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CONTRACT [

CONSTRUCTION []

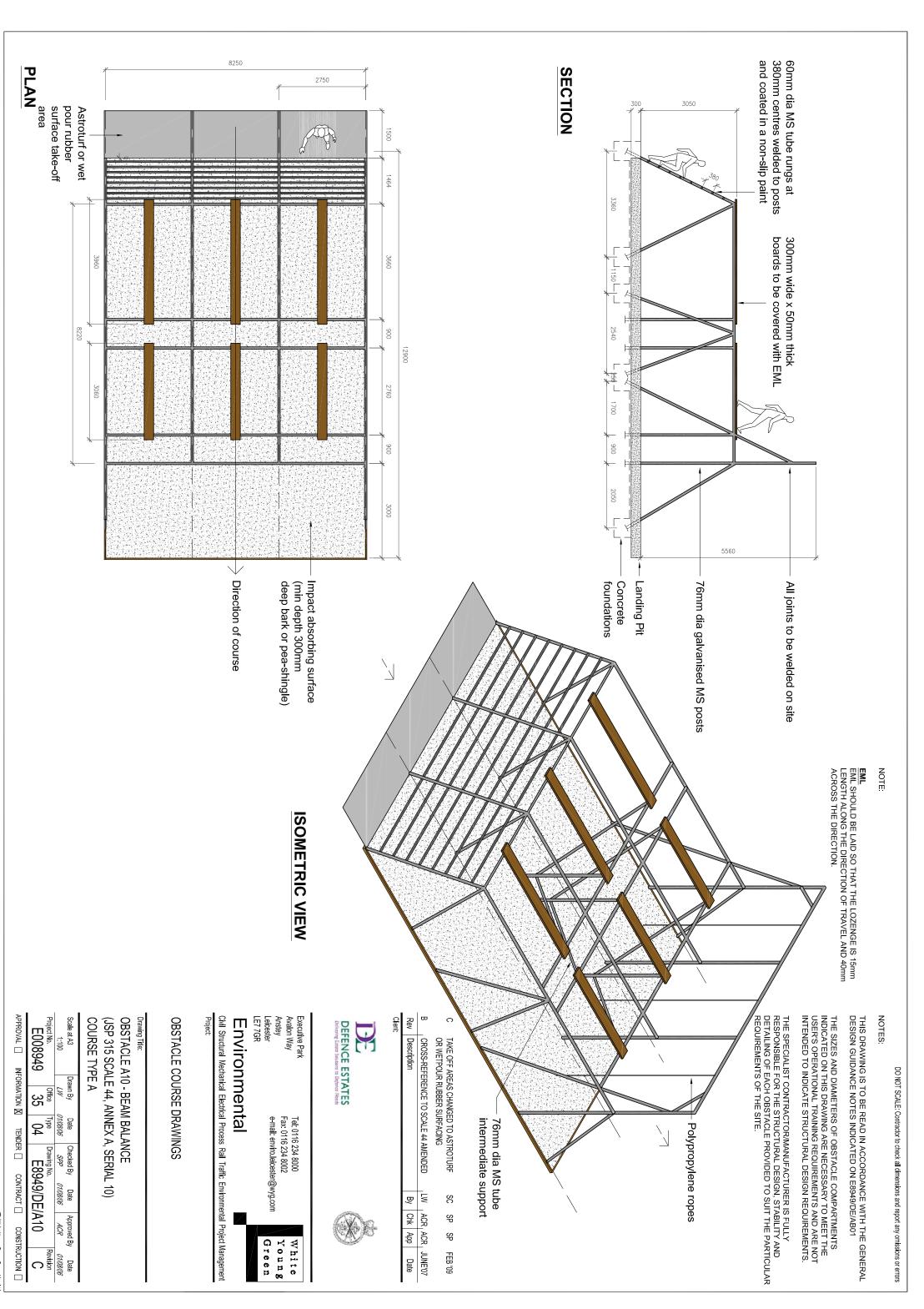
Revision

Date *01/08/06* 

Approved By

ACR

Date 01/08/06





NOTE

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EML SHOULD BE LAID SO THAT THE LOZENGE IS 15mm LENGTH ALONG THE DIRECTION OF TRAVEL AND 40mm ACROSS THE DIRECTION.

Timber support braces

to stakes and braces

Landing Pit

EML non slip surface applied to top of poles

450

500

Straps to extend 300mm min. below pole

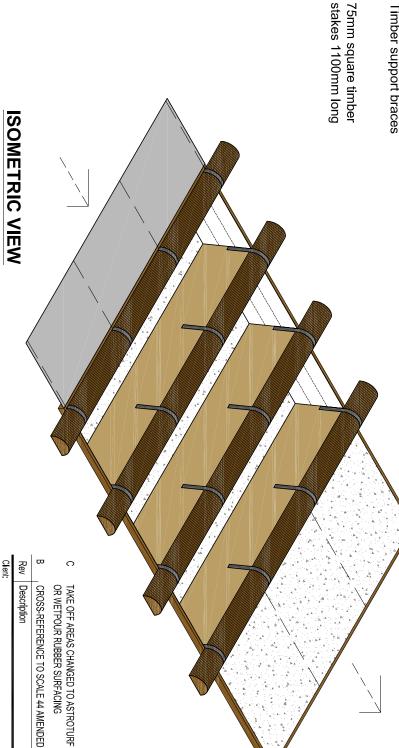
600

Timber poles secured

Pea-shingle impact absorbing surface

(min depth 75mm)

timber boarding 38mm thick



SECTION

DEFENCE ESTATES



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Executive Park

Tel: 0116 234 8000 Fax: 0116 234 8002 Green Young White

Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management Leicester LE7 7GR Avalon Way Environmental e-mail: enviro.leicester@wyg.com

4500

1220

Direction of course

Pea-shingle impact absorbing surface (min depth 75mm)

50mm x 3mm thick galvanised MS straps fixed to timber stakes

to hold 4 no. 300mm dia poles

1220

420

1000

300

920

300

920

920

300

1500

3960

**OBSTACLE COURSE DRAWINGS** 

**OBSTACLE A11 - TREBLE STRIDE DITCH** COURSE TYPE A (JSP 315 SCALE 44, ANNEX A, SERIAL 11)

Project No. E008949 Scale at A3 135 Office **2** Checked By SPP Drawing No. E8949/DE/A11 Date 01/08/06 Approved By

ACR Revision 01/08/06 Date

APPROVAL | INFORMATION X TENDER CONTRACT [ CONSTRUCTION []

PLAN

area

surface take-off pour rubber Astroturf or wet

1220

1220

1220

4500mm long with non-slip surface (EML)

4 no. 300mm dia timber poles

420

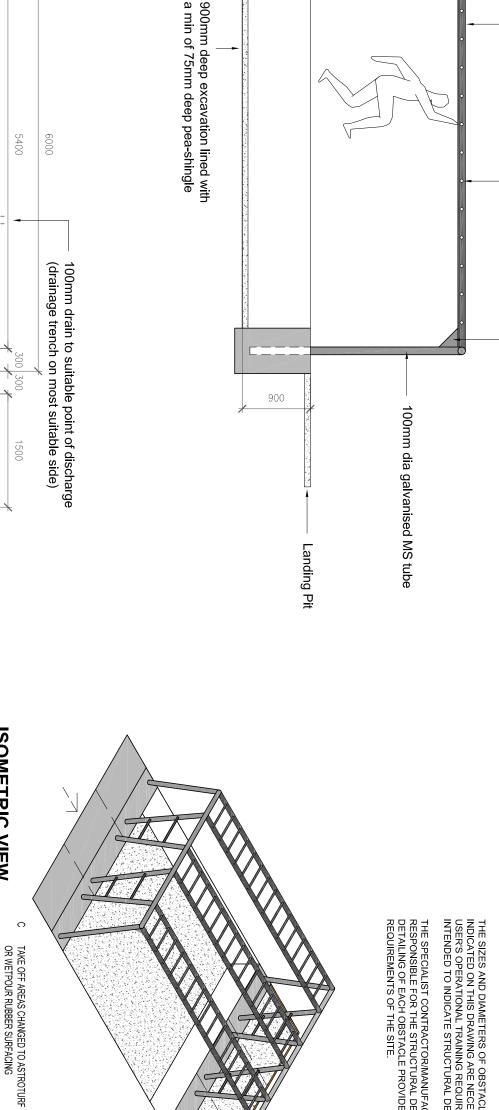
1220



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Scale 1:50 SECTION

200

800

2000

MS tubes

100mm dia galvanised

42mm dia MS monkey bars welded to 100mm dia main tubes at 375mm centres

12mm MS galvanised plate corner bracket

## **ISOMETRIC VIEW**

Scale 1:100

Client

Rev

Description

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CROSS-REFERENCE TO SCALE 44 AMENDED

