor and sign off acceptance on behalf of the NLWA.
- Meeting attendance as and when required / requested by PM's, video call preferable where possible.

- Report on monthly project CDM 2015 compliance progress to HSW lead for inclusion in the MPSR HSW report.
- Assist the HSW Delivery Manager in development of bulletins / alerts, best practice lessons learnt.

24.5 Health, Safety & Wellbeing Site H&S Assurance Manager

Don Cody, don.cody@safersphere.co.uk , Tel: 07932 388749

- Implement the HSW inspection and audit plan as directed by the HSW Delivery Manager, utilising "I-Auditor" NLHPP template and system. Each site within the NLHPP to be visited weekly, with an encompassing summary for each site, each month for the MPSR report.
- Assist the HSW Delivery Manager with safety observation management, action and feedback.
- Assist the HSW Delivery Manager in development of bulletins / alerts, best practice lessons learnt.

24.6 Health, Safety & Wellbeing RAMS Assurance Manager

James Keirle, james.keirle@safersphere.co.uk , Tel: 07749 531680

- Review all issued "High Risk" RAMS packs as agreed between the HSW and PM teams.
- Comment upon, issue comments, re-review and further comments to position of "Acceptance" of RAMS packs. Communicate with project PM's regarding checks and status.
- Keep a log of RAMS identifying current status and percentage of first time pass for KPI's.
- Report on RAMS outcomes on a monthly basis to HSW Lead for inclusion in MPSR report.
- Assist the HSW Delivery Manager in development of bulletins / alerts, best practice lessons learnt.

24.7 Health, Safety & Wellbeing BIM Assurance Manager

Jonathan King, jonathan.king@safersphere.co.uk , Tel: 07920 413045

- Implement and manage the "HARM Zero" system for design risk management. Providing support, user management, project generation and controls.
- Assist with the BIM 1192-6 alignment and support compliance with feedback to the HSW Delivery Manager.

24.8 Health, Safety & Wellbeing Administrator

Sian Simpson, sian.simpson@safersphere.co.uk , Tel: 07545 422616

- Assist the HSW Lead & Managers with the NLHPP HSW programme centralised reporting function so that all observations and incidents are communicated and actioned effectively.
- Assist the HSW Lead & Managers with report / schedule / dashboard preparations and collation where required.

- Support the HSW team with administration resource where required to meet the demands of the service delivery.

25 SLT HSW Support

The HSW Delivery Manager shall report to and support the NLHPP SLT on all aspects of the HSW programme. This will consist of focused training where identified (e.g. CDM 2015 Client Training) alongside the provision of HSW surgeries through which the HSW lead shall provide open support availability via Microsoft “teams” and or at Berol House.

26 Client CDM Advisor

The HSW CDM Assurance Manager shall support the discharge of CDM 2015 duties attributed to the NLWA as laid out in the HSW roles & responsibilities.

27 HSW Site Audits

The HSW Site H&S Assurance Manager shall undertake weekly site audits and reporting as laid out in the HSW roles & responsibilities. These audits will be uploaded to Asite and distributed to the client PM, Wood Supervisor, Principal Designer and Contractor Site Management.

28 Safety Observations & Incident Reports / Investigations

The HSW team shall manage the process of development wide safety observations and incident reports, including lessons learnt and KPI tracking as identified in item 5 of this HSW Manual. This is managed via the Asite HSW form field module and outputs via the PPM Reporting Hub.

In addition, where any incident occurs in direct relation to the NLWA, their employees, assets or the public, under the relevant categories of incident the HSW Delivery Manager shall produce a full incident investigation report for submission to the NLHPP SLT.

29 Health & Safety Working Group & Forums

A “Health & Safety Working Group” will convene monthly in line with the terms of reference provided in Appendix B.

This process will be managed and chaired by the HSW Delivery Manager. The purpose of this forum is to identify HSW improvements, actions and deliverables, reporting back to the SLT on any decisions required as part of the process.

Other specific forums will be established over the course of the NLHPP project where the need is identified in pursuance of continual improvement.

30 HSW Alerts, Bulletins and Snapshots

The HSW team shall where an incident, best practice, legal change or the needs of the NLHPP project dictate, generate and issue H&S alerts, bulletins and weekly HSW snapshots in conjunction with the Arup and NLWA communications teams.

Where applicable the HSW Delivery Manager shall coordinate any such publications with the relevant partners (i.e. LEL HSQE, Principal Designer, etc.)

31 HSW Culture Survey, Development Plan & Programme

This HSW Manual is partly generated in response to the HSW culture survey & report conducted by Arup. The HSW Development Manager and HSW Delivery Manager are working alongside the Arup specialist consultants in responding to the identified action outputs from this survey in the HSW development action plan. This is an ongoing iterative process involving development of a number of HSW initiatives in collaboration with other NLHPP work streams. The action plan shall be updated regularly and distributed via the Asite platform and normal reporting channels.

32 Project and MPSR HSW Reporting

The HSW Lead, Development Manager and Delivery Manager shall prepare the HSW MPSR report each month in line with the NLHPP Reporting protocols.

Other NLHPP partners shall contribute information for the report including the culture survey specialists, Principal Designers and Principal Contractors as set out in this HSW Manual. The HSW team shall collate this information into the MPSR report. The MPSR report shall also serve the needs of the members committee report.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – F: Principal Designers & Designers

33 Design Risk Management

Wood are appointed as the Principal Designer by NLWA, to act in the role across most of the contracts associated with NLHPP. The exception is the energy recovery facility ("ERF") where procurement will be by a full design and build process using the Institute of Chemical Engineers (IChemE) "Red Book" form of contract. With the above in mind all designers shall comply with the Wood DRM procedure identified in this section of the HSW Manual. DRM procedures proposed by any other appointed Principal Designers must meet the requirements of this procedure as a minimum.

33.1 Introduction

Implementing an inherently safe design and risk management process, that is understood and utilised by the principal designer who has the appropriate skills, knowledge and experience, is key to ensuring we go so far as is reasonably practicable towards eliminating, mitigating and managing risk in our designs and reducing vulnerabilities in the design phase.

The purpose of this procedure is to describe a common process by which the safety and environmental impact of a design can be inherently improved, and the residual risk can be reduced and managed. This systematic approach is referred to as "**Safety by Design**".

This procedure specifies the minimum requirements associated with Safety by Design activities on projects designing for construction. The intent of Safety by Design is to:

- Address health, safety, security and environmental ("**HSSE**") risks during the design phase for a facility/system or for equipment. These HSSE risks could manifest at any stage of the project lifecycle, in particular the construction and in-life operational phases (operations, upgrade and decommissioning).
- Systematically and comprehensively identify and assess hazards and environmental challenges, and their associated risk to People, Environment, Asset and Reputation ("**PEAR**").
- Examine whether these hazards can be entirely avoided, or their magnitude can be reduced by design. If this is not possible then appropriate and preferably engineered controls shall be put in place to manage the residual risk.

Designers are in a unique position to reduce the risks that arise during the life cycle of the project and have a key role to play. Designs develop from initial concepts through to a detailed specification, often involving different teams and people at various stages. At each stage, designers from all disciplines can make a significant contribution by identifying and eliminating hazards and reducing likely risks from hazards where elimination is not possible.

It is also important to effectively communicate the assumptions, required actions and control measures to those who will use the designs. This will include interaction and collaboration with others in the wider team and the use of clear, concise information on drawings/documents.

33.2 Approach to Safety by Design and Risk Management Process

The Principal Designer approach in implementing Safety by Design comes from the requirements outlined in CDM 2015 and the "General Principles of Prevention" which set out the principle's duty holders should follow in identifying the measures necessary to control the risks to HSSE in a particular project.

The "General Principles of Prevention" can be summarised as:

a) Avoid risks.
b) Evaluate the risks which cannot be avoided.
c) Combat the risk at source.
d) Adapt the work to the individual, especially as regards to the design of workplaces, the choice of work equipment and of working and production methods, with a view, in particular, to alleviating monotonous work and work at a predetermined work-rate and to reducing the effect on health.
e) Adapt to technical progress.
f) Replace the dangerous by the non-dangerous or the less dangerous.
g) Develop a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships and the influence of factors relating to the work environment.
h) Give collective protective measures priority over individual protective measures.
i) Give appropriate instruction to employees.

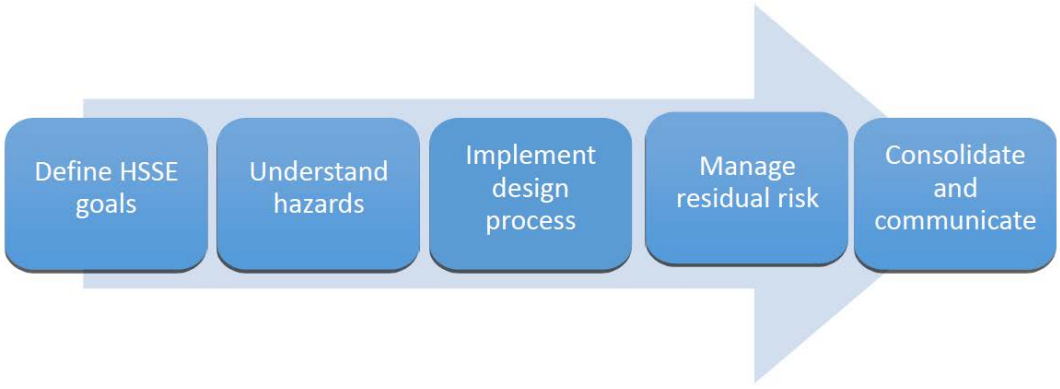
The “General Principles of Prevention” are a requirement of the Management of Health & Safety at Work Regulations 1999 and apply to all industries, including construction.

CDM 2015 requires designers, principal designers, principal contractors and contractors to take account of the “General Principles of Prevention” in carrying out their duties.

The “General Principles of Prevention” provide a framework to identify and implement measures to control risks on a construction project, however the principles do not always lend themselves easily to construction design and some professional judgement is required in their interpretation and use. For “standard work tasks” there will not be any need to directly refer to these principles as they are already implicit in the method of work.

The intent of Safety by Design is to eliminate hazards that could occur throughout the lifecycle of a project, in particular during certain development phases (construction, fabrication, testing) and the in-life operational phases (operations, upgrade, maintenance, decommissioning and demolition). If elimination cannot be achieved and hence residual risk remains, the intent of Safety by Design is to reduce the magnitude of such residual risk sufficiently to minimise the need for controls and other safeguards. The residual risk should preferably be managed to an acceptable level by implementation of engineered controls rather than administrative controls.

33.3 Work Process Steps



33.3.1 Define HSSE Goals

Project HSSE goals shall be defined and agreed with partners prior to commencing any design.

HSSE goals will help maintain focus throughout the Safety by Design process and could include:

- Goals to ensure compliance with regulatory requirements.
- Safety case demonstration and/or design substantiation requirements.
- Compliance with legislative or project specific tolerability of risk criteria or "So Far As Is Reasonably Practicable" ("**SFAIRP**") criteria.
- Project specific HSSE goals, provided by the client.
- Project drivers that can (directly or indirectly) impact the HSSE performance of the design.
- Goals related to "Inherently Safer Design" ("**ISD**".)

