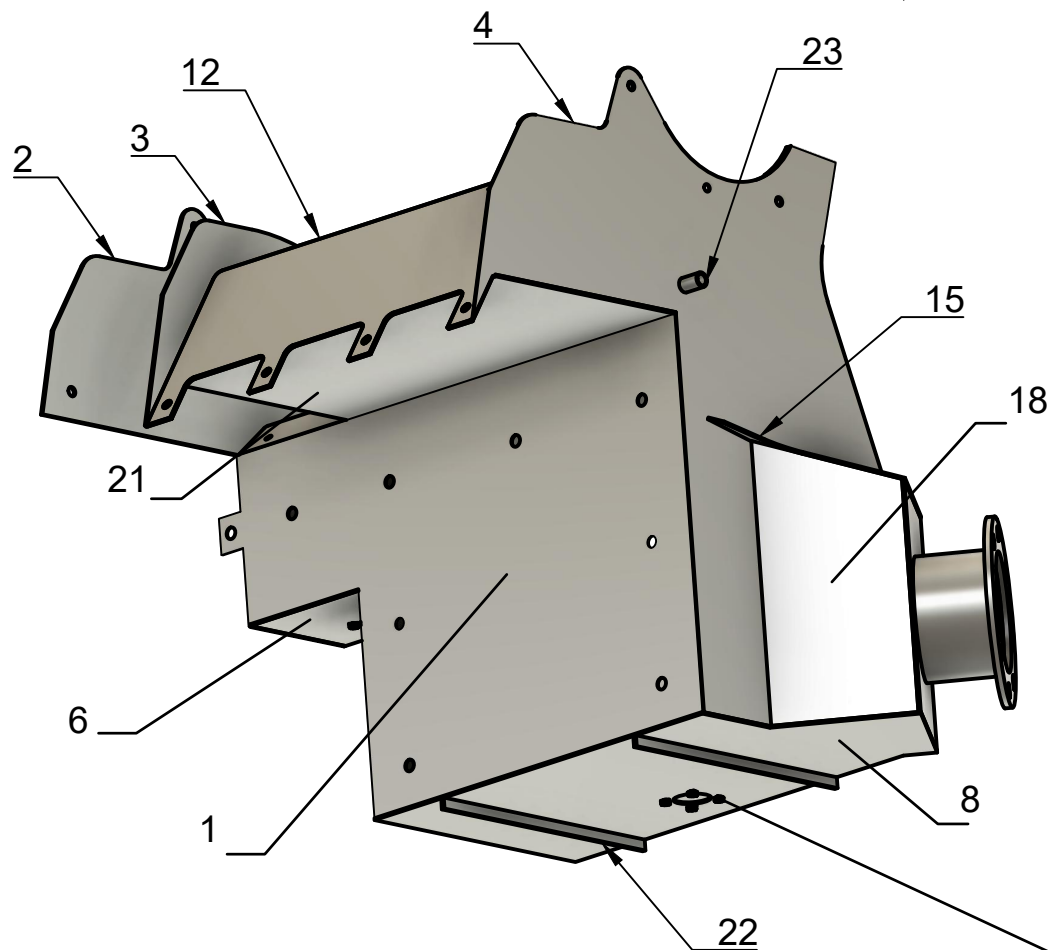


Main box parts	
1	Back plate
2	Box 1 RH end plate
3	Box 2 RH end plate
4	Box 2 LH end plate
5	Box 1 top
6	Box 1 base
7	Box 1 front
8	Box 2 base
9	Box 2 front
10	Box 1 screen top strip
11	Box 2 screen top strip
12	Fairing 3
13	Sun shield support tab
14	Sun shield side tab
15	House roof
16	House end wall
17	House front wall
18	House back wall
19	Outlet pipe
20	Outlet flange

n.b. Fairings 1 and 2 are not shown here because they are part of the "Adjustable fairings" component that bolts onto Box 1 top.

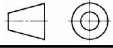
All parts TIG welded together.

Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material: 304L stainless		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:16	
Required:		Units:		Revision date 25/3/21	
Sheet 1 of 28		Sheet title Parts index 1		Rev.	