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DEFENCE ESTATES

Pea-shingle impact absorbing surface (min depth 75mm)





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5000

700

1000

700

450

1000

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Environmental

of course

4100

Direction

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## **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A12 - OVERHEAD TRAVERSE** COURSE TYPE A (JSP 315 SCALE 44, ANNEX A, SERIAL 12)

Scale at A3 AS SHOWN Checked By SPP Date 01/08/06 Approved By

ACR Date

Project No. E008949 PPROVAL | INFORMATION X 135 Office **2** TENDER Drawing No. E8949/DE/A12 CONTRACT [ CONSTRUCTION [] Revision 01/08/06

100mm dia galvanised MS tubes Scale 1:100

1000

Concrete base

100mm dia galvanised

42mm dia MS struts

MS tube

600 700 700

PLAN Scale 1:50

surface take-off area

42mm dia MS monkey bars welded to 100mm dia main tubes at 375mm centres

Astroturf or wet pour rubber

450

700

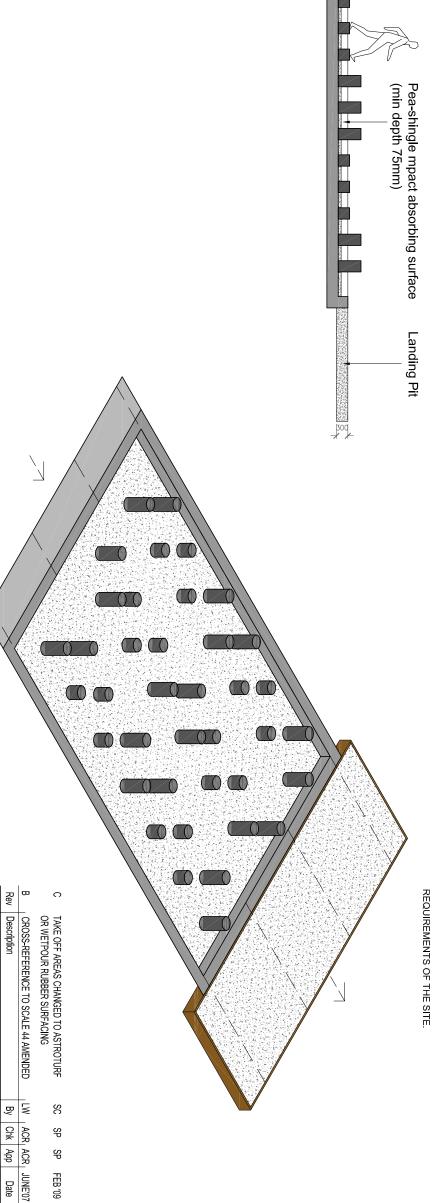
1000

**DIRECTION OF COURSE ELEVATION FACING** 

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SECTION

weld mesh)

Concrete wall and base (to be reinforced with

take-off area 7300 Astroturf or wet pour rubber surface 700 800 700 1500 1500 700 800 10000 Direction of course 500 Pea-shingle impact absorbing surface (min depth 300mm) stepping stones 300mm dia concrete Pea-shingle impact absorbing surface (min depth 75mm) Concrete wall

ISOMETRIC VIEW

1000

800

700

700 700 700

700

700 700

800

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> Young Green

Environmental

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## **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A13 - STEPPING STONES** 

(JSP 315 SCALE 44, ANNEX A, SERIAL 13) COURSE TYPE A

Project No. E008949 Scale at A3 \PPROVAL | 1.100 INFORMATION X 35 Office 94 1 TENDER Checked By SPP Drawing No. **E8949/DE/A13** CONTRACT [ Date *01/08/06* Approved By

ACR CONSTRUCTION [] Revision Date 01/08/06

PLAN

10600

3000



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5800

76mm dia MS galvanised tubes

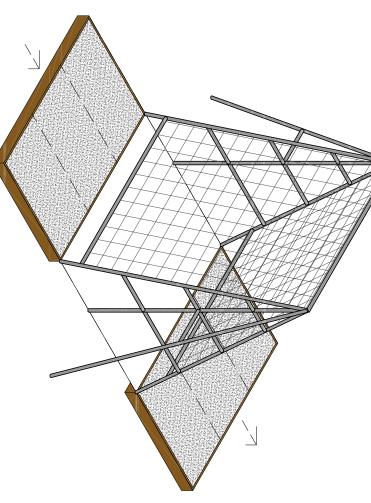
1450

1450

114.3mm x 5mm MS galvanised tube top rail welded to uprights

1450

THE SPECIALIST CONTRACTOR/MANUFACTURER IS FULLY RESPONSIBLE FOR THE STRUCTURAL DESIGN, STABILITY AND DETAILING OF EACH OBSTACLE PROVIDED TO SUIT THE PARTICULAR REQUIREMENTS OF THE SITE.



2000

Scale 1:100 SECTION

Landing Pit

1500

2500

Landing Pit

76mm dia crossbar

Concrete foundations

1450

Pea-shingle impact absorbing surface (min depth 300mm)

4000

### ISOMETRIC VIEW

Rev Description

CROSS-REFERENCE TO SCALE 44 AMENDED

LW ACR ACR JUNE'07

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Scale 1:100



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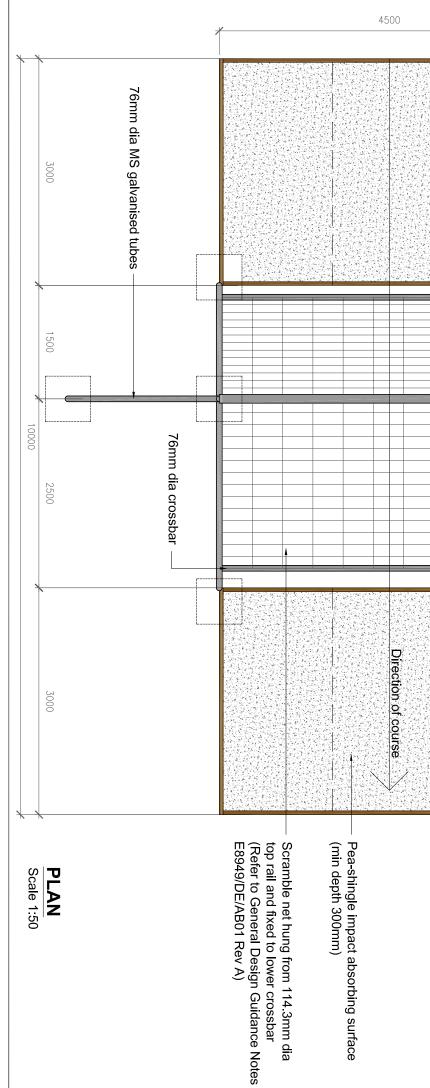
### **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A14 - SCRAMBLE NET** (JSP 315 SCALE 44, ANNEX A, SERIAL 14)

