Appointed Person A61

Lifting Operations Technical Test – Practical

RESOURCES

	Required
Area	• Quiet room having desks and seating arrangements for each candidate
Other equipment	• CPCS supplied Risk Assessment/Method Statement • CPCS supplied Lifting Scenarios 1–8 • Copies of LOLER 1998 • Copies of PUWER 1998 • Copies of BS 7121 parts 1, 2 and 3 • Range of mobile crane specifications • Copies of Lifting accessory catalogues • Copies of mobile crane outrigger point loading charts (preferable) • Drawing and writing and measuring (rulers etc.) equipment • A2 or A3 white paper for drawings
Notes	• There must be a minimum of five mobile crane specifications for each scenario. One crane must be the ideal and two within 25% of the ideal, with one of those being out of its capacity for the scenario • An ideal crane is one that is deemed as working to 80% of its capacity for the radius, height and ground conditions for each scenario. This is important as Candidates must take commercial considerations into account and not select too large a crane • Candidates must be supplied with information regarding outrigger point loadings. Crane manufacturer's outrigger point-loading charts must, as far as is reasonably practical, be used • Up to 8 candidates may be assessed providing sufficient resources are available

ACTIVITY

	Instructions
Sequence	• The Technical Test theory question paper or lift scenario may be attempted in any order by the candidate. However, the theory question paper, once started, must be completed by the Candidate before a comfort/refreshment break can be taken. The standards of the practical test grading sheet must be explained to the Candidates prior to starting the test. It is recommended to allow Candidates sight of the marking sheet The test must be completed within a given time. The specifications' section gives further information.
Brief	• The tester will issue a lift scenario each Candidate. Each Candidate will have a different scenario and each Candidate must have access to the equipment identified within the resources section
	Activity measurements
Standards	• Identified on the grading form
Test timings	• The test must be completed within 6 hours and 30 minutes

Risk Assessment

Note: This form can only be used for the purposes of CPCS appointed person and crane supervisor training, assessments and testing, and is used with kind permission of the Construction Plant-Hire Association.
A drawing showing the lift details must accompany this form. All boxes **MUST** be completed with either the required information or marked N/A.
Drawings must show plan and elevation and be in an identifiable scale
Important – All submitted data must be in metric units.

Assessment Scenario No	Date of Assessment:
Candidate Name	Location of Assessment

1. General Details

Customer:		
Site contact:		Telephone:
Site Location:		
Description of lift:		

2. Details of Load

Weight: Net Gross	
Dimensions:	
Position of C of G:	
Height of lift	
Max radius	

3. Details of Crane

Make & model:	
Capacity:	
Boom length required:	
Fly jib length and angle (if required) or N/A	
Outrigger spread: *show dimensions on drawings*	
Mat/Pad size	*Show all calculations*
Rigged Weight of Crane:	

4. Ground Conditions

Access/egress for crane & transport:	
Lifting position:	

5. Lifting Accessories

Slings (wire rope):	Slings (webbing):
Slings (chains):	Shackles:
Other Accessories:	

6a. Identification of Hazards (Proximity)

Proximity Hazards	**Present?**
Overhead power lines	Yes / No
Other overhead obstacles	Yes / No
Underground services	Yes / No
Excavations	Yes / No
Unstable/Soft ground	Yes / No

Proximity Hazards (cont.)	**Present?**
Hazardous chemicals/materials	Yes / No
Confined working area	Yes / No
Restricted access – width	Yes / No
Other Hazards identified	Yes / No

6b. Identification of Hazards (Load)

Load Hazard	
Slinging difficulties	Yes / No
Top heavy	Yes / No
Sharp edges	Yes / No
Other hazards identified	Yes / No

7. Assessment of Risk

Hazard Present	Risk	Action to Avoid or Reduce Risk

Continue on a separate sheet if needed.

8. Operational Requirements:

What crane should come equipped with

9. Customer Provisions:

Method Statement

10. Personnel

The following personnel *(please state)* will be provided, complete with relevant personal protective equipment. The duties of these people will be as defined in British Standard 7121:

Title	Responsibility	Required PPE

Continue on a separate sheet if needed.

11. Lifting Accessories

The lifting accessories will be provided by *(please name)*…….....

12. Weather Conditions

The lifting operation can only take place if the weather conditions are within the limits recommended by:

(please state) ……..……..

13. Ground Conditions

The ground bearings are *(please state)*……..and I have obtained assurances that the ground can withstand the load.

14. Sequence of Operations

Please start at 1 and number each action consecutively

No	Description

Continue on a separate sheet if needed.

15. Contingency Statement

16. Candidate's Confirmation*		
I confirm that I have prepared the Risk assessment and Method Statement, and the lift has been planned in accordance with current legislation and British Standard 7121	**Signed:**	**Date:**

Note * For the purposes of Crane Supervisor Training and Testing, the Instructor shall sign this section.