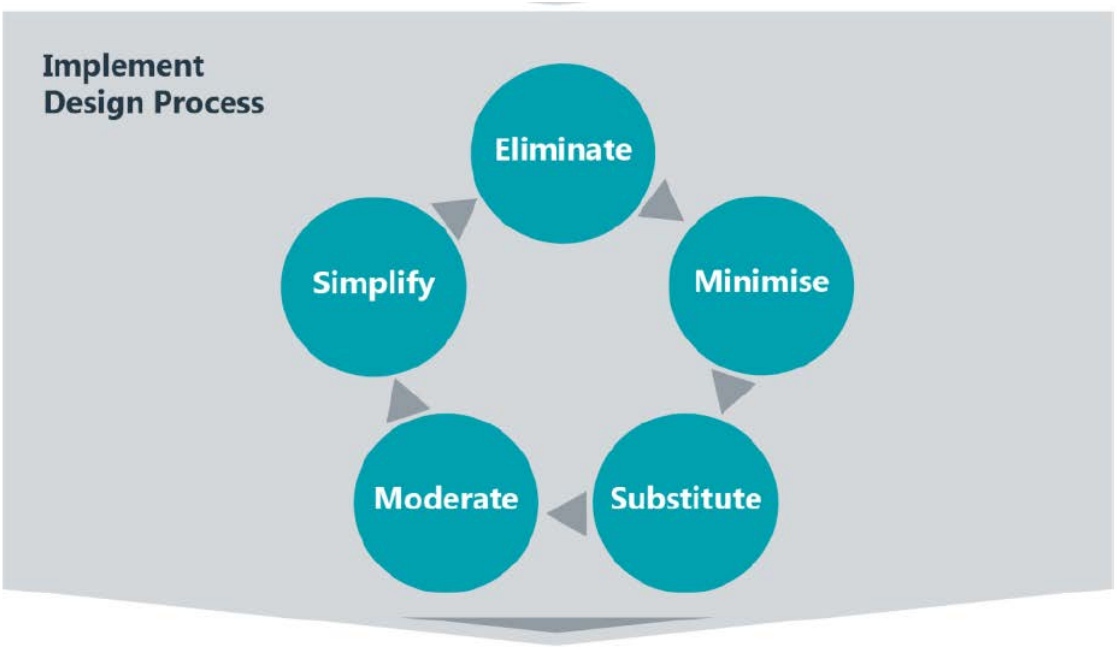
33.3.2 Understand Hazards

The purpose of this step is to identify and understand specific HSSE hazards and impacts associated with a project.

As a minimum, a structured project hazard identification activity shall be conducted, with the focus on identifying hazards that could occur in relevant development phases (e.g. construction, fabrication, testing) and in-life operational phases (operations, upgrade, decommissioning).

In general, the level of detail pursued in the identification process shall reflect the level of maturity to which the design options have been developed.

33.3.3 Implement Design Process



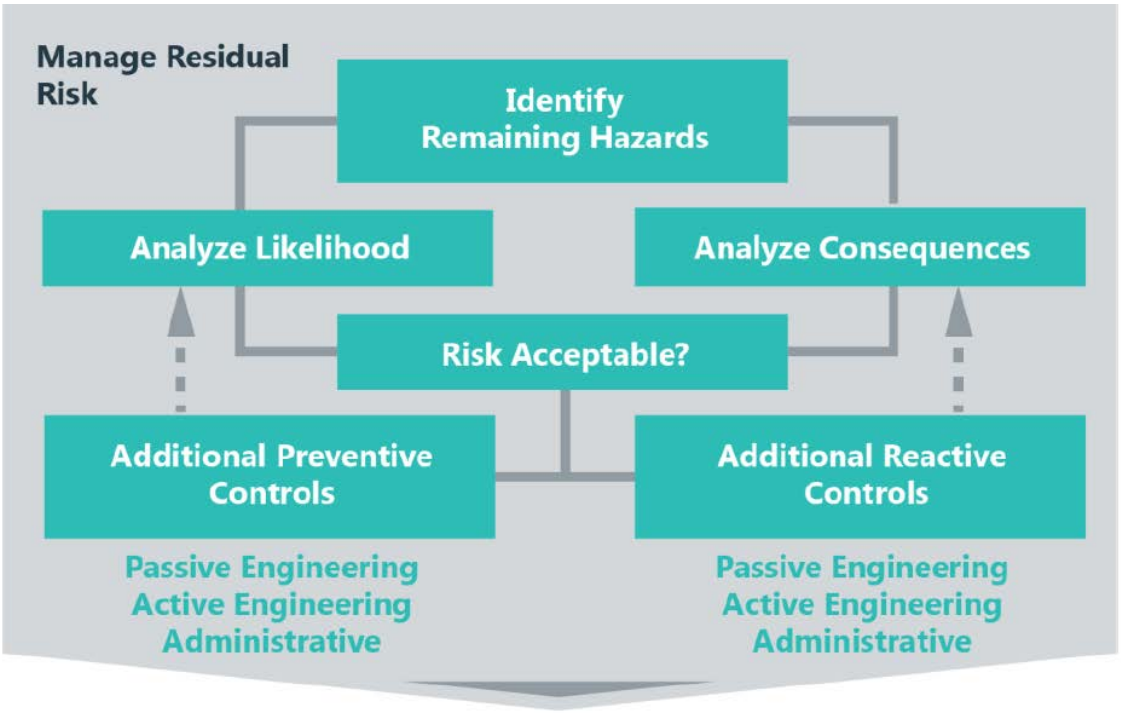
The intent of ISD is to eliminate a hazard completely or reduce its magnitude sufficiently to eliminate the need for elaborate safety systems ("engineered controls") and procedures ("administrative controls"). Furthermore, this hazard elimination or reduction should be accomplished by means that are inherent in the process and thus permanent and inseparable from it.

The implementation of ISD is achieved by adopting a strategy based on the following principals:

- Eliminate - remove hazardous materials, processes and activities, potential to impact upon environmentally sensitive habitats/species.
- Minimise - use smaller quantities of hazardous substances, minimise the number of hazardous activities.
- Substitute - replace a hazardous material with one that is less hazardous, substitute a hazardous activity with one that is less hazardous.
- Moderate – minimise the impact of a release of hazardous material or energy by: changing the layout/configuration, adopting less hazardous operating conditions or a less hazardous form of a material or facilities, by minimising the number of people exposed, or minimising the impact upon habitat/species e.g. through timing or location of activity, and.
- Simplify - design facilities in order to eliminate unnecessary complexity, thus minimising the possibility of human error.

In terms of addressing human error through design, the steps 'minimise', 'substitute' and 'moderate' are focused on making hardware/software design changes in order to limit the consequences of human error; the intent in step 'simplify' is to reduce the likelihood of human error by modification of the hardware/software design.

33.3.4 Manage Residual Risk

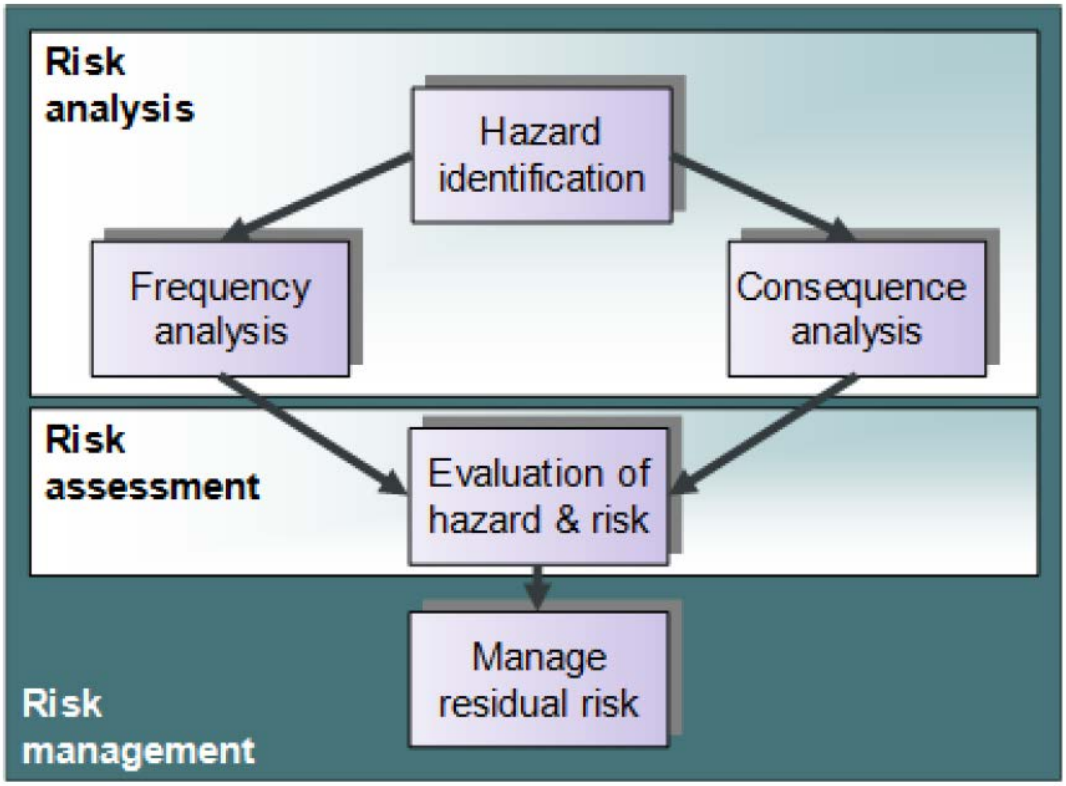


If 'inherent control' cannot be fully achieved or is perceived to be inadequate, residual hazards will remain and their associated risks will need to be reviewed and possibly mitigated. Risk mitigation will require the implementation of additional ("add-on") controls/safeguards.

In identifying risk, we need to consider what would be affected if the risk were to be realised. For this we need to consider PEAR with the emphasis on safeguarding people whilst protecting the environment, assets and reputations.

The risk is estimated based on both the likelihood and PEAR impact of the various consequences. in this context risk is defined as the product of the likelihood with which an undesired event or outcome is anticipated to occur and the severity, impact or effect of this outcome.

In the ‘risk assessment’ the estimated risk levels are assessed against risk criteria. The selection, development and implementation of the controls or safeguards required to manage these risks to an acceptable level should be considered as part of project design. The continued effectiveness of these controls throughout the various lifecycle phases (e.g. by means of planned maintenance and inspection, or replacement) should also be evaluated.



It is important to remember that risk thrives at interfaces:

- Physical:
  - between foundations and superstructure.
  - changes or alterations to an existing structure.
- Procedural:
  - Determining responsibilities at the interfaces.
  - Communication between designers.
- Handovers from one party to another; such as from one phase of a project to another e.g. from one design team to another or from construction to commissioning/operation.
- Demarcation (communication between adjacent, but separate undertakings).

33.3.4.1 Design Risk Management

DRM is the management of design related uncertainty. In construction there is a great deal of uncertainty which has to be managed effectively; for example, in terms of cost, quality, time, and of course, always, the impact on the health, safety and well-being of those who may be affected by the design or impact upon the environment (the subject of this procedure).

DRM should not be seen as a bolt-on at the end of design but as an inherent part of the design process.

It must be noted that only one designer (or design organisation) is responsible for completing the actual design task for that design element and when doing so they are responsible for

ensuring compliance with designer's duties under CDM 2015 (Regulation 9). Responsibility for that duty cannot be abdicated by indicating that the design decisions were made by a collective.

When carrying out DRM, the focus should be on significant risks over which the duty holder can exercise some control or take measures to mitigate. Significant risks are those that a contractor or operator would have to devote additional time and resources to manage. These are not the day to day risks associated with managing the construction and subsequent use of an asset, but those that require a greater degree of thought and management. The designer should also recognise when circumstances combine to change a day to day risk into a more significant risk which will need management over and above what would be expected.

The designer needs to consider all those whose health, safety and well-being may be affected by the design and resulting impact upon the environment, not just during construction but also in the commissioning, operation or use, repair and maintenance, decommissioning and finally demolition of the structure (the whole life cycle).