2 Checked By SPP Drawing No. E8949/DE/A14 Approved By

ACR Revision B Date *01/08/06*  COURSE TYPE A

Project No. E008949 APPROVAL | INFORMATION X TENDER CONTRACT CONSTRUCTION

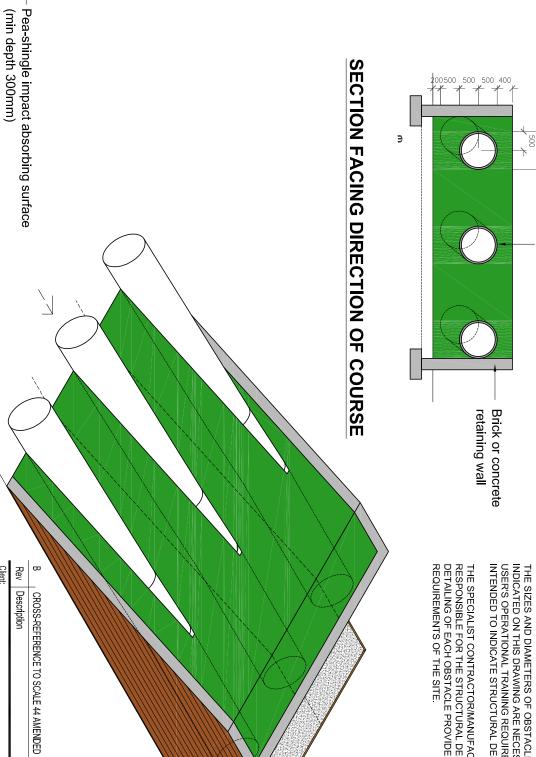




Concrete tubes to be cranked through two directions as shown

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SECTION

3no. 1m dia concrete tubes set with slight incline

Protective covering to upper section of entrance tubes

Obstacle can be dual purpose and double as ramp

Tubes to be turfed over

1000

2100

700

Landing Pit

to ramp

Flat run-off section

7000

Protective covering to upper section of entrance tubes

Ramp contained within supporting wall

4000

1500

2000

1500

3000

ISOMETRIC VIEW

LW ACR ACR JUNE'07

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### **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A15 - TUBE CRAWL** 

(JSP 315 SCALE 44, ANNEX A, SERIAL 15) COURSE TYPE A

Checked By SPP Approved By

ACR

Project No. **E**008949 APPROVAL [] INFORMATION X TENDER 2 Drawing No. E8949/DE/A15 CONTRACT CONSTRUCTION Revision B Date *01/08/06*  PLAN



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4900

Pea-shingle impact absorbing surface (min depth 300mm)

**SECTION** 

2150

7300

2150

(with removable cover)

Anchor point

60mm dia MS tubes coated in non slip paint welded to

burma rope bridge Polypropylene

Rope of bridge fixed to cross member at both ends

Glide rope

in pit below ground level) (attached to shackle house 76mm dia MS galvanised tubes

posts as ladder rungs

900

3000

Rev Description

TAKE OFF AREAS CHANGED TO ASTROTURF OR WETPOUR RUBBER SURFACING CROSS-REFERENCE TO SCALE 44 AMENDED

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Date

All joints to be welded on site

Burma bridge

centre stiffener 76mm dia MS tube

1900

7300

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## **OBSTACLE COURSE DRAWINGS**

(JSP 315 SCALE 44, ANNEX A, SERIAL 16) **OBSTACLE A16 - BURMA BRIDGE** COURSE TYPE A

Project No. E008949	1:100	Scale at A3
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<sup>Туре</sup>	01/08/06	Date
Drawing No.	Spp	Checked By
)49	01.	
/DE/	/08/06	Date
E8949/DE/A16	108/06 ACR	Date Approved By

15100

PLAN

BURMA ROPE BRIDGE - VERTICAL STRANDS
THE GAP BETWEEN UPRIGHTS MUST BE WITHIN A MINIMUM OF 650MM AND A MAXIMUM OF 750MM.

surface rubber

take-off area

Astroturf or

wet pour

Direction of course

Anchor point for descent glide rope (attached to shackle house in pit)

Pea-shingle impact absorbing surface (min depth 300mm)

1500

1500

<u>t</u>

SOMETRIC VIEW

BURMA ROPE BRIDGE - ROPE TENSIONERS
DO NOT FIT TENSIONERS. ROPES TO BE FITTED DIRECTLY
ONTO THE SUPPORT FRAME.

SECURING THE BURMA ROPE BRIDGE
THE TOP AND BOTTOM ROPES ARE TO BE SECURED DIRECT
TO THE MAIN FRAME VIA THE THIMBLE EYES AND TO A
BOTTLE SCREW TO D OR BOW (PREFERRED) GALVANISED
STEEL OR ALLOY SHACKLES.

NB. IF INTRODUCED, THE TOP AND BOTTOM ROPES AND
GUIDE RAIL WILL NEED TO BE SHORTENED.

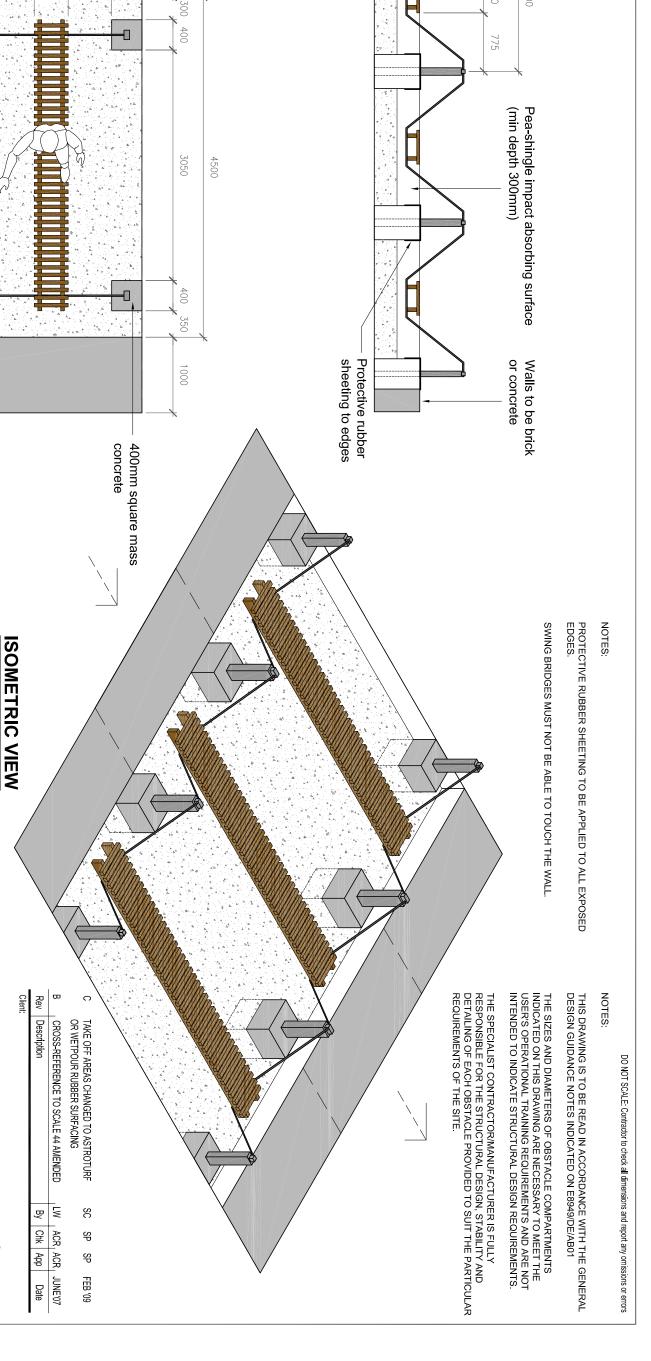
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CONSTRUCTION [



600

775

450

2000

SECTION

Direction of course 450mm wide duckboards made from 2 no. 125mm x 50mm joist and 50mm x 40mm battens (Duckboards to be applied with a non-slip finish) Pea-shingle impact absorbing surface (min depth 300mm) spaced 50mm apart. concrete 19mm dia MS rod Executive Park Avalon Way LE7 7GR Anstey Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management (JSP 315 SCALE 44, ANNEX A, SERIAL 17) **OBSTACLE A17 - SWINGING DUCKBOARDS OBSTACLE COURSE DRAWINGS** COURSE TYPE A Environmental DEFENCE ESTATES Tel: 0116 234 8000 Fax: 0116 234 8002 e-mail: enviro.leicester@wyg.com