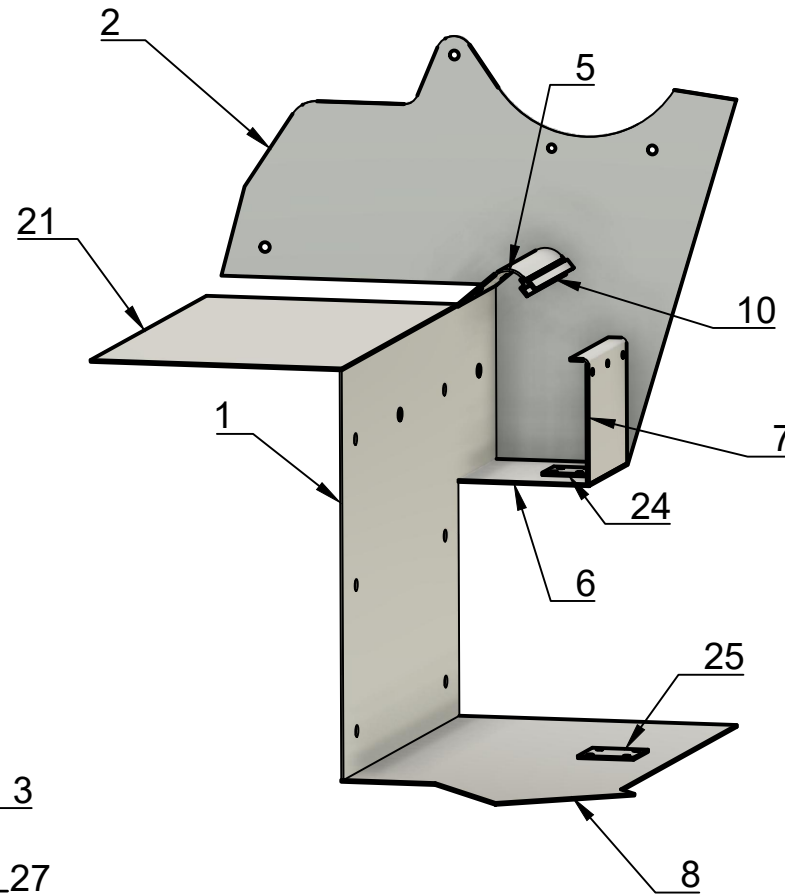
Main box parts	
21	Fairing 3 floor
22	Box 2 base ribs
23	Vent pipe

Weld nuts (stainless M6)	
Box 1 base	4-off
Box 1 front	3-off
Box 2 base	4-off
Box 2 front	7-off

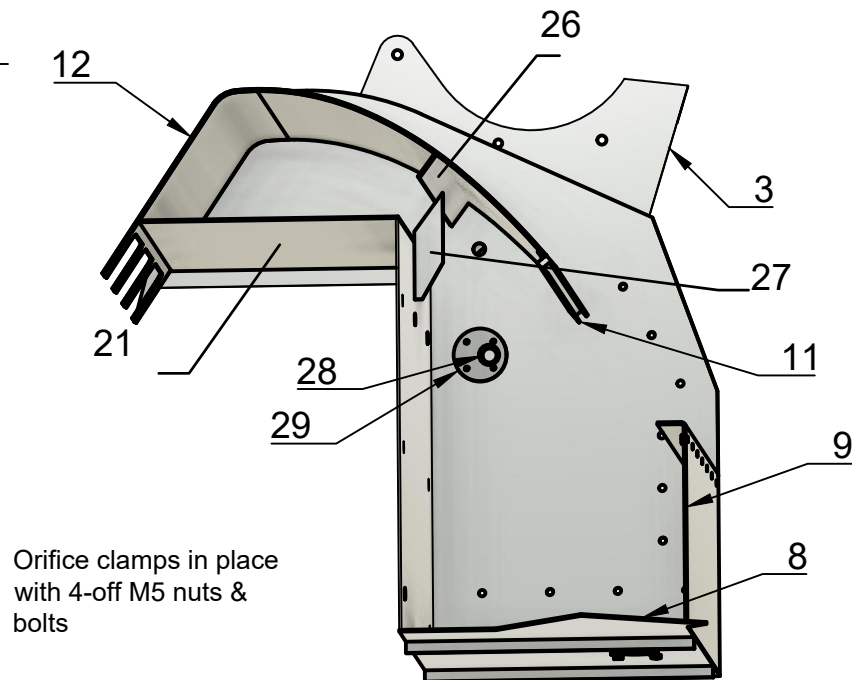
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material: 304L stainless		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:10	
Required:		Sheet 2 of 28		Revision date 25/3/21	
		Sheet title Parts index 2		Rev.	