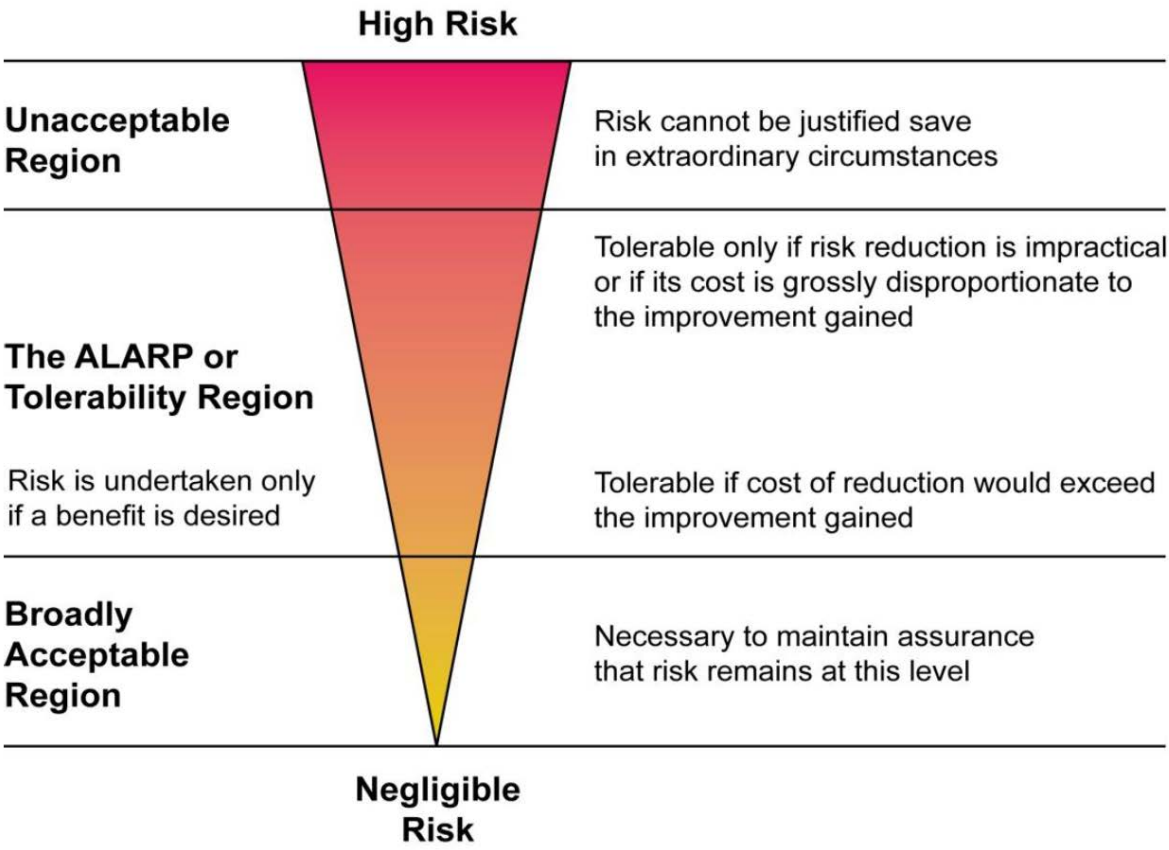
Consideration should be given to a variety of different circumstances, including emergency situations and the design adjusted accordingly to ensure the safety of those who may be affected.

33.3.4.2 Risk Criteria

The residual risk is estimated and assessed against agreed criteria for PEAR. If the risk is not acceptable or risk criteria are not met, modifications to the design (i.e. additional controls /safeguards) will need to be identified and their effect will need to be re-assessed until the risks are acceptable or deemed SFAIRP.

The principle of SFAIRP is based on the premise that absolute safety for a facility or operations cannot be guaranteed, and that risk-reducing preventive and protective actions are commensurate with the severity of the risks. The SFAIRP principle is applied if the risk is between the risk criteria defining the "unacceptable region" and "broadly acceptable region". Within the SFAIRP region risk mitigation is only required if the risk reduction is practical, technically feasible and the associated costs are not grossly disproportionate to the improvement gained.

It is noted that expressions with qualification can be found, e.g. "As Low As Reasonably Achievable" ("ALARA") and SFAIRP.



33.3.4.3 Controls and Safeguards

Controls or safeguards are generally more effective and therefore are more likely to be "reasonably practicable" if they prevent a hazardous event occurring rather than simply being reactive, i.e. responding to the consequences. Although the degree of risk reduction for a given control/safeguard depends on specific circumstances, the hierarchy of preference used for adopting controls/safeguards is as follows:

- Prevention - Minimise likelihood of a hazard materialising.
- Control - Limit severity of hazard before effects take place.
- Mitigation - Limit impact and prevent escalation.
- Emergency Response - Evacuate and recover personnel.

In addition, engineered and administrative type of controls can be distinguished. These are defined as follows:

- Passively engineered - Reduce the consequence or likelihood of an incident arising from a hazard through devices which do not require detection of an incident or action by any person or device.
- Actively engineered - Reduce the consequence or likelihood of an incident arising from a hazard by detection of an incipient incident and activation of devices which interrupt the sequence of events resulting in the incident or mitigate the consequences of the incident.
- Administrative - Reduce the consequence or likelihood of an incident arising from a hazard by detection of an incipient incident followed by implementation of procedures or human activated devices to interrupt the sequence of events resulting in the incident or mitigate the consequences of an incident.

Engineered type of controls should be preferred above administrative controls because of their availability and effectiveness, as the former will require no or less human intervention in order to be active. In addition, if engineered controls are considered, passive engineered controls are preferential as these require no or less human intervention to operate or maintain compared to active engineered controls.

The above preferential hierarchies are reflected in the design of process systems, sometimes referred as “layers of protection”. The effectiveness of the layers in managing the residual risk is assessed in a “Layer of Protection Analysis” (“LOPA”).

33.3.4.4 Functional Safety

The effectiveness and required integrity of safety instrumented systems, as part of the layers of protection, is considered in a Safety Integrity Level (“SIL”) assessment. The intent of a SIL assessment is to determine the required functional safety of the layer “Emergency Shutdown” through the application of safety instrumented systems required based on the project’s risk criteria. In this context functional safety is defined as part of the overall safety that depends on a safety instrumented system operating correctly in response to its inputs. These inputs include the safe management of likely operator errors, hardware failures and environmental changes.

Furthermore, the SIL assessment demonstrates that the assigned SIL for the various safety instrumented functions can be met based on the proposed configuration of safety instrumented systems.

The framework for functional safety is described in the international standard IEC 61508. Supporting standards provide guidance on how to implement functional safety in specific industries and sectors: IEC 61511 for the process industry, IEC 61513 for the nuclear industry and IEC 62061 for the manufacturing industry.

33.3.5 Consolidate and Communicate

The purpose of this phase is threefold:

- To consolidate the findings of the Safety by Design process.
- To communicate these findings to internal and external partners. Findings could involve the final outcome of the process as well as the results of specific activities undertaken as part of the process.
- To demonstrate that the design risk management process has been completed as intended, and that the goals that were identified at the outset of the project have been met.

The outputs should be communicated to relative partners in accordance with legislative and customer requirements.

33.4 Managing Actions and Recommendations

Any action or recommendation raised during the project's Safety by Design process shall be recorded and followed up.

Actions shall be recorded, tracked and closed out using a dedicated register (for example the project specific risk register or "DRMR").

Following up these actions can be complex as it requires multiple parties to be involved, either as responsible party or in an approving capacity. Also, these actions are often a two-step execution: a planning step and a close-out implementation phase.

33.5 Implementation of Safety by Design

The principles of Safety by Design can be applied throughout the lifecycle of a project design. The timing for implementing an inherent safety strategy is critical to its success.

The most effective risk management strategy is to concentrate the inherent safety efforts early in the project, in particular during the investigate phases and early development phases (front-end engineering). At this stage the location and layout of the facility, the type of facility, system or equipment, as well as the technology or method used can still be influenced. Also, it is conceivable that the process design, plant operating conditions, quantities of hazardous materials and modus operandi can be challenged.

As the development phases progress, the focus of the project will shift to managing the residual risk associated with hazards. These hazards could materialise during later development phases (e.g. construction, fabrication or testing) or during in-life operational phases (e.g. operations, upgrade, maintenance, demolition, decommissioning). This strategy will result in adopting controls that will manage the risk to a level that is acceptable.

Managing the residual risk will often require administrative controls in addition to the engineered controls. These administrative controls (e.g. operational and maintenance procedures) ensure that the engineered controls (in particular the active engineered safeguards) are and remain effective.

- Can plant and equipment be installed, maintained and operated safely?
- Can plant and equipment be decommissioned and removed safety from safe?

Most risks encountered during the lifecycle of the structure will be controlled using 'standard work tasks' that can be managed by simply providing the relevant information to those persons with the relevant skills, knowledge and experience who plan to undertake those tasks.

This is not to say they carry no risk, but rather Industry has well established ways of managing those risks (e.g. industry good practice, safe systems of working and standard design details). Therefore, for these 'standard work tasks' where there are established industry solutions both in design and construction and where these are followed, the designer will normally have achieved what is reasonably practicable.

Designers should therefore focus their efforts on the areas of the design that fall outside these criteria.

During the pre-construction phase, designers must develop an access & maintenance strategy that records their decisions for how plant and equipment will be installed, maintained and operated safely. the safety of both contractors and those affected by maintenance operations

must be considered in developing any scheme to reduce risks as low as is reasonably practicable.

Firstly, risk and hierarchy of risk for each system must be assessed. Design risk registers beyond routine cleaning to encompass the longer-term requirements of façade maintenance and replacement of element of the façade. As always there are a number of possible ways to achieve this goal, however an ill-conceived solution can prove to be difficult to use and increase the long-term maintenance costs to any project.

Considering the access requirements early within the design stage gives designers the opportunity to incorporate systems that can be developed to be in-keeping with and sympathetic to the architecture of a project. Access requirements of a project are frequently considered much too late in a design, which can result in unsightly, obtrusive, and in unsightly, obtrusive, and in the long-term costly solutions being employed.

Maintenance strategies for a project should be developed to include, but not be limited to:

- Identify the unique requirements of the project.
- Identify all surfaces requiring access of the structures.
- Identify all surfaces requiring access for cleaning or maintenance, including the requirements for replacement of elements of the façade, such as security cameras etc.
- Identify the risks involved in performing these operations. The eventual strategy should outline the equipment and methods employed in achieving this required access.

34 Design Risk Management System and BIM alignment with PAS 1192-6

34.1 HARM Zero System for DRM

In alignment with the above DRM process, the project will likely, following consultation and authorisation, utilise an online collaboration tool for Design Risk Management – “HARM Zero”.

“HARM Zero” guides users (collaborators) to eliminate hazards, reduce and manage risks and avoid harm from the construction stage of a project right through to occupation. A clear and simple system to use “HARM Zero” offers multiple benefits for everyone from clients to designers, contractors and end-users.

The system provides live project HARM registers which can be reviewed and updated in real-time from anywhere using a phone, tablet or PC. “HARM Zero” is a significant enhancement from the traditional spreadsheet approach used to identify and manage risks. Photographs, drawings and reports (e.g. site investigation or asbestos survey) can be uploaded or linked to clearly illustrate and highlight hazards, risks and risk mitigation measures. Risks can easily be sorted and classified, and the system is BIM compatible, currently via “COBie” aligned csv export.

For further introductory details please follow the HARM Zero Video Link

The “HARM Zero” system shall be implemented and managed by the NLHPP HSW BIM Assurance Manager, with collaboration inputs from all designers (including contractor designs), Principal Designers and Principal Contractors.

For access to the system please contact the HSW BIM Assurance Manager and or HSW Administrator.

34.2 BIM PAS 1192-6 Alignment

The HSW BIM Assurance Manager shall provide input and support to the BIM PAS 1192-6 alignment programme led by Wood and Arup.

This will involve being part of the BIM working group and implementing actions for the NLHPP HSW programme coming out of this alignment process.

Further initiatives will be established against this criteria as the programme progresses.

35 Principal Designer Reporting

Each Principal Designer shall provide on a monthly basis a short summary on position and look ahead each month, to be included in the HSW MPSR report. This should be issued to the HSW Administrator and the summary shall include: -

1. Brief Principal Designer update / work complete in period.
2. Items in development / next steps.
3. “HARM Zero” / DRM register exports / links.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

NLHPP HSW Manual – G: Principal Contractors & Contractors

36 CDM 2015 & HASWA 1974 Compliance

This HSW Manual does not set out the health & safety requirements required by statute. It is expected that the Principal Contractors are fully aware of and will provide for best practice and compliance with HASWA including all its subordinate legislation, regulations etc. and specifically CDM 2015.

37 Construction Phase Plan

The Principal Contractor must ensure that their initial Construction Phase Plan ("CPP") is issued to the HSW CDM Assurance Manager, via the PM / Supervisor, a minimum of 10 working days prior to commencement of planned works on site. This allows time for review and comment processes prior to culmination in acceptance that the CPP is suitable and sufficient for works to commence in accordance with CDM 2015.