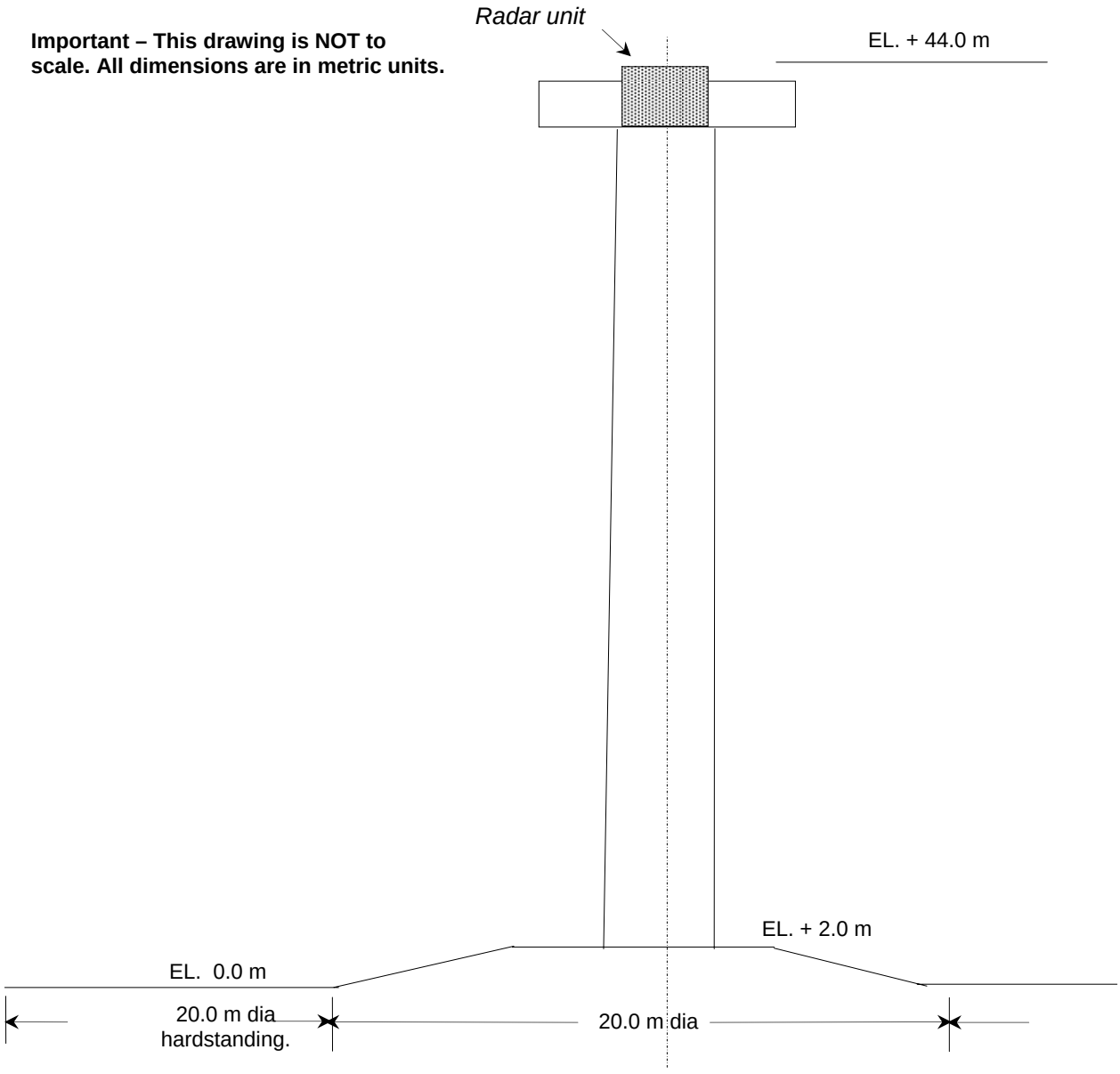
Assessment Scenario Technical Test – Practical

Title – Lift an airport radar unit. **Scenario 1**

Candidate's Notes:

1. Lift and lower a radar unit onto a transporter. The airfield is active and the worksite is located at the eastern corner of the airport.
2. There are 4 lifting points at the top of the radar unit, fitted with eye bolts – with link.
3. A dedicated lifting frame (supplied by the clients) must be used – being 0.4 t with wire rope slings, with a single lift point (to the crane) and 3.5 m from lifting ring to attaching points.
4. Weight of unit – 646 Kg.
5. Height of unit – 1.8 m.
6. Diameter of unit – 4.8 m
7. Diameter of tower – 3.0 m
8. Platform is 6.7 m dia and has rail height of 1.4 m.
9. Radar unit has been prepared for lifting by client and is ready to lift.
10. There is an internal stairway to the platform for maintenance purposes.
11. Customer – Dundrodd Airport Authority. Site – Zone 1, Dundrodd Airport. Site Contact – L Wade, 01744 98 65 87
12. Good access and egress roads to work site.
13. Trailer for transporting load to be positioned as close to tower as feasibly possible.
14. Ground bearing pressure not to exceed 25t/m^2

Important – This drawing is NOT to scale. All dimensions are in metric units.



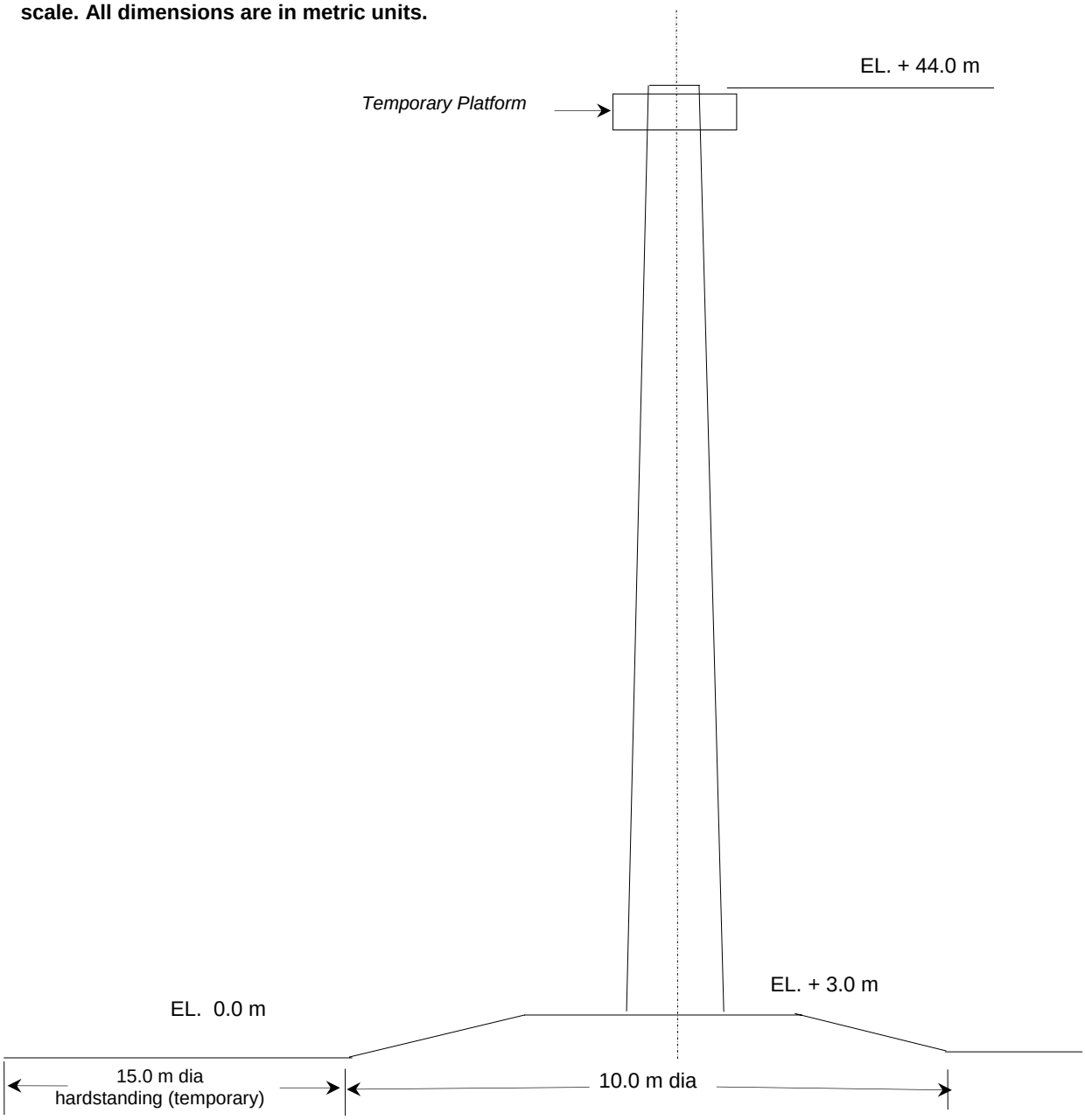
Assessment Scenario Technical Test – Practical

