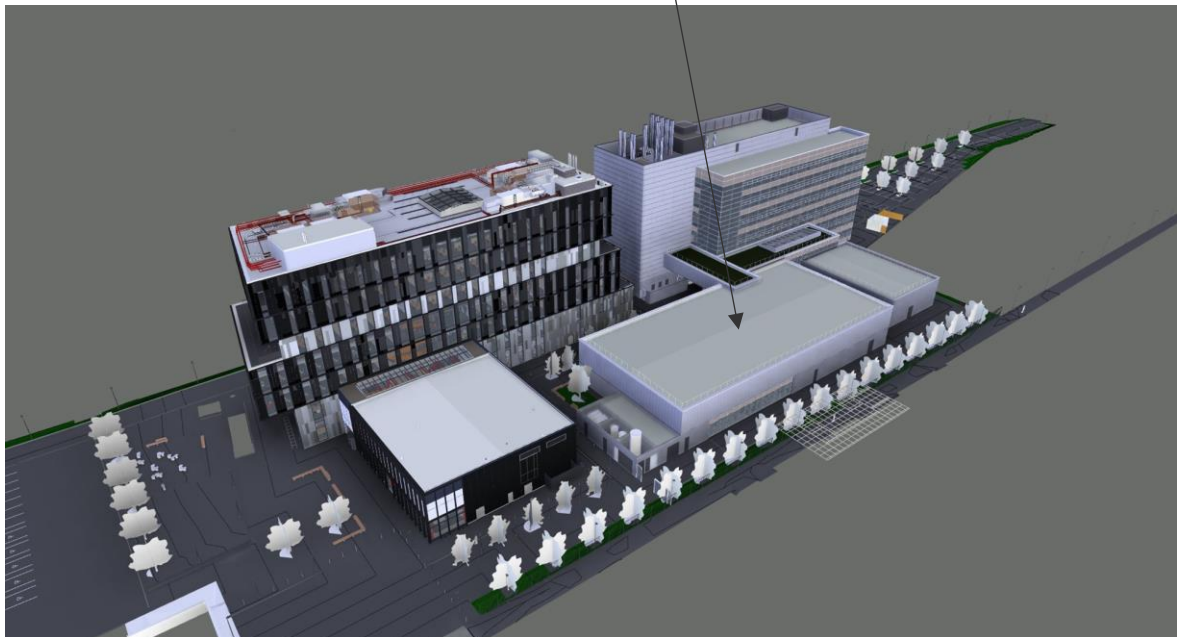


Ellis Moore – Student Number; 1811157

Project Control – Assignment 01

Date of Assignment Submission – 09.12.19

Steel Erection for Zone 5 (MS at the rear of document)



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Main body of work

Introduction

The purpose of a method statement is to give a general and then detailed breakdown of a task's risks, procedures, legislation and overall construction points.

The method statement that has been extracted to use for this assignment is in relation to the Cardiff Innovation Centre (CIC) which is currently being constructed by Bouygues UK Limited (Principle Contractor) for Cardiff University (The University of South Wales).

CIC is a £130M scheme that is compiled of 5 zones. Each zone has a specific purpose at the finished project such as research of highly sensitive machinery and atom analysis. The site is in the centre of Cardiff next to a railway, so the buildings are all provided with "vibration mitigation" to attempt to mitigate any vibration through the earth that could force the research off true results

Bouygues UK Limited are a multinational multibillion-pound organisation that have a large amount of experience inside of the education sector. Their experience is unquestionable and allows them to adapt to issues presented within the scheme, such as flooding, evolving clients, budget analysis, new construction techniques for new internal systems and such more.

Morgan's of Usk Ltd (MOU) have been deemed the subcontractor for the erection of the steel frame for Zone 5 (TRF) under Bouygues UK Limited. The method statement I will be analysing will be the form document sent from MOU to Bouygues UK Ltd.

Review of method statement

General Information

The start of the method statement document investigates a few general admin points. Who is receiving the document, company information, key personnel involved with the document and much more. This section also includes general rules of practise for the company on all its jobs. These are not specifically linked to the CIC job, only general rules that are carried over as a "do minimum" template.

Key legislation is stated early in the document to reiterate the contractors understanding of their role and reasonability's. Some examples of the key legislations are as follows;

- The Provision and Use of Work Equipment Regulation 1998
- The Health and Safety (First-Aid) Regulation 1981
- The Work at Height Regulations 2005

The stated legislation will be kept to by the contractor and will be checked by the principle contractor. Legislation is an important part of a Method Statement and this is reinforced by allocating the first point of the main section under pure legislative text. Some of the legislation is NOT specific to the task being carried out BUT this creates a comfort blanket to the principle contractor to show he understands the policy's potentially relating to the works.

Policy documents relating to the works are also given in this first section as they cover all bases the task could relate to. These policy documents include the following;

- Safety Policy Statement Documents
- Environmental Policy Statement Document
- Insurance Documentation

These general points then lead into default statements that like the legislative section, give a brief standard overview of the company's understanding of their process and outlook of their usual task involvement. The points include;

- Safety on site
- Contracts managers responsibilities
- Specification and tolerances
- Safety harness procedures
- PPE outlines
- Crane orientation plans
- Deliveries procedure

As stated previously, this first section only overviews general procedures and default phrases. More detailed, task specific points are written in full in the RAMS documents that are located in the site offices with senior members of staff.

Prior to commencing work

This section of the method statement states actions / procedures that the principle contractor needs to carry out to allow the contractor erecting the steel to carry out their task inline with programme. One of these actions is as follows; "True grid lines to be on all column bases / supports" and "suitable access to site". If the principle contractor does not carry out the "prior to commencing of work" tasks, this could cause a delay with the purposed works and put the contractor in delay which will have a financial and external image repercussion.

This section also outlines any tasks that the contractor needs to carry out pre erection of the steel to allow a reduction in the unknown risks. This would include extended ground surveys for power cables, drainage, personnel availability etc.

Methods and Practices of Working

The section stated has a key role in this document, it states actual methods and practises that are relevant to the task and show knowledge of the logistics of the task. Some key items are as follows

- Steelwork erection strategies (4 points ranging on conditions / site staff's experiences)
- Safety points relating to the task set out in the method statement.
- Key procedures from unloading to final fitment.

There are many more points within this section but the above are some of the main items. The points throughout this section inform the site managers / principle contractor that the subcontractor knows what he needs to be aware of when carrying out the stated task. This suggests competency but will need to be kept to full when on site.

An example of how important this section is follows thusly. Steelworkers are lifting a steel beam with 2 chains and straps and the straps fail causing the beam to drop to the ground violently. The principle contractor will investigate the equipment and make sure that the straps they had indicated in their method statement had been used during this task.

The risk assessment section of the method statement (further on in the document) should show a detailed plan of the correct proposed erection of the steelwork bringing forward one of the methods of erecting shown in this section. The purposed methods could be legislation / British Standards so these must be checks before signing the contractor. This is essential to this document.

Safe method of work

This section outlines key points regarding key items to allow the work to be carried out safely. Please see below for key examples;

- Firm ground conditions
- MEWP procedures
- Lifting by crane
- Procedures for releasing weight from a crane's support

These confirm that a site is safe to work on and there is minimal risk allocated to the design being incorrect causing steel structural failure.

Specific site erection

The scope of works is stated within this section, outlining key points regarding the upcoming task. This is important as it shows the principle contractor you have adjusted / analysed your task to meet site issues, constraints and requirements. The step by step plan "talks" you through the processes that will be kept to throughout the task, and if deviations are needed, the principle contractor will be informed and issued with a true reflection of the newly updated revised method statement. For example, the "plant" vehicles stated in point 6.4 may change due to issues with availability or maintenance. As specific plant vehicles are stated, an updated method statement would need to be submitted to the principle contractor so that the documents reflect true events.

This section also states key processes that MOU will do to erect the steel in an order that suits the site's ergonomics and principle contractor's programme.

Personal equipment (PPE)

This area states key pieces of PPE that must be worn by the steelworkers who are on site and carrying out the task. Bouygues UK Ltd have their down standards on PPE that will be incorporated into their site induction. The principle contractor can fully influence this section and state.

Assessment of Hazardous Substances

This section is dedicated to the thinking of COSHH and risk management. Risk ratings are allocated to a task/material to show its severity / risk on the site with its occupants.

Mitigation strategies for the risks are notes to show that risks have tried to be reduced when it is a noticeable issue. These are needed to reduce risk of life loss / injury on site and are risks agreed between the proposed and principle contractors. This section flows into the section stated below;

Risk Assessments

This section is vital in showing understanding of risks within a task. This section shows the principle contractor that MOU have understood the procedures they will be undertaking during the erection of the steel, risks allocated to these procedures, and ways they are intending to mitigate or (more likely) reduce risks on site.

The tables shown in this section allocate a risk to a specified task, its current risk, its mitigation proposal and its final risk calculation. This implies understanding of key risks and knowledge of mitigation proposals. If the task is too dangerous or likely after mitigation strategies have been purposed, the specific task may need to be replaced with a different strategy that doesn't include said risk.

Crane assessment / lifting plan

When a crane is in use for a project, a crane assessment must be carried out due to legislation. This assessment states how the crane will maneuver, what gridlines it will sit on during what erection stage it is at, and its lifting radius.

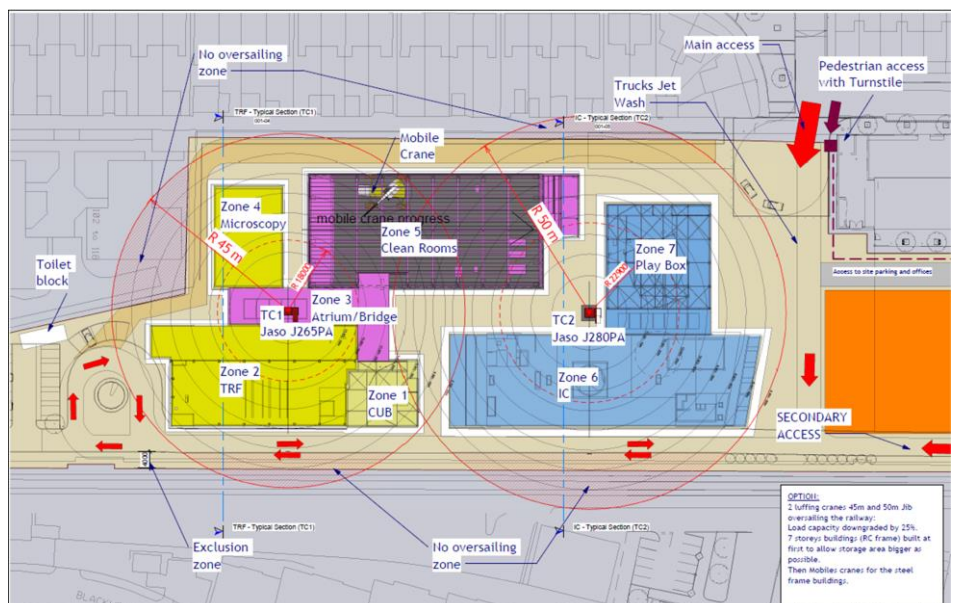
The crane assessment will also specify max weights on the task at hand and requests certain figures from the principle contractor to confirm (for example) that the ground is suitable for a crane specified and listed weighting.

This section also states the origin of the crane for audit purposes. The provider of the crane is usually on an approved suppliers list.

Restrictions of the crane are also specified in this area. It states in this document that common crane restrictions are not applicable to this scheme. No overhead cables have been stated, no underground services. No voids below ground.

Within this section is the following subsection – Management of Lifting Operations. This section outlines key stages such as crane supervisor appointment sheet. This outlines key responsibilities between the crane supplier and the principle contractor. This sheet also links back to the lifting plan and other key documents within this method statement to show due process.

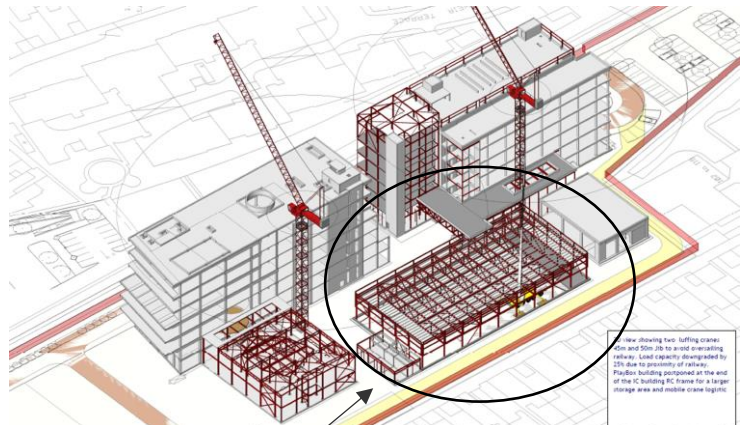
A position sheet is attached to this section to show the movement of the crane as it erects the steel structure. This plan has been agreed with Bouygues UK and meets their requirements. This is important as it shows the crane will be positioned, moved and its actual swing radius of its boom-end (image to the left shows examples of main cranes swing radius for MOU to consider). This allows all parties to add this into their site safety plans and make sure the stated works would be 1. Viable for



the site, 2. Meets requirements for time scale and 3.

The crane risk assessment also includes sub vehicles that will be assisting the erection of the steel. This task requires 2 “self- propelled articulating booms” that will lift workers to positions to guide steel beams, and portion bolts to secure their positions.

The final page of the document refers to lifting strategies regarding angles for connections by chains and straps. This allows the principle contractor to state if he believes these strategies for lifting are okay or will fail. This creates a clear picture of what the contractor will carry out, and if legislation isn't met, or the tasks method deviates from the method statement, the task will be deemed “non-compliant”



Zone 5

Conclusion

After undertaking the research above, the method statement document is fundamental to a project. It outlines key processes within a task, legislation that is relevant to able to the task and risk control features. The document follows a standard format and states its sections in the following order for easier understanding;

- General information that outlines standard practices for the business.
- Key legislation tat they agree to on all tasks
- Specific standards and processes linking to the specific task that will be carried out
- Mobilisation and responsibilities when on site
- Risk mitigation strategies
- Specific methods to complete specialist task

The document is highly practical at the construction site as it stores multiple sources of information under one banner. The document can show anything from risks, to legislation. The documents must be stored in the site office and be accessible for all members of staff (in person or electronically). The HSE will shut down a construction site does not have method statements present for all tasks that meet their standards.

The document has been analysed has been very effective at showing how the task will be carried out inline with key law, agreed processes and risk management. The Principle contractor would be happy to accept this method statement for the erection of steel for zone 5 for the job CIC as it is crystal clear and shows that the task has been fully considered by al parties to produce a highly details method statement, RAMS and much more.

The document meets legislation and shows that the contractor has a safe, secure strategy that will cause minimal risk to their working, and the principle contractors' site.

The most important part of a method statement is that it is relatable on a site. If a site manger wishes to see the methodology for lifting a certain section of steelwork, he would find it step by step within this document. This creates a “blanket method” that will be easy to follow for all, leaving no variations for items to fail.

No items are deemed as missing from this Method Statement.