Under no circumstances will works be permitted to commence, inclusive of enabling, site setup or any other construction activities, until the HSW CDM Assurance Manager has communicated acceptance of the CPP.

The CPP will be monitored by the HSW Site H&S Assurance Manager throughout the contracts to ensure it is continually updated to remain suitable and sufficient for the works taking place.

COVID-19 management provisions for the projects must form part of the CPP in alignment with Construction Leadership Council guidance current at the relevant time.

38 Site Welfare Facilities

Welfare facilities are to be provided by the client under license from January 2020 for use by the Principal Contractors where agreed.

Any Principal Contractors not under licence or contract to utilise these facilities must provide their own welfare facilities, fully maintained in compliance with Schedule 2 of CDM 2015.

Site welfare facilities must also take cognisance of the Construction Leadership Council COVID-19 Guidance current at the time.

39 Safety Management, Supervision & Qualifications

The Principal Contractor shall include for HSW management of all subcontractors in accordance with duties outlined in CDM2015.

The Principal Contractor shall ensure suitable supervisory resource is applied to the project, trained to a H&S standard of the CITB Site Managers Safety Training Scheme or equivalent.

All site-based project personnel and workers should hold a base level of HSW qualifications. These should, as a minimum provide a basic level of safety knowledge relevant to the construction industry and the importance of taking personal responsibility for HSW.

The base level qualifications recognised for this Project are: -

- Client Contractor National Safety Group (CCNSG) Passport – through the Engineering Construction Industry Training Board (ECITB); or
- Operatives Integrated Risk Awareness Course (OIRAC) – through Training Qualifications UK (TQUK); or

- Construction Skills Certificate Scheme (CSCS) or
- Construction Industry Training Board (CITB) HSW Awareness Course – through – the CITB.

The Contractor should determine which roles or workers require additional specific skills training such as NPORS, permit to work, confined space, face fit testing, gas monitoring, vehicle marshal, vehicle banking operative ('banksman') and the so on.

40 Drugs & Alcohol

Any person affected by the adverse influence of alcohol or drugs (both prescription and non-prescription) must not undertake project-related activities under any circumstances. If in any doubt as to their capacity to safely undertake an activity, the person must cease that activity immediately and contact their supervisor or manager.

Contractors/suppliers are required to operate their own substance abuse policies that comply with the following:

- No possession or use of illegal drugs or alcohol at work (including novel psychoactive substances or "legal highs")
- If anyone suspects they may be under the influence of drugs or alcohol they must not attend work
- Notify their employer if using any prescribed drugs that could affect their ability to work safely
- Drug and alcohol testing policy using recognised limits, where positive testing of random and for cause may result in removal from site

Advice may be sought from Occupational Health service on implementation of the policies, but provision should be made for testing in the following situations:

- Pre-arrival on site
- Post-incident
- Suspicion or cause
- Random

If the relevant supervisor or manager has any concerns regarding the fitness for work of an individual, then they must remove the person from project-related activities until their fitness for work is confirmed and follow the relevant process. The Project Manager is also to be notified immediately of any such occurrence.

41 Asbestos Management

All asbestos found via survey or as finds during the works or removed by the NLHPP project works, included asbestos in ground, must be reported to LEL for inclusion on the LEL managed system. All finds should be communicated to paul.newport@londonenergyltd.com and is to include the following details where applicable:-

- Location
- Description
- Status (Detected / Presumed)
- Sample No
- Product Type
- Asbestos Type
- Condition
- Quantity
- Surface Treatment
- Fibre Release
- Action Required
- Photos
- Remarks
- Date of Survey / Removal

42 Risk Assessments & Method Statements

RAMS review systems are already developed and embedded within NLHPP as part of the LEL "Property License Process" set out in Appendix C.

The HSW RAMS Assurance Manager is responsible for supporting this process in the check, review, comment and acceptance of "High Risk" RAMS submitted. Packages of work identified as "High Risk" include but are not limited to the following.

- Temporary Works activities.
- Earthworks:
    - Deep trenches, excavations / breaking ground, temporary slopes and stockpiles,
    - Trenchless construction, including headings, thrust bores, mini tunnels.
- Structural:
    - formwork, falsework, propping, façade retention, needling, shoring, temporary bridges,
    - Crane erection & major lifting activities.
- Demolition of an element of any structure temporary or otherwise.
- Removal or disturbance of asbestos (inclusive of surveying).
- Piling operations.
- High risk work at height (i.e. rope access, leading edge works).
- Confined space activities.
- Underground / above ground utilities / services.
- Tasks involving hot work.
- Work near pressurised gas distribution mains or piping (pressurised systems), chemical, fuel lines.
- Work on or near energised electrical installations or services.
- Use of abnormal High risk COSHH / hazardous substances.
- Working on or over water.
- Working in the vicinity of live operations (LEL traffic / plant etc.).
- Works outside the EcoPark requiring increased security measures.

43 HSW Audits & Procedure Review

The NLHPP HSW Site H&S Assurance Manager shall undertake weekly audit visits to each project / site. The Principal Contractor is to facilitate these visits by provision of the following: -

- Full induction to allow full access of the site to conduct the audit.
- Provision of suitable escort for the audit i.e. site manager.
- Access to site documentation for inspection.
- If requested joint inspections with the contractor H&S advisor / manager.

The Principal Contractor shall also make available all H&S Procedures for review by the HSW team, client PMs and contract supervisors upon request.

44 Principal Contractor HSW Reporting to NLHPP

In addition to or as part of the wider project reporting mechanisms, the Principal Contractor for each project that is part of the NLHPP shall provide the following information to form part of the MPSR HSW report, and to feed KPI reporting and review.

Key Performance Indicator (KPI)	Month Result
Leading Indicators	
Occupational Health Engagements (Surveillance, Checks, Mental Health Training, Visits, Surgeries, Promotions, etc)	No.
Safe Start or Point of Work Briefings	No.
Names of all inducted Personnel in the month (To arrange for "Wellbeing 4 Life" Orientations)	Name & Employer
Lagging Indicators	
Serious Incidents (SI)	No.
Lost Time Injury (LTI)	No.
Dangerous Occurrence (DO)	No.
Near Miss / Close Call (NM)	No.
Undesired Circumstance (UC)	No.
Threatening Behaviour (TB)	No.
First Aid Injury (FA)	No.
External Event with Impact (EXT)	No.
Statutory Notices from Health & Safety Executive	No.
Person hours worked on the project in the period.	No.
12 Month Rolling Average Accident Frequency Rate (AFR)	AFR Rate

These statistics should be provided to the HSW Administrator within 5 working days of the close of each month.

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

Appendix 1 – EcoPark Access & Induction Protocol

EcoPark Access Protocol

Access to the EcoPark site is now restricted to essential personnel only and by advance approval by LEL Directors. This protocol is to confirm arrangements.

Guidance

- Essential access is work that enables the NLHPP critical activities to continue, and that cannot be delivered remotely. Construction work and site investigative works is generally essential as is supporting safety and management oversight activities by the NLHPP team.
- Project Manager's will be required to consider all upcoming works – third party and DNO activities as well as ongoing construction.
- Access requests can be for the next day or week and up to 1 month in advance.

By 11:00 the day before
Project Manager or functional leads to collate all project access requirements and submit requests by to the Programme Office NLHPP@Arup.com

11:30
Approval review with Project Delivery Lead (or other NLHPP leadership team member)

12:00
Programme Office submits approved requests to LEL at nlhpp@Londonenergyltd.com

14:00
Response from LEL with access confirmed or denied to NLHPP@Arup.com

Responsibility

Project Manager- for contractor, advisor, health & safety, client attendance

Functional Leads: for any functional business (critical meetings/visits

Details to be submitted

- All information must be submitted in the prescribed template.
- Narrative to support the reason why the access to the work is essential and will be provided by the Project Managers. The Programme Office will review all requests and ensure consistency.

Process of entering site

- All people entering the LEL site must have their temperature checked upon arrival. Those with a temperature above 38 degrees Celsius will not be allowed on site and will be given written guidance on what to do next.
- To park on site you must use the LEL section of the IKEA carpark. To get to the EcoPark from here you can use the LEL shuttle bus, public transport or a taxi.

Arrangements

- All access needs to be approved for access by LEL as owners and managers of the EcoPark.
- Project requests for access must be approved by the Project Delivery Lead (or other NLHPP Leadership team member) prior to being submitted to LEL to verify that the need is essential.
- NLHPP access requests are initially made to the Programme Office at NLHPP@Arup.com.
- NLHPP Project Managers are managing access to work sites and therefore contractors and NLHPP team members should approach them first.
- The Programme Office (Jake) co-ordinates requests for NLHPP approval and submission to LEL at nlhpp@londonenergyltd.com.
- LEL confirm access agreement or denial back to Programme Office (nlhpp@arup.com) who will advise those involved.
- In the event of access being denied the Project Managers will assess impacts with the contractor (as per the contract process).

Queries

Please contact the programme office at NLHPP@arup.com for any queries. If urgent, please call Jake Jackson (07890399019) or Allan Haynes (07464172133).

EcoPark Induction Protocol

Access to the EcoPark site is now restricted to essential personnel only and by advance approval by LEL Directors. This protocol is to confirm associated induction arrangements.

Guidance

- Anyone undertaking work on the EcoPark requires a full induction every two years.
- Visitors, who will only walk on designated walkways, crossings and footpaths are covered suitably with a Visitor Induction.
- Inductions can be viewed in advance by accessing this link with only a quiz done on site. We must advise LEL whether the video will be viewed in advance when the request is made for the Induction.

Arrangements

- EcoPark inductions expire after 2 years, you must rebook a new site induction if yours expires.
- All new visitors must schedule EcoPark inductions at least 72 hours in advance (not including weekends) which means their site access must align with this.
- Inductions start at 8.30am and finish at 9.30am everyday. Additional spaces have been provided given that there is only one induction per day now.
- If you watch the induction video linked here in advance of the induction, you only need to fill out the questionnaire on the day.

NLHPP Activity	LEL Induction Level	Induction Booking Process	Notes
Project team members (NLWA and Advisor staff) visiting the EcoPark LEL offices to meet with LEL.	Visitor	Contact LEL host 72 Hours notice	No access to site unless accompanied. Must be booked in via Visitor System in advance of arrival.
Project team members visiting the EcoPark to undertake site inspections and non intrusive surveys.	Full – every 2 years	Contact LEL NLHPP team to book in 72 hours notice	This includes tender site visits and working in the NLHPP EcoPark site office
NLHPP Contractor staff accessing their licenced work site.	Full – every 2 years	Contact LEL NLHPP team to book in 72 hours notice	This covers getting to/from the NLHPP worksite.
NLHPP team members accessing NLHPP licenced work site.	Full – every 2 years	Contact LEL NLHPP team to book in 72 hours notice	This covers getting to/from the worksite.
Working in a NLHPP licenced worksite.	Full – every 2 years	Contact LEL NLHPP team to book in 72 hours notice	This covers getting to/from the worksite.
Working on NLHPP under licence but not within site hoarding (i.e. intrusive surveys)	Full – every 2 years	Contact LEL NLHPP team to book in 72 hours' notice	This covers getting to/from the worksite.

Additional documentation & visitor information

Access to the EcoPark site is now restricted to essential personnel only and by advance approval by LEL Directors. This protocol is to confirm associated induction arrangements.

Document titles and Asite references
• LEL IKEA Car Park Access Map: https://adoddleak.asite.com/adoddlepublic/dpd/zRLoXq5sMj6n9Bf7BLq4 • LEL IKEA Car Park to EcoPark Walking Map: https://adoddleak.asite.com/adoddlepublic/dpd/MgnpMrMFn65xMrCnpRAd • LEL Car Parking Restrictions FAQs: https://adoddleak.asite.com/adoddlepublic/dpd/rEaoX69FXd9eqKu89Aqj • LEL Car Parking Restrictions: https://adoddleak.asite.com/adoddlepublic/dpd/9MaoXy9t9j4RgKhpMgqr • Extended LEL Shuttle Bus Timetable from Ikea & Tottenham Hale Station: https://adoddleak.asite.com/adoddlepublic/dpd/A9p5k4kSkEdry5Irjeyn

Visitor information
• The maximum visitor group size is 12 (including any visit guides) • Any visitor groups greater than 4 persons have to be booked at least 48 hours in advance through the LEL Communications Team • All visitors must complete the LEL COVID Disclaimer before entering an LEL site

North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

Appendix 2 – Health & Safety Working Group Terms of Reference

Health & Safety Working Group

Collaboration

Purpose: To establish the Safety and Wellbeing strategy, vision and culture for the NLHPP and act as a forum for planning and progress in all matters relating to Safety &Wellbeing (including CDM). Provide a platform for resolving issues and communicating the vision to deliver an integrated approach to HSW across the NLHPP team and LEL operations.