Title – Lift a Wind Turbine Generator/Housing **Scenario 2**

Candidates Notes:

1. From a transporter, lift and place into position a wind turbine generator/housing unit.
2. There are 2 integral lifting points at the top of the generator housing
3. Diameter of column – base = 5.0 m, top = 3.0 m
4. Weight of generator and housing – 3.8 t
5. Diameter of housing – 2.6 m *(note: housing locates horizontally on tower)*
6. Length of housing - 4.5 m
7. Housing to be bolted to tower by turntable with 8 x bolts.
8. There is an internal stairway to turbine housing for maintenance purposes.
9. Platform (temporary) diameter - 5.0 m, height 1.2 m (platform to be rigged/derigged by client)
10. Customer – Wind Energy Inc. Site – Glenshire Wind Farm. Site Contact – N Hubband, 01334 765 775
11. Good access and egress roads to site.
12. Trailer with load to be positioned close to tower as feasibly possible.
13. Ground bearing pressure not to exceed 25t/m^2

Important – This drawing is NOT to scale. All dimensions are in metric units.



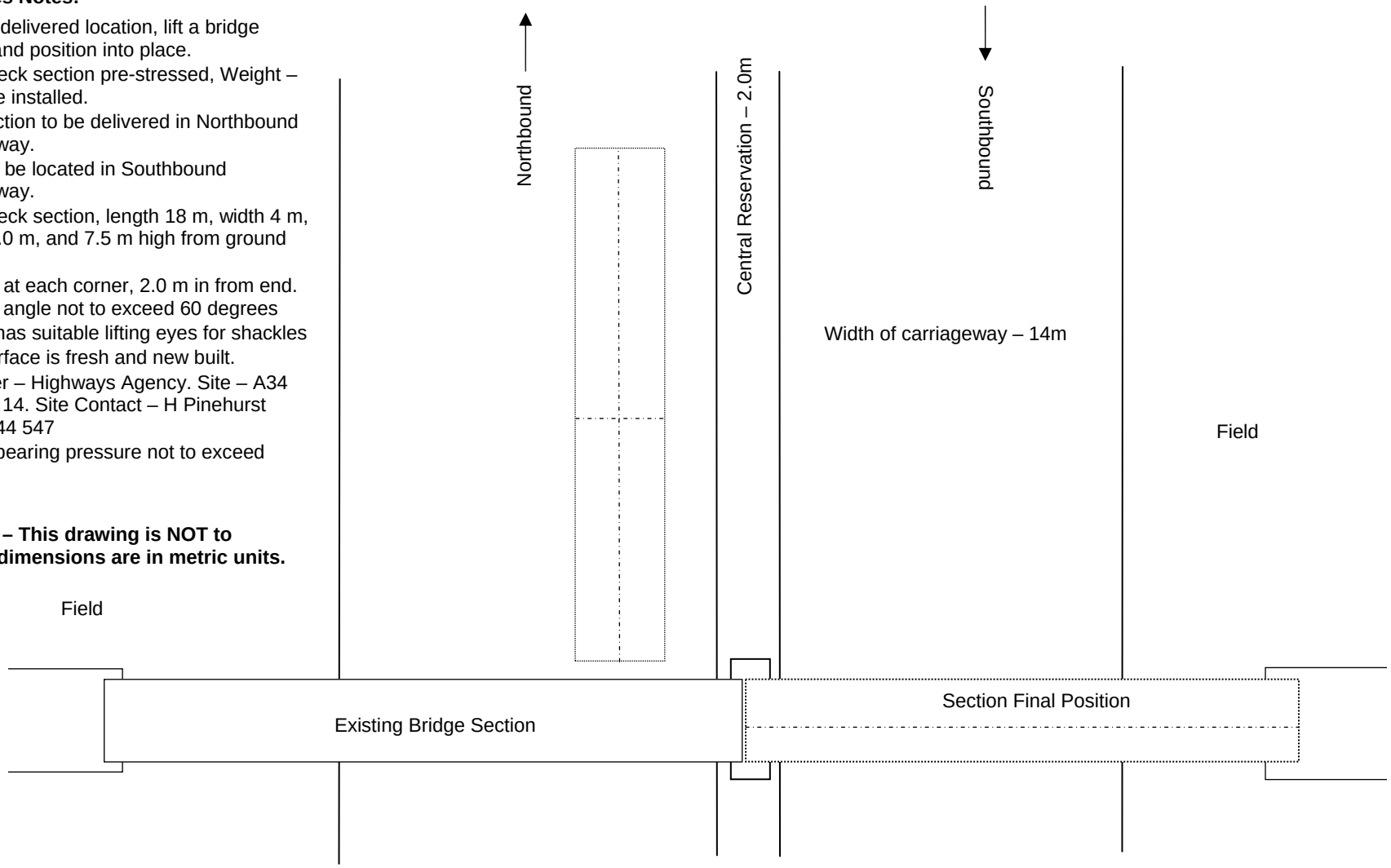
Title – **Lift and Place a Section of Footpath Bridge**

Scenario 3

Candidates Notes:

1. From its delivered location, lift a bridge section and position into place.
2. Bridge deck section pre-stressed, Weight – 34 t to be installed.
3. Deck section to be delivered in Northbound carriageway.
4. Crane to be located in Southbound carriageway.
5. Bridge deck section, length 18 m, width 4 m, Height 2.0 m, and 7.5 m high from ground level.
6. Lift point at each corner, 2.0 m in from end. Included angle not to exceed 60 degrees
7. Section has suitable lifting eyes for shackles
8. Road surface is fresh and new built.
9. Customer – Highways Agency. Site – A34 Junction 14. Site Contact – H Pinehurst 07877 344 547
10. Ground bearing pressure not to exceed 25t/m_2

Important – This drawing is NOT to scale. All dimensions are in metric units.