References

MOU Method Statement for the erection of Zone 5 Steelwork.

NEC – Method Statement formal acceptance

Contract Management – Gleeds Project Mangers Handbook

Images – Internal source within project (NOT ONLINE)

There are no sources in the current document.



Morgan's of Usk Ltd

Woodside Works, Usk, Monmouthshire, NP5 1SS
Tel: 01291 672253 Fax: 01291 673196

METHOD STATEMENT FOR STRUCTURAL STEEL ERECTION **Zone 5**

CONTRACTS:	Zone 5 Innovation Campus
CONSULTANT ENGINEER:	CH 2MHill Glasgow Office City Park 368, Alexandra Parade Glasgow G31 3AU
PRINCIPAL CONTRACTOR:	Bouygues UK
CONTRACT NUMBERS:	MOU 8493
DATED:	12 TH September 2019
REVISED:	

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METHOD STATEMENT
SIGNATURES

NAME

COMPANY

DATE

Prepared by:

Clive Jones

Morgan's of Usk

11/09/2019

Design Check off:

N/A

Design Engineer Check off:

N/A

Issued to:

Ian Knight

Bouygues U. K

Erection
Supervisor

Morgan's of Usk
Erector

Contract File

Morgan's of Usk

CONTRACTS:

Bouygues U.K
Cardiff Innovation Centre
Maindy Road
Cardiff
CF 24 4HQ

CLIENT:

Bouygues U.K
Unit 4,
Ashtree Court,
Woodsy Close,
Cardiff.
CF23 8RW

CONSULTANT ENGINEERS:

CH 2MHill
Glasgow Office
City Park 368, Alexandra Parade
Glasgow
G31 3AU

PRINCIPAL CONTRACTOR:

Bouygues U.K

STEELWORK CONTRACTOR:

Morgan's of Usk Ltd,
Woodside Works,
Usk,
Gwent,
NP15 1SS

SUB CONTRACTORS:

Steel Erecting

Morgan's of Usk Ltd.

(Steel Erector Supervisor)

Metal Decking

N/A

**Pre-Cast
Installation.**

N/A

COMPANY INFORMATION

POSTAL ADDRESS:

MORGAN'S OF USK LTD,
WOODSIDE WORKS,
USK
GWENT,
NP15 1SS

LOCATION:

The Offices and Works are situated on the Woodside Trading Estate approximately one mile north west from Usk junction of the A449, proceed through the town, over the river bridge, turn left, BP garage on the right, the Morgan's Of Usk Ltd, sign and entrance will be seen on the right hand side of the road. The office block is adjacent to the first car park.

KEY PERSONNEL:

A MORGAN	MANAGING DIRECTOR
N MORGAN	FINANCIAL DIRECTOR
A THOMAS	GENERAL MANAGER
B JAMES	HEALTH & SAFETY MANAGER
NICK BOWEN	DRAWING OFFICE MANAGER
A THOMAS	WORKS MANAGER
C JONES	CONTRACTS MANAGER

MANUFACTURING WORKS:

MORGAN'S OF USK LTD LIMITED
WOODSIDE WORKS,
USK,
GWENT,
NP15 1SS
Tel: 01291 672253
Fax: 01291 673196
E-Mail www.mou.org.uk

SAFETY POLICY STATEMENT

It is the aim of Morgan's of Usk Ltd to safeguard the health and safety of all its employees, customers, visitors and others who may be affected by its activities and to pursue a policy which as far as it's reasonably practicable, ensures that:

- its business is conducted in accordance with the best-known practices for the promotion of health and safety at work:
- a safe and healthy working environment is established and maintained at all its operating locations and that plant and machinery is designed and constructed and new processes are developed in accordance with this policy:
- there is full compliance with relevant statutory provisions for the health and safety both of employees at work and the general public:
- directors and managers at all levels are encouraged to regard health and safety matters as being of at least equal importance to that of their other managerial responsibilities:
- adequate standards of training and instruction in matters of health and safety are provided and maintained at all levels of employment:
- co-operation of employees in promoting safe, healthy conditions and systems of work is encouraged by discussion and effective joint consultation:
- an adequate advisory service in matters of health and safety is provided and maintained:
- health and safety will be a standing agenda item at routine meetings between Employees, Managers, Directors and the Managing Director and in turn between Managing Director and the Main Board Directors:

This policy will be implemented through the Health and Safety Manual, of which it forms the first part.

The manual sets out the ways in which the company will pay due attention to its obligations under the law. The company intends to achieve compliance with statutory standards as a minimum, with the aim of achieving best practice where possible.

Basic safety rules for all employees have been set out in the responsibilities section of the Safety Manual. All employees must be informed of their personal duties for their health and safety, and the need to co-operate with the company.

Local management will ensure that both the health and safety policy and manual is published/brought to the attention of all employees, contractor's employees and any other persons working on site. Local management will ensure employees and others undertake to comply with these policies whilst on site.

This Policy, and the Manual, will be reviewed annually, when significant changes are made to the organisation, legislation or standards, or the assessments of risk alter.

Last Review	05/01/14	12/01/15	14/01/16	11/01/17	11/1/18	11/1/19		
Approved	AM	AM	AM	AM	AM	AM		

Environmental Policy

1. Morgan's of Usk Limited design, manufacture and erect structural steel buildings across the UK but primarily in South Wales and the South of England.
2. It is the Intent of Morgan's of Usk Limited to develop an environmentally aware workforce, to manage its activities so as to eliminate unnecessary or unacceptable risks to its employees, to third parties who may be affected by our work activities and to the environment.
3. We are committed to the prevention of pollution of land, water, air and nuisance due to noise or odour. Our operations shall fully comply with the Health and Safety at Work etc Act 1974 and environmental regulations, codes of practice and other requirements to which the company subscribes.
4. Morgan's of Usk Limited is committed to the ecologically sound and sustainable use of resources and strives to operate in a manner that minimises waste and protects the environment. We shall promote recycling where practical to do so.
5. We shall regularly monitor our environmental performance to ensure that its support functions are effective in maintaining and improving our environmental performance.
6. We shall ensure that newly installed plant and equipment is capable of meeting all existing and likely future control standards.
7. Morgan's of Usk Limited will continue to promote its commitment to safe and environmentally responsible behaviour through the training, education, information and co-operation of all staff.
8. Senior management shall actively encourage the implementation of these broad principles in all their business activity and ensure that the Environmental Management System of Morgan's of Usk Limited are observed. It is recognised that the success of this Environmental Policy ultimately lies within the commitment and dedication of each and every employee.
9. Morgan's of Usk Limited achieved "BS 8555" accreditation in January 2012, and are committed to continual improvement in its every day activities.
10. Mr Andrew Morgan (Director) shall be responsible for the implementation of our Environmental Policy.

ANDREW MORGAN
Managing Director
10th November 2018

Version 1.1
Review Date:
15/02/19

"IF IT'S IN STEEL, WE MAKE IT"



**Morgan's of
Usk Ltd.**

**Constructional
Engineers**

**Woodside Works,
Usk, Gwent NP15 1SS**

**Tel: 01291 672253 Fax:
01291 673196**

Email: andyt@mou.co.uk

*Specialists in Industrial and
Agricultural Buildings*

Reg. Office:
Grove House,
3 Park Grove,
Cardiff. CF1 3BL

Company Reg. No. 2137982

1.0 GENERAL

1.1 It is the intention of Limited and its nominated sub contractors to carry out the erection of the steelwork in accordance with: -

The Management of Health & Safety at Work Regulations 1999

The Provision and Use of Work Equipment Regulations 1998

The Manual Handling Operations Regulations 1992

The Personal Protective Equipment Regulations 2002

The Control of Substances Hazardous to Health Regulations 2002

The Electricity at Work Regulations 1989

The Noise at Work Regulations 2005

The Health and Safety (First-Aid) Regulations 1981

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

The Lifting Operations and Lifting Equipment Regulations 1998

The British Standard BS7121: Parts 1, 3 and 5: Safe Use of Cranes

The Construction (Head Protection) Regulations 1989

The Construction (Design and Management) Regulations 2013

DSEAR 2002 (Formally Highly Flammable Liquids and Liquefied Petroleum Gases Regulations)

The Safety Representatives and Safety Committees Regulations 1977

The Health and Safety (Safety Signs and Signals) Regulations 1996

The Work at Height Regulations 2005,

The BCSA blue Erectors Manual.

1.2 The on-site activity of the erection of structural steelwork for a new Innovation Centre, the steel erection will be carried out by a nominated sub-contracting company who have demonstrated their competence in the erection of structural steel, the installation of pre cast floor units will be carried out by others. Their labour on site will be controlled by a full time competent trained SSST Supervisor, supervised by Morgan's of Usk Ltd directly employed Contracts Manager. The sub-contractor will provide evidence that his labour, on

Morgan's of Usk Ltd sites, will have been trained in plant awareness, managing safety, slinger, mobile elevated work platforms and others associated with the work being carried out. Those having received training will keep on their person at all times their identity card for inspection. All certificates will be entered in Morgan's of Usk Ltd record sheets, and will also be offered to Bouygues U.K, for inclusion within the Health and Safety file.

1.3 Safety on site will be supervised by the SSST supervisor, and will be monitored by Morgan's of Usk Ltd Contracts/ Safety Manager, who will carry out inspections and make recommendations to improve safety. Regular tool box talks will be given by the Contracts Manager. He will have the responsibility to stop working practices if he feels it is not in the operatives, or company's, best interest in complying with current legislation. The Contracts/Safety Manager will also report to Bouygues U.K site manager, on hazards etc associated with other trades or companies engaged on the site, local to Morgan's of Usk Ltd work area.

1.4 Morgan's of Usk Ltd Contracts Manager will make regular visits to site to attend progress meetings, monitor site activities, enforce Health and Safety requirements and update programmes as required he will be invited to attend all Health and Safety meetings. Morgan's of Usk Ltd Contracts Director will maintain an involvement throughout the contract.

1.5 SPECIFICATION AND TOLERANCES

All steelwork will be erected generally in accordance with the specification of The National Structural Steelwork Specification 5th Edition.

1.6 SAFETY HARNESES

On this contract the work will be carried out, working out of MEWPs. (Geni Z45s straight and articulated), Men working aloft must at all times be wearing an approved safety harness (4.0 Para 6 - Morgan's of Usk Ltd 'Safe Method of Work). Morgan's of Usk Ltd will provide mobile elevated work platforms wherever practical to work off, whereby a fall restraint 1200mm long, will be attached to the platform anchorage point. Harnesses to be inspected for wear and tear by the user every week and the findings to be recorded on the

appropriate paperwork. Waist type belts will not be permitted on any Morgan's of Usk Ltd sites.

1.7 SAFETY HELMETS

To be worn at all times. See Morgan's of Usk Ltd policy on the wearing of Safety Helmets on Construction Sites 5.0.

1.8 SAFETY FOOTWEAR

All erection personnel will wear approved toe protector type shoes/boots at all times.

1.9 GLOVES & GLASSES

Erecters are to wear the appropriate gloves& Glasses for the work being carried out, at all times, erecters will wear general purpose site gloves. All to BSS specification

1.10 HIGH VISIBILITY JACKETS

All Morgan's of Usk Ltd sub-contractors and visiting personnel will wear yellow high visibility jackets or vests at all times when on site. This is to include all crane and lorry drivers. The SSST supervisor will wear an orange supervisor marked vest. All slinger/banksmen are to wear orange high visibility vests. 1.10

1.11 CRANE CO-ORDINATION PLANS

The Site Manager of Morgan's of Usk Ltd, will present to Bouygues U.K his crane positions and lifting operations on a daily plan, copies to be held by all slingers and SSST supervisor. It may be necessary to change the plan if circumstances change and notification will be in writing to Bouygues U.K prior to any changes.

The slinger on the ground will attach the chains, and signal the lift to the crane driver, once lift is in the air, the slinger will direct the lift to the position required.

1.12 DELIVERIES

Deliveries to the site, the driver will contact the erecters on approach to the site, in order for the lorry to be escorted onto the site through the designated routes.

Delivery Restrictions:

8-00am to 16.00 All drivers must ring ahead to pre book delivery's

Speed limit to be 5 mph,

The Site Manager of Morgan's of Usk Ltd will notify Bouygues U.K the day before any deliveries are scheduled for the following day. He will also make sure that the lorries are kept off site until such time as an unloading area within the site is available, lorries to be escorted by a Banksman.

1.13 METHOD STATEMENT SIGN OFF SHEET

The Contracts Manager and all Morgan's of Usk Ltd sub-contract personnel are to be briefed on the Method Statement, Risk Assessments etc, and will be asked to sign the appropriate sheet at the rear of this Method Statement to say they have been briefed and that they understand it. This will also include the Mobile Crane drivers.

2.0 PRIOR TO COMMENCEMENT

- 2.1 Bouygues U.K is to establish scribed crossed lines of the true grid lines on all the column bases/supports and any lines which may be set at angles to the main setting out lines to enable Morgan's of Usk Ltd to set out the frame correctly.**
- 2.2 Morgan's of Usk Ltd will carry out a survey of the site to determine the adequacy of the access, temporary roads, the over site preparation and to check the dimensional accuracy, setting out, and the levels of the concrete bases and holding down bolts prior to commencing erection on each phase. Notifying Bouygues U.K of any inaccuracies found.**
- 2.3 Bouygues U.K will provide suitable access, firm level and blinded temporary roads, together with over site hard core, suitable for the use of our cranes and vehicles up to 38 tonnes gross, and articulated boom access platforms 6078 kg or similar. Where necessary, attention must be paid to road curvature and gradients.**
- 2.4 Bouygues U.K must ensure that the whole working area is clear of any obstruction, open trenches, etc and clear of materials and labour associated with other Contractor's work.**
- 2.5 Personnel, other than the erection gang, to be excluded from areas where overhead working creates a risk to safety. Morgan's of Usk Ltd will provide and maintain signage around the erection area of overhead working.**
- 2.6 Any risk from overhead/underground services (e.g. power lines) to be notified by Bouygues U.K who will be responsible for providing barriers etc.**

2.7 Special attention must be given to the adequate anchorage of any 'drilled in' by others, which are being used as HD bolts, and the following aspects must be observed:

- 1 Check with the design Engineer.
- 2 Verify from Bouygues U.K that 'pull out' tests have been conducted on at least a random 10% of bolts with not more than one bolt tested from any one column base position.
- 3 Obtain copies of the test certificates relating to the tested bolts. If any doubt exists concerning the cured strength of the bolts then the stanchions are to be wedged before being released from the crane.

3.0 METHODS AND PRACTICES OF WORKING

3.1 SLINGING

Steelwork members to be erected in a level or slightly sloping plane will be slung by one of the following methods:

A daily slinging schedule will be completed, and will include what accessories that will be used, copies will be held by Bouygues U.K, and the site slingers and supervisors.