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6400

450

450mm square mass

450

400

1000

2000

Project No. **E**008949

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CONTRACT

CONSTRUCTION

2

Drawing No. E8949/DE/A17

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Checked By SPP

Approved By

ACR

Date *01/08/06* 

area **PLAN** 

rubber surface take-off Astroturf or wet pour

Concrete exit area



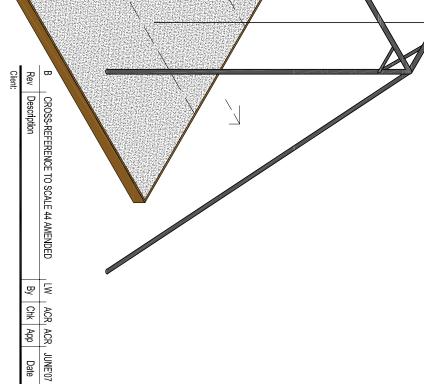
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3 no. Polypropylene ropes suspended from cross bar on 2 sides of frame

105mm dia galvanised MS frame

76mm dia galvanised MS strut



SECTION

Pea-shingle impact absorbing landing area (min depth 300mm)





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ISOMETRIC VIEW

Direction of course

Landing area

Pea-shingle impact absorbing surface (min depth 300mm)

12000

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### **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A18 - CLIMBING ROPES** (JSP 315 SCALE 44, ANNEX A, SERIAL 18)

COURSE TYPE A

В	A18	E8949/DE/A18	E89	94	35	E008949
Revision			Drawing No.	Type	Office	Project No.
01/08/06	ACR	01/08/06	ЅРР	01/08/06	/W7	1:100
Date	Approved By	Date	Checked By	Date	Drawn By	Scale at A3

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CONTRACT

CONSTRUCTION

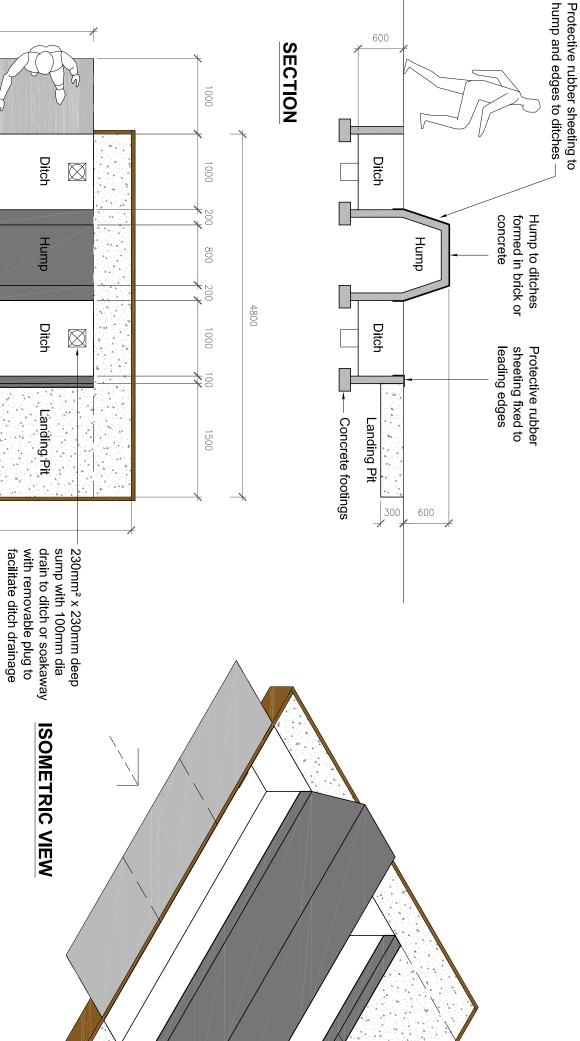
PLAN

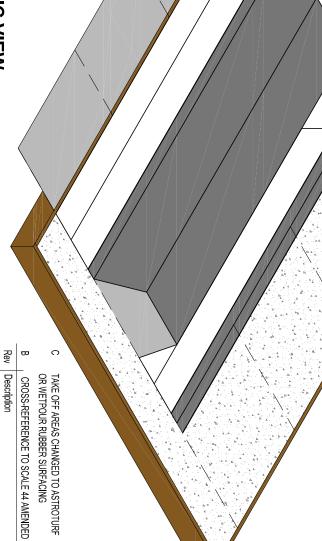


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Executive Park

4500

of course Direction

5500

Pea-shingle impact absorbing surface (min depth 300mm)

500

PLAN

Astroturf or wet pour rubber surface take-off area

3200

Timber retaining board

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Leicester LE7 7GR

Young Green White

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## **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A2 - DOUBLE DITCH** 

Drawing Title:

COURSE TYPE A (JSP 315 SCALE 44, ANNEX A, SERIAL 2)

C	/A2	E8949/DE/A2	E8	04	35	E008949
Revision			Drawing No.	Type	Office	Project No.
01/08/06	ACR	01/08/06	Spp	01/08/06	LW7	1.50
Date	Approved By	Date	Checked By	Date	Drawn By	Scale at A3 D

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INFORMATION X

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CONTRACT [

CONSTRUCTION []

THIS DRAWING IS TO BE READ IN ACCORDANCE WITH THE GENERAL DESIGN GUIDANCE NOTES INDICATED ON E8949/DE/AB01

48mm dia galvanised steel posts with plug in top of each post

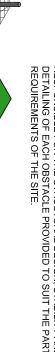
Mesh welded to straining wires 460mm above crawl surface

Artificial turf crawl surface

Concrete slab

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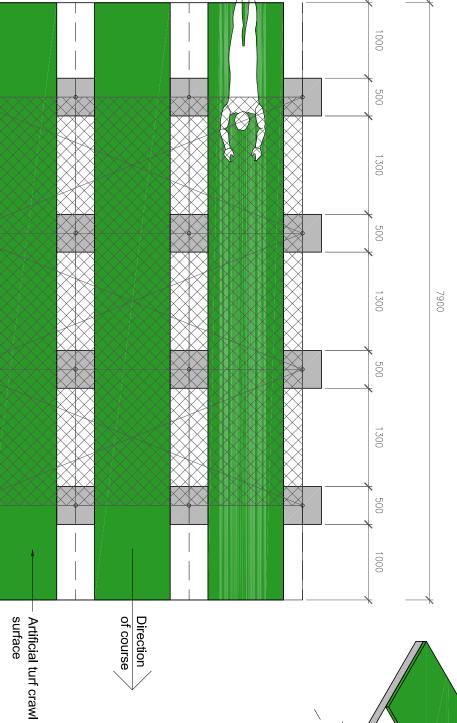
1000

500

009

097

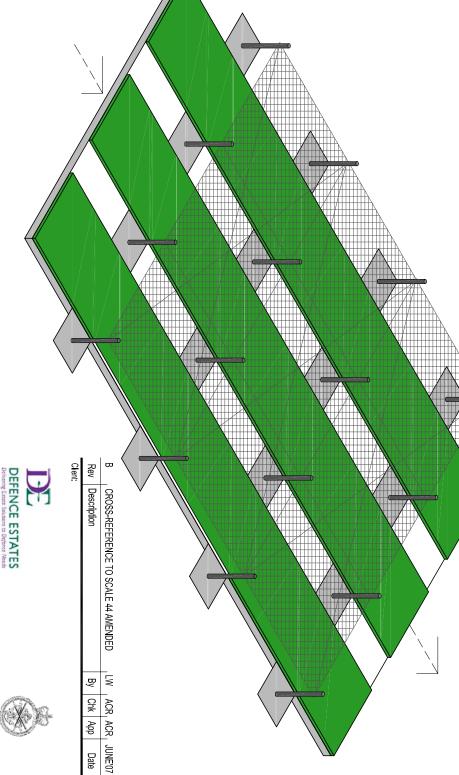
5000



4500

PLAN

5900



### ISOMETRIC VIEW

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## **OBSTACLE COURSE DRAWINGS**