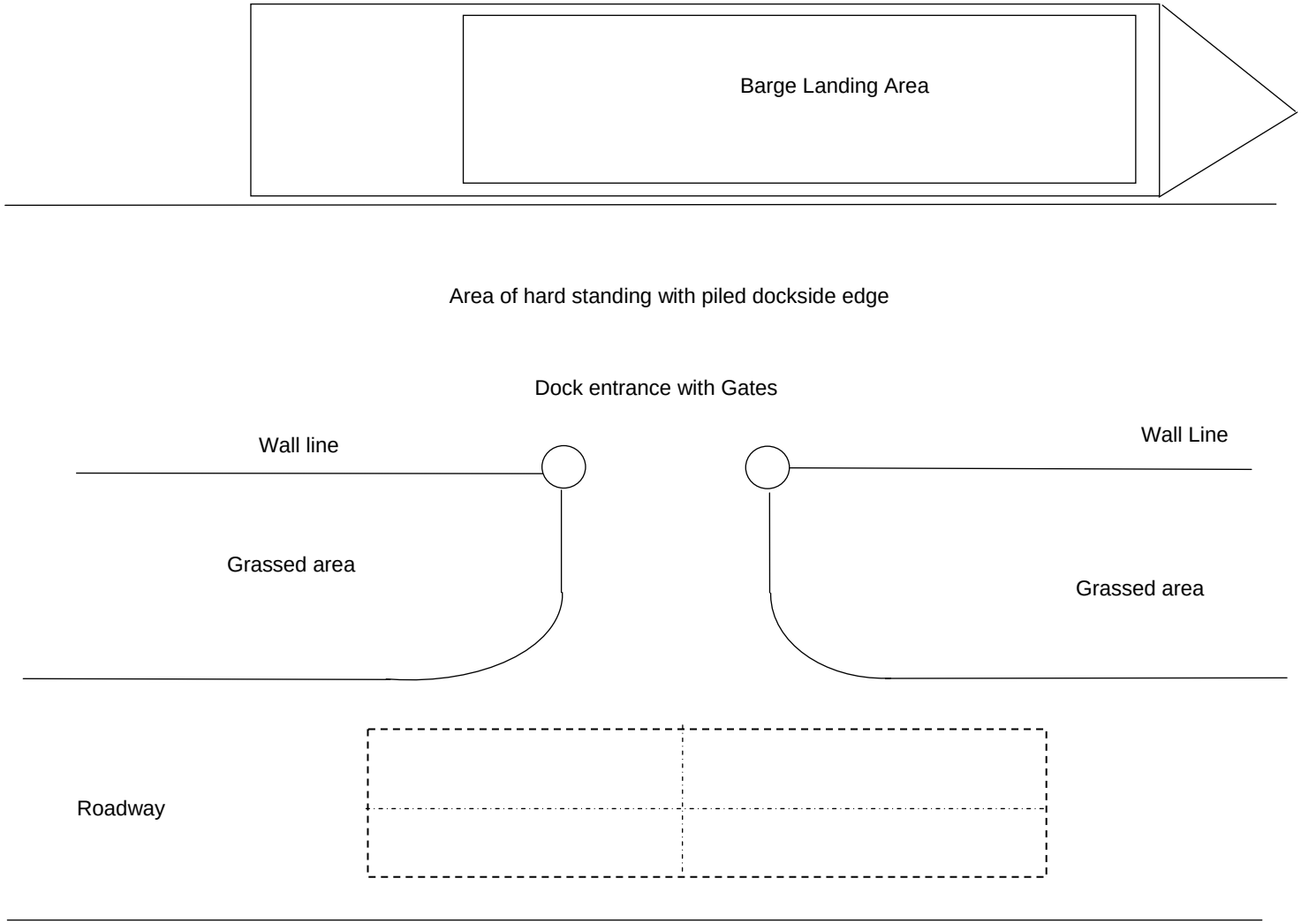


Title – Lift and Place a Tank onto a Barge **Scenario 4**

Candidates Notes:

1. From its delivered position, lift an aluminium tank from the trailer and place onto the waiting barge.
2. Weight of tank – 9.35 t.
3. Tank dimensions – Length 12 m, Diameter 5 m.
4. Lifting beam supplied by client, weighs a total of 650 kgs (inclusive of beam suspension wires) and is 6 m in length.
5. Roadway width – 7 m.
6. Gateway width – 5 m.
7. Wall and Gate heights 2.43 m.
8. Grassed area width – 5 m
9. Dockside 12 m wide
10. Tank has no fixed lifting points, and is hollow.
11. Barge landing area = 15 m x 6.6 m.
12. Barge is floating in a closed lock and moored alongside with a 1.0 m gap.
13. Flatdeck barge has full surrounding safety rail with a 0.7 m walkway all around the landing area.
14. Customer – TTP Chemicals Ltd. Site – Leeside Docks. Site Contact – J Stone 0207 345 4522
15. Ground bearing pressure not to exceed 25 t/m2

Important – This drawing is NOT to scale. All dimensions are in metric units.