Attendees:

- HSW Lead – Chair
- H&S Administration Support
- Project Manager Lead (Arup)
- Construction Manager (Arup)
- H&S Manager (LEL)
- CDM Manager (LEL)
- Managing Director (LEL)
- Technical Director (Wood)
- Principal Designer (Wood)
- Principal Contractor Leads
- Operatives Representatives
- Communications Lead (NLWA)
- Collaborations Lead (Arup)
- Others by invitation

Logistics:

- Frequency – Monthly
- Date – TBC
- Duration – 2 hours
- Format – Microsoft Teams
- Action Tracker Owner: H&S Administration Support

Agenda:

- Safety Moment
- Vision/aspirations – development and maintenance of safety leadership and culture
- Programme Health, Safety & Wellbeing Strategy – development, implementation and assurance
- CDM strategy – including items for escalation and resolution
- Progress monitoring – update of progress on H&S deliverables
- Reporting – review of leading and lagging H&S statistics / *KPI's*
- Continuous Improvement – review of opportunities to improve.

Inputs (to be circulated before the meeting by):

- HSWG Actions Tracker
- HSW KPI's

Outputs (to be completed within the meeting):

- HSWG Actions Tracker
- Strategy/decision paper approvals.
- Team communication conveying the current HSW initiatives messages and status

1

Responsible for ToR Maintenance:	Paul Popescu	Last Updated:	Aug 2020	Status:	Approved for Sharing

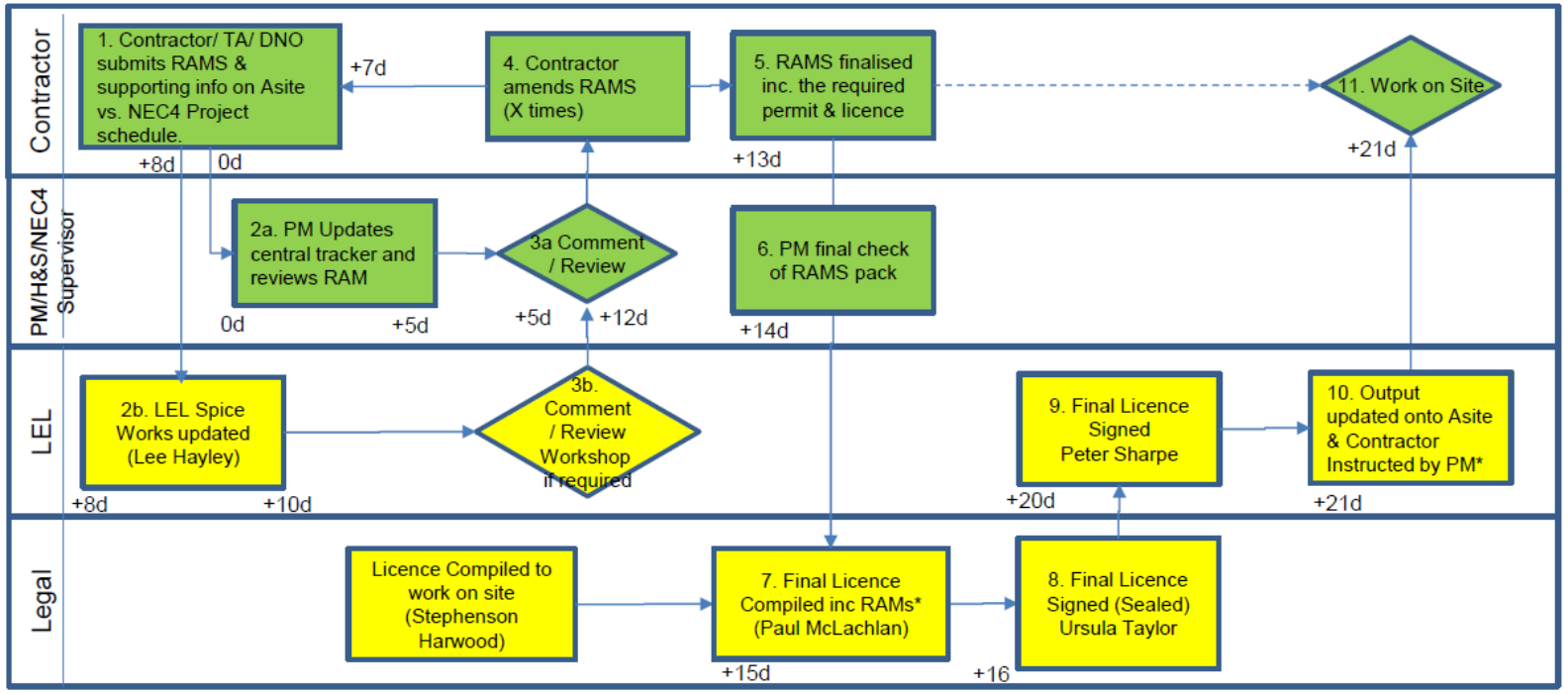
North London Heat and Power Project
Health, Safety & Wellbeing Coordination Manual

Appendix 3 – Property Licence Process

LEL Property Licence Process

Applicable to NLWA Projects that need a licence from LEL to carry out works within the Eco Park

Works Categories: 1. Construction Work 2.Site Investigations Intrusive/ Non Intrusive works , 3. Statutory Undertakers



Site Wide Working Group:

1. Allan Haynes – Construction Manager – owns/ runs the process
2. Jake Jackson – Compiles/maintains and updates the tacker (licence log) and expedites the process
3. Mark Beattie - LEL key contact

Note

1. TA = Technical Advisor (e.g. Wood, Ramboll etc)
2. DNO = District Network Operator (e.g. Thames Water)

Durations: Shown in elapsed days (worst case)

Process step detail

Step	Guidance	Owner
1	Submitted by 1. Principle Contractor e.g. 2. TA = Technical Advisor (e.g. Wood, Ramboll etc) 3. DNO = District Network Operator (e.g. Thames Water)	Submitter
2.	PMs to update the Central tracker owned by Allan Haynes and coordinated by Jake Jackson RAMS finalised inc. the required permit & licence e.g. RAMS, Section 61, third party permits and licence (e.g. EA FRAP)	Submitter
6	1. RAMS 2. Confirmation via email that LEL have signed-off / are happy with the RAMS 3. The scope of the work – which can be described in the RAMS 4. Confirmation of the time period the license is needed for – e.g. 7am 05/05/20 – 7pm 15/05/20 5. Any EA Permits or Section 61 notices 6. A drawing of the area that the license will cover – to include a brief description and particular attention must be given to access & egress	NLHPP Project Manager
7	Final Licence Compiled inc RAMs* (Paul McLachlan) 1. Queries or clarifications may be raised to NLHPP PM for resolution 2. Legal team then confirm when the licence has been reviewed and approved	NLHPP Legal
8	Final Licence Signed (Sealed) Owner Ursula Taylor Martin Capstick, (alternative point of contact if Ursula Taylor is unavailable)	
9	Final Licence Signed – Owner Peter Sharpe Mark Beattie (alternative point of contact)	
10	Output updated onto Asite & Contractor Instructed* 1. Nicholas McDonald will upload the licences onto Asite for NLHPP 2. NLHPP PM to instruct the submitter (see step 1)	NLWA Admin NLHPP PM

* Detailed steps to be used in conjunction with the process flow

APPENDIX B HEALTH, SAFETY & WELLBEING COORDINATION MANUAL

North London Heat and Power Project

Programme Monthly Report of Health, Safety and Wellbeing: July 2020

Document Details	
Document Number	NP-ARP-XXXX-XXX-RP-ZZ-090079
WBS Ref	
Confidentiality Level	Confidential (top confidentiality level)
Revision No:	P02

Assurance Record			
	Author	**Check & Review**	**Approval for Use**
Name	**Mike Forsyth**	Douglas Chisholm	David Cullen
Role	**HS&W Director**	Delivery Lead	Programme Director
Signature			
Date	**07/08/2020**	24/08/2020	

Revision Record		
Revision No.	**Date**	**Description of Revision**
P01	**07/08/2020**	First Issue
P02	**21/08/2020**	Clarification on Culture Survey Specialist and Enfield Ditch.

Engagement Confirmation	
Function	**For Comment**
Programme Director	Yes
SRO	N/A
SHE&W	Yes
LEL	Yes
Technical Advisor	Yes

Engagement Confirmation	
Function	**For Comment**
Technical Authority	Yes
Programme Office	Yes
Project Delivery	Yes
Finance	Yes
Legal & Governance	Yes
Commercial	Yes

Contents

1 Executive Summary

July activity has been dominated by not only the site re-remobilisations, but also by the transition to the new Health, Safety and Wellbeing team of Mike Forsyth, Richard Procter, Jonathan King, Don Cody, Nick Williams, James Keirle and Lindsey Jones, to be followed up with the addition of Paul Popescu in early August.

During this transition to the new health, safety and wellbeing team, the site visits and inspections have been increased to several times per week and by several people at the same time. This level of intensity is related only to the handover and does not imply any greater concerns about the ability of the contractors to manage the obvious risks.

The new Health, Safety and Wellbeing (HS&W) have now undertaken a full desktop review of the current HS&W management systems and are progressing further development of:

- Enhancing the culture and behavioural system under the “Safety First” principle
- Updating the current HS&W plan, Assurance Plan and Best Practice plan to form a single HSW Stakeholder Manual.
- Developing an improved Safety Observation and H&S incident reporting tool, based upon and utilising the Asite H&S Module.
- Programming HSW forums and groups to obtain the best possible improvement platform for feedback into the SLT.

Overall COVID-19 issues have been managed well. The Construction Leadership Council (CLC) Site Operating Procedures (SOPs), V5 released on Wednesday 1st July, for controlling the spread of COVID-19 are not significantly different to prior recommendations; no substantial changes to the project’s COVID-19 management have been made. It is important to note that both Galldris and Buckingham have elected to maintain >2m social distancing despite the Government’s suggestion that this could be relaxed. Where work has to be undertaken with operatives closer than that, additional PPE is required.

Disturbingly the month has seen a series of problems where services have been encountered during trial excavations. The Pre Construction Information provided by the Principal Designer has qualified all of the site information with warnings about the poor level of accuracy and completeness of the data they have been able to obtain. Furthermore it was anticipated by them, the client and the contractors that further previously unrecorded services of all types would probably/inevitably be encountered.

This is an area of great concern. Even though hand digging to 0.5m and/or VacEx should expose unknown services without prejudicing their integrity, this is not always the case. There have been two occasions when (water) services were breached; the first resulted from a poor decision by the operatives involved who were not at the time being supervised, and the second was hit with a hand spade which should not have lead to the breach. It may be that the pipe itself was flawed or particularly fragile, but this is pure speculation. The incident investigation for this latter breach is still ongoing. Both of these and other occasions of discovering unmapped services have been followed up with safety stand downs and all have been reminded of the project mantra “safety first”.

The incident investigation report for the services strike of 20th June on the Sewer Diversion Enabling works has been concluded and is appended. The main area of concern regarding this incident is the level of buried services information and certainty. The HSW team have consulted to the project team and discussions are ongoing regarding prioritisation of the Ground Penetration Radar surveys, site wide in order to give a wider understanding of the

potential for unchartered services in any given area. Linked to this, it appears that the contractor's may not be issued the latest information as they are reportedly not using ASite for project information.

HSW Incident 20-06-2020 Investigation Report Link

There are no health, safety or wellbeing issues to report this month, however after last month's issues, site security is still high on the agenda.