1. A single chain wrapped around the member twice at mid span.
2. Two chains wrapped around the member either once or twice at equal distance from the middle.
3. Duplex straps can be used as described for Nos. 1 and 2, the Duplex strap can be attached to the end of the chain, using the correct safety hook on the end of the chain.
4. Lifting Brackets bolted to the steel member (positive lifting)

Safety Points for Slinging

5. Know the weight of the load, as listed on delivery notes, identified by the part number of the member.
6. Slings must not be used for any load exceeding the safe working load stamped on the slings. They must have in-date test examination certificates.
7. When using double or multi leg slings do not forget the angle at which they are placed could affect the safe working load. Refer to Erectors Manual or check with a reference chart, or contact Morgan's of Usk Contracts Manager.
8. Make sure that the slings have located themselves correctly on the load.

9. Position the hook over the centre of gravity of the load for lifting to prevent the load from swinging.
10. Warn persons working in the immediate area where the lift is to be made of your intentions and provide warning signs and bunting to restrict entry to lifting area.
11. Protect slings on loads with sharp corners by using packing.
12. If in doubt seek advice from your Contracts Manager.

3.2 OFF LOADING

3 Permit to lift will be obtained from the site manager, prior to the work being carried out.

Steelwork will be off-loaded from within the site, adjacent to the crane. The erectors will unload the steel members with an inertia reel attached to the anchor point inside the cherry picker basket, which will be suspended above the rear of the load, or a telehandler if available. Suitable timber dunnage will be used to stack the steel members clear of the ground, and should be placed in such a manner as to prevent sliding or collapse of members. When steel is placed on top of steel, timber packs will be inserted between members. Components will be lifted singularly, or in bundles depending on size, shape and weight and commensurate with the capacity of the crane. Weights of individual members can be found on the delivery notes. Areas for off-loading outside the building footprint will be by agreement. Only certified Slingers will be involved in off-loading operations, The Slinger will check all lifting equipment before use. Slinger to ensure lifting equipment is suitably attached before authorising lift.

3.1 STABILITY

Where possible, erection should start where a stable box (e.g. braced bay) can be formed.

Where this is not possible steelwork must be adequately guyed. In all cases bracing and other stabilising members must be fixed as soon as the attaching members are in place. Temporary bracing positions, if required, will be shown on attached sketch/drawings enclosed. Morgan's of Usk Ltd, Design Engineers, have made their recommendations on the locations and system to be used.

3.2 ERECTION OF STANCHIONS

Stanchions will be slung from one leg of the chain brothers attached to a Dawson remote release clamp which will be clamped to the top of the stanchion to a pre-drilled hole location. Stanchions may be slung from one leg of the chain brothers with a double turn taken approximately 4/5ths from the base. Only chain slings with safety hooks should be used to carry out this operation. The use of open hooks is not to be used. The crane will take the strain until such times that all nuts have been fitted to the holding down bolts and tightened down. Use steel wedges and guy columns as appropriate in accordance with Morgan's of Usk Ltd "Safe Method of Work" (paragraph 4.3). When columns have been plumbed, lined and levelled and accepted by Bouygues U.K the holding down bolts to the underside of base plate to be grouted up with mix as specified by the Engineers. Release of lifting chains will be done off a powered access platform wherever possible.

3.3 ERECTION OF PURLINS

Cold rolled purlins will be generally uplifted singularly and fixed across the roof member; lines of purlins will be fixed at strategic positions for tying into erected roof members. Fixing of purlins will be carried out from powered access platforms.

ERECTION OF INFILL MEMBERS, HOT ROLLED PURLINS AND BRACING

UBS - RSC - CHS - RHS will be uplifted by crane, bolting up will be carried out by erectors working off powered access platforms. Safety harnesses will be worn being attached to; the anchor part of an access platform that is being used.

3.4 MOVEMENT OF LOADS

To be under the control of the crane co-ordinator or the nominated competent person.

1. Proper signals must be given by the person responsible for the lift to the crane driver Slinger, and no other person.
2. Before signalling to raise the load ensure all tackle is securely and correctly attached and that no other person will be in danger of injury from the hoisting of the load.

3. Always try a load to see if it is secure and balanced before hoisting and/or moving to the full height and distance.
4. Chains, slings or lifting tackle must never be dragged along the floor and when the load slings have been emptied see that the hooks of the slings are hooked up to the top ring before giving the signal to move off.
5. Large loads are to have rope steadying tails attached at all times.
6. Walkie-talkies may be required for use with tower cranes or if mobile driver's vision is restricted.

3.5 USE OF LADDERS / PODIUMS

- 1 **Note: Ladders / Podiums will be used on this contract for access onto lorry bed only.**
- 2 Ladder /Podium permit to be obtained from the site manager, and entered into site register.
- 3 Ladder/Podium must be serviceable and properly maintained at all times.
- 4 Podium to have a front access and egress gate
- 5 Ladder/Podium with defects or broken rungs should not be used and removed off site.
- 6 All ladders/Podiums must be secured at either the top or base and must protrude 1000mm above top level of structure.
- 7 Always check that the ladder/Podium is in position at the proper angle 75°, or 1 in 4 ratios.

3.6 CRANEAGE

The following will apply to all cranes working on sites under direct supervision:

- 1 All drivers to be trained and certified.
- 2 All cranes will carry current Test Certificates and Examination Reports.
- 3 All cranes will have on display load/radius indicators.
- 4 All cranes will have fitted overload warning devices.
- 5 Crane drivers will observe banks man's signals at all times.
- 6 A six-monthly check will be carried out on all chains and slings carried on all cranes.

Certificates to be checked for expiry date.

- 7 Crane pads supplied with the crane, to be used under the outriggers at no less than .750m x .750m x 50mm.
- 8 Bouygues U.K, to carry out CBR checks, and instruction issued if extra mats are required.

Slinger/ Signals

No crane is to be operated without a Slinger on duty at all times. The operator must follow the Banks man's instructions at all times. The Slinger should stand in a safe position where he can both see the load and be seen clearly. Walkie talkie radios may be required for certain conditions.

3.7 CERTIFICATION

All personnel engaged by Morgan's of Usk, and required to operate or use the following should have been trained and be in possession of a certificate for: -

- 1 CSCS.
- 2 CITB: SSST, For Site Supervisor
- 3 Mobile elevated work platforms IPAF.
- 4 Tele Handler. - CPCS
- 5 Mobile Cranes. -CPCS
- 6 Abrasive wheel
- 7 Slingers.
- 8 Tower scaffold erection, PASMA

3.8 WELDING AND BURNING

- 1 A hot works permit must be obtained from Bouygues U.K.
- 2 All oxygen/Propane cylinders to be used in a vertical position in a bottle trolley and not laid down.
- 3 On all gas cylinders suitable gauges must be fitted with flashback arrestors.
- 4 All hoses must be in good condition and secured to connections by crimped fittings.
- 5 All oxygen and Propane cylinders should be vertically stored securely within a lock-up cage when not in use.
- 6 All cylinders must be turned off after use and pressure released from hoses.

- 7 Check that the surrounding area is clear of all combustible material and that adequate ventilation is provided during all cutting and welding operations.
- 8 Never work above ground level without cordoning off the area below, where sparks may fall.
- 9 Observe fire precautions at all times. Work only to hot works permits if in operation.
- 10 All welding cables must be in good condition.
- 11 Suitable provided eye and hand protection must be worn by persons engaged in welding and burning.
- 12 Never wrap the electrode cable around any part of your body.
- 13 Maintain the electrode holder, work clamp, welding clamp and machines in good, safe operating condition.
- 14 Warn other personnel not to watch the arc nor expose themselves to the arc rays or to hot splatter of metal.
- 15 Welding and burning may produce fumes and gases hazardous to health.
- 16 Cordon off area and display appropriate signs etc.
- 17 Keep fire fighting equipment close to hand.

3.9 ELECTRICAL EQUIPMENT

- 1 All portable/semi portable electric tools must not exceed 115 volt plugs and sockets used in conjunction with these tools.
- 2 Regular inspections must take place to check for damage to power cables.
- 3 All electrical repairs must be carried out by a qualified electrician.
- 4 All electrical tools etc to be PAT tested and labelled by an independent electrical contractor at not less than 12-week intervals. Dates to be logged on Morgan's of Usk Ltd record sheets.

3.10 WORKING HOURS

It is our intention to work 5 days per week, Monday to Friday, 8.00am to 5.30pm. Weekdays overtime, and weekend work is not permitted.

3.11 SAFETY

It is our intention to carry out the erection of the steelwork in accordance with current HSE regulations, as outlined in Section One.

3.12 PUBLIC AWARENESS

It will be the responsibility of the Bouygues U.K to provide barriers to exclude the public or other site workers, from Morgan's of Usk Ltd working areas along with other trades not associated with our works.

3.13 ATTENDANCES/WELFARE

Bouygues U.K to provide the following:

1. Stoned access and roadways for transport and craneage, on to, and within site confines.
2. Access for MEWPs onto the ground floor concrete slab.
3. 110 Volt power will be supply by Morgan's of Usk Ltd.
4. Hot and cold water and toilet facilities.
5. Drying rooms.
6. Canteen for hot and cold food.
7. Adequate storage areas for on site materials.
8. Permanent TBM for setting structures to true levels.
9. **Grid and dimensional lines marked as crossed lines on all bases from which Morgan's of Usk Ltd Limited can set the structure out to.**
9. Skips for removal of waste, cardboard and bolt bags only

3.14 SUPERVISION AND MANNING

3.15 The site operations and day to day running will be controlled by a full time Site SSST Supervisor on site, with overall control by Morgan's of Usk Ltd Contract/Safety Managers visiting on a weekly basis.

3.16 CRANEAGE AND VEHICLE ACCESS

All delivery vehicles and craneage, will use the access haul ways, to be developed and detailed on drawings after discussion with Bouygues U.K, and Morgan's of Usk Ltd.

Bouygues U.K to confirm that the ground is capable of carrying the out rigger loads of the crane, as shown in the crane assessment documents.

3.20 FAILURE TO DANGER

Actions that are to be taken in the event of an accident, or incident on site.

1) Site Supervisor to immediately ring the following key personnel.

Name Bouygues U.K Project Director, Ian Knight Tel 07900136746

AND

Name Morgan's of Usk Ltd, Contract/ Manager, Clive Jones, Tel 01291 672253 or Mobile 078166566187

or

Andrew Morgan, Morgan's of Usk Ltd, Managing Director Tel 01291 672253
or 07816 656181

- 2) a) Ring Emergency Services to report incident, if problem involves injury to site personnel or member of the public.
b) Ring Local Authority Highways Department if incident affects the pavement of highway.
- 3) All site personnel to evacuate the affected area.
- 4) Area to be cordoned off to protect site personnel and members of the public.
- 5) Full report of incident to be compiled, all necessary forms to be completed and distributed to all key personnel.
- 6) The nearest hospital is at University of Wales Heath Park Way Cardiff CF14 4XW (02920747747), this will be confirmed at the site induction.

4.0 SAFE METHOD OF WORK

IMPORTANT POINTS TO REMEMBER

4.1 Ensure that the ground underfoot is generally firm and workable. If in doubt contact the Contracts Manager.

4.2 Use mobile elevated work platforms wherever possible (MEWP).

4.3 When erecting single storey/first lift of multi storey columns, base packs must be placed central and holding down bolts firmly tightened with at least three threads protruding. In addition, base packs or wedges can be placed central to the edges of the base plate and firmly

driven home. Permanent ties/bracing should be fixed to columns without delay to form a stable bay/box. See attached chart. If there is any doubt about the stability of columns, e.g. in windy conditions, due to excessive length/weight etc, they should be guyed using a minimum of three guys. **On no account should columns be left overnight without permanent ties/bracing or guys.**

4.4 When lifting by crane note the following: -

1. One person only should give instructions (fully trained Slings).
2. Hand lines should be used wherever practical.
3. Lifting clutches and shackles should be used wherever practical.
4. Crane operator should not leave crane while lift is suspended.

4.5 Wear a safety helmet and observe conditions laid down in 5.0 attached.

4.6 When "working aloft" at all times wear an approved safety harness. This harness must be attached to the anchor point of the MEWP

4.7 The crossing of open spaces should be avoided. When this is not "reasonable or practicable" straddling the beam, method is permissible with limitations. A separate risk assessment will be provided, see preceding section Clause 3.D ii.

4.8 It is essential that 50% of each bolt group is in position before releasing the crane slings.

4.9 As each section is fully bolted, and any snagging works completed, the structure will be plumbed, levelled, and lined it will be handed over for immediate grouting.

4.10 Look out for overhead electric lines and ensure that precautions are taken as recommended in Health and Safety Executive Guidance Note GS6.

5.0 POLICY ON THE WEARING OF SAFETY HELMETS

It is the policy of Morgan's of Usk Ltd that suitable and approved safety helmets will be worn at all times by all persons working at or visiting construction sites. Issue to be recorded on Morgan's of Usk Ltd, PPE Sheet. All personnel working aloft must wear helmets fitted with chin strap. The only exceptions to this ruling are: -

1. Whilst in the site offices or welfare facilities.
2. Plant fitters working on, in, or under heavy construction plant, but a suitable and approved Hard Hats' must be worn on such occasions.
3. Crane drivers (when in operating cab).
4. Plant operators and transport drivers when operating plant from within a rigid cab with overhead protection and wearing a helmet would restrict vision or prove an encumbrance likely to cause danger.

It must be clearly understood that in all the above exceptions the requirement to wear a safety helmet still exists whilst walking to or from the place of work across the site.

Suitable and approved safety helmets will be issued to all employees likely to attend site.

In the event of employees failing to wear helmets, the disciplinary procedure will be their dismissal from site, as such failure to wear safety helmets will be considered to be a breach of Company safety rules liable to disciplinary action. Sub-contractors must be informed of this policy and in turn must instruct their employees accordingly.

6.0 SITE ERECTION

6.1 Scope of Works

The contract is for the construction of a new steel frame building, the site working area is on a level plain adjacent to the existing development buildings, the working areas will be hard cored and compacted outside of the foot print, by Bouygues U.K before the steel erection starts.

Site deliveries are to be by articulated delivery lorries which will access the site through the existing development, the drivers will be issued with the Traffic Management Plan, before delivering materials to the site, before he arrives on the site, he will ring the site manager, and supervisor. The crane positions will be on and inside of the foot print of the building, as shown on the crane plane issued.

The building consists of a steel frame erected off new concrete bases, with columns, beams, eaves, and perimeter steels, 1st floor beams, with bracings to the roof and elevations to the steel frame,

The columns will be fixed to prepared concrete bases formed by Bouygues U.K; holding down bolts will be cast into position, to correct gridlines, as per the column setting out drawings issued.

Holding down bolts will be supplied by Morgan's of Usk Ltd.

The column bases are to have the gridlines clearly marked and crossed on all column bases, prior to the steel frame being delivered to site.

Bouygues U.K to supply a base level to be supplied to one base position, in order for the erector Supervisor to transfer the level, to all base positions.