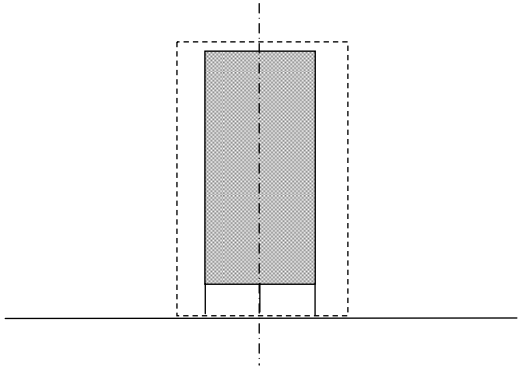
Title – Lift and Place a Vessel into Position

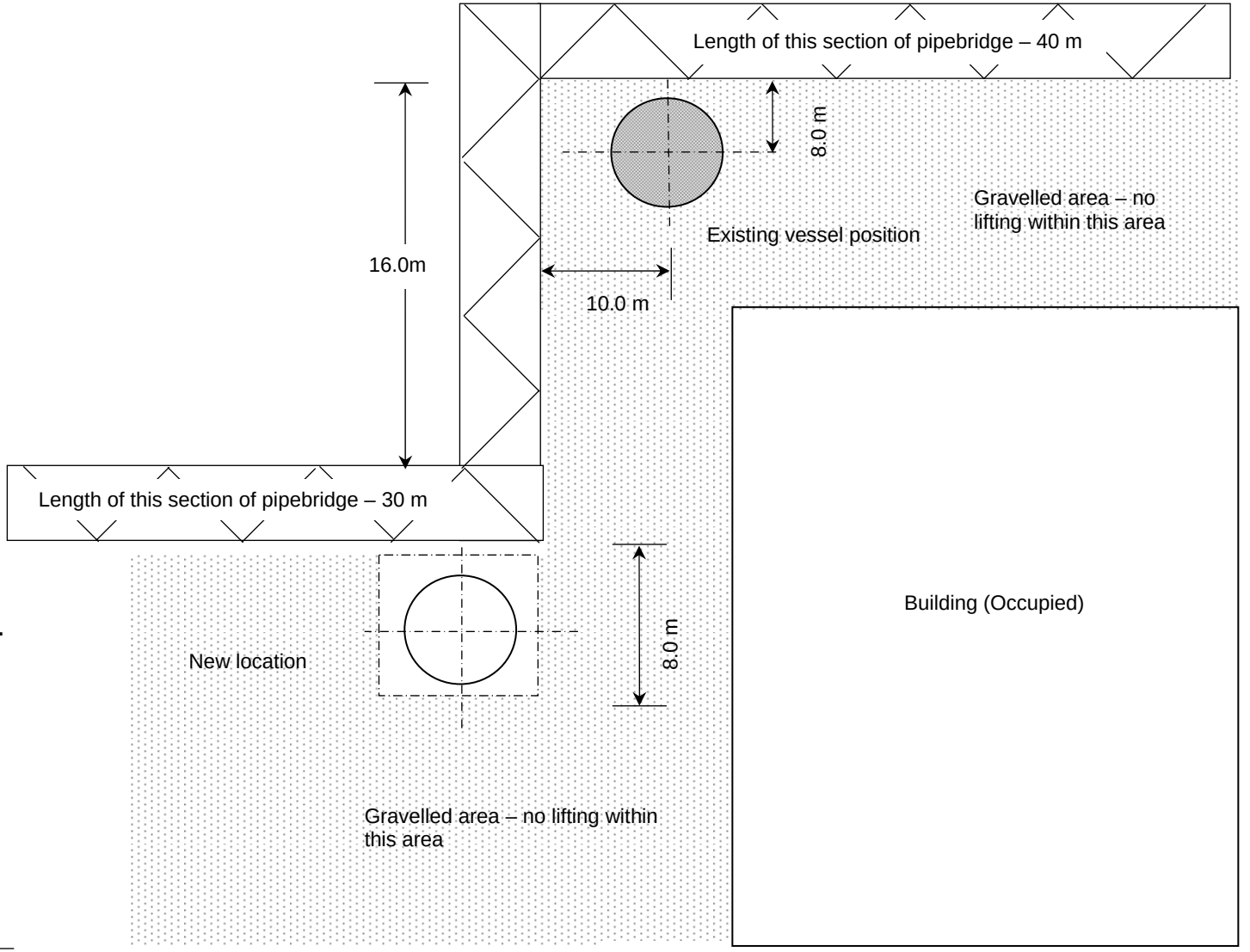
Scenario 5

Candidates Notes:

1. Lift a vessel from an existing position and place into an open steel support structure. The plant is under construction.
2. Vessel weight: 22 t.
3. Support steelwork: 11.5 m high x 7 m x 7 m.
4. Vessel dimensions – Height (inc legs) 11 m, Diameter 6.8 m.
5. Vessel exists on site in vertical orientation.
6. Pipebridge height (to underside) – 8.8 m.
7. Pipebridge dimensions 2.7 m x 2.7 m.
8. Height of building – 7 m with flat roof. Dimensions 20 x 20 m.
9. Tank has 2 x fixed lifting points, has 4 x legs spaced radially, and 1 x central leg. The tank is to be bolted to the supporting steelwork by the client.
10. Customer – East-South Water Ltd. Site – Northern Grange Treatment Works. Site Contact – S Loggan 07735 345 554
11. Gravelled area to south of pipebridge. Concreted area to north of pipebridge.
12. Ground bearing pressure not to exceed 25 t/m^2
13. Good access and egress road to work site.

Important – This drawing is NOT to scale.
All dimensions are in metric units.