The Health, Safety and Wellbeing Management Plan and the Assurance and Best Practice Reference Documents have been included in the ERF tender documents for reference and for information purposes only. There has been useful feedback from across the NLHPP team on these documents and further improvements are ongoing as noted.

The Health Safety and Wellbeing development programme attitudes survey has confirmed recommendations to increase the visibility and engagement of the development initiatives and the Health, Safety and Wellbeing Team. A programme of activities to reflect this is being developed in liaison between the HSW team and culture survey spceialists.

2 HS&W General Report

2.1 RIDDOR Events

There have been no RIDDOR events during July.

2.2 Incidents & Observations

The July recordings in observations trackers for the sites are given in links below:-

E1a2 Laydown West

E1b Northern Access

E2a Transport Yard

E2b Sewer Diversion Enabling Works

E4a Site Wide Intrusive Surveys

There has been another incident this month which occurred on Wednesday 22nd July. Galldris were doing some excavation works associated with the Sewer Diversion Enabling Works. The SDEW works team where hand digging to the South of the Polkacrest cabin and when they got to the SE corner of the cabin the spade they were using struck a buried water pipe. The material is UPVC and the diameter is estimated as 110mm. This is similar to the pipe strike on the town main of 20th June. There were no injuries, but there was interruption to LEL's business on the EcoPark through lack of water supply when the mains was isolated. The leak has been subsequently repaired, but this has been deemed temporary by LEL and further works are to be carried out. Galldris are undertaking their investigation and further reviewing their RAMS and all operating procedures including toolbox talks.

In general terms there are no other issues of great consequence. Mostly the observations reflect COVID-19 performance showing mostly good, positive behaviours and attitudes to health, safety and wellbeing with few minor slippages in social distancing; they are good/leading indicators.

Events outside of the sites are still causing concern as either breaches of security or thefts of equipment. Information has been further forthcoming describing intimidation and threats of violence associated with the thefts and attempted thefts of equipment. There are also still concerns about the activities of adjacent industries which are posing noise and dust issues.

Notes are recorded on asbestos cement pipework and debris removal and cable tracing.

2.3 Near Misses

Although RIDDOR requires the recording of certain specific types of incident including some near misses, this section is to record all of these (RIDDOR or not) in one place. There have been none other than the water mains breach previously referred to.

2.4 CDM 2015 Principal Designer Update

Prepared by Claire Oliver, on behalf of the corporate appointment as Principal Designer to Wood plc.

This section provides a snapshot of the key CDM documentation the Principal Designer is directly involved with.

Each project within the programme is listed, and a 'status' is given to each phase and document for each task.

The site wide utilities and site wide phasing tasks are generally delivered in relation to the local works package they are associated with, hence they are not likely to have their own contract related documents.

See Appendix B for the July 2020 status table.

Since June 2020, the Northern Area Clearance and ERF Pre-Construction Information reports have been issued, as a draft and for SQ tender stage respectively.

The H&S File for the Northern Access Road / Deephams Farm Road has been shared with the contractor. The Lay Down Area and Transport Yard H&S Files are due to be updated by the contractors to capture their recent works.

2.4.1 In development / next steps:

Wood have prepared a strategy document to agree with LEL and NLWA on the arrangements for the EcoPark H&S File. This has been shared with the H+S Working Group (including LEL) for comment.

The Lay Down Area and Transport Yard H&S Files are due to be updated by the contractors to capture their recent works.

2.5 LEL and Adjacent Sites Interface(s)

The NLHPP & LEL liaison meetings were held on the 6th and 20th July and covered a wide range of topics. Any issues arising in between these meetings are addressed immediately.

The recent service strikes and follow-up actions by both NLHPP and LEL were high on the agenda, but it was recognised that improving behaviours and attitudes to risk were key to improving performance. However, in the interim additional RAMS or, as a minimum, additional sections of the RAMS were to be introduced focusing specifically on the potential implications or threats to LEL's estate or operations. This is to be implemented immediately.

With the near complete mobilisation and integration of the new health, safety and wellbeing team it was also agreed that joint site visits both within and outside the LEL boundaries would be beneficial. It was agreed that these would be initiated as soon as Paul Popescu, the new team HS&W Lead was on board (as of 10th August) and had been fully inducted.

The joint recording and management of asbestos has been launched and format for logging these data has been communicated to the contractors, site engineers and the project managers.

On a general note LEL have noted that the VacEx works being carried out adjacent to their offices have resulted in noise levels, inside the offices, of 80 - 100dB This should not have affected LEL's activities because it was originally agreed and scheduled to be carried out at night, but this had not been followed.

2.5.1 Near miss investigation

The incident that occurred in February when some potential bidders for the EcoPark South contract were being shown the site has been investigated by LEL, but NLHPP have still to conclude their review. This is high on the priority list, but unfortunately has taken second place to all the COVID-19 issues from March through to July and the more immediate needs to deal with the two service strikes already described.

2.6 HS&W Snapshots

When circumstances dictate, the HS&W team together with the NLHPP Communications team have the facility to be able to quickly create and distribute 'alert' messages on health, safety and wellbeing to draw everyone's attention to the matter. These are circulated to all offices working on the project and to all sites. Hard copies sent to sites should be printed in colour and laminated; copies to individuals and to offices are distributed electronically. The HS&W Snapshots are typically in the form of a single page of A4 and describe the issue both in words and via an illustration/photograph, and they provide advice and a resolution.

- 2nd July – Buried services
- 3rd July - Social distancing
- 10th July - (Our HS&W) Expectations
- 17th July - Good practices (buried Services)
- 24th July - Introducing the new (HS&W) team
- 24th July - The importance of site security

2.7 Health, Safety and Wellbeing Working Group

The Health, Safety and Wellbeing Working Group met on the 8th and on the 22nd July. The standard agenda reviewed matters across all areas, but with the recent service strikes and their potential disruption to LEL's business these immediate issues facing the Group were addressed in more detail.
Re-mobilisation COVID-19 issues and general health, safety & wellbeing were covered and comments were made regarding the management of service strikes and the extensive asbestos ground contamination, albeit that all of the asbestos encountered so far has been asbestos-cement which has a much lesser risk factor than any other form. Additionally LEL asked for future RAMS to include a consideration of how the activity could affect LEL's business and how these risks were being mitigated and managed. The point was also made

that VacEx excavation had extreme noise levels which had been measured at between 80 and 100dB inside their offices.
Other LEL interface issues and also matters arising through the feedback from the Principal Designer are addressed elsewhere in this report.
At the 8th July meeting members were invited to start considering how the Group could better address 'Site Observations' and 'Lessons Learnt'. After a short discussion it was agreed that they should be addressed in this order and that 'Lessons Learnt' could more usefully come out of 'Site Observations' than vice versa. Richard Procter advised that the Health, Safety and Wellbeing Team had some further work to do on the Site Observations and that these proposals would be presented at a later date. The Group was asked to contribute their own ideas to Richard and help champion the initiative.

3 HS&W Site Reports & Dashboard Report

Owing to a backlog and sick leave of the HSW consultant whom undertook the site visits, the early July HSW Site Visit Reports are not currently available, however will be provided in an updated HSW MPSR Report as soon as available. Reports for the later part of the month along with summaries are provided below.

3.1 Laydown West - E1a2 (Buckingham)

WC20/07/2020

Site compliance score 96%. Approx. 20 persons on site. Site activities include formwork to Enfield Ditch bridge crossover, ground works to laydown area. Site is operating safely. Site Supervisor demonstrates good approach to health and safety. Plant and pedestrians segregated. Good access to upper site level. Good welfare arrangements in place. COVID-19 arrangements working well and include full-time cleaner and dedicated marshal. Operatives following RAMS and wearing correct PPE

Full Report Link

3.2 Northern Access - E1b (Galldris)

WC20/07/2020

Site compliance score 98%. Approx. 8 persons on site. Site activities safety handrails to completed sheet pile capping and groundworks. Site is operating safely. Site Supervisor demonstrates good approach to health and safety. Dedicated pedestrian walkway segregates Ardra Road from access from compound to site. Sheet piling completed. Good welfare arrangements in place. COVID-19 arrangements working well and include full-time cleaner and dedicated marshal. Operatives following RAMS and wearing correct PPE.

Full Report Link

3.3 Transport Yard/Hawley Road E2a (Galldris)

WC20/07/2020

Site compliance score 98%. Approx. 35 persons on site. Site activities include formwork to centre of site, ground works and service trenches around perimeter of site and completion works to cladding on steel frame building. Site is operating safely. Site Manager demonstrates proactive approach. Plant and pedestrians segregated. Good welfare arrangements in place. COVID-19 arrangements working well and include staggered start times/break times, temperature checks, full-time cleaner and dedicated marshal. Operatives following RAMS and wearing correct PPE

Full Report Link

3.4 Sewer Diversion Enabling Works W2b (Galldris)

WC20/07/2020

No visit undertaken due to suspension of works following services strike

3.5 Updates to the Principal Contractors' Construction Phase Plans

The two Principal Contractors, Galldris and Buckingham, are both constantly reviewing and updating their Construction Phase Plans to accommodate COVID-19 Site Operating Procedures. The Health, Safety and Wellbeing team's view is that this is being done both effectively and quickly and they are confident that both Principal Contractors have everything under control.

3.6 COVID-19 management

The COVID-19 management plans developed by both the contractors and by the NLHPP Health, Safety and Wellbeing team are being further developed to provide more detail on the procedures to be followed if someone falls ill at work, and to parallel the government initiative on (test) track & trace.

Special efforts are being put into the need for detailed consideration of circumstance when the >2m proximity rule cannot be accommodated

3.7 Dashboard Report

The dashboard report has been attached in Asite to this document 'Monthly Report of the Health, Safety and Wellbeing Team: July 2020'. This is embedded on the following pages.

Doc Ref	NP-ARP-XXXX-XXX-OA-ZZ-090106
File Name	Health and Safety Dashboard July 2020

Health and Safety Dashboard — July 2020

Lagging Metrics

		Period July 2020							Period June 2020	Total to Date**
		E1A2	E1B	E2A	E2B	PCE*	E4A	Total		
Death; Major injury (RIDDOR); Fire; Significant (EA reportable) release to	**Serious Incidents (SI)**	0	0	0	0	0	0	0	0	0
IP is removed from site for treatment or recovery	**Lost Time Injury (LTI)**	0	0	0	0	0	0	0	0	1
Minor injury treated on the site with basic first aid	**First Aid Injury (FA)**	0	0	0	0	0	0	0	0	17
An event not causing harm, but has the potential to cause injury or ill health	**Near Miss / Close Call (NM)**	1	0	1	3	0	0	5	7	26
As RIDDOR	**Dangerous Occurrence**	0	0	0	0	0	0	0	0	4
Something outside Project control that causes us to take action e.g. nearby fire, flood, site protest, UXB	**External Event with Impact (EXT)**	0	1	0	0	0	0	1	1	36
A set of conditions or circumstances that have the potential to cause injury or ill health, including poor procedures	**Undesired Circumstance (UC)**	5	6	5	5	0	3	24	19	115
Abuse, physical threats or actions short of violence	**Threatening Behaviour (TB)**	0	0	0	0	0	0	0	0	0

Accident Frequency Rate (AFR***)

	NLHPP	Construction Industry
AFR for Reporting Period	0.00	2.32

**** The Accident Frequency rate enables comparison of accident rates against hours worked rather than the number of accidents. The calculation is (number of accidents) / (number of hours worked on site) x 100 000. Thus, a project with 1 million hours worked and 3 LTIs would have an AFR of 0.3. The values shown*