6.2 Erection Sequence

1. The erection team will arrive on the site, and report to the site manager in order for the site inductions to be carried out, the gang will produce their site certificates to the site manager, before starting on the site.
2. The erectors and the crane driver will read the method statement, and will sign the document at the back of the method statement, the erector supervisor will return a copy of the document, to Morgan's of Usk Ltd.
3. A 80 Tonne All Terrain crane will be set up by the crane driver, inside of the foot print of the building, to the manufacturer's instructions, as shown on the crane plan supplied, at gridlines H/G 7A-K to E the erection will start at gridline 7A/K working towards gridline 17A/K-E in order to complete this phase.
4. The erector supervisor will check the column bases, and will place steel level packs, to each column base position, before the columns are lowered into position.
5. The steel will be delivered on a 38- tonne articulated lorry; the driver will drive onto the site, and will reverse to the position required for off-loading the steel members, The driver will be banked into position, by the erector supervisor.
6. The steel members will be unloaded by the steel erectors, to the positions required, and will be lowered onto timber supports in readiness for the erection to be carried out.

7. The Floor beams will be unloaded and laid out at ground floor level, in readiness for erecting into the steel frame.
8. The erection will commence with the erection of the columns along gridlines 7A/K to grid line 9 K to A the columns will be linked together by the perimeter beams, eaves beams, and the floor beams the erectors will install the Vertical bracings along gridlines K to J and F To E in order to stabilise the steel frame.
9. The erectors will pre assemble the roof trusses and position between grid line 9-K-E As to drawing
10. The erection will continue with the erection of the columns along gridlines 10 K to 10 E the columns will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, fixed to the positions shown on the drawings supplied. The erectors will install the roof truss on grid line 10 bracings to be form a stable box, in order for the erection to continue. As to drawing
11. The erection will continue with the erection of the columns along gridline 11K to 11 E the columns will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 11 bracings to be form a stable box, in order for the erection to continue. fixed to the positions shown on the drawings supplied.
12. The erection will continue with the erection of the columns along gridline 12 k TO 12 E and the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 12 bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings
13. The erection will continue with the erection of the columns along gridline 13 k to 13 E the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 13 bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings

14. The erection will continue with the erection of the columns along gridline 14K to 14E the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 14 bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings
15. The erection will continue with the erection of the columns along gridline 15K to 15E the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 15 bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings
16. The erection will continue with the erection of the columns along gridline 16K to 16E the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof truss on grid line 16 bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings
17. The erection will continue with the erection of the columns along gridline 17K to 17E the internal columns, will be linked together by the perimeter beams, ground and 1st floor beams, link beams, and eaves beams, erectors will install the roof steelwork and bracings to be form a stable box, in order for the erection to continue fixed to the positions shown on the drawings
18. The erector foreman will proceed to plumb and line the steel frame, and hand over the column bases to Bouygues U.K, in order to grout up the column bases.
19. On completion of the erection of the steel frame, the crane driver will de rig the crane, and leave the site.

6.3 Erection

Best Working Practices are outlined in Section 3 of this Method Statement

Erection will commence during the week prior to the contract start date, whereby the erection subcontractor's engineer will carry out a survey of all the holding down bolts' positions and the level of the concrete bases cast in. The results of the survey will be recorded on a Morgan's of Usk Ltd, foundation drawing for future reference, any discrepancies found against the construction drawings will be notified to Bouygues U.K. Management for rectification work to be carried out before the erection of structural steel commences.

On day one of Morgan's of Usk Ltd attendance on site, all personnel will attend an induction briefing to be conducted by Bouygues U.K on Health & Safety, site rules etc. this will also apply to personnel being employed later during the erection period. Morgan's of Usk Ltd Contracts Manager will also conduct a Method Statement briefing to all erection personnel on the methodology of the statement. All will be asked to sign the appropriate sheet along with the company policy statement at page 6.

6.4 Plant

1 x 80 Tonne All Terrain Crane for Steel Erection.

3 x Z45ft, Mobile Elevated Work Platforms (MEWP)

1 x Tele Handler

Various Tools, and impact wrenches (107db/A)

1x Lorry loading Fall protection system

Welding Generator, if required for any snagging works.

7.0 PERSONAL EQUIPMENT

Hard Hats EN 397)
Safety Footwear EN 345) ***TO BE WORN AT ALL TIMES***
High Visibility Vest/jacket EN 471)
Full Body Safety Harness with 1m restraint lanyard EN 361)
Gloves appropriate to the work being carried out. EN 388
Safety Glasses EN 166b
Ear Defenders for using impact wrenches (107db/A) and ear plugs EN 352-1
All to be recorded on PPE record sheets.

MORGAN'S OF USK LTD	Job No. 8493	Sheet of	Rev.
	Job Title; ERECTION OF STEEL FRAME BUILDING ZONE 5		
	SAFE MAXIMUM WIND SPEEDS FOR FREE STANDING COLUMNS		
	Client Bouygues UK	Made by Clive Jones	Date 11/09/2019
		Checked by	Date

<u>Section Size</u>	Column Length (mm)	Ve (mph)		<u>Section Size</u>	Column Length (mm)	Ve (mph)
162 UC	6000.00	81		356 X 171 UB	6000.00	56
	12000.00	40			12000.00	28
	18000.00	27			18000.00	19
203 UC	6000.00	80		406 X 140 UB	6000.00	55
	12000.00	40			12000.00	27
	18000.00	27			18000.00	18
254 UC	6000.00	75		406 X 178 UB	6000.00	54
	12000.00	37			12000.00	27
	18000.00	25			18000.00	18
305 UC	6000.00	74		457 X 152 UB	6000.00	55
	12000.00	38			12000.00	27
	18000.00	25			18000.00	18
356 UC	6000.00	77		457 X 191 UB	6000.00	64
	12000.00	39			12000.00	32
	18000.00	26			18000.00	21
178 X 102 UB	6000.00	59		533 X 210 UB	6000.00	59
	12000.00	30			12000.00	30
	18000.00	20			18000.00	20
203 X 102 UB	6000.00	55		610 X 229 UB	6000.00	56
	12000.00	28			12000.00	28
	18000.00	18			18000.00	19
203 X 133 UB	6000.00	71		610 X 305 UB	6000.00	60
	12000.00	36			12000.00	30
	18000.00	24			18000.00	20
254 X 102 UB	6000.00	49		686 X 254 UB	6000.00	57
	12000.00	24			12000.00	28
	18000.00	16			18000.00	19
254 X 148 UB	6000.00	63		762 X 267 UB	6000.00	54
	12000.00	32			12000.00	27
	18000.00	21			18000.00	18
305 X 102 UB	6000.00	45		838 X 292 UB	6000.00	56
	12000.00	22			12000.00	28
	18000.00	15			18000.00	19
305 X 127 UB	6000.00	54		914 X 305 UB	6000.00	54
	12000.00	27			12000.00	27
	18000.00	18			18000.00	18
305 X 165 UB	6000.00	58		914 X 419 UB	6000.00	58
	12000.00	29			12000.00	29
	18000.00	20			18000.00	19
356 X 127 UB	6000.00	50				
	12000.00	25				
	18000.00	17				

The gust wind speed (Ve) given is for a Morgan's of Usk standard 4 bolt base detail and assumes that 2 wedges are used under both long sides of a UB column base and that 1 wedge is used under each of the sides of a UC column base i.e. a minimum of 4 No wedges per column base.

25 N/mm² grade concrete has been assumed and a 7 day cube strength has been assumed for the design check of the concrete in the foundations

Wind speeds are the maximum that the base detail can safely withstand without the column being tied back in both directions to a braced part of the structure.

Notwithstanding any of the above the columns should not be left free standing for an undue length of time and must not be left free standing over night.

CERTIFICATE OF EMPLOYERS LIABILITY INSURANCE

ASSESSMENT OF HAZARDOUS SUBSTANCES

LOCATION All structural steel members	ACTIVITY Touch up of painted steels	SUBSTANCE Zinc Phosphate Primer All empty containers will be returned to Morgan' yard for disposal
PERSONS at RISK Employees 4 Others 10 Public None	HAZARD Skin contamination, Splashing to eyes, Inhalation by nose and mouth,	MEASURES IN PLACE TO REDUCE RISK Wear gloves, goggles, and masks
MEASURES RECOMMENDED TO REDUCE RISK FURTHER Tool box talk by erector Supervisor, prior to work commencing.	PERSONAL PROTECTIVE EQUIPMENT REQUIRED Gloves, Goggles, Masks	SPECIAL COMMENTS Data sheets to be provided when any touching up is carried out on site

RISK RATING

<u>LIKELIHOOD OF HARM</u> IMPROBABLE POSSIBLE OCCASIONAL FREQUENT COMMON		<u>SEVERITY OF INJURY</u> TRIVIAL MINOR OVER 3 DAYS MAJOR FATAL	
RISK FACTOR 0 TO 20			
PROBABILITY (P) 2	SEVERITY (S) 2	RISK = P x S 4	0 – 5 Low 6 – 10 Medium 11 – 20 High
MANUFACTURER'S DATA SHEET AVAILABLE If Requested, can be supplied		RISK ASSESSMENT by: Clive Jones Signature:	
REVIEW DATE 12/March/19		Date: 11th September 2019	

ASSESSMENT OF HAZARDOUS SUBSTANCES

LOCATION Mechanical Plant on site	ACTIVITY On site Fuel and oils, refilling plant on site, On site bundied tanks for fuel	SUBSTANCE Gas oil and hydraulic oils
PERSONS at RISK Employees 4 Others 10 Public Nil	HAZARD Ground Contamination. Fire. Skin contamination. Splashing to eyes. Inhalation by nose and mouth	MEASURES IN PLACE TO REDUCE RISK Bundied tank for re fuelling, nappy mats, spill kit on site. Fire extinguisher, Signage Wear gloves, masks and goggles protective clothes, clean water available to wash to affective areas Bowser to be in a fenced off area and a lock fitted to the gate
MEASURES RECOMMENDED TO REDUCE RISK FURTHER Tool box talk by the erector foreman, Supervision of works by the erector foreman	PERSONAL PROTECTIVE EQUIPMENT REQUIRED Gloves, Masks, Overhauls. Goggles.	SPECIAL COMMENTS

RISK RATING

<u>LIKELIHOOD OF HARM</u> IMPROBABLE <u>POSSIBLE</u> OCCASIONAL FREQUENT COMMON		SEVERITY OF INJURY TRIVIAL <u>MINOR</u> OVER 3 DAYS MAJOR FATAL	
RISK FACTOR 0 TO 20			
PROBABILITY (P) 2	SEVERITY (S) 2	RISK = PxS 1	0 – 5 Low 6 – 10 Medium 11 – 20 High
MANUFACTURER'S DATA SHEET AVAILABLE If Required		RISK ASSESSMENT by : Clive Jones Signature:	
REVIEW DATE 12/March/19		Date: 11th September 2019	

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

RISK ASSESSMENT

Activity: ACCESS/EGRESS INC SITE UNLOADING AND DISTRIBUTION OF MATERIALS TRANSPORT

Hazards which create potential for harm

Notes

Mobile plant/vehicles	Y	Falls of materials	Y	Fire/explosion	Y	Overhead services	[]	1 H=High risk M=Medium risk L=Low risk 2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager. 3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Deep excavations	[]	Noise/vibration	[]	Flying particles	[]	Buried services	[]	
Demolition	[]	Fumes/gas	[]	Collapse of structures	[]	Manual handling	[]	
Work on/adjacent to water	[]	Dust	[]	Contaminated ground	[]	Vehicle overturning	Y	
Falls from height	[]	Heat	[]	Soft ground	Y	Confined spaces	[]	
Falls on level	Y	Lifting operations	Y	Lighting levels	Y	Adverse weather	[]	

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR		CONTROL MEASURES		RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Slips trips and falls	M	All access and egress roads and routes to be kept clear at all times. Site entrance to be clearly signed with site routes board. Wearing of hi-visibility clothing to be enforced. All vehicles to park within boarding		L	C Jones
Contact with moving vehicles	H	Pedestrian routes to be established and clearly segregated, signposted and barriers erected. All visitors and operatives to be briefed on traffic management and routes during induction. Visitors to site to be issued with hi-visibility vests and safety helmets. Site traffic management plan to be formulated in writing (method statement)		L	C Jones
Collision of mobile plant and delivery vehicles	H	Areas of contractors parking to be established. Speed restrictions introduced. Hauliers to be informed of access routes and reporting procedures on arrival at site. Banksman to be in attendance when vehicles are turning or reversing. One way system to be introduced where practicable and reversing kept to a minimum		L	C Jones
Transfer of mud on public highways	M	Cleanliness of routes to be monitored and maintained, road sweeping daily/as and when required. Materials to be stacked safely and at an acceptable height (eg steelwork, metal decking, P.C. units).		L	C Jones
Obstruction of emergency vehicles	H	Lay down area for materials to be established. Local authorities and emergency services to be informed of access routes. All operational systems to be communicated at site induction, reviewed on an ongoing basis and amended as necessary		L	C Jones
Fire explosion	H	Flammable gases and liquids to be stored in a lockable cage and signs posted. Specific legislation/standards CDM 2016 Health & Safety signs and signals regulations 1996		L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: SITE TIDINESS/HOUSEKEEPING

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	Y	Fire/explosion	☐	Overhead services	☐
Deep excavations	Y	Noise/vibration	☐	Flying particles	☐	Buried services	☐
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	☐
Work on/adjacent to water	☐	Dust	Y	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	Y	Heat	☐	Soft ground	☐	Confined spaces	☐
Falls on level	Y	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR CONTROL MEASURES RESIDUAL RISK CONTROL MEASURES IMPLEMENTED

Slips trips and falls	H	Skips to be placed at strategic points with forklift skip attachments utilised as required. All operatives to be site inducted into the importance of good housekeeping.	L	C Jones
Falls of material	H	Debris and spent material to be removed from work area at regular intervals. Lay down areas for material storage to be clearly marked. Materials stacked in a safe manner with securing straps where necessary. Timber to be stacked when not in use. Non compliance notices to be issued where applicable. Welfare facilities, offices, mess rooms and toilets to be kept in good order and cleaned as required. Waste food to be disposed of to prevent the attraction of vermin. Weekly site inspections to note housekeeping conditions on all site areas.	L	C Jones
		<u>Specific legislation/standards</u> CDM Regulations 2016.		