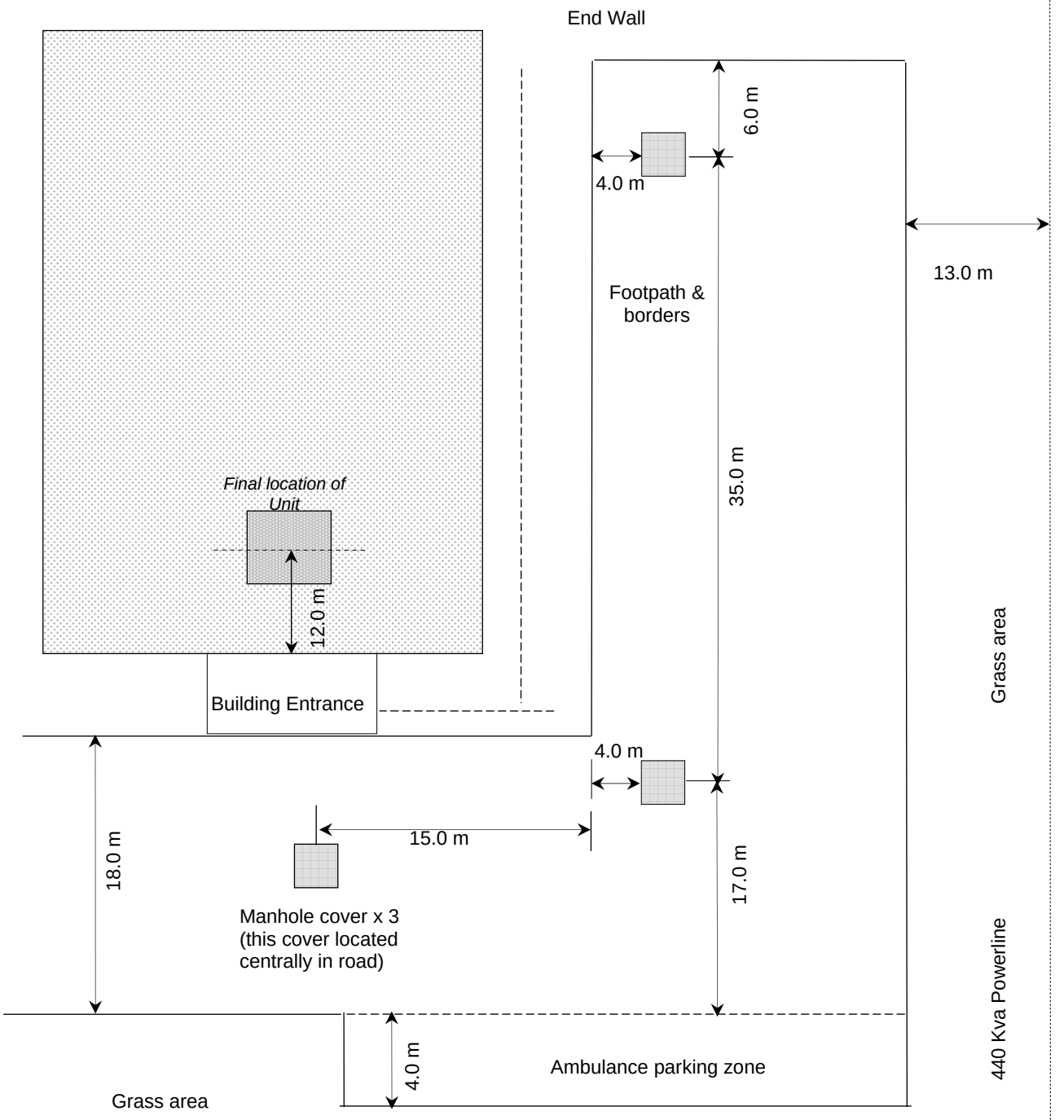


Title – Lift and Place an Air Conditioning Unit **Scenario 6**

Candidates Notes:

1. Air Conditioning to be lifted from transporter and placed on top of the building, 12 m from the front of the building. The site is a new build and not occupied by the client.
2. Weight of the unit– 6.4 t and has a lifting point in each corner.
3. The Unit is 3.25 m high x 2.4 m x 2.4 m.
4. The building is 33 m high, 20 m wide and 30 m in length.
5. The road is 18 m wide with the end wall 2.4 m high.
6. The footpath and borders surrounding the building are 6 m wide and contain various underground services.
7. The manhole covers are 1 m x 1 m in size.
8. Customer – NHS. Site – Priestley Hospital. Site Contact – J Oremand, 01207 885 586
9. Trailer for transporting load to be positioned close to building as feasibly possible.
10. Ground bearing pressure not to exceed 25 t/m^2

Important – This drawing is NOT to scale. All dimensions are in metric

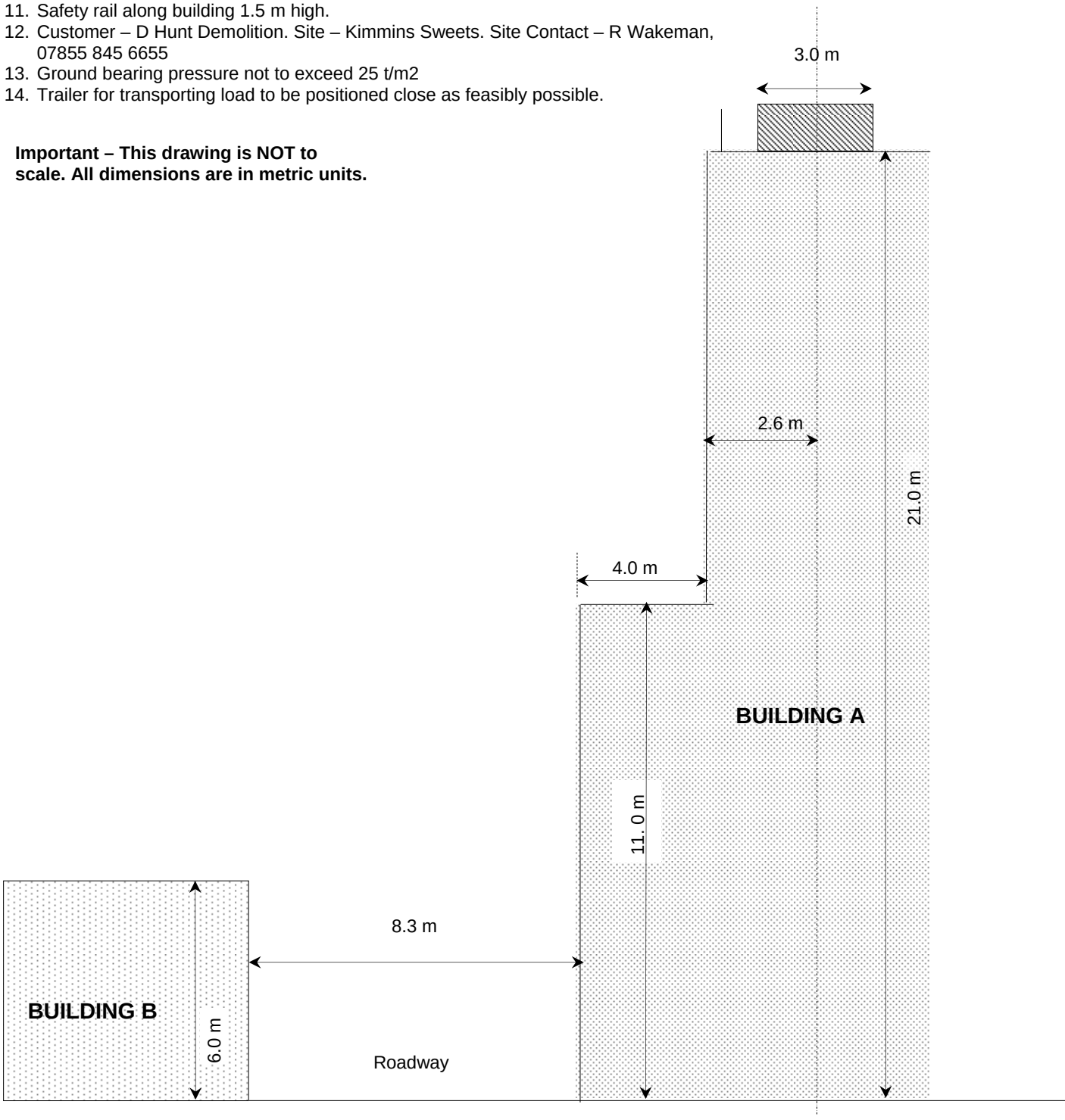


Title – Lift and Land a Lift Motor-unit **Scenario 7**

Candidates Notes:

1. Unit located in top of a disused factory. Unit to be placed onto truck for transportation.
2. There are 4 x integral eye bolts in each corner on top of the motor.
3. Weight of motor – 4.8 t
4. Length of the motor – 5.0 m
5. Height of motor – 1.5 m
6. Width of the motor – 3.0 m
7. Roadway constructed of concrete and has no underground services.
8. Length of roadway – 40 m, with clear access at both ends.
9. Length of Building A and B – 20 m x 20 m
10. Access to roof is via internal stairs.
11. Safety rail along building 1.5 m high.
12. Customer – D Hunt Demolition. Site – Kimmins Sweets. Site Contact – R Wakeman, 07855 845 6655
13. Ground bearing pressure not to exceed 25 t/m2
14. Trailer for transporting load to be positioned close as feasibly possible.

Important – This drawing is NOT to scale. All dimensions are in metric units.

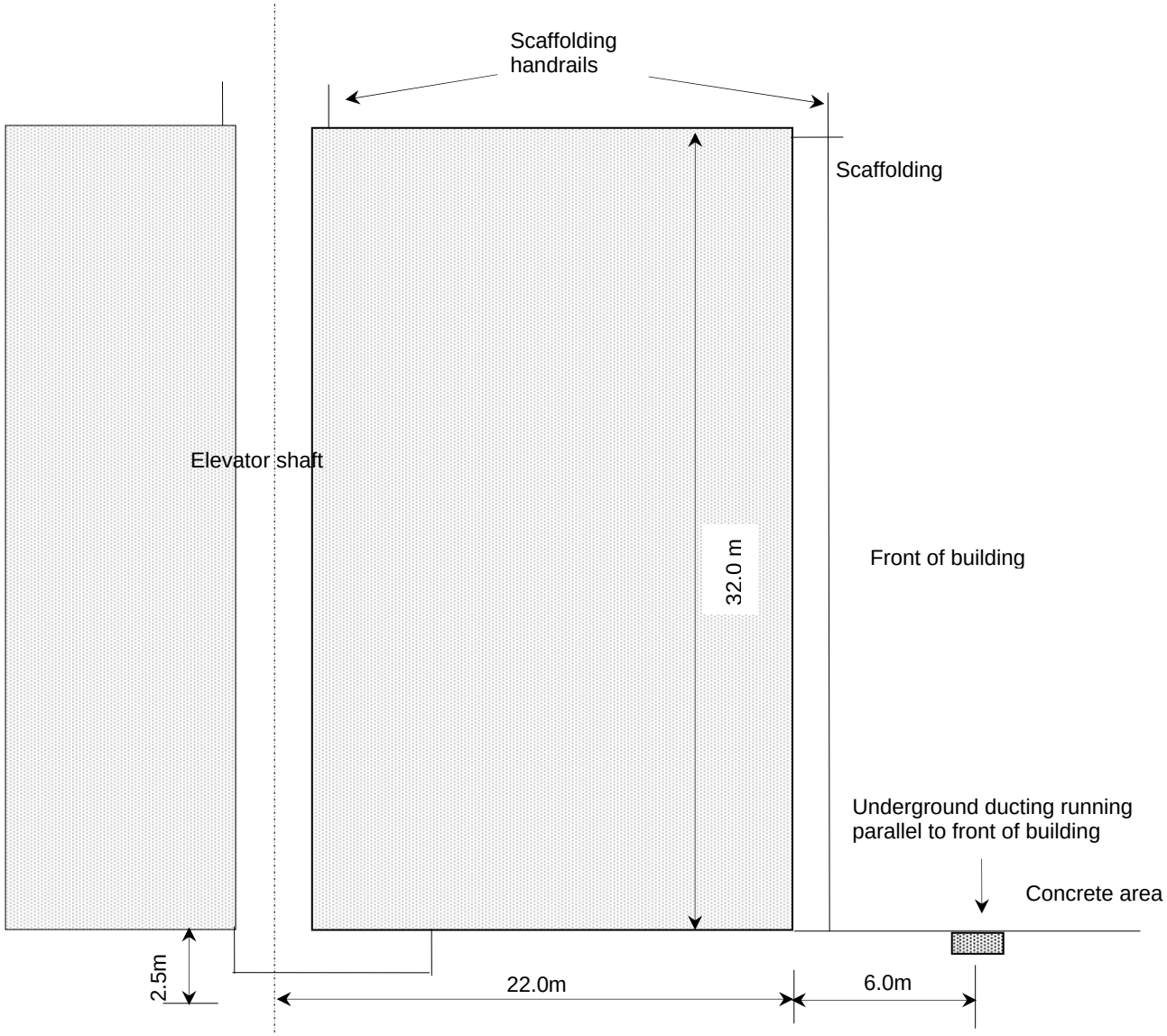


Title – Lift and Place a Lift Base-support Unit **Scenario 8**

Candidates Notes:

1. From a transporter, lift and lower the base-support unit down the lift shaft of this building being constructed. The unit is to be located at the bottom of the shaft.
2. The elevator shaft is 2 m x 2 m.
3. Weight of base-support unit – 0.7 t and is mounted on a pallet. Support unit must remain on pallet until located in basement.
4. Dimensions of base-support unit – Length 1m, Width 1m, Height 0.9m.
5. The building is 30 m long (front to rear) x 50 m wide. The shaft is located as per the diagram and midway between the two sides of the building. There is no hard standing at the sides of the building – only at the front.
6. Underground basement has separate maintenance access.
7. Scaffolding extends 1.5 m from the building.
8. Scaffolding handrails are 1.5 m high with one set encircling the shaft.
9. Underground ducting runs parallel to the front of the building and is 1 m wide and 1/2 metre deep.
10. Concrete area extends 15 m from the front of the building. Ground conditions on each side and the rear of the building are unsuitable for lifting purposes.
11. Customer – Meteor Construction. Site – RSB Headquarters. Site Contact – A Holbetts, 01788 674 7483
12. Ground bearing pressure not to exceed 25 t/m^2

Important – This drawing is NOT to scale.
All dimensions are in metric units.