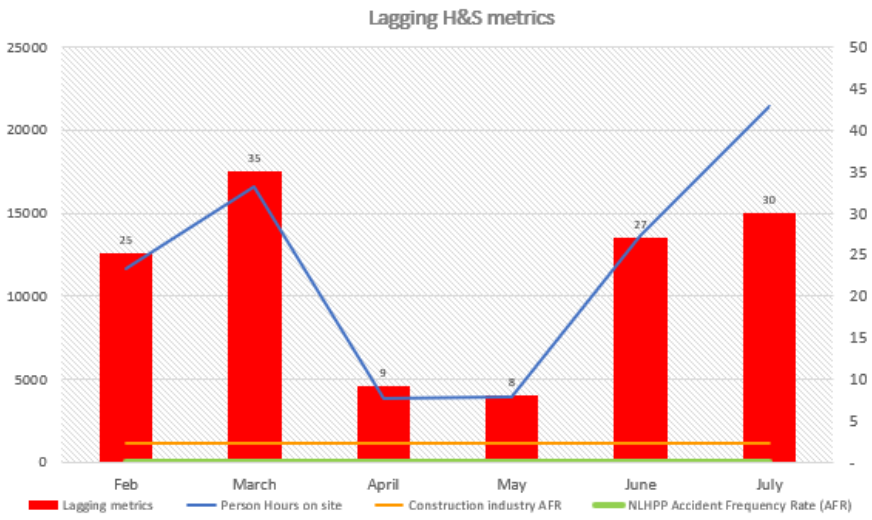


Figure 1 represents the total hours worked on site against lagging H&S metrics for each reporting period and the NLHPP Accident Frequency Rate (AFR) comparing to the Construction industry AFR

Leading Metrics

		Period July 2020							Period June 2020	Total to Date**
		E1A2	E1B	E2A	E2B	PCE*	E4A	Total		
Any action or suggestion, idea, behaviour that is 'above and beyond' compliance	**Positive Behaviour (PB)**	0	0	0	2	0	1	3	16	108
Anything volunteered and not resulting from a formal assessment or audit. Positive or negative.	**Safety Observation (SO)**	0	4	6	1	0	0	11	9	72
Site visits by Senior Leadership	**Leadership Engage-**	1	1	1	1	0	1	5	1	6
Weekly site inspection visits by H&S advisors	**Site Inspection Visits**	4	4	4	4	0	2	18	23	76

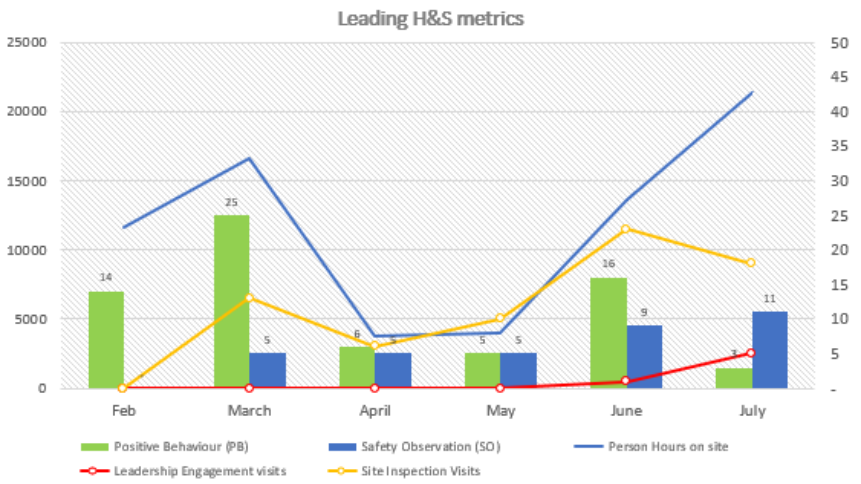


Figure 2 represents the total hours worked on site against leading H&S metrics for each reporting period

		Period July 2020	Period June 2020	Total to Date
Health, Safety and Wellbeing Alerts	**HS&W Snapshots**	6	6	27

HS&W Snapshot	Date Issued
Buried Services	2nd July
Social distancing on site	3rd July
Expectations when returning to work (COVID guidance)	10th July
Buried services - good practice	17th July
The importance of site security	24th July
Introducing our new Health, Safety and Wellbeing team	24th July

COVID –19 RELATED (according to CLC SOP****)

		Period June 2020							Period June 2020	Total to Date***
		E1A2	E1B	E2A	E2B	PCE*	E4A	Total		
Incidents/Observations related to COVID-19 (positive, negative or observations)—already accounted for in the above incident reporting categories	**COVID –19 related**	0	1 PB, 2 UC	1 PB	1PB	0	0	5	17	56

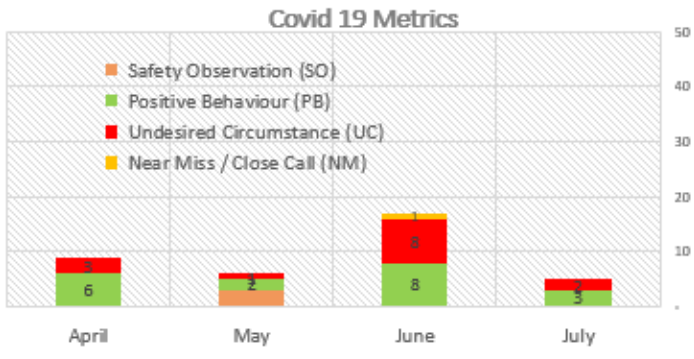


Figure 3 represents the COVID-19 related metrics for each reporting period

* Portacrest Cabin EcoPark ***Total to date: from April 2019 to the end of the reporting period , ****Construction Leadership Council Site Operating Procedures*

Site Summary

Site	Key Incidents on Site	Response/Action
E1A2 - Laydown West	Richmond excavator operating without banksman and blind to pedestrian route gate behind counterweight.	Brought to the attention of BGCL, to ensure that banksman directs plant movements especially near pedestrian routes.
	Fences need to be monitored and secured to better standard at two points on Lee Parkway works	Fence around Japanese knotweed area unsecured and untidy . Fences at Enfield ditch where excavation and bridge abutment works were incomplete and unsecured. Issue dealt with during visit, but this should be under continuous review.
E1B - Northern Access	Operative in open unsupported trench (confirmation of safety not yet received from TW designer)	Operative removed immediately. Galldris to review how this came to happen
E2A - Transport Yard	Operative cutting rebar on ground , resulting in dust cloud. No mask being worn	Operative should have cut on supports to avoid cutting into concrete. This was dealt with immediately
	Some lapses in security or stability of edge protection fencing	Galldris to ensure that fences are linked together and on secure footing, and not too close to edges, as there were a few points where this was not the case
E2B - Sewer Diversion Enabling works	Excavations, by hand (as per RAMS), to a trench (600mm deep x 400 mm wide) for service ducts. At approximately 1040 hrs one of the Galldris groundworkers struck an unknown (uncharted) water mains with his shovel. 110 mm PVC pipe, encased in a thin layer of concrete (approx. 10 mm agg size). Pipe cracked and water proceeded to fill the trench. Approx water pressure - not more than 2 bar. All workers immediately cleared the area. No injuries. Area is directly outside of Wood NEC Site Supervisor's office so was noticed immediately.	LEL, Galldris, Wood and Arup Mgt on site. Immediate action was to call LEL and make safe (isolate water supply) to enable investigation and potential repair. Repair being dealt with by Galldris. Call from NLWA Constr Mgr at 14:50 hrs to inform all works across SDEW to cease with immediate effect. PC to be instructed by NEC PM. To be investigated by LEL, Galldris, NLWA and Wood. Investigations ongoing and excavations suspended until lessons learned
	Fire exit access from contractors portacabin rendered unusable by trench dug for uncharted water pipe (the one involved in the above incident)	Fire exit initially blocked for short time to permit digging, but since the incident occurred, the trench had been left open so that fire exit in Portacabin remained out of use. Galldris to backfill trench or build bridge over it to enable fire exit use. This was done on same day of request.
	Concrete delivery truck arrived on site without operating audible reverse signal . Vehicle was moved on to site with Galldris Banksman so operation was safe.	Driver was told by Galldris not to return to site with this vehcile until the audible signal is repaired
E4a - Site Wide Intrusive Works	Undesired Circumstance (UC) noted in relation to further unchartered buried services and asbestos.	Galldris responded by Brief of the operatives, how important it is every time we break the ground. Galldris proceeding with caution, particularly with concrete covered areas with undetermined services. Asbestos Materials have been segregated and to be tested.

In Period Commentary on H&S Issues

July activity has been dominated by not only the site re-remobilisations, but also by the transition to the new Health, Safety and Wellbeing team of Mike Forsyth, Richard Procter, Jonathan King, Don Cody, Nick Williams, James Keirle and Lindsey Jones, to be followed up with the addition of Paul Popescu in early August. During this transition to the new health, safety and wellbeing team, the site visits and inspections have been increased to several times per week and by several people at the same time. This level of intensity is related only to the handover and does not imply any greater concerns about the ability of the contractors to manage the obvious risks.

Overall COVID-19 issues have been managed well. The Construction Leadership Council (CLC) Site Operating Procedures (SOPs), V5 released on Wednesday 1st July, for controlling the spread of COVID-19 are not significantly different to prior recommendations; no substantial changes to the project's COVID-19 management have been made. It is important to note that both Galldris and Buckingham have elected to maintain >2m social distancing despite the Government's suggestion that this could be relaxed. Where work has to be undertaken with operatives closer than that, additional PPE is required.

Disturbingly the month has seen a series of problems where services have been encountered during trial excavations. The Pre Construction Information provided by the Principal Designer has qualified all of the site information with warnings about the poor level of accuracy and completeness of the data they have been able to obtain. Furthermore it was anticipated by them, the client and the contractors that further previously unrecorded services of all types would probably/inevitably be encountered.

This is an area of great concern. Even though hand digging to 0.5m and/or VacEx should expose unknown services without prejudicing their integrity, this is not always the case. There have been two occasions when (water) services were breached; the first resulted from a poor decision by the operatives involved who were not at the time being supervised, and the second was hit with a hand spade which should not have lead to the breach. It may be that the pipe itself was flawed or particularly fragile, but this is pure speculation. The incident investigation for this latter breach is still ongoing. Both of these and other occasions of discovering unmapped services have been followed up with safety stand downs and all have been reminded of the project mantra "safety first".

The incident investigation report for the services strike of 20th June on the Sewer Diversion Enabling works has been concluded and is appended. The main area of concern regarding this incident is the level of buried services information and certainty. The HSW team have consulted to the project team and discussions are ongoing regarding prioritisation of the Ground Penetration Radar surveys, site wide in order to give a wider understanding of the potential for unchartered services in any given area. Linked to this, it appears that the contractor's may not be issued the latest information as they are reportedly not using ASite for project information. HSW Incident 20-06-2020 Investigation Report Link

There are no health, safety or wellbeing issues to report this month, however after last month's issues, site security is still high on the agenda.

The Health, Safety and Wellbeing Management Plan and the Assurance and Best Practice Reference Documents have been included in the ERF tender documents for reference and for information purposes only. There has been useful feedback from across the NLHPP team on these documents and further improvements are ongoing as noted.

The Health Safety and Wellbeing development programme attitudes survey has confirmed recommendations to increase the visibility and engagement of the development initiatives and the Health, Safety and Wellbeing Team. A programme of activities to reflect this is being developed in liaison between the HSW and culture survey teams.