Main box parts	
24	Box 1 drain cover
25	Box 2 drain cover
26	Fairing 3 longitudinal rib
27	Fairing 3 support web
28	Metering orifice
29	Orifice clamp ring

Box 1 & 2
internal view

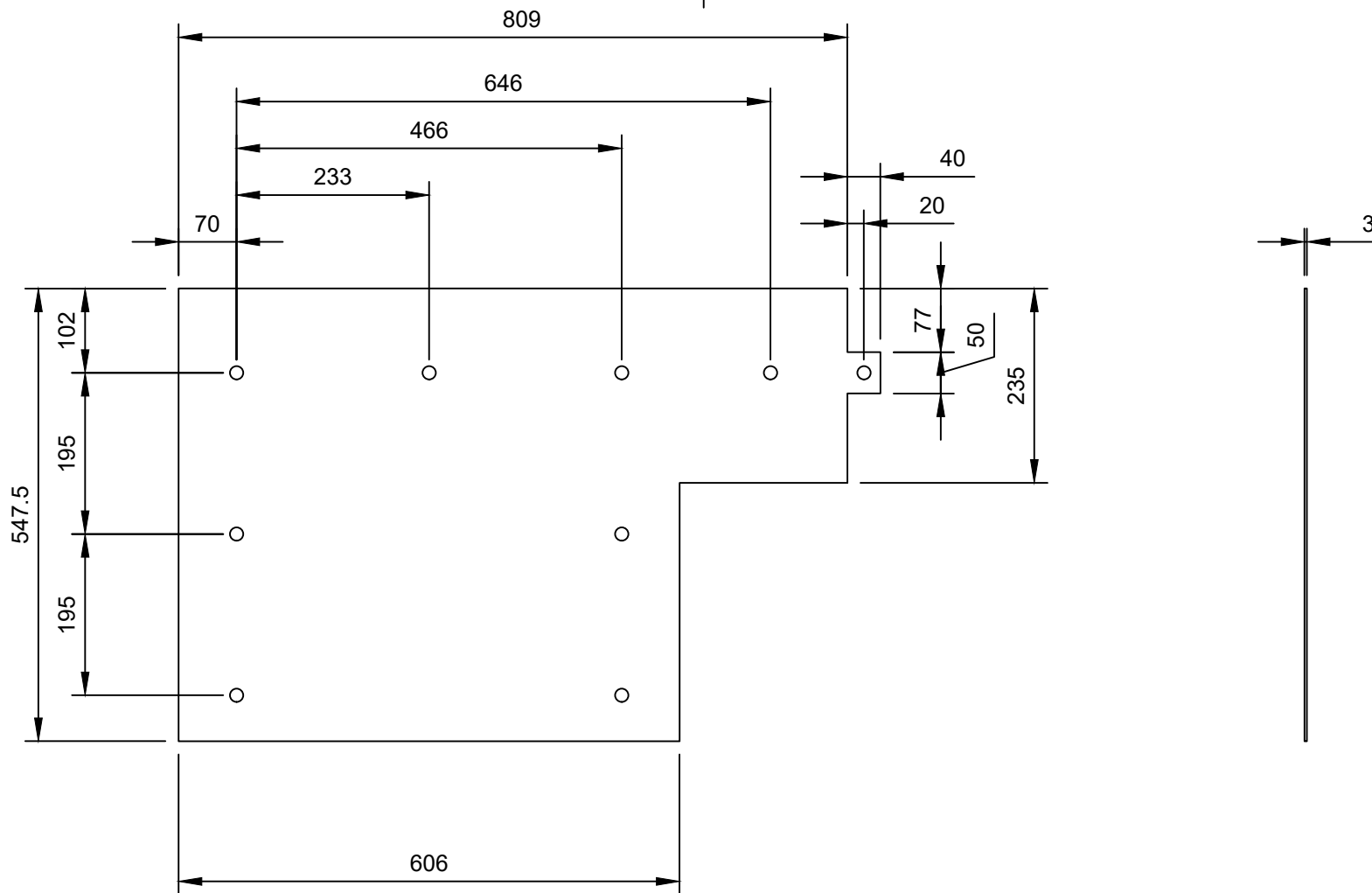


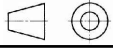
Box 2 internal view

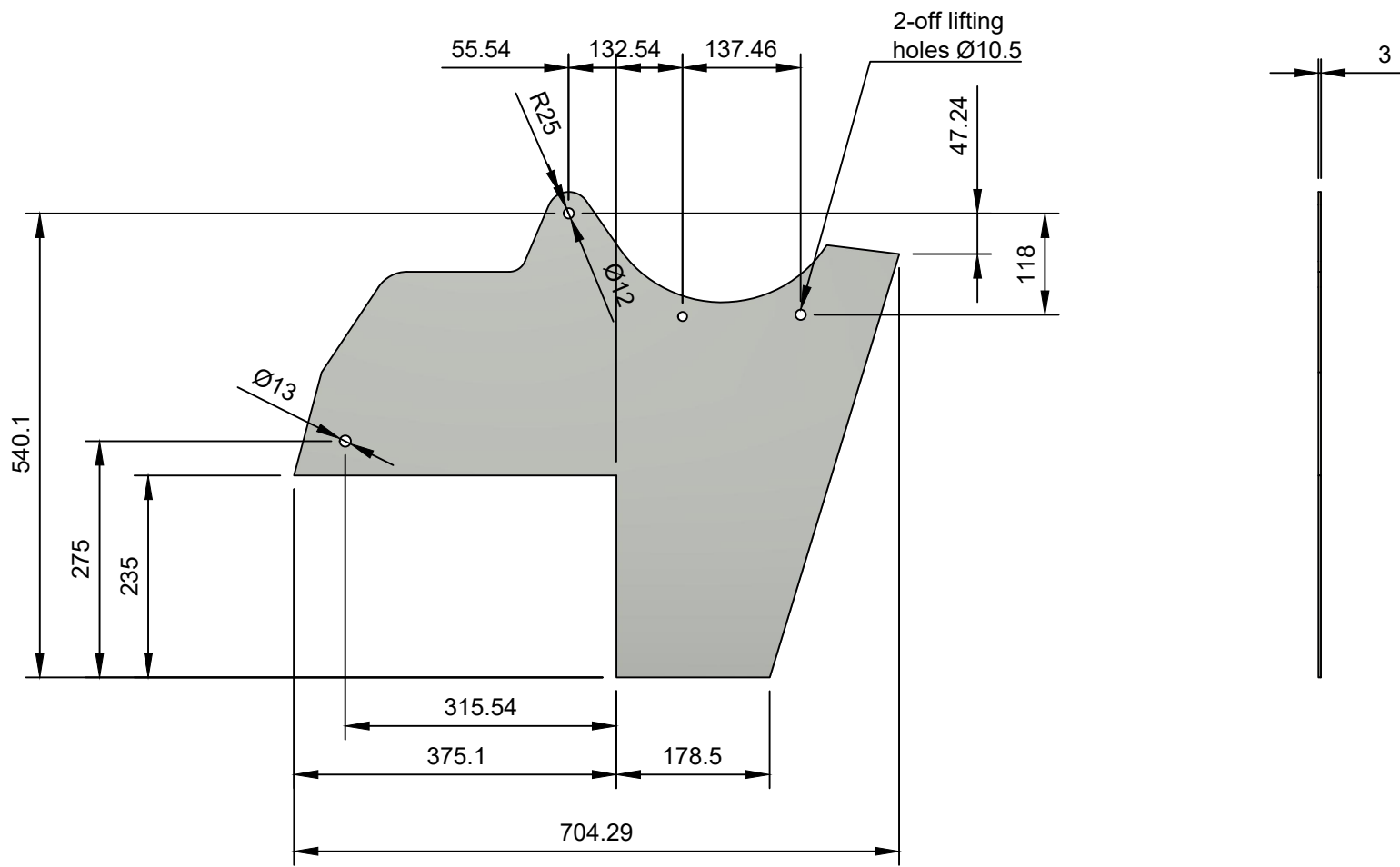


Orifice clamps in place
with 4-off M5 nuts &
bolts