Appointed Person A61

Lifting Operations Technical Test – Practical

Basic details		
	Test ref.	Candidate name
	Tester name	Candidate ref.
	Tester ref.	Date of test
	Make and model	Start time of test
		Duration

The Candidate must achieve all asterisked items and a minimum of 8 of the remaining items to be successful on the test

	Criteria	Standard	Y / N
Section A (1) General details	1 customer	*as stated in given scenario*	
	2 name of site contact	*as stated in given scenario*	
	3 phone number of contact	*as stated in given scenario*	
	4 Site location	*full description as stated in given scenario*	
	5 the description of lift	*as stated in given scenario*	
Section B (2) Loads	6 the net weight of the load/loads*****	*as stated in given scenario*	
	7 the gross weight of the load/loads*****	*calculated as weight offload/ hook block and lifting accessories with a minimum FOS identified*	
	8 dimensions of the load/loads*****	*as stated in given scenario*	
	9 position of the C of G	*as calculated (load is uniform or central)*	
	10 height of the lift*****	*from ground level to bottom of load*	
	11 maximum radius*****	*of load at any given point during the lift*	
Section C (3) Crane	12 make and model*	*as identified*	
	13 the required capacity*	*must be the predetermined ideal size & type*	
	14 main boom length required	*as per selected crane specifications*	
	15 fly jib length and angle (if required)	*as per selected crane specifications*	
	16 outrigger spread*	*as per selected crane specifications*	
	17 mat/pad size	*as calculated*	
	18 rigged weight of crane*	*as per manufacturers' specifications*	
	19 additional counterweights (if required)	*as per manufacturers' specification*	
Section D (4) Ground conditions	20 access and egress points for the crane*	*as stated in given scenario*	
	21 access and egress points for other transport	*as stated in given scenario*	
	22 the required lifting position*	*as stated in given scenario*	
Section E (5) Lifting accessories	23 the type and length required*	*suitable type(s) identified*	
	24 correct WLL identified*	*accurate*	
	25 the number of lifting accessories required*	*number identified*	

continued…

		Criteria	Standard	Y / N
Section F (6a) Proximity hazards (as applicable)	26	overhead power lines*	*identified as yes or no*	
	27	other types of overhead obstacles*	*identified as yes or no*	
	28	underground services*	*identified as yes or no*	
	29	excavations*	*identified as yes or no*	
	30	unstable/soft ground*	*identified as yes or no*	
	31	hazardous chemicals/materials	*identified as yes or no*	
	32	confined working areas*	*identified as yes or no*	
	33	restricted access – width*	*identified as yes or no*	
	34	restricted access – height*	*identified as yes or no*	
	35	other vehicles	*identified as yes or no*	
	36	other hazards*	*identified as yes or no*	
Section G (6b) Load hazards	37	slinging difficulties*	*identified as yes or no*	
	38	top heavy loads*	*identified as yes or no*	
	39	sharp edged loads*	*identified as yes or no*	
	40	other hazards*	*identified as yes or no*	
Section H (7) Assessment of risk	41	hazards (not included in items 26-36)*****	*identified*	
	42	risk s against the hazards in item 41*	*identified*	
	43	action to be taken to avoid/reduce risk as in item 41*	*identified*	
	44	risk s against the hazards in items 26-36*	*identified*	
	45	action to be taken to avoid/reduce risk as in items 26-36*	*identified*	
Section I (8)	46	the equipment the crane must come equipped with	*identified (must state if information is contained in method statement)*	
Section J (9)	47	customer provisions	*identified (must state if information is contained in method statement)*	
Section K (10) Personnel	48	the number of additional personnel required*	*must be minimum of 2 noted – lifting at height or depth requires minimum of 3*	
	49	the type of personnel required*	*identified*	
	50	any PPE that personnel must be equipped with*	*identified*	
Section L (11) Lifting accessories	51	supplier of lifting accessories	*identified*	

continued…

	Criteria	Standard	Y / N
Section M (12) Weather / Environmental and ground conditions	52 conditions when the lifting operation must be shut down	*as per crane manufacturers' recommendations*	
	53 instruction to check wind speed at point of lift*	*identified*	
Section N (13) Ground conditions	54 ground conditions, and stated all precautions to be taken*	*identified*	
Section O (14) Sequence of operations	55 the sequence of operations*	*logical order, does not cause incident or greater, is without confusion*	
Section P (15) Contingency statement	56 include a contingency statement*	*In case of interruption of lift etc.*	
Section Q Drawing	57 did the drawings (plan and elevation) show the positioning of the crane*	*clear and identifiable*	
	58 did the drawings correctly show the positioning of the crane, load (before and after lift) and ancillaries*	*clear and identifiable*	
	59 clearly marked to scale*	*scale clearly identified, matched to drawing and suitable to show detail*	
Section R Additional	60 were the contents of the method statement understandable to others who may be involved in the lift*	*clear, decipherable and coherent*	

The Candidate must achieve all asterisked items and a minimum of 8 of the remaining items to be successful on the test

Achieved / Not achieved

Tester observations	.....

Sign off	I confirm that I have carried out the Practical Technical Test in accordance with CPCS requirements and that the candidate has: Achieved ☐ Not achieved ☐ **Candidate signature:** ..... **Tester signature:** .....

CITB-ConstructionSkills Grant claim details	Grant is only payable for the award of a full Technical Test or Advanced Technical Test pass (both practical and theory elements to a maximum of 2 categories in any Grant Scheme year) in accordance with the full Grant Scheme rules. Employer **does not** intend to claim a Technical Test pass grant ☐ No further information required Employer **does** intend to claim a Technical Test pass grant ☐ Please complete additional fields below **CITB-ConstructionSkills Levy Grant Registration Number (7 digits)** ☐☐☐☐☐☐☐ **Employer Name** ..... **Employer Postcode** .....

Internal use	