В	/A3	E8949/DE/A3	E89	94	35	E008949
Revision			Drawing No.	Type	Office	Project No.
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Date	Approved By	Date	Checked By	Date	Drawn By	Scale at A3
					ΕA	COURSE TYPE A
		<u>(</u> သ	SERIAI	NNEX /	LE 44, A	(JSP 315 SCALE 44, ANNEX A, SERIAL 3)
				≤	3-CRAV	<b>OBSTACLE A3 - CRAWI</b>
						Drawing Title:

E8949/DE/A3 CONTRACT [

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INFORMATION X

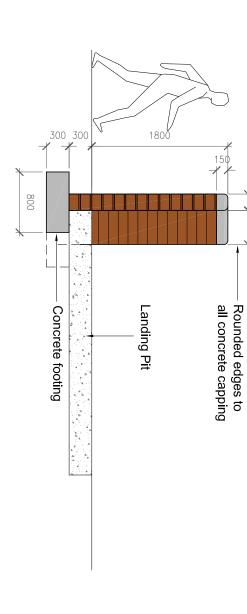
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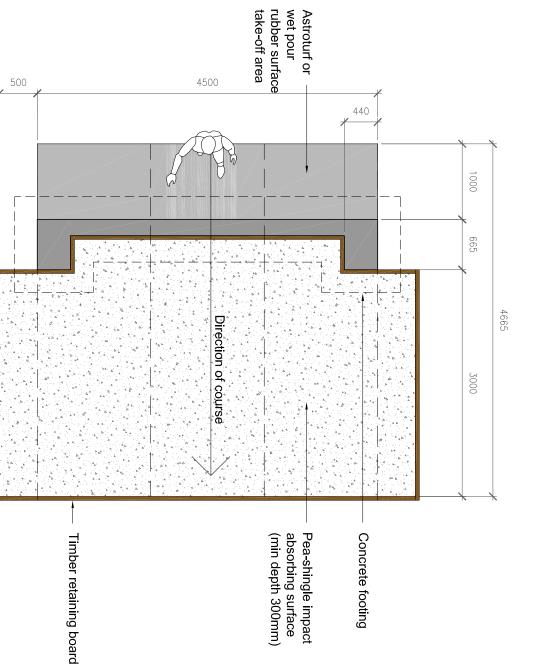
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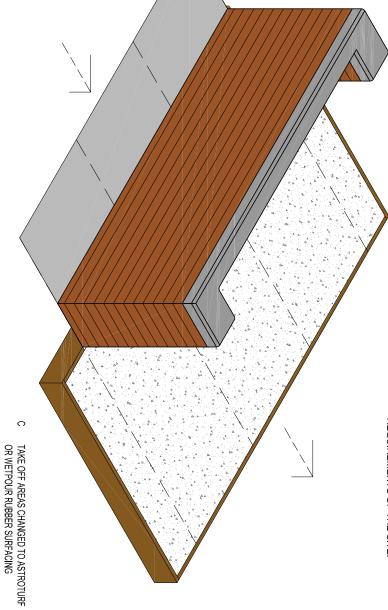
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### SECTION



# ISOMETRIC VIEW



Client

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Description

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## **OBSTACLE COURSE DRAWINGS**

(JSP 315 SCALE 44, ANNEX A, SERIAL 4) **OBSTACLE A4 - SINGLE WALL (LOW)** COURSE TYPE A

Drawing Title:

E008949	Project No.	1:50	Scale at A3
ၾ	Office	711/	Drawn By
2	Type	01/08/06	Date
E86	Drawing No.	Spp	Checked By
E8949/DE/		01/08/06	Date
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C	Revision	01/08/06	Date

PLAN

APPROVAL

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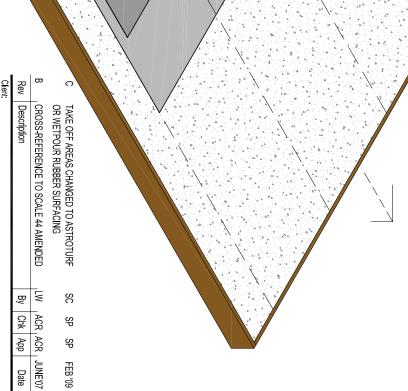
Rough concrete to ramp to facilitate grip purchase

Landing Pit

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### **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A5 - DRY DITCH** 

Drawing Title:

500

Astroturf or wet pour rubber surface take-off area **PLAN** 

6750

Timber retaining board

Landing Pit

Pea-shingle impact absorbing surface (min depth 300mm)

PLAN

4500

150 1/

**—** 

Ditch

Concrete slope lip

ISOMETRIC VIEW

Direction of course

1000

1750

1000

1000

3000

 $230 \text{mm}^2 \times 230 \text{mm}$  deep sump with 100 mm dia drain to ditch or soakaway with removable plug to facilitate ditch drainage

**SECTION** 

(JSP 315 SCALE 44, ANNEX A, SERIAL 5) COURSE TYPE A

Project No. E008949 Scale at A3 50 ္တ 94 1 Checked By SPP Drawing No E8949/DE/A5 Date *01/08/06* Approved By

ACR Revision Date 01/08/06

APPROVAL

INFORMATION X

TENDER

CONTRACT [

CONSTRUCTION []



25mm thick cement / sharp sand mortar (wood float finish) along tops of walls

00.05

1800

Landing Pit

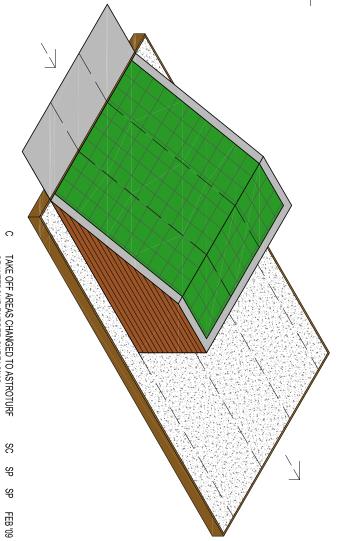
Retaining wall to be constructed in brick or concrete

Rounded edges to all concrete capping

THIS DRAWING IS TO BE READ IN ACCORDANCE WITH THE GENERAL DESIGN GUIDANCE NOTES INDICATED ON E8949/DE/AB01

THE SIZES AND DIAMETERS OF OBSTACLE COMPARTMENTS INDICATED ON THIS DRAWING ARE NECESSARY TO MEET THE USER'S OPERATIONAL TRAINING REQUIREMENTS AND ARE NOT INTENDED TO INDICATE STRUCTURAL DESIGN REQUIREMENTS.

THE SPECIALIST CONTRACTOR/MANUFACTURER IS FULLY RESPONSIBLE FOR THE STRUCTURAL DESIGN, STABILITY AND DETAILING OF EACH OBSTACLE PROVIDED TO SUIT THE PARTICULAR REQUIREMENTS OF THE SITE.



**SECTION** 

300

Concrete footing

800

1500

3150

1285

absorbing surface (min depth 300mm) Pea-shingle impact

4650

Scale 1 100 ISOMETRIC VIEW

Rev Description TAKE OFF AREAS CHANGED TO ASTROTURF OR WETPOUR RUBBER SURFACING CROSS-REFERENCE TO SCALE 44 AMENDED K SC

Ъ Chk App Date ACR, ACR, JUNE'07

Client



DEFENCE ESTATES

Executive Park

Direction of course

Young Green White

Avalon Way Leicester LE7 7GR Environmental

e-mail: enviro.leicester@wyg.com

Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management

## **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A6 - RAMP** 

500

area

PLAN

surface take-off pour rubber Astroturf or wet

Ramp to be turfed flush with top of retaining walls on 150mm min. topsoil using grass reinforcement system

Timber retaining board

4500

4070

Ramp

Landing Pit

(JSP 315 SCALE 44, ANNEX A, SERIAL 6)

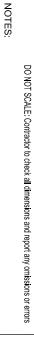
COURSE TYPE A

Project No. E008949 Scale at A3 35 Office **2** Checked By SPP E8949/DE/A6 Date 01/08/06 Approved By

ACR Date 01/08/06

INFORMATION X TENDER CONTRACT [

APPROVAL | CONSTRUCTION []



THE SIZES AND DIAMETERS OF OBSTACLE COMPARTMENTS INDICATED ON THIS DRAWING ARE NECESSARY TO MEET THE USER'S OPERATIONAL TRAINING REQUIREMENTS AND ARE NOT INTENDED TO INDICATE STRUCTURAL DESIGN REQUIREMENTS.