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: USE OF GAS & OXYGEN EQUIPMENT only if required

Hazards which create potential for harm

Mobile plant/vehicles	☐	Falls of materials	☐	Fire/explosion	Y	Overhead services	☐	Notes 1 H=High risk M=Medium risk L=Low risk 2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager. 3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Deep excavations	☐	Noise/vibration	☐	Flying particles	Y	Buried services	☐	
Demolition	☐	Fumes/gas	Y	Collapse of structures	☐	Manual handling	☐	
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐	
Falls from height	☐	Heat	Y	Soft ground	☐	Confined spaces	Y	
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐	

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD	RISK FACTOR	CONTROL MEASURES	RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Risk of explosion	M	Compressed gas cylinders must be in good condition and not suffering from corrosion, be properly colour coded (Reference to National Standards), be individually identified. Hoses will be properly colour coded to the internationally recognised standard for the gas being used, in good condition and fitted with hose connections attached by permanent clips. Check valves and flashback arrestors must be used on both hoses at all times. Users must regularly check equipment for perished, damaged hoses, regulators and pressure gauges etc. Defects must be reported to supervisors & faulty equipment must be replaced. Cylinders must be in trolleys or tied off when on site. A bottle key must be kept with cylinders in use. Stored oxygen and fuel gas cylinders must be kept separate with minimum separation distance of 5m within locked cages, open to the air. Cylinders must never be stored or used in a horizontal position but must be secured in an upright position. Empty cylinders must also be separated from full cylinders. All gas cylinders must be handled with care and they must not be misused or abused. They must be properly shut off when not in use and safety caps must be fitted when being removed.	L	C Jones
Risk of fire	M	No modification to tanks or drums that have contained flammable liquid shall be undertaken at the site. Fire extinguishers to be present at point of use.	L	C Jones
Slips trips and falls	M	Great care must be taken to ensure that gas equipment, inc hoses are not allowed to cause obstruction of roadways, walkways, manholes, ladders or other means of access where they can cause hazards or be damaged. Hoses not in use should be coiled up and put in a safe place. Hoses should whenever possible be supported off the ground. Subcontractor's supervisor must carry out frequent checks to ensure these procedures are complied with. During meal breaks and at stopping times hoses and equipment must be removed from confined spaces or excavations. Oxygen or gas cylinder must not be taken into confined spaces for use or storage.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones

Date: 11/09/2019

Person supervising work:

Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: NOISE

Hazards which create potential for harm

Notes

Mobile plant/vehicles	Y	Falls of materials	☐	Fire/explosion	☐	Overhead services	☐	1 H=High risk M=Medium risk L=Low risk
Deep excavations	☐	Noise/vibration	Y	Flying particles	☐	Buried services	☐	2 Control measures are to ensure that residual risks are reduced to a minimum.
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	☐	Where controls fail to reduce from high, refer assessment to your line manager.
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐	3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐	
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐	

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR

CONTROL MEASURES

RESIDUAL CONTROL MEASURES

HAZARD	RISK FACTOR	CONTROL MEASURES	RISK	IMPLEMENTED
		Noise at Work Regulations imposes limits on hours of exposure to noise of employees. The duty is on the employer of the employee so exposed. It is essential therefore that when any operation of a Subcontractor is likely to expose any employee on site to an average noise level of 85 dB(A) or above that assessments are carried out		
Hearing loss	M	The Subcontractor must keep stocks of ear defenders or other suitable hearing protection. In addition to the foregoing, noise must be kept to a minimum at all times and must not exceed acceptable and/or locally specified rules and conditions relating to noise imposed by the Subcontract. Due regard must always be given to noise levels, permissible times for noisy work operations and other restrictions which may be imposed by Local Authority Environmental Health Officers under the Control of Pollution Act and the Environmental Protection Act. Subcontractors receiving Notices or Prohibition Notices under the current legislation must notify the Site Manager of such Notices immediately and obey its terms.	L	C Jones
Failure to hear alarms or warnings	M	Radioes, personal tape players, CD players or any music generating equipment are not allowed in the construction area.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH - COSHH

Hazards which create potential for harm

Notes

Mobile plant/vehicles	Y	Falls of materials	[]	Fire/explosion	Y	Overhead services	[]
Deep excavations	[]	Noise/vibration	[]	Flying particles	[]	Buried services	[]
Demolition	[]	Fumes/gas	Y	Collapse of structures	[]	Manual handling	[]
Work on/adjacent to water	[]	Dust	Y	Contaminated ground	[]	Vehicle overturning	[]
Falls from height	[]	Heat	Y	Soft ground	[]	Confined spaces	[]
Falls on level	[]	Lifting operations	[]	Lighting levels	[]	Adverse weather	[]

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD		RISK FACTOR	CONTROL MEASURES	RISK	RESIDUAL CONTROL MEASURES IMPLEMENTED
			Statutory Regulations to be compiled with Hazardous substances include any flammable liquid or any substance likely to give rise to toxic, corrosive, irritant or harmful risk.		
Risk of ill health	M		Substances hazardous to health must be identified prior to taking them onto the site and if they cannot be substituted or eliminated, assessments stating how the substances will be controlled and what precautions will be introduced must be carried out and recorded in writing by a competent person. This assessment must be communicated to and understood by the workforce that is likely to come into contact with the substance(s). A copy of all assessments must be supplied to the Site Manager prior to work. COSHH data sheets must be submitted with the Safety Method Statement. Subcontractors are responsible for the implications of COSHH on their work. Hazardous substances brought to site must be kept to a minimum and must be stored in appropriate, secure containers with the contents clearly labelled. The containers must be stored in a secure area, preferably quarantined from the main storage area, with suitable warning notices posted.	L	C Jones
Risk of pollution	M		Hazardous materials not to be allowed to discharge into water courses or drainage systems.	L	C Jones
Risk of fire or explosion	M		Hazardous waste material to be kept separate from inert waste & be disposed of in a specialist disposal facility.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones

Date: 11/09/2019

Person supervising work:

Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Activity: SUBCONTRACTORS TOOLS AND EQUIPMENT

Total no. of persons at risk: 25

Total no. of persons at risk:

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	☐	Fire/explosion	☐	Overhead services	☐
Deep excavations	☐	Noise/vibration	Y	Flying particles	Y	Buried services	☐
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	☐
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR CONTROL MEASURES RESIDUAL CONTROL MEASURES RISK IMPLEMENTED

Risk of Bodily injury	M	All Subcontractors tools and equipment must be suitable for the purpose. Tools to be CE marked or comply with equivalent standard. Homemade tools are not permitted. Guards & electrical trip switches must work effectively & not be removed or bypassed. All tools should be of good quality and maintained in a safe working condition. Subcontractors will be responsible for storing their own tools and equipment. The operator must examine tools visually each & every time before use	L	C Jones
Risk of electrical shock	M	The Subcontractor will nominate or employ the services of a competent qualified electrician to inspect and tag electrical power hand tools on a 3 monthly basis. Hired tools must be PAT tested prior to delivery to site. The tag must display name, signature of the individual inspecting the tool and date of inspection. Temporary electrical installations must be tested on a 3 month basis and a Certificate issued. The Subcontractor will keep a register of all electrical power hand tools in use on site. The register will detail - Individual identity number of the tool - Name signature & company of qualified electrician carrying out the inspection - Date of inspection - Remarks on condition of tool & whether repaired or withdrawn from use. Electrical powered hand tools not to be used unless tagged with a current 'INSPECTION' tag. All electrical leads must be connected to the power source through standard industrial waterproof plugs and sockets, which must be in good condition	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones

Date: 11/09/2019

Person supervising work:

Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: MECHANICAL PLANT AND EQUIPMENT

Total no. of persons at risk: 25

Total no. of persons at risk:

Hazards which create potential for harm

							Notes
Mobile plant/vehicles	Y	Falls of materials	☐	Fire/explosion	☐	Overhead services	☐
Deep excavations	☐	Noise/vibration	Y	Flying particles	☐	Buried services	☐
Demolition	☐	Fumes/gas	Y	Collapse of structures	☐	Manual handling	☐
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR

CONTROL MEASURES

RESIDUAL CONTROL MEASURES

			RISK	IMPLEMENTED
		Mechanical plant and equipment is identified as :- Forklift trucks, mobile cranes, welders, generators, compressors, powered access equipment, cherry pickers, MEWP etc. Mechanical plant transported to the site must be in a safe and sound condition properly maintained. Emissions should be acceptable limits and no smoke may be discharged. Notes: No climbing out of MEWP basket.		
Plant failure	M	The Subcontractor in accordance with the manufacturer's handbook to ensure that all plant equipment is systematically inspected, maintained and repaired, will establish a programme of regular preventative maintenance. The preventative maintenance programme must be provided & copied to the Subcontractor's employee responsible for implementation should be included. Plant must be examined on a weekly basis and the results entered in to the statutory register held on site in the office.	L	C Jones
Risk of bodily injury	M	A safe system of work must exist during all maintenance and repair operations to ensure that no part of the machinery is set in motion while work is being carried out.	L	C Jones
Risk of fire	M	Where refuelling is required, fire extinguishers, earthing, warning signs, boarding and proper fuel dispensers must be provided. Refuelling areas should be bounded to contain spills. Any spills to be cleaned immediately with absorbent granules and sand, properly disposed of.	L	C Jones
Risk of pollution	M	Waste oil removed from vehicles to be sent to the appropriate off-site waste disposal facility and this is the responsibility of the Subcontractor. All static plant must have drip trays.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: **WELDING**-only if required on site

Hazards which create potential for harm

							Notes
Mobile plant/vehicles	☐	Falls of materials	☐	Fire/explosion	Y	Overhead services	☐
Deep excavations	☐	Noise/vibration	☐	Flying particles	Y	Buried services	☐
Demolition	☐	Fumes/gas	Y	Collapse of structures	☐	Manual handling	☐
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	☐	Heat	Y	Soft ground	☐	Confined spaces	Y
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

1 H=High risk M=Medium risk L=Low risk
2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager.
3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.

HAZARD	RISK FACTOR	CONTROL MEASURES	RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Risk of electrocution	M	Welding 415 volts. See 03/13 Electricity for risk assessment Welding sets must be in good condition, properly maintained and earthed. Isolation switches on welding sets must be readily accessible. Terminals and live components must be adequately protected. Cables to be frequently inspected to ensure the insulation are intact. Damaged cables on electrical holders must be properly repaired or replaced. The welding return cable will be secured onto the work piece. If this is not practical it must be as near as possible. Proper cable connectors will be used when connecting runs of cables.	L	C Jones
Risk of burns	H	Welders will wear face and eye protection with correct grade of filters, welders gauntlets, long sleeved flame resistant overalls and safety helmets at all times except when welding when it is agreed as being impractical and written permission granted by the Site Manager subject to the investigation of hazards i.e. no work overhead or shielded from falling objects. Welding areas should be screened off using flame-retardant blanket or other suitable material. All combustible material must be cleared away from the vicinity of all welding operations.	L	C Jones
Risk of eye damage	H	Welders will wear face and eye protection with correct grade of filters, welders gauntlets, long sleeved flame resistant overalls and safety helmets at all times except when welding when it is agreed as being impractical and written permission granted by the Site Manager subject to the investigation of hazards i.e. no work overhead or shielded from falling objects. Welding areas should be screened off using flame-retardant blanket or other suitable material. All combustible material must be cleared away from the vicinity of all welding operations.	L	C Jones
Risk of fire	M	Work must adhere to the hot works permit system. Fire extinguishers must be provided adjacent to hot works. Asbestos material must not be used on the Contracts. Electric Arc Welding equipment and accessories conform to BS638 or ANSI or equal.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: LADDERS the delivery trailers
NOTE: Ladders/Podiums are only used for access onto

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	Y	Fire/explosion	☐	Overhead services	☐
Deep excavations	☐	Noise/vibration	☐	Flying particles	☐	Buried services	☐
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	☐
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	Y	Heat	☐	Soft ground	☐	Confined spaces	☐
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

1 H=High risk M=Medium risk L=Low risk
2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager.
3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.

HAZARD RISK FACTOR CONTROL MEASURES RESIDUAL RISK CONTROL MEASURES IMPLEMENTED

HAZARD	RISK FACTOR	CONTROL MEASURES	RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Risk of falling	M	Ladders/podiums must be in good condition and free from defects i.e. broken rungs, split stiles. Ladders/podiums must not be painted. Be securely fastened at the top or footed. Be properly positioned at the base. External at least 1m (5 rungs) above the working platform. Be at an angle of 15°, 300mm out for every 1.2m height i.e. 1 in 4. Use rungs as handholds not stiles when climbing. Only one person must be allowed on a set of steps or ladder at any one time. Persons must work with a set of steps of the appropriate height for the task. The top rung of steps must be kept at waist height, no work to be carried out when standing above this height. Ladders are to be used as a means of access not as a working platform except for light minor or one off activities and then the person must wear a harness and tie off to a suitable anchorage whilst carrying out the minor task. Note do not use a fall arrest system below 4m.	L	C Jones
Risk of falling tools	M	Consider alternatives, scaffold tower MEWPs etc. Do not work or walk under steps or ladders.	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones

Date: 11/09/2019

Person supervising work:

Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: **WORK ADJACENT TO OTHER WORKERS AND SITE CONTRACTORS**

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	Y	Falls of materials	[]	Fire/explosion	Y	Overhead services	[]
Deep excavations	[]	Noise/vibration	Y	Flying particles	[]	Buried services	[]
Demolition	[]	Fumes/gas	[]	Collapse of structures	[]	Manual handling	[]
Work on/adjacent to water	[]	Dust	[]	Contaminated ground	[]	Vehicle overturning	[]
Falls from height	Y	Heat	[]	Soft ground	[]	Confined spaces	[]
Falls on level	[]	Lifting operations	[]	Lighting levels	[]	Adverse weather	[]

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD		RISK FACTOR		CONTROL MEASURES		RESIDUAL RISK		CONTROL MEASURES IMPLEMENTED	
Electric shock	L			Programme of works, restriction on access routes and methods of working to be discussed and agreed by all parties.		L		C Jones	
Burns	L			Knowledge of potential hazards to be exchanged		L		C Jones	
Injuries to third parties	M			Demarcation of working areas to be clearly defined. Barriers and notices will be erected as required. No Access to erection area by other workers		L		C Jones	
Unauthorised entry to work area	H			Authorised persons only to be admitted to site. Door keepers/security control if required. Areas to have perimeter fencing, access to be closed off, barrier area where work is being undertaken.		L		C Jones	
Noise (direct and transmitted)	M			Drilling and cutting periods to be agreed.		L		C Jones	
Environment	L			Waste to be removed regularly to avoid a build up.		L		C Jones	
Restriction of fire escapes	H			Materials to be stacked such that access/egress restrictions are minimised. All fire escape routes shall be kept clear at all times. Areas to be inspected on cessation of work on a daily basis by a member of staff.		L		C Jones	

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: **USE OF WHEEL MOUNTED EQUIPMENT**

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	☐	Fire/explosion	Y	Overhead services	☐
Deep excavations	☐	Noise/vibration	Y	Flying particles	Y	Buried services	☐
Demolition	☐	Fumes/gas	☐	Collapse of structures	Y	Manual handling	Y
Work on/adjacent to water	☐	Dust	Y	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	☐	Heat	☐	Soft ground	Y	Confined spaces	☐
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

RESIDUAL CONTROL MEASURES

HAZARD	RISK FACTOR	CONTROL MEASURES	RISK	IMPLEMENTED
Flying particles	H	Correct discs only to be used for the task, to be changed by trained personnel only – Register of trained personnel to be retained on site Segregated work area to protect others.	L	C Jones
Dust	H	Guards fitted to equipment. Good ventilation required to reduce dust levels. Water to be used if possible when cutting masonry.	L	C Jones
Noise	M	Correct PPE worn by operator i.e. dust mask, goggles, ear defenders, gloves, hand shield & ballistic clothing if required. Wheels to be stored correctly, damaged discs not to be used. Equipment to be free from defects.	L	C Jones
Vibration	M	Rotation of operators where necessary, operatives advised of VWF symptoms and necessity to halt operations.	L	C Jones
Entanglement	H	No loose clothing to be worn. All hand held grinders to have 'Dead man' switch and appropriate guard fitted.	L	C Jones
Manual handling	M	Pedestal or bench mounted grinders must have emergency stop buttons & adjustable tool reset & guard. For operatives of lengths where continued manual handling becomes a risk, implement a mechanical means of cutting or support.	L	C Jones
Fire/explosion	M	Only competent and trained personnel are to use and maintain the equipment. Records of preventative maintenance to be supplied with equipment. If flammables nearby cannot be relocated a fire extinguisher should be available.	L	C Jones
		Specific legislation/standards PUWER 1998 – PPE Regs 2002 – CDM 2016, Noise at Work Regulations 2005		

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: MANUAL HANDLING & LIFTING

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	Y	Fire/explosion	☐	Overhead services	☐
Deep excavations	☐	Noise/vibration	☐	Flying particles	☐	Buried services	☐
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	Y
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐
Falls on level	Y	Lifting operations	Y	Lighting levels	☐	Adverse weather	☐

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

1 H=High risk M=Medium risk L=Low risk
2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager.
3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.