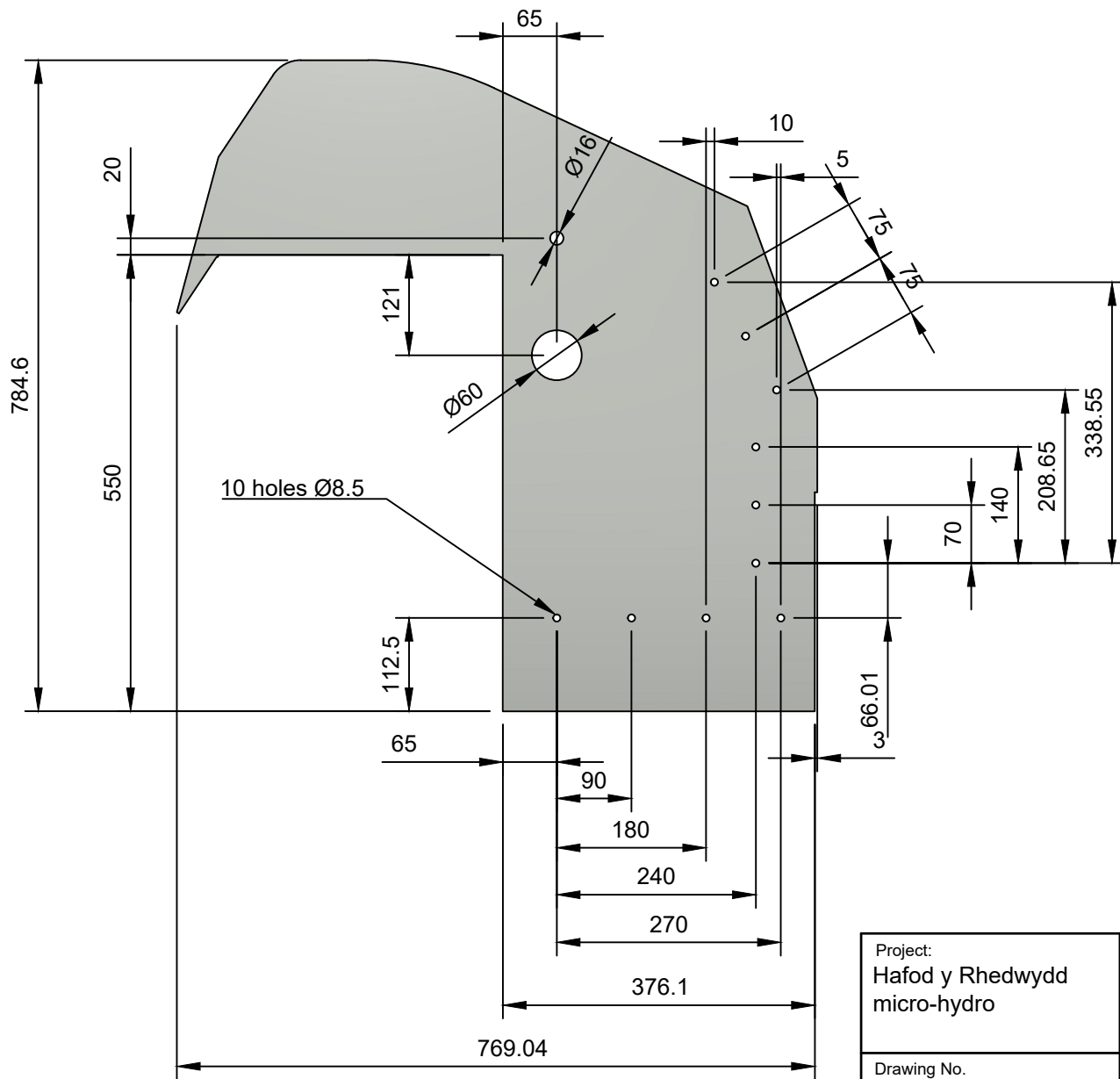
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss		Paper size A4	
Sheet 3 of 28		Sheet title Parts index 3		Units: Default scale 1:10	
		Rev.		Revision date 25/3/21	