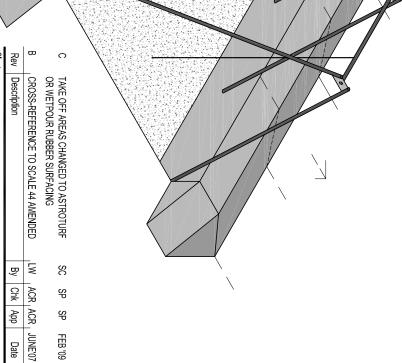
THE SPECIALIST CONTRACTOR/MANUFACTURER IS FULLY RESPONSIBLE FOR THE STRUCTURAL DESIGN, STABILITY AND DETAILING OF EACH OBSTACLE PROVIDED TO SUIT THE PARTICULAR REQUIREMENTS OF THE SITE.

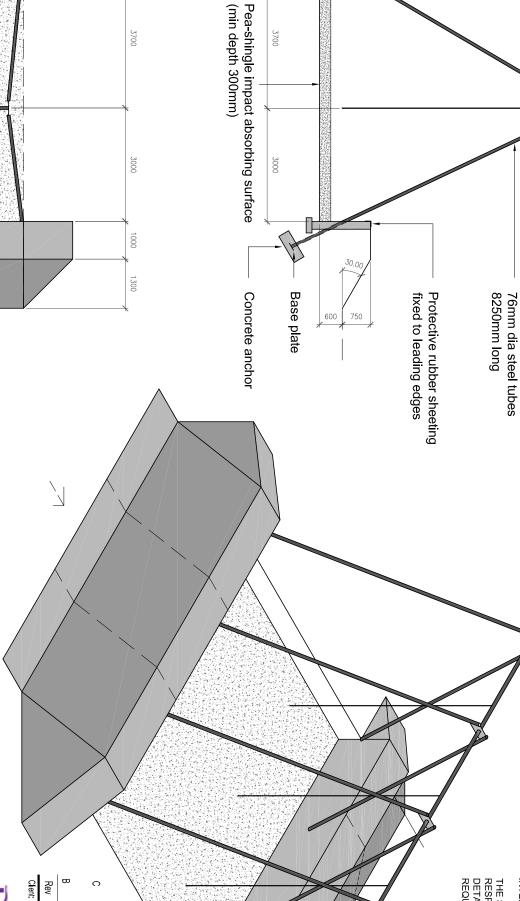
6100

Rough concrete to ramp to facilitate grip purchase

Polypropylene rope

1200





SECTION

3700

3000

Retaining walls to be constructed in brick or concrete

3000

ISOMETRIC VIEW

Rough concrete to ramp to facilitate grip purchase

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Avalon Way

Executive Park

Young Green White

Leicester LE7 7GR Environmental

8250

Direction of course

pour rubber surface take-off area

PLAN

Astroturf or wet

Rough concrete to ramp to facilitate

76mm dia MS tube threaded both ends

1300

grip purchase

Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management

### **OBSTACLE COURSE DRAWINGS**

**OBSTACLE A7 - SWING OVER DITCH** (JSP 315 SCALE 44, ANNEX A, SERIAL 7)

COURSE TYPE A

Project No. E008949 Scale at A3 1.100 135 Office **2** Checked By SPP E8949/DE/A7 Date *01/08/06* Approved By

ACR Revision Date 01/08/06

APPROVAL |

INFORMATION X

TENDER

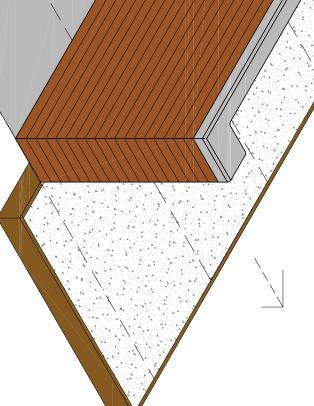
CONTRACT [

CONSTRUCTION []



THE SIZES AND DIAMETERS OF OBSTACLE COMPARTMENTS INDICATED ON THIS DRAWING ARE NECESSARY TO MEET THE USER'S OPERATIONAL TRAINING REQUIREMENTS AND ARE NOT INTENDED TO INDICATE STRUCTURAL DESIGN REQUIREMENTS.

THE SPECIALIST CONTRACTOR/MANUFACTURER IS FULLY RESPONSIBLE FOR THE STRUCTURAL DESIGN, STABILITY AND DETAILING OF EACH OBSTACLE PROVIDED TO SUIT THE PARTICULAR REQUIREMENTS OF THE SITE.



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TAKE OFF AREAS CHANGED TO ASTROTURF OR WETPOUR RUBBER SURFACING SS

SP

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FEB '09

Description CROSS-REFERENCE TO SCALE 44 AMENDED M Ву Chk App Date ACR ACR JUNE'07



Client

Rev

DEFENCE ESTATES
Delivering Estate Salutions to Defence Needs



Avalon Way Leicester LE7 7GR Executive Park Tel: 0116 234 8000 Fax: 0116 234 8002 e-mail: enviro.leicester@wyg.com

White Young Green

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### **OBSTACLE COURSE DRAWINGS**

(JSP 315 SCALE 44, ANNEX A, SERIAL 8) **OBSTACLE A8 - SINGLE WALL (HIGH)** 

COURSE TYPE A

APPROVAL Project No. E008949 Scale at A3 INFORMATION X ္တ 2<sup>Type</sup> TENDER Drawing No. E8949/DE/A8 Checked By SPP CONTRACT [ Date *01/08/06* Approved By

ACR CONSTRUCTION [] Revision Date 01/08/06

PLAN

SECTION

300 300

Concrete footing

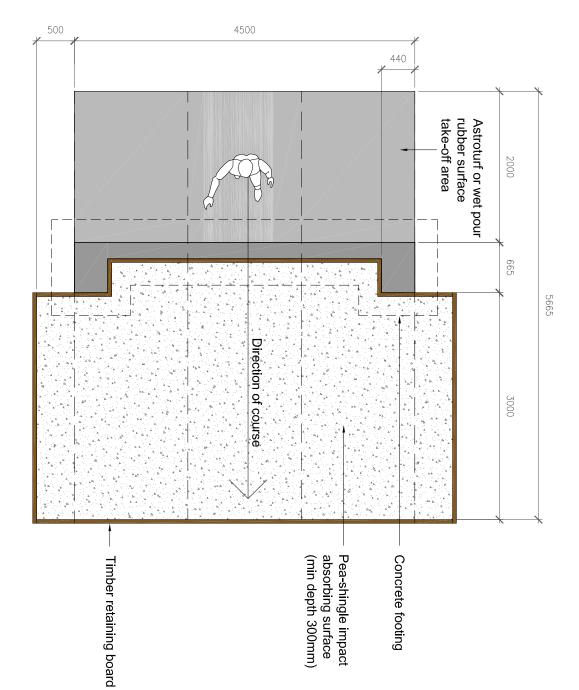
800

V 2500

Landing Pit

450

Rounded edges to all concrete capping



ISOMETRIC VIEW

Scale 1:100

1000

1125

1875

3000

4555

Concrete footing –

Impact absorbing surface

Ladder made from 48mm dia MS tubing

Horizontal bar set into capping

APPROVAL  $\square$  INFORMATION  $\boxtimes$  TENDER  $\square$  CONTRACT  $\square$  CONSTRUCTION  $\square$ 

surface take-off area

80mm dia vertical pipe

Scale 1:50

PLAN

Astroturf or wet pour rubber

6160

500

### TYPES OF OBSTACLE COURSES:-

THESE DRAWINGS RELATE TO THE PROVISION OF BASIC OBSTACLES AS DEFINED IN JSP 315 SCALE OF ACCOMMODATION No. 44 FOR USE OTHE FOLLOWING TYPES OF OBSTACLE COURSE:-9