HAZARD		RISK FACTOR		CONTROL MEASURES		RESIDUAL RISK		CONTROL MEASURES IMPLEMENTED	
Strains & sprains to muscles & joints	L			Assess load to be moved, distance and height if up stairs. Establish best route before carrying anything.		L		C Jones	
Torn ligaments & tendons	L			Ensure walkways and stairs are clear.		L		C Jones	
Back injury (disc)	M			Use mechanical means – trolley, sack truck bogie – where possible.		L		C Jones	
Hernia	M			Provide other manual lifting aids.		L		C Jones	
Lifting loads beyond physical capacity	M			Instruct operatives on correct lifting and carrying techniques. Break down into manageable size loads not exceeding 20kg if possible. Provide assistance for loads over 20kg or awkward loads.		L		C Jones	
Cuts & abrasions from surfaces & sharp edges	L			Provide gloves		L		C Jones	

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: MOBILE TOWER SCAFFOLDS (If required during variations, at later stages of the contract)

Total no. of persons at risk: 25

Hazards which create potential for harm

										Notes
Mobile plant/vehicles	☐	Falls of materials	Y	Fire/explosion	☐	Overhead services	Y			1 H=High risk M=Medium risk L=Low risk
Deep excavations	☐	Noise/vibration	☐	Flying particles	☐	Buried services	☐			2 Control measures are to ensure that residual risks are reduced to a minimum.
Demolition	☐	Fumes/gas	☐	Collapse of structures	Y	Manual handling	☐			Where controls fail to reduce from high, refer assessment to your line manager.
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐			3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Falls from height	Y	Heat	☐	Soft ground	☐	Confined spaces	☐			
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐			

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR		CONTROL MEASURES		RESIDUAL CONTROL MEASURES	
				RISK	IMPLEMENTED
Falls of men materials tools	H	Mobile towers to be erected by competent PASMA trained persons only. Towers to be supplied with all components inc. lockable wheels & be free from defects.		L	C Jones
Collapse of tower	H	Supplier to provide written or verbal instructions on method of erection. Erected on a firm level base and in accordance with the manufacturer's instructions. All towers should be fitted with internal ladder access as far as is practical. Working platforms should be fully boarded with toe boards, guard rails and at least 600mm wide. Trap doors to be down when work being carried out. Tower height should not exceed 3 times the base ratio for external work and 3.5 times the base ratio for internal work. When increasing height stabilisers should be used to increase base ratio. Towers should be tied to the structure in exposed conditions. Towers should not exceed 9m in height. Tower scaffolds should be inspected before use and when erected, every 7 days and inspection recorded.		L	C Jones
Contact with overhead services	H	Mobile towers should not be erected or used in the vicinity of overhead power lines.		L	C Jones
Manual handling	M	Towers are never to be moved with men on the working platform, tools or materials must be below the top of the toe boards and the trap door closed down. SWL to be marked and never exceeded. Floor areas, where mobile towers are working, should be free from materials and rubbish. Trailing electrical leads should be so arranged as not to cause a tripping hazard.		L	C Jones
		Specific legislation/standards CDM 2016 POWER 1998 BS5073			

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: **ERECTION OF STEEL STRUCTURES**

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	Y	Falls of materials	Y	Fire/explosion	[]	Overhead services	Y
Deep excavations	[]	Noise/vibration	Y	Flying particles	[]	Buried services	[]
Demolition	[]	Fumes/gas	[]	Collapse of structures	[]	Manual handling	[]
Work on/adjacent to water	[]	Dust	[]	Contaminated ground	[]	Vehicle overturning	[]
Falls from height	Y	Heat	[]	Soft ground	[]	Confined spaces	[]
Falls on level	Y	Lifting operations	Y	Lighting levels	[]	Adverse weather	Y

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

RESIDUAL CONTROL MEASURES

HAZARD	RISK FACTOR	CONTROL MEASURES	RISK	IMPLEMENTED
Mobile plant/ vehicles	H	A full risk assessment and working method statement is to be obtained detailing management responsibilities, access arrangements, lay-down areas, fabrication zones etc. Traffic management procedures to be followed. PPE to be worn as directed. All operatives are to be suitably qualified (CSCS or equivalent).	L	C Jones
Falls from height	H	MEWPs to be used for access to working areas. Where possible work platforms should be used in preference to safety lines and harnesses. Where harnesses are in use they are to be clipped to a suitable anchorage point at all times.	M	C Jones
Slips trips & falls	M	Guard rails, toe boards and edge protection to be installed as required. All areas to be kept clear of debris, regular housekeeping implemented.	L	C Jones
Noise/ vibration	M	Comply with associated noise and HAV risk assessment where applicable	L	C Jones
Lifting steel sections	H	Steel erection to be undertaken by trained personnel only. Slinger/ banksman/signaller present at all times. Weights clearly marked on all delivery notes. Where complex lifting is anticipated lift controller is to be nominated and present. Lifting equipment and gear to be tested and suitable for the task.	M	C Jones
Overhead cables	H	Site survey to be undertaken to establish positions of overhead power lines. Signage, barriers and goalposts to be erected as required.	L	C Jones
Adverse weather	H	Wind conditions to be monitored and lifting not permitted during high winds. Anemometer may be required.	L	C Jones
Falling tools & materials	H	Access to be restricted underneath steel erection process & demarcation barriers erected as necessary	L	C Jones
		Specific legislation/standards CDM 2016. PUWER 1998 BS5073		

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: ELECTRICITY ON SITE (INC. P.A.T.)

Total no. of persons at risk: 25

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☐	Falls of materials	☐	Fire/explosion	Y	Overhead services	☐	1 H=High risk M=Medium risk L=Low risk
Deep excavations	☐	Noise/vibration	Y	Flying particles	☐	Buried services	☐	2 Control measures are to ensure that residual risks are reduced to a minimum.
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	☐	Where controls fail to reduce from high, refer assessment to your line manager.
Work on/adjacent to water	☐	Dust	Y	Contaminated ground	☐	Vehicle overturning	☐	3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐	
Falls on level	Y	Lifting operations	☐	Lighting levels	☐	Adverse weather	☐	

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD RISK FACTOR

CONTROL MEASURES

RESIDUAL CONTROL MEASURES

HAZARD	RISK FACTOR	CONTROL MEASURES	RISK	IMPLEMENTED
Electric shock	H	Site power of 415v for welding & 110v for small tools and lighting to be supplied. 110v tools only to be used on site. Any tool, plant or equipment exceeding 110v to be connected to a residual current device (RCD). All equipment must be treated as live unless locked off and tagged. No interfering with electrical cabinets. Distribution of electricity to be installed by trained personnel only and an installation certificate issued. Adequate records should be made of all parts of the installation & updated when alterations are made. Repairs to be carried out by competent persons only. Daily inspection of tools, plugs and leads to be undertaken by users. Temporary supplies to office and welfare facilities to be tested at 3 monthly intervals and certificate issued.	L	C Jones
Fire/explosion	M	Leads to be fully extended to avoid overheating. Portable appliance testing to be carried out 3 monthly and office equipment annually. All tools and electrical equipment to have proof of preventive maintenance.	L	C Jones
Noise	H	Noise assessment required where action levels warrant. Reduce noise and dust to others by distancing, segregation or deadening where possible.	L	C Jones
Slips trips and falls	H	Trailing cables to be kept in a tidy condition and clipped at height where possible. All cables to be placed away from access routes or adequately protected if this is impossible.	L	C Jones
Vibration (from power tools)	H	Rotation of operatives/tasks where vibrating tools are in use. Supply to be locked off during maintenance, modification or repair.	L	C Jones
Dust	H	Dust and noise levels to be monitored at all times. Lighting to confined spaces not to exceed 25v.	L	C Jones
		Specific legislation/standards P.U.E.R 1998 BS5073 Electrical equipment safety regs 1994 Electricity at work regs 1989	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20
Activity: USE OF CRANES.

Total no. of persons at risk: 25

Hazards which create potential for harm

								Notes
Mobile plant/vehicles	☐	Falls of materials	Y	Fire/explosion	☐	Overhead services	Y	1 H=High risk M=Medium risk L=Low risk 2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager. 3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Deep excavations	☐	Noise/vibration	☐	Flying particles	☐	Buried services	☐	
Demolition	☐	Fumes/gas	☐	Collapse of structures	☐	Manual handling	Y	
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☐	
Falls from height	☐	Heat	☐	Soft ground	☐	Confined spaces	☐	
Falls on level	☐	Lifting operations	Y	Lighting levels	☐	Adverse weather	Y	

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD	RISK FACTOR	CONTROL MEASURES	RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Falls of materials	H	Full working method statement to be obtained including travel routes & standing positions. Loads to be secured by competent person with suitable & sufficient slings etc.	L	C Jones
Lifting and lowering of loads	H	Lifting operations to be carried out in accordance with BS7121 Part 1. Area demarcated as out of bounds to all persons not involved. Assembly, rigging & de-rigging inc. fly jibs to be supervised by competent lifting supervisor with approved risk assessments in place. Lifting gear to be 6 monthly tests and marked accordingly with SWL. Never exceed SWL. Discard lifting gear showing signs of damage, fraying or strain.	M	C Jones
Overhead services	H	Minimum operating distance from overhead power lines, 6m or greater if advised by service provider. Routes of underground services to be established & suitable bearing protection, concrete slabs, and road plates provided where necessary.	L	C Jones
Contact with plant & equipment	H	Minimum distance (when slewing) from immovable objects to be 600mm to prevent trapping. Trained banksman, slinger, and signaller to be in attendance during lifting operations, with clear method of communication with crane driver. Lift to be supervised by appointed person where slinger/signaller cannot assume duties of competent person.	L	C Jones
Overturning crane	H	Automatic safe load indicator, audible reversing warning alarm, load radius indicator & crane hooks with safety catches to be fitted and operational. Cranes to be sited on suitable load bearing ground. Outriggers to be extended during lifting & sited correctly on load spreader pads, no working free on wheels. 12 monthly test & examination certificate required. Cranes to be operated by competent person only, with valid certificate. Weekly inspections to enter in the appropriate site register. Ground bearing tests to be carried out by Rydon Construction Ltd, prior to the site start.	M	C Jones
Adverse weather	H	Anemometer should be available to assess wind speed. Crane operator's decision is final when assessing weather conditions.	L	C Jones
Specific legislation/standards PUWER 1998 CDM 2016 regs 1996 LOUER 1998 NHS WR 1999				

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: **ERECTION OF FREE-STANDING COLUMNS**

Hazards which create potential for harm

Mobile plant/vehicles		Y	Falls of materials	Y	Fire/explosion	Y	Overhead services	Y	Notes	
Deep excavations		[]	Noise/vibration	Y	Flying particles	[]	Buried services	[]	1 H=High risk M=Medium risk L=Low risk 2 Control measures are to ensure that residual risks are reduced to a minimum. Where controls fail to reduce from high, refer assessment to your line manager.	
Demolition		[]	Fumes/gas	[]	Collapse of structures	Y	Manual handling	[]	3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.	
Work on/adjacent to water		[]	Dust	[]	Contaminated ground	[]	Vehicle overturning	[]		
Falls from height		Y	Heat	[]	Soft ground	[]	Confined spaces	[]		
Falls on level		Y	Lifting operations	Y	Lighting levels	[]	Adverse weather	Y		

N.B. Tick box for hazard and risk factor (H,M, and L) All significant risks are to be assessed.

HAZARD	RISK FACTOR	CONTROL MEASURES	RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Mobile plant/ vehicles	H	A full risk assessment and working method statement is to be obtained detailing management responsibilities and access arrangements. Traffic management procedures to be followed. PPE to be worn as directed. All operatives are to be suitably qualified (CSCS or equivalent).	L	C Jones
Falls from height	H	MRWPs to be used for access to working areas. Where possible work platforms should be used in preference to safety lines and harnesses. Where harnesses are in use they are to be clipped to a suitable anchorage point at all times.	M	C Jones
Slips trips & falls	M	Keep all ground around column base as small as possible and tidy.	L	C Jones
Noise/ vibration	M	Comply with associated noise and HAV risk assessment where applicable.	L	C Jones
Lifting steel sections	H	Steel erection to be undertaken by trained personnel only. Slinger/ bankman/signaller present at all times. Weights clearly marked on all delivery notes. Where complex lifting is anticipated lift controller is to be nominated and present. Lifting equipment and gear to be tested and suitable for the task.	M	C Jones
Overhead cables	H	Site survey to be undertaken to establish positions of overhead power lines. Signage, barriers and goalposts to be erected as required.	L	C Jones
Adverse weather	H	Wind conditions to be monitored and lifting not permitted during high winds. Anemometer may be required.	L	C Jones
Steel column falling over in high winds	H	Refer to Ve (mph) speeds in enclosed table. Wedge base plates as detailed. Do not leave free standing column unattended. Some columns might need temporary propping.	M	C Jones
Failure of concrete column base	H	Confirmation that concrete has reached 7 day strength before erecting column. Written confirmation may be required in some instances.	M	C Jones
Holding down bolt failure	M	Wedge base plate as detailed until such time as column is tied into structure. Specific legislation/standards CHS WR 1996 PUWER 1998 BS5073	L	C Jones

HEALTH & SAFETY RISK ASSESSMENT

Site: BOUYGUES U.K ZONE 5

Person conducting assessment: C Jones
Date: 11/09/2019
Person supervising work:
Date: 07/10/2019

Persons exposed: 25 Employees 5 Other workers up to 20

Total no. of persons at risk: 25

Activity: MOBILE ELEVATED WORK PLATFORMS

Total no. of persons at risk:

Hazards which create potential for harm

Notes

Mobile plant/vehicles	☒	Falls of materials	☒	Fire/explosion	☐	Overhead services	☐	1 H=High risk M=Medium risk L=Low risk
Deep excavations	☐	Noise/vibration	☒	Flying particles	☐	Buried services	☐	2 Control measures are to ensure that residual risks are reduced to a minimum.
Demolition	☐	Fumes/Leaks	☒	Collapse of structures	☐	Manual handling	☐	Where controls fail to reduce from high, refer assessment to your line manager.
Work on/adjacent to water	☐	Dust	☐	Contaminated ground	☐	Vehicle overturning	☒	3 If the operations are likely to affect the public, or the safe operation of a public transport system, the controlled measures must reduce the likelihood of significant harm to the level that existed before the work commenced.
Falls from height	☒	Heat	☐	Soft ground	☒	Confined spaces	☐	
Falls on level	☐	Lifting operations	☐	Lighting levels	☐	Adverse weather	☒	

N.B. Tick box for hazard and risk factor (H,M,L) All significant risks are to be assessed.