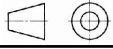


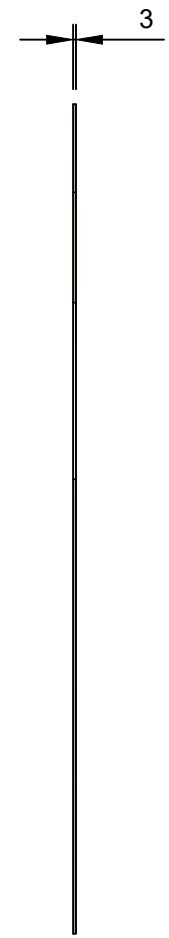
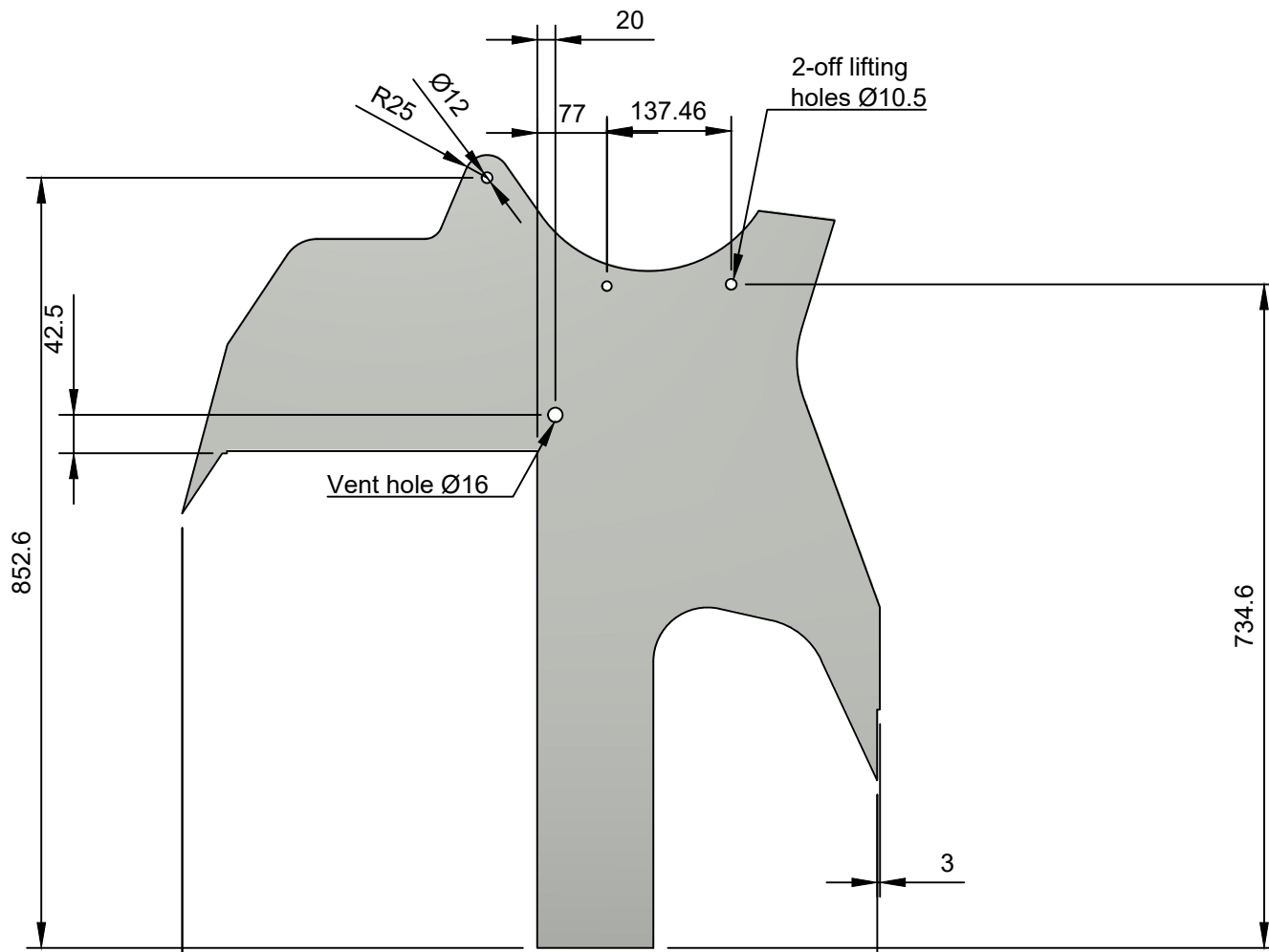
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 4 of 28	Sheet title Item 1: Back plate		Rev.	Default scale 1:8
			Revision date 25/3/21	