Strategic Overview

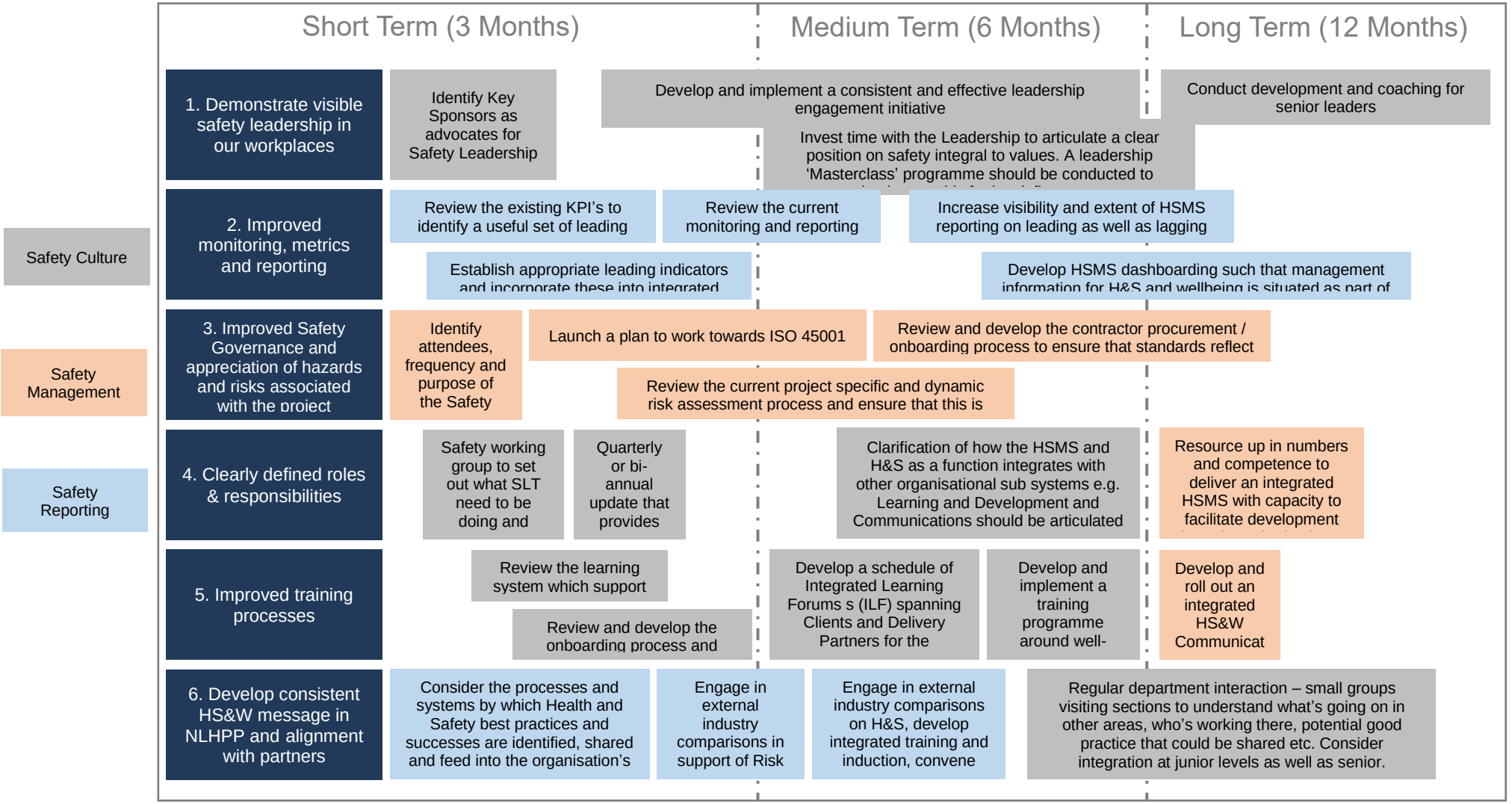
Completed during the reporting period	Activities In progress	Look ahead for next period
Onboarding of new HSW Team, inductions, site visits and HSW review	Investigation into 2nd Service Strike	Re-Establish Safety Engagement Tours by NLHPP SLT and LEL Senior Management.
Completion of HSW incident investigation report 20-06-2020	Enhancing the culture and behavioural system under the "Safety First" principle	Complete NLHPP H&W Induction following video provision by DC.
Analysis of HS&W survey results has lead to a programme of works to be implemented over the next months.	Updating the current HS&W plan, Assurance Plan and Best Practice plan to form a single HSW Stakeholder Manual.	Complete HS&W Stakeholder Plan as draft for SLT presentation.
Health & Safety Summit undertaken with great feedback which is informing the HSW Development Programme moving forward alongside H&S Working Group.	Developing an improved Safety Observation and H&S incident reporting tool, based upon and utilising the Asite H&S Module.	Complete work with Information Manager to develop and introduce new Safety Observation and Incident Management System.
6No. HSW Snapshots developed and issued to project.	Analysis of HS&W survey results has lead to a programme of works to be implemented over the next months.	Complete HS&W Development prograrmme for continual actions moving forward.
All "Business as Usual" delivery aspects picked up, owned and being delivered by new HSW Assurance Team.	Programming HSW forums and groups to obtain the best possible improvement platform for feedback into the SLT.	Update and establish all HSW owned and directed forums.

4 HS&W Development Report

Moving on from the original ideas for health, safety and wellbeing development initiatives, the results of the online survey have become available and have been circulated.

Further work on the findings and Recommendations, is presented in a similar form in the illustration on the next page (Figure 1). This is currently being developed into a specific action plan to be suitably project managed with tasks, timescales and owners. This action plan will be issued to the SLT in due course and appended to the August MPSR report.

Figure 1: Recommendations from the Health, Safety and Wellbeing online survey



4.1 HS&W key development areas

The Recommendations shown above are currently being developed into a detailed programme of works with specific deliverables, tasks, timescales and owners. The key and immediate priority themes are:

1. Demonstrate visible safety leadership in all the workplaces
2. Improved monitoring, metrics and reporting
3. Improved safety governance and appreciation of hazards & risks
4. Clearly defined roles and responsibilities
5. Improved awareness and training
6. Develop a consistent message about what H&S means for NLHPP and an ambition towards alignment on this with the project Partners

The new HSW team are working alongside the specialists that have undertaken the HSW Culture Survey, to develop an Action Plan of HSW improvements across these themes. The draft outline of this action plan is provided in links below, with a full delivery of the final plan to the SLT planned for 15th September 2020.

HSW Development Action Plan

HSW BAU Action Plan

4.2 Development programme look ahead

The new Health, Safety and Wellbeing (HS&W) have now undertaken a full desktop review of the current HS&W management systems and are progressing further development of:

- Enhancing the culture and behavioural system under the “Safety First” principle, including an induction process.
- Updating the current HS&W plan, Assurance Plan and Best Practice plan to form a single HSW Stakeholder Manual outlining information, procedure and input for all parties in relation to HSW.
- Developing an improved Safety Observation and H&S incident reporting tool, based upon and utilising the Asite H&S Module.
- Programming HSW forums and groups to obtain the best possible improvement platform for feedback into the SLT.

APPENDIX A: DEFINITIONS AND GLOSSARY

RIDDOR-Definition

- Types of reportable injury
- The death of any person
- All deaths to workers and non-workers, with the exception of suicides, must be reported if they arise from a work-related accident, including an act of physical violence to a worker.
- Specified injuries to workers
- The list of ‘specified injuries’ in RIDDOR 2013 replaces the previous list of ‘major injuries’ in RIDDOR 1995. Specified injuries are (regulation 4):
- fractures, other than to fingers, thumbs and toes
- amputations
- any injury likely to lead to permanent loss of sight or reduction in sight
- any crush injury to the head or torso causing damage to the brain or internal organs
- serious burns (including scalding) which:
- covers more than 10% of the body
- causes significant damage to the eyes, respiratory system or other vital organs
- any scalping requiring hospital treatment
- any loss of consciousness caused by head injury or asphyxia
- any other injury arising from working in an enclosed space which:
- leads to hypothermia or heat-induced illness
- requires resuscitation or admittance to hospital for more than 24 hours

Over-seven-day incapacitation of a worker

Accidents must be reported where they result in an employee or self-employed person being away from work, or unable to perform their normal work duties, for more than seven consecutive days as the result of their injury. This seven-day period does not include the day of the accident, but does include weekends and rest days. The report must be made within 15 days of the accident.

Over-three-day incapacitation

Accidents must be recorded, but not reported where they result in a worker being incapacitated for more than three consecutive days. If you are an employer, who must keep an accident book under the Social Security (Claims and Payments) Regulations 1979, that record will be enough.

Non-fatal accidents to non-workers (eg members of the public)

Accidents to members of the public or others who are not at work must be reported if they result in an injury and the person is taken directly from the scene of the accident to hospital for treatment to that injury. Examinations and diagnostic tests do not constitute ‘treatment’ in such circumstances.

There is no need to report incidents where people are taken to hospital purely as a precaution when no injury is apparent.

Occupational diseases

Employers and self-employed people must report diagnoses of certain occupational diseases, where these are likely to have been caused or made worse by their work: These diseases include (regulations 8 and 9):

- **COVID-19 deaths or illness potentially arising from exposure while at work**
- carpal tunnel syndrome;
- severe cramp of the hand or forearm;
- occupational dermatitis;
- hand-arm vibration syndrome;
- occupational asthma;
- tendonitis or tenosynovitis of the hand or forearm;
- any occupational cancer;
- any disease attributed to an occupational exposure to a biological agent.

Dangerous occurrences

Dangerous occurrences are certain, specified near-miss events. Not all such events require reporting. There are 27 categories of dangerous occurrences that are relevant to most workplaces, for example:

- the collapse, overturning or failure of load-bearing parts of lifts and lifting equipment;
- plant or equipment coming into contact with overhead power lines;
- the accidental release of any substance which could cause injury to any person.
- Additional categories of dangerous occurrences apply to mines, quarries, offshore workplaces and relevant transport systems (railways etc).

Gas incidents

Distributors, fillers, importers & suppliers of flammable gas must report incidents where someone has died, lost consciousness, or been taken to hospital for treatment to an injury arising in connection with that gas. Such incidents should be reported using the Report of a Flammable Gas Incident - online form.

Registered gas engineers (under the Gas Safe Register,) must provide details of any gas appliances or fittings that they consider to be dangerous, to such an extent that people could die, lose consciousness or require hospital treatment. The danger could be due to the design, construction, installation, modification or servicing of that appliance or fitting, which could cause:

- an accidental leakage of gas;
- incomplete combustion of gas or;
- inadequate removal of products of the combustion of gas.
- Unsafe gas appliances and fittings should be reported using the Report of a Dangerous Gas Fitting - online form.

AFR Definition

Accident Frequency Rate is [(Number of injuries in the period)/(Total hours worked during the period)] x 1,000,000. ie the number of injuries per million hours worked. Annual Injury Incidence Rate is [Number of reportable injuries in financial year)/(average number employed during the year)] x 100,000.

When the total hours being worked is not or cannot be recorded accurately, the accident frequency rate will be calculated as follows:

NRA / ANE x 100,000

Where NRA is the number of reportable accidents in the previous 12 months. The number of reportable accidents is defined as the total number of RIDDOR accidents (as defined by the Health and Safety at Work Act), across all the Contractors including its sub-contractors; and in the previous 12 months shall mean the previous 12 month period relevant to each current month.

ANE is the average number of employees over the previous 12 months which shall take into account the following:

- Where subcontractors provide part of the service the number of subcontract workers should be included.
- Head office and management staff should be included.
- The Contractor shall take a reasonable view on the use of part-time staff and sub-contract workers when calculating the number of employees.

Incidents & Observations

An incident, in the context of occupational health and safety, is an unintended event that disturbs normal operations. OSHA defines an incident as "an unplanned, undesired event that adversely affects completion of a task." Incidents range in severity from near misses to fatal accidents.

“A safety observation report is a tool used by safety officers to document hazards as well as safety commendations in the workplace. ... Performing and documenting regular safety observations can ensure a safe workplace as well as share best practices with other teams.”

APPENDIX B: PRINCIPAL DESIGNER TRACKER

CDM 2015 Principal Designer Tracker

Tracker for July 2020

Key:

issued / closed
in development / on track / as expected
issues developing / late delivery
cause for concern

	Wood PD Contact	Project Stage	PCI + Hazard Maps	Design Risk Management Register	Design Change in Construction	Health and Safety File
Project						
Laydown Area East	-	completed	issued at tender stage	carried over to LDA-W	package completed	carried over to LDA-W
Laydown Area West and Eastern Access	C Oliver	in construction	issued at tender stage			in development
Sewer Diversion Enabling Works	P Minto	in construction	issued at tender stage			in development
Sewer Diversion Main Works	P Minto	contractor design	issued at tender stage		construction yet to commence	in development
Hawley Road Transport Yard	P Minto	in construction	issued at tender stage			issued to Contractor
Northern Access Road	J Hewett	in construction	issued at tender stage			issued to Contractor
EcoPark South	C Oliver	tender	issued at ISFT		N/A	N/A
Energy Recovery Facility	C Oliver	tender preparation	issued at SQ		N/A	N/A
Northern Area Clearance	C Oliver	tender preparation	issued as draft		N/A	N/A
Site wide phasing	M Krym	design	-		-	-
Site wide utilties	M Krym	design	-		-	-