HAZARD RISK FACTOR		CONTROL MEASURES		RESIDUAL RISK	CONTROL MEASURES IMPLEMENTED
Plant Condition	M	MEWPs etc. Mechanical plant transported to the site must be in a safe and sound condition properly maintained. All Certification of MEWPs to be in date. MEWPS to be checked daily before use, and all weekly checks recorded. Operatives to be trained to operate the MEWP from the ground level, in event of mechanical breakdown, or in an event of a emergency. Electric machines to be kept charged up		L	
Toppling Over of MEWPs	H	The operator will insure the working areas are level and compacted. Do not park or operate MEWP on gullies, manholes, drains or any other unsafe areas, and areas free of any obstructions. Do not operate on sloping ground Do not manoeuvre when full extended at height. Plant must be kept apart, with designated roadways, and working areas, drivers are to be CPCS card holders. Do not operate in high winds, check the machine duty chart for high winds working, before operating the machine.		L	C Jones
Falls from Height	H	All operatives to be trained IPAF. trained. Work restraint lanyard to be worn, and fixed to the anchor point in the basket. Immediate dismissal from site if not adhered too, also erectors must not climb on the guard rails. Use correct access gate. Do not climb out of basket at height		L	C Jones
Falling objects and tools	M	Area of work to have barriers and signage around the work area. All tools and equipment to be kept on the floor of the basket. ensure that all gates are closed and guard rails are in good condition. Do not over load the machine. Tools to have lanyards		L	C Jones
Over loading	M	Do not exceed the SWL combined weight of the operatives and materials of the MEWP manufactures instructions..		L	C Jones

CRANE ASSESSMENT

Contract Name-Bouygues U.K Zone 5	Assessment Ref.
Contract Number: 8493	
Crane to be Used	
Type, Make & Model: 80 Tonne All Terrain Crane, Terex- Demag AC80-2 (or similar)	
Maximum Rated Load 10.6 Tonne At Required Radius: 14 m	Source: Hired In
Crane Standing or Support Conditions	
Maximum Outrigger Load: 60.0 Tonne	Maximum Ground Bearing Pressure: 60.0t/m2
60.0t/m2 on. 4 x 1 x 1 Mtr bearing mats,	
Ground prepared by Bouygues U.K. in order to carry the weights of the 80-tonne crane.	
LIFTING ACCESSORIES TO BE USED (Including spreader bars, lifting frames, etc.)	
4 x Chain brothers (6 tonne per leg)	
Note: If extra ground mats are required, these will be instructed by Bouygues U.KLtd	
SPECIAL REQUIREMENTS (Restricted movements, length of jib, frames, etc.)	
Working on and inside the foot print, (see crane plan for grid positions)	
Ground to be confirmed by Bouygues U.K, that it is capable to carry the weight of the outrigger load (60.0 Tonne) of the 80Tonne Crane.	
MANAGEMENT OF CRANE LIFT(S)	
By Site YES Contract Lift NO	Driver Hired with Crane YES Employed by Contract NO
Crane Specified	
Name: Clive Jones (Crane Appointed Person)	
Employer: Morgan's of Usk Ltd.	
Name of Person Completing this Form (Print)	Clive Jones
Signature:	Date: 11/09/2019

Lift Details				
Brief Description of Work to be Carried Out: To erect steel frame, with columns, floor beams, eaves and perimeter beams, roof trusses				
LOADS TO BE LIFTED (FOR GENERAL SITE USE, ENTER MAXIMUMS IN EACH COLUMN)				
Weight of Load	Height of Lift	Up or Down	Radius	Other Characteristics
10.6 t	10 m	Up	14 m	Roof Truss
0.335t	18 m	Up	21m	Floor Beams
0.132t	18 m	Up	21m	Bracing
0.173t	18 m	Up	21m	Perimeter Beams
RESTRICTIONS				
Services/Obstructions (Tick if present and note details on page 2)				
Overhead Cables	No	Underground Services (Gas, Oil, Electricity, etc.)	No	
Existing Buildings	No	Sensitive Services (Pipelines etc.)	No	
Voids and Traps	No	Road Closures (Drive Way)	no	
Other:				
Ground Conditions; Crane working positions, to be confirmed by Bouygues U.K, to carry weight of crane, and outrigger load of 60.0 Tonne (see crane layout plan)				
Special Requirements; All other site construction workers are to be excluded from erection area, by Bouygues U.K, site management, area to be cleared of building materials				
Communications Arrangements: By hand signals				
Specified Crane				
Source: Hired in		Type: All Terrain Crane		
Make: Terex/Demag (or similar)		Model: AC80-2 Tonne Crane		
Personnel & Communications				
Lifting Operations Supervisor Name:			Title: Erector SSST Supervisor	
Slings, No. Required: Three			Signallers, No Required: Three	

CRANE PLAN

SITE DRAWING: Indicates bay numbers, starting point, edge protection, significant holes, crane positions, lay down area, route of vehicles and turning area, etc.

CRANE

LORRY

M

PERIMTER
HANDRAIL

STAIRS

START

SITE CABINS

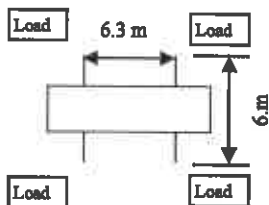
ROAD

ENTRANCE

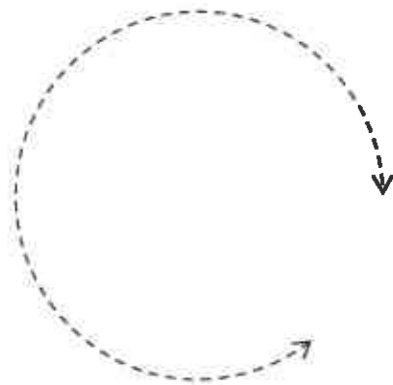
ACCESS PLATFORM
POSITION

PERIMETER ACCESS
PLATFORM ALL
AROUND BUILDING (NO
LOWER THAN 900MM
BELOW TOP OF SLAB)

Outrigger Spread



(SEE ATTACHED CRANE PLAN)



Sign-Off

Planned By: (Lifting Operations Controller)	Name: Clive Jones,	Signature:	Date: 11/9/2019
Understood & Accepted By: (Lifting Operations Supervisor)	Name:	Signature:	Date 07/10/2019

POWERED ACCESS PLATFORM ASSESSMENT

Contract Name: Bouygues U.K Zone 5	Assessment Ref.:
Contract Number: 8493	
MEWP to be used	
Type, Make & Model: Geni Z45 (or similar)	Boom Length: 45ft
Maximum Rated Load 6078kg	Source: HIRED IN

RESTRICTIONS			
Services/Obstructions (Tick if present and note details on sketch)			
Overhead Cables	NO	Underground Services (Gas, Oil, Electricity, etc.)	NO
Existing Buildings	NO	Sensitive Services (Pipelines, etc.)	NO
Voids and Traps	NO	Road Closures (Drive Way)	NO
Other:	NO	Others: Working on footprint	NO
Ground Conditions On the foot print of the structure, and a 5m strip around the external elevations (where possible) To be prepared by Bouygues U.K, to carry the weight of the MEWP (6078kg), Assessed Safe Bearing Pressure			
Special Requirements Bouygues U.K, to clear any site debris and materials, prior to erectors arrival on site. <u>No access allowed by climbing out of the basket</u> <u>Keys to be removed when machine is not in use.</u>			

MANAGEMENT OF MEWP		<u>Drivers</u>	
By Site	YES	Employed by Subcontractors	YES
MEWP Specifier			
Name: CLIVE JONES (Crane Appointed Person)			
Employer: MORGANS OF USK LTD			
Name of Person Completing this Form (Print)		CLIVE JONES	
Signature:		Date: 11 TH September 2019	

OTHER ADDITIONS

Havs Calculations:

<u>Equipment.</u>	<u>Vibration output.</u>	<u>Vibration Value.</u>	<u>Max Usage in 8Hrs</u>
Heavy Duty Drill	2.5	2.5	480 mins in 8 Hours
Impact Wrenches	7	7	61 mins in 8 Hours

Note:

40 beams a day, x 6 bolts = 240 bolts per day, at 5 seconds per bolt 5 divided by 60 secs = 12 per min, divided by 240 = 20min per day

Impact Wrenches, Noise Assessment = 107dc/A Ear Defenders to be used at all times.

METHOD STATEMENT AWARENESS/SITE INDUCTION RECORD

CONTRACT TITLE; **BOUYGUES U.K ZONE 5**

CONTRACT NO: **8493**

SUBCONTRACTOR:

(Morgan's Erecter)

DATE: **11/9/2019**

The undersigned operators, being under the control of Morgan's of Usk Ltd, have today been given instruction in this Erection Method Statement. They sign to state that they have attended this instruction and understood it.

Number of men on site..... Number attending.....

NAME (Print)	SIGNATURE	COMMENT

The undersigned operators have undergone Site Induction

NAME (Print)	SIGNATURE	COMMENT

They are aware that should there be any points arising they must be referred back to Morgan's of Usk Ltd.

All new operatives must be inducted before commencing work

Method Statement Instructor **Clive Jones**
Induction Instructor
for Morgan's of Usk Ltd

Signature.....
Signature.....



MORGAN'S OF USK LTD
Woodside Works
Usk
Gwent NP15 1SS
Tel: 01291 672253

MANAGEMENT OF LIFTING OPERATIONS

CRANE SUPERVISOR APPOINTMENT

Site: BOUYGUES U.K ZONE 5

Contract No 8493

In accordance with the Lifting Operations and Lifting Equipment Regulations and BS7121 Part 1: Safety Use of Cranes, the following person is hereby appointed as Crane Supervisor.

Name *Erector Supervisor, SSST*
(Print please) _____

The appointed Crane Supervisor will carry out the following duties: -

- Verify that the crane and lifting accessories supplied comply with the specification set out in the Lift Plan
- Verify that the load complies with the load set out in the Lift Plan
- Ensure that the crane is positioned correctly as set out in the Lift Plan
- Check the certification for Thorough Examinations and Inspections
- Check that all personnel involved in the lifting operation are competent and hold relevant certification from an acceptable scheme
- Verify that the ground conditions/temporary works and weather conditions are as set out in the Lift Plan
- Report to the Appointed Person any variations in conditions or equipment that may adversely affect the safety of the lifting operation
- Check that the working area is safe from proximity hazards
- Establish an exclusion zone including barriers and signage as required
- Carry out briefing on the Lift Plan to all those involved and ensure that all who may be affected are advised of the risks and relevant control measures. Records of briefings to be maintained using the Lift Plan Briefing Record
- Supervise the lift to ensure full compliance with the Lift Plan
- Immediately stop the operation if it becomes dangerous to proceed and suspend work until the remedial measures agreed with the Appointed Person are put in place

Signed

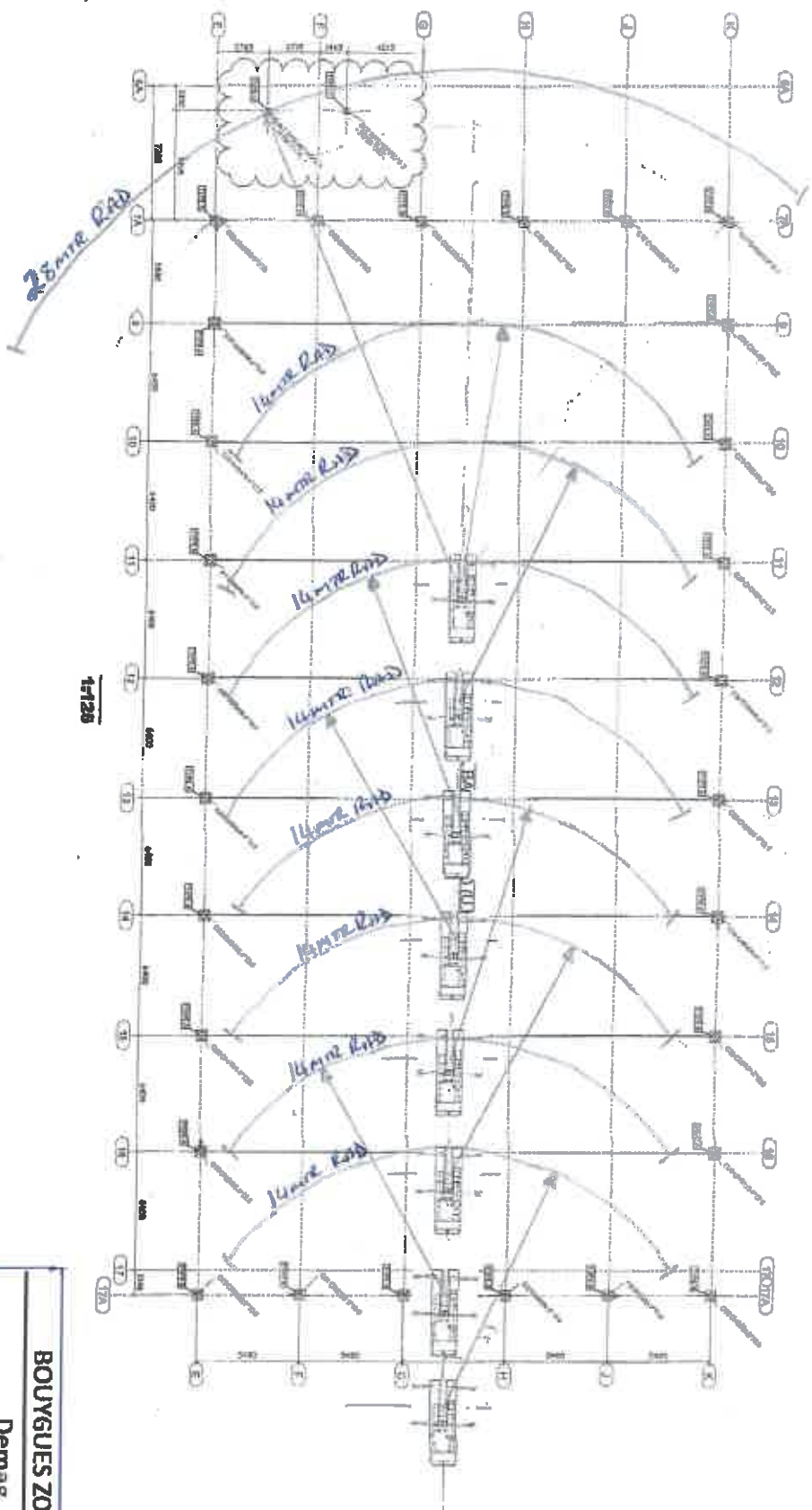
Appointed Person

Date 11/09/2019

Signed

Crane Supervisor

Date 07/10/2019



BOUYGUES ZONE 5	Ref:8493
Demag	AC80/2
Main Boom Length	31.3Mts
Outter Rigger Loading	60.0 tonne
Outter Rigger Spread	7700x7000
Outter Rigger Mat Size	7500x750
Counter Weight	18tonne
Heaviest Lift with Accessories	10.6tonne
Max Radius	14Mts
SWL @14Mts	11.3tonne
Drawing Scale	1:125
Signed: <i>[Signature]</i> Date: 12/4/19.	(AP)