### COURSE TYPE A

(FOR USE BY TRAINED SERVICE PERSONNEL IN UNITS)

IN DIFFICULTY BETWEEN LANES ALL OBSTACLES TO BE SUITABLE FOR 3 LANE USE WITH NO VARIATION

MAXIMUM OF 18. OBSTACLES USED RANGES FROM A MINIMUM OF 14 TO A

# LIST OF DE DESIGN DRAWINGS (A1- A18):-

E8949/DE/AB01	GENERAL DESIGN GUIDANCE NOTES	UIDANCE NOTES
E8949/DE/A	SCHEMATIC LAYOUT	SCHEMATIC LAYOUT - COURSE TYPE A (UNIT)
E8949/DE/A1	OBSTACLE A1	- STEPS
E8949/DE/A2	OBSTACLE A2	- DOUBLE DITCH
E8949/DE/A3	OBSTACLE A3	- CRAWL
E8949/DE/A4	OBSTACLE A4	- SINGLE WALL (LOW)
E8949/DE/A5	OBSTACLE A5	- DRY DITCH
E8949/DE/A6	OBSTACLE A6	- RAMP
E8949/DE/A7	OBSTACLE A7	- SWING OVER DITCH
E8949/DE/A8	OBSTACLE A8	- SINGLE WALL (HIGH)
E8949/DE/A9	OBSTACLE A9	- DOUBLE WALL (OBUA)
E8949/DE/A10	OBSTACLE A10	- BEAM BALANCE
E8949/DE/A11	OBSTACLE A11	- TREBLE STRIDE DITCH
E8949/DE/A12	OBSTACLE A12	- OVERHAND TRAVERSE
E8949/DE/A13	OBSTACLE A13	- STEPPING STONES
E8949/DE/A14	OBSTACLE A14	- SCRAMBLE NET
E8949/DE/A15	OBSTACLE A15	- TUBE CRAWL
E8949/DE/A16	OBSTACLE A16	- BURMA BRIDGE
E8949/DE/A17	OBSTACLE A17	- SWINGING DUCKBOARDS
E8949/DE/A18	OBSTACLE A18	- CLIMBING ROPES

COURSE TYPE B (FOR USE BY TRAINEES AND RECRUITS).

ALL OBSTACLES TO BE SUITABLE FOR 3 LANE USE WITH VARIATION IN DIFFICULTY PROVIDED BETWEEN LANES, ALTHOUGH OBSTACLES WITHOUT VARIATIONS MAY BE USED.

NUMBERS OF OBSTACLES MAY VARY BUT IS USUALLY 9.

# LIST OF DE DESIGN DRAWINGS (B1- B9):-

	OBSTACLE B5	OBSTACLE B3	E8949/DE/B1 OBSTACLE B1 - V. E8949/DE/B2 OBSTACLE B2 - W	E8949/DE/AB01 GENERAL DESIGN GUIDANCE NOTES E8949/DE/B SCHEMATIC LAYOUT - COURSE TYPE B (TRAINEES
- DRY DITCH (VARYING WIDTHS) - RAMP (VARYING HEIGHTS) - COMBINATION CLIMBING ROPES	- BALANCE WALLS (VARYING HEIGHTS) - DRY DITCH (VARYING WIDTHS)	- WATER DITCH (VARYING WIDTHS)	<ul><li>VAULT (VARYING HEIGHTS)</li><li>WALL (VARYING HEIGHTS-HIGH)</li></ul>	SE TYPE B (TRAINEES)

NB. THE JSP SCALE DOES NOT COVER THE PROVISION OF OBSTACLES FOR CONFIDENCE BUILDING OR SPECIALIST COURSES.

THE SCHEMATIC LAYOUT DRAWINGS FOR TYPE A AND B COURSES ARE FOR INFORMATION PURPOSES ONLY AND ARE NOT TO BE REGARDED AS STANDARD LAYOUTS.

## SITING AND LAYOUT OF COURSES

WHERE POSSIBLE, THE LAYOUT OF COURSES SHOULD BE DESIGNED AROUND EXISTING SITE FEATURES USING STREAMS, SITE CONTOURS AND FEATURES TO CREATE ADDITIONAL INTEREST. COURSES DO NOT NEED TO BE IN A STRAIGHT LINE.

OF THE UNIT CONCERNED. THE SEQUENCE AND SPACING OF OBSTACLES IS TO BE SELECTED TO SUIT THE SITE, SAFETY AND THE INDIVIDUAL TRAINING REQUIREMENTS

THE DISTANCES BETWEEN OBSTACLES SHOULD BE METRES AND A MAXIMUM OF 10 METRES.

NB. OBSTACLE IS INCLUSIVE OF LANDING AREA. A MINIMUM OF 5

ADVICE ON THE LAYOUT OF OBSTACLE COURSES SHOULD BE SOUGHT FROM THE APPROPRIATE SERVICE PHYSICAL DEVELOPMENT DIRECTORATE / FORMATION HEADQUARTERS SO2 PAT AT AN EARLY

### HEALTH AND SAFETY

ALL MAIN LANDING PIT AREAS ARE TO BE FILLED WITH IMPACT ABSORBING MATERIAL TO A DEPTH OF 300mm USING 12mm PEA

ALL SECONDARY LANDING AREAS UNDER AND AROUND OBSTACLES AND ANY UNTURFED SECTIONS OF THE COURSE ARE TO BE COVERED IN A MINIMUM OF 75mm DEEP PEA SHINGLE OR BARK CHIPPINGS AS

ALL EXPOSED CONCRETE AND LEADING EDGES ON OBSTACLES ARE TO BE COVERED IN PROTECTIVE RUBBER SHEETING AS INDICATED ON THE DRAWINGS.

TO HAVE AN DRAWINGS. THE TOP SURFACES OF ALL PLANKS, TIMBER CAPPINGS AND LOGS ARE TO HAVE ANTI-SLIP FINISHES APPLIED AS INDICATED ON THE INDICATED

ALL CONCRETE CAPPINGS TO WALLS TO HAVE SMOOTH ROUNDED EDGES.

WARNING SIGNS ARE TO BE DISPLAYED AT STRATEGIC POINTS AROUND OBSTACLE COURSES INDICATING THAT ONLY PERSONNEL UNDER INSTRUCTION ARE ALLOWED TO USE THE OBSTACLES. THE AUTHORISED DESIGN CAN BE OBTAINED FROM OC TAS (CE), HQ INF

THE INFORMATION GIVEN IN THESE DESIGN DRAWINGS IS OF A GENERAL NATURE. WHEN THESE OBSTACLE DESIGNS ARE USED, CONSIDERATION MUST BE GIVEN TO THE SPECIFIC SITE CIRCUMSTANCES WHICH APPLY AT THE TIME, AND ANY OTHER INFORMATION, THAT WILL HAVE AN EFFECT ON ANY OTHER PERSONS' HEALTH AND SAFETY DURING THE CONSTRUCTION AND USE OF AN OBSTACLE COURSE.

## OBSTACLE DESIGN REQUIREMENTS

BRICKWORK
ALL BRICKWORK TO BE CLASS B ENGINEERING QUALITY WITH REINFORCEMENT TO JOINTS AS NECESSARY.

### TIMBER

ALL TIMBER IS TO BE PRESSURE IMPREGNATED WITH PRESERVATIVE.

### STEEL TUBES

ALL EXPOSED MS STEEL TUBES ARE TO BE GALVANISED. ALL JOINTS ARE TO BE SITE WELDED AND TREATED WITH GALVANISING PAINT. ALL CUT ENDS ARE TO BE FITTED WITH PLASTIC CAPS. ALL

EML

EML SHOULD BE LAID SO THAT THE LOZENGE IS 15mm LENGTH ALONG THE DIRECTION OF TRAVEL AND 40mm ACROSS THE DIRECTION.

TAKE-OFF AREAS

APPROACHES TO OBSTACLES SHOULD BE OF A FIRM SUBSTANCE WHICH ALLOWS SURE-FOOTED TRACTION TO ENABLE ACCELERATION EG. ASTRO-TURF, OR WETPOUR RUBBER SURFACING. NB. NOT LOOSE FILLING SUCH AS PEA SHINGLE.

### LANDING PITS

ALL PITS, EXCEPT WATER JUMPS ARE TO BE DRAINED TO A SUITABLE POINT OF DISCHARGE.

WATER JUMPS MUST BE ABLE TO BE DRAINED

**ROPES / NETS** 

ALL CORDAGE, NETS AND ROPES ARE TO BE POLYPROPYLENE OR OTHER SUITABLE SYNTHETIC MATERIAL AND ARE TO BE SUPPLIED BY THE SPECIALIST MANUFACTURER AS PART OF THE OBSTACLES.

### SCRAMBLE NETS

ROPES:
ROPES (PERIMETER AND MESH) SHOULD BE 3-STRAND, STAPLE SPUN WITH A DIAMETER OF 24MM, MAY BE NATURAL (MANILA GRADE 1 PREFERRED) OR SYNTHETIC (POLYPROPYLENE) AND MUST CONFORN TO BS EN 698 (FOR MANILA ROPES) OR BS EN 699 (FOR POLYPROPYLENE ROPES) OR AN ALTERNATIVE APPROVED BY DC IPT CONFORM

ROPE ENDS S ROPE ENDS S CHAPTER 3. SHOULD 쯈 SPLICED IN ACCORDANCE WITH BR 89

NET DISTORTION:
NET MESH SHOULD BE 225MM SQUARE KNOTTED AND SPLICED PREVENT DISTORTION.

DO NOT SCALE: Contractor to check all dimensions and report any omissions or errors

TEXTILE, USED NETS ARE TO BE LASHED DIRECTLY TO THE MAIN FRAME USING 16MM-20MM NATURAL OR SYNTHETIC ROPE. EXCEPTIONALLY, NYLO TEXTILE, 2 PLY, OLIVE DRAB/BLACK, 50MM WIDE WEBBING MAY BE

WHERE WEBBING IS USED, IT IS TO BE SECURED USING BUCKLE: ACETAL, G1, BLACK 902 MANUFACTURED BY ITW NEXUS LTD, KINGSWICK HOUSE, SUNNINGHILL, BERKS SL5 7BH OR SUITABLE ALTERNATIVE APPROVED BY DC IPT. BUCKLES SL50,

STITCHING:
WHERE WEBBING IS USED, THE THREAD TO BE USED IS POLYESTER AND COTTON, CONTINUOUS FILAMENT POLYESTER CORE, COTTON SHEATH, OLIVE DRAB TO BS EN 12590:2000: TABLE 5 METRIC TICKET 25. Ö

SECURING SCRAMBLE NETS:
SCRAMBLE NETS ARE TO BE LASHED TO THE OBSTACLE FRAME ALONG SCRAMBLE NETS ARE TO BE LASHED TO THE OBSTACLE FRAME ALONG EACH SIDE AND ACROSS THE TOP. SIDE LASHING IS TO BE A MINIMUM OF ONE LOOP TO EACH SQUARE AND TOP LASHING IS TO BE A MINIMUM OF TWO LOOPS TO EACH SQUARE.

TENSION:
SCRAMBLE NETS MAY BE TENSIONED TO TAKE UP ANY SLACK THROUGH CONTINUED USE, BY RE-LASHING.

### **BURMA BRIDGE ROPEWORK**

TOP AND BOTTOM ROPES:
THE TOP AND BOTTOM ROPES ARE TO BE 24MM-28MM DIAMETER,
POLYESTER (LESS STRETCH PROPERTIES THAN POLYPROPYLENE (
MANILA) CONFORMING TO BS EN 697 OR A SUITABLE ALTERNATIVE
APPROVED BY DC IPT. 유

ROPE RUNNING THE LENGTH OF THE ROPE BRIDGE PÓSITIONED MID-WAY BETWEEN TOP AND BOTTOM ROPES) ARE TO BE 12MM-16MM DIAMETER, POLYESTER CONFORMING TO BS EN 697 OR A SUITABLE ALTERNATIVE APPROVED BY DC IPT. OTHER ROPES:
THE VERTICAL ROPES, HAND RAILS AND GUARD RAIL (HORIZONTAL

### ROPE ENDS:

THE ENDS OF THE TOP AND BOTTOM ROPES ARE TO HAVE THIMBLE EYES ATTACHED AND ARE TO BE SPLICED AND SEIZED IN ACCORDANCE WITH BR 68, CHAPTER 3.

DISTORTION PREVENTION:
THE VERTICAL ROPES ARE TO BE SPLICED WITH THE TOP AND BOTTOM ROPES AND THE GUIDE RAIL ROPE TO PREVENT DISTORTION.

THE TOP AND BOTTOM ROPES ARE TO BE SECURED DIRECT TO THE MAIN FRAME VIA THE THIMBLE EYES AND TO A BOTTLE SCREW TO DIBOW (PREFERRED) GALVANISED STEEL OR ALLOY SHACKLES.

ANY PERSON CARRYING OUT A RISK ASSESSMENT OR INSTRUCTING MUST BE ABLE TO SEE WHETHER THE SCREW/TURN BUCKLES THAT SECURE/TENSION THE BURMA BRIDGE ROPES TO THE FRAME HAVE BEEN UNDONE OR LOOSENED SINCE THE LAST USE. SECURING THE BURMA ROPE BRIDGE: THE TOP AND BOTTOM ROPES ARE TO 유

### ROPE SWING ROPEWORK

THE MAIN ROPE IS TO BE 28MM-34MM DIAMETER, NATURAL (MANILA GRADE 1 - PREFERRED) OR SYNTHETIC (POLYPROPYLENE) AND CONFORM TO BS EN 698 (FOR MANILA ROPE) OR BS EN 699 (FOR POLYPROPYLENE ROPE) OR A SUITABLE ALTERNATIVE APPROVED BY DC IPT.

TO HAVE A THIMBLE EYE ATTACHED AND SEIZED WITH BR 68, CHAPTER 3. THE BOTTOM END OF THE ROPE IS TO BE SPLICED AND SEIZED IN ACCORDANCE WITH BR 68, CHAPTER 3. THE TOP END OF THE ROPE IN ACCORDANCE S

SECURING ROPE SWINGS:
THE ROPE SWING IS TO BE ATTACHED TO THE MAIN FRAME VIA D
BOW (PREFERRED) GALVANISED STEEL OR ALLOY SHACKLES.

### CROSS-REFERENCE TO SCALE 44 AMENDED $\leq$ ₽ ACR 웆 ACR App JUNE'07 Date

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Description

SECURING BURMA BRIDGE NOTE AMENDED, TAKE OFF AREAS CHANGED TO ASTROTURF OR WETPOUR RUBBER SURFACING

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FEB '09

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onmental	Tel: 0116 234 8000 Fax: 0116 234 8002 e-mall: enviro.leicester@wyg.com
	White Young Green

Leicester LE7 7GR

Avalon Way

Executive Park

Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management Environmerical

# **OBSTACLE COURSE DRAWINGS**

**OBSTACLE COURSES A AND B** Drawing Title: JSP 315 SCALE 44

GENERAL DESIGN GUIDANCE NOTES

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APPROVAL	E008949	NTS Project No	Scale at A3	
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] CONSTR		ACR	Approved By	
CONSTRUCTION [	(C	03/10/06 Revision	Date	

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