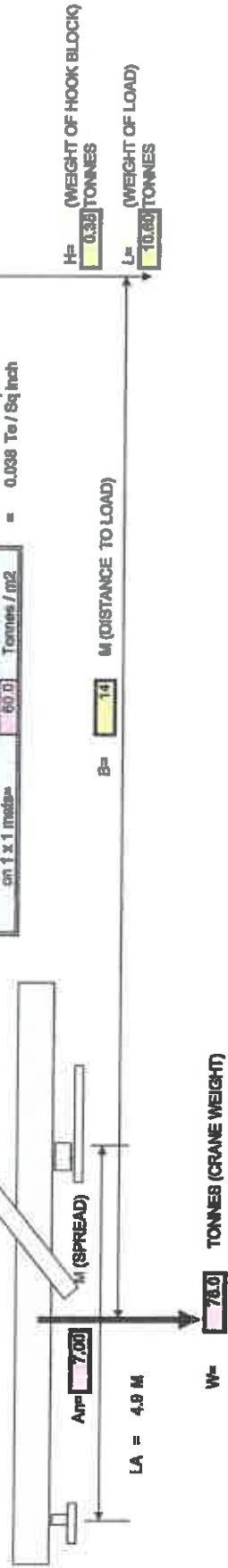
25	8	24.55
35	6.05	28.9
40	8.2	36
50	8.4	44
60	7.2	58
70	7.2	62
80	7	78
100	7	85
120	7.5	95
180	7.5	110
200	8.3	130
250	8.5	170
300	8.5	172
400	10	200
500	10	245

CRANE SIZE **80** TONNE

Bouygues U.K Zone 8



OUTRIGGER LOAD		= 0.088 T _h / Sq Inch	
On .75 x .75 m ²	105.8	=	0.120 T _h / Sq Inch
On .8 x .8 m ²	74.03	=	0.088 T _h / Sq Inch
On 1 x 1 m ²	50.0	=	0.058 T _h / Sq Inch
W=	78.0 Tonnes		
B=	14.0 Metres		
A=	9.9 Metres		
L=	10.5 Tonnes		
H=	0.35 Tonnes		
	60.0 Tonnes		





Self-Propelled Articulating Booms

Z™-45/25 RT & Z™-45/25J RT

Specifications

Models	Z-45/25 RT		Z-45/25J RT	
Measurements	US	Metric	US	Metric
Working height maximum*	51 ft 10 in	15.97 m	51 ft 6 in	15.86 m
Platform height maximum	45 ft 10 in	13.97 m	45 ft 6 in	13.86 m
Horizontal reach maximum	24 ft 7 in	7.49 m	24 ft 8 in	7.52 m
Up and over clearance maximum	23 ft 5 in	7.14 m	23 ft 7 in	7.14 m
▲ Platform length	2 ft 6 in	0.76 m	2 ft 6 in	0.76 m
▲ Platform width	6 ft	1.83 m	6 ft	1.83 m
▲ Height - stowed	7 ft	2.13 m	7 ft	2.13 m
▲ Length - stowed	17 ft 8 in	5.38 m	21 ft 10 in	6.65 m
▲ Width	7 ft 6 in	2.29 m	7 ft 6 in	2.29 m
▲ Wheelbase	6 ft 8 in	2.03 m	6 ft 8 in	2.03 m
▲ Ground clearance - center	1 ft 3 in	0.37 m	1 ft 3 in	0.37 m

Productivity

Lift capacity	500 lb	227 kg	500 lb	227 kg
Platform rotation	180°		160°	
Vertical Jib rotation	—		135°	
Turntable rotation	355° non-continuous		355° non-continuous	
Turntable tailswing	zero		zero	
Drive speed - stowed	4.5 mph	7.24 km/h	4.5 mph	7.24 km/h
Drive speed - raised **	0.61 mph	1.0 km/h	0.61 mph	1.0 km/h
Gradeability - 2WD - stowed***	30%		30%	
Gradeability - 4WD - stowed***	45%		45%	
Turning radius - inside	5 ft 8 in	1.68 m	5 ft 6 in	1.68 m
Turning radius - outside	14 ft 9 in	4.50 m	14 ft 9 in	4.50 m
Controls	12 V DC proportional		12 V DC proportional	
Tires	315/55 D20		315/55 D20	

Power

Power source

60 hp (55.8 kW) Ford MSB425 Dual Fuel
 49 hp (35.8 kW) Deutz D2.9L4 diesel T4f
 48 hp (35.8 kW) Perkins AB6T 404D-22 diesel T4f ****

Auxiliary power unit

12 V DC

Hydraulic tank capacity

22 gal 83 L

Fuel tank capacity

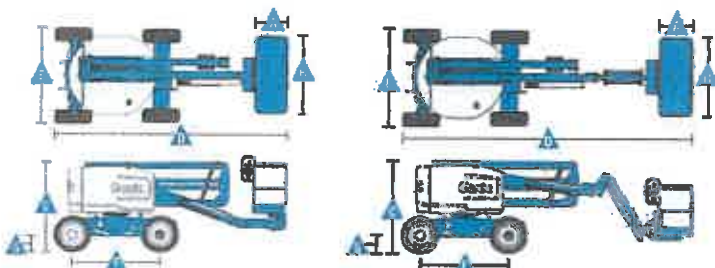
17 gal 64.4 L

Weight****

2WD	13,100 lb	5942 kg	13,200 lb	5987 kg
4WD	13,400 lb	6078 kg	13,500 lb	6123 kg

Standards Compliance

ANSI A92.5, CSA B354.4, EN 280, AS 1418.10



* The metric equivalent of working height adds 2 m to platform height. U.S. adds 6 ft to platform height.

** In lift mode (platform raised), the machine is designed to operate on firm, level surfaces only.

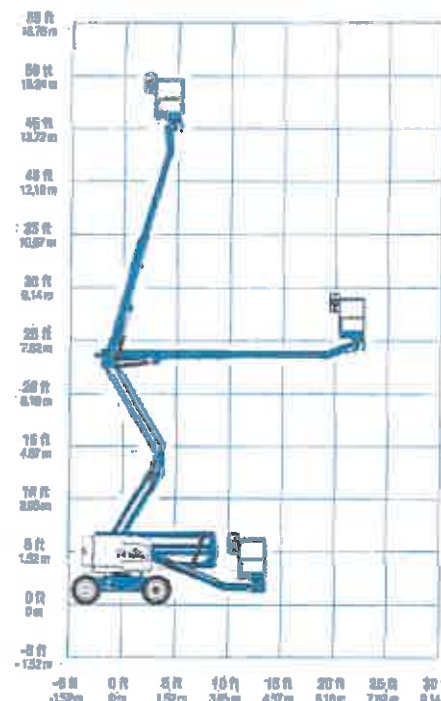
*** Gradeability applies to driving on slopes. See operator's manual for details regarding slope ratings.

**** Weight will vary depending on options and/or country standards.

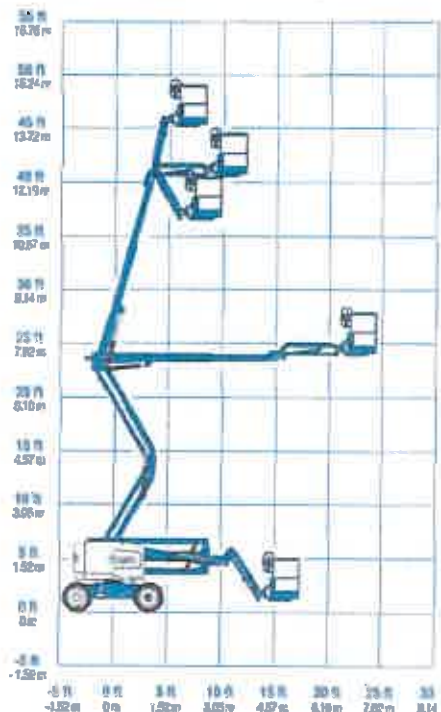
***** Also available for T4f in some regions

www.genielift.com

Range Of Motion Z-45/25 RT



Range Of Motion Z-45/25J RT





Self-Propelled Articulating Booms

Z™ -45/25 RT & Z™ -45/25J RT

Features

Standard Features	Easily Configured To Meet Your Needs	Options & Accessories
Measurements Z-45/25 RT 51 ft 10 in (15.97 m) working height 24 ft 7 in (7.49 m) horizontal reach 23 ft 5 in (7.14 m) up and over clearance - Up to 500 lb (227 kg) lift capacity Z-45/25J RT 51 ft 6 in (15.86m) working height 24 ft 8 in (7.52 m) horizontal reach 23 ft 5 in (7.14 m) up and over clearance - Up to 500 lb (227 kg) lift capacity	Platform Options - Steel 6 ft (1.83 m) dual entry with side swing gate (standard) - Steel 3 ft 10 in (1.17m) with sliding mid-rail Jib Options - Non-jib 5 ft (1.52 m) jib boom Power Options 75 hp (55.9 kW) Ford gas/LPG 49 hp (36.5 kW) Deutz T4f diesel 48 hp (35.8 kW) Perkins T4f diesel Drive Options 2WD 4WD Axle Options - Active oscillation (4WD) - Non-oscillating (2WD) Tire Options - Rough terrain air-filled (standard) - Rough terrain foam-filled - Rough terrain non-marking (air or foam-filled) - High flotation air-filled - Sealant treated air-filled	Productivity - Lift Guard Platform Mesh - Full - Lift Guard Platform Mesh - Full - Platform top auxiliary rail - Air line to platform - Thumb rocker steer - Specialty hydraulic oil (Cold weather, fire resistant or biodegradable) - Aircraft protection package* - Hostile environment kit - Alarm package (Beacon and travel) - Panel cradle package - Light package - Lockable platform control box cover - Tow package - Operator Protective Structure** - Fall Arrest Bar - Florescent tube caddy** - Pipe cradle (pair)** - Lift Tools Expo Installer** Power - Engine gauge package (Ford engine only) - AC generator packages (110 V / 60 Hz - 220 V / 50 Hz, 2200 W) - Cold Weather Packages - Diesel catalytic scrubber muffler (T4f engines only) - LPG tank 33.5 lb (15.19 kg) capacity
Productivity - Self-leveling platform - Hydraulic platform rotation - Proportional joystick controls - Drive enable - AC power cord to platform - Horn - Hour meter - Tilt alarm - Descent alarm 355° non-continuous turntable rotation - Positive traction drive - Two speed wheel motors - Entry toeboard on 6 ft (1.83m) platform - Lift Guard™ Contact Alarm - Dual parallelogram for vertical wall tracking Power 12 V DC auxiliary power - Swing out engine tray - Intake air heater (Deutz engine only)		



* Reduces platform capacity to 440 lb (only available on jib models)
 ** Available through aftermarket parts only

Genie United States

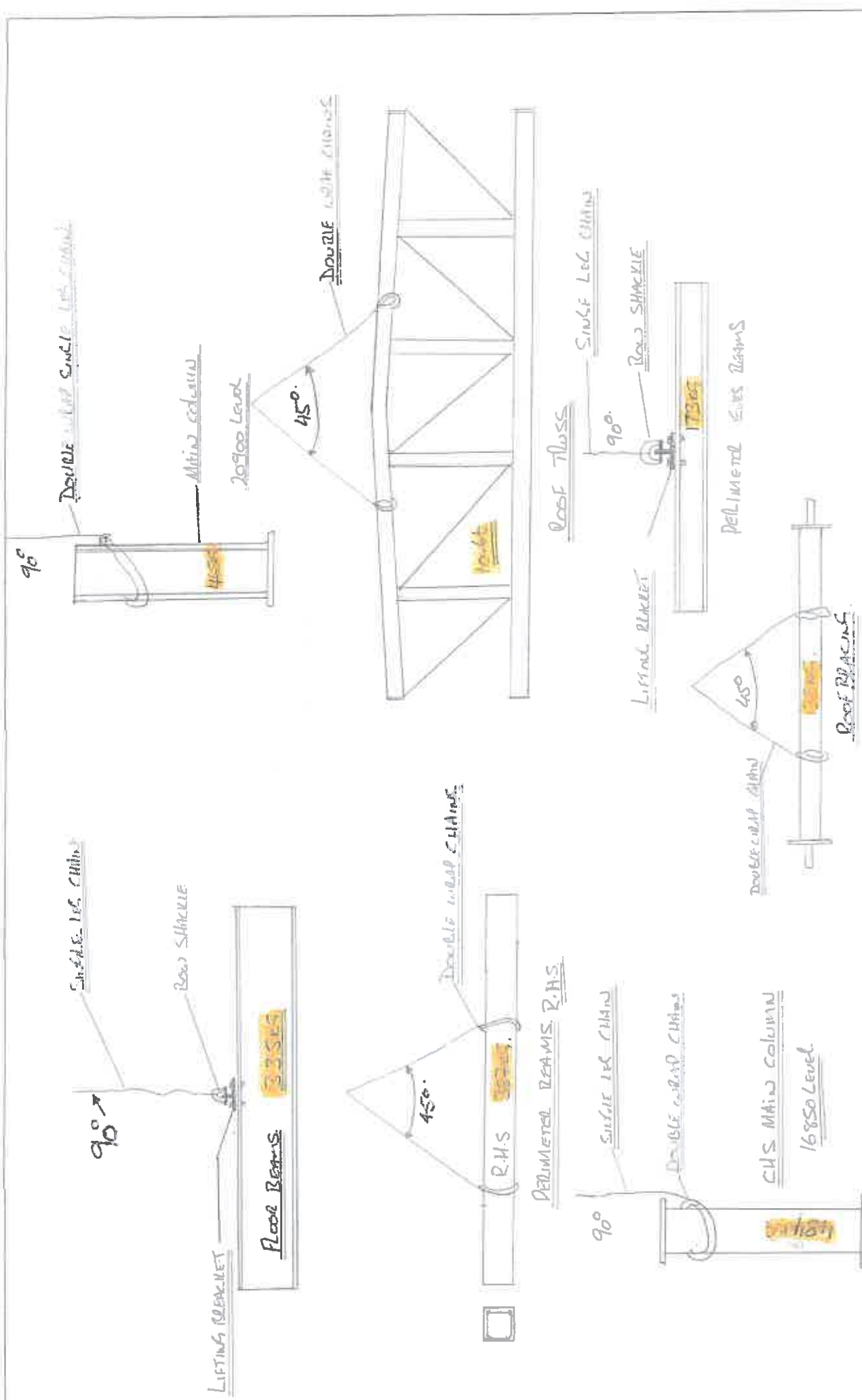
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Z45RT 0210-1, Part No. 108282

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