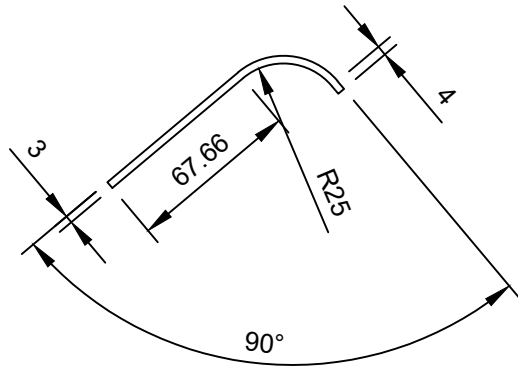
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 5 of 28	Sheet title Item 2: Box 1 RH end plate	Rev.	Default scale 1:8	
			Revision date 25/3/21	



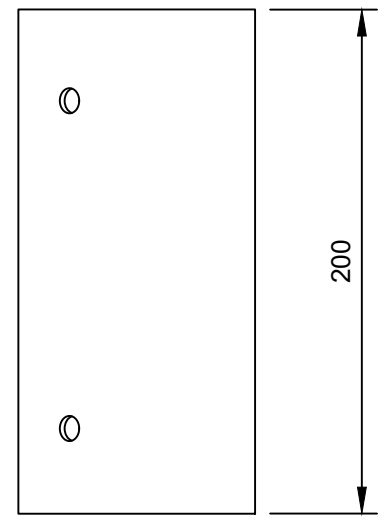
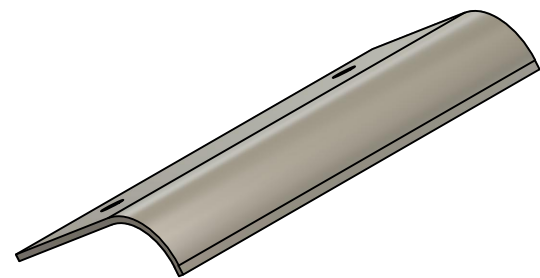
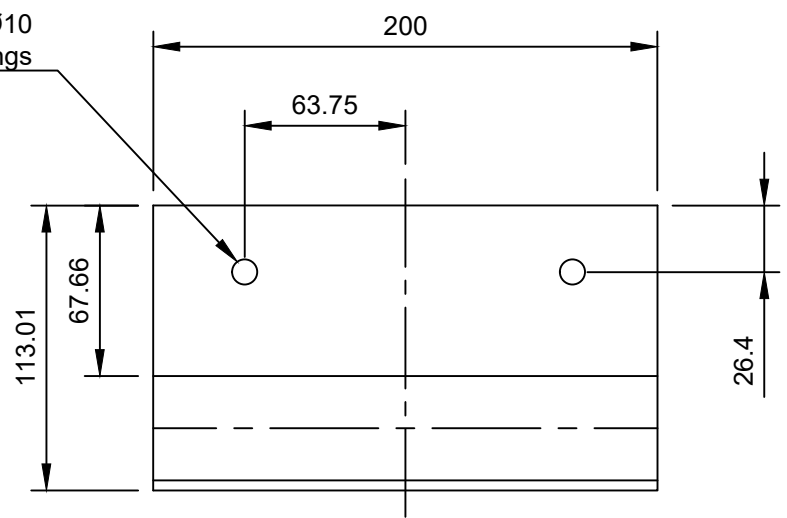
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 6 of 28	Sheet title Item 3: Box 2 RH end plate	Rev.	Default scale 1:8	
			Revision date 25/3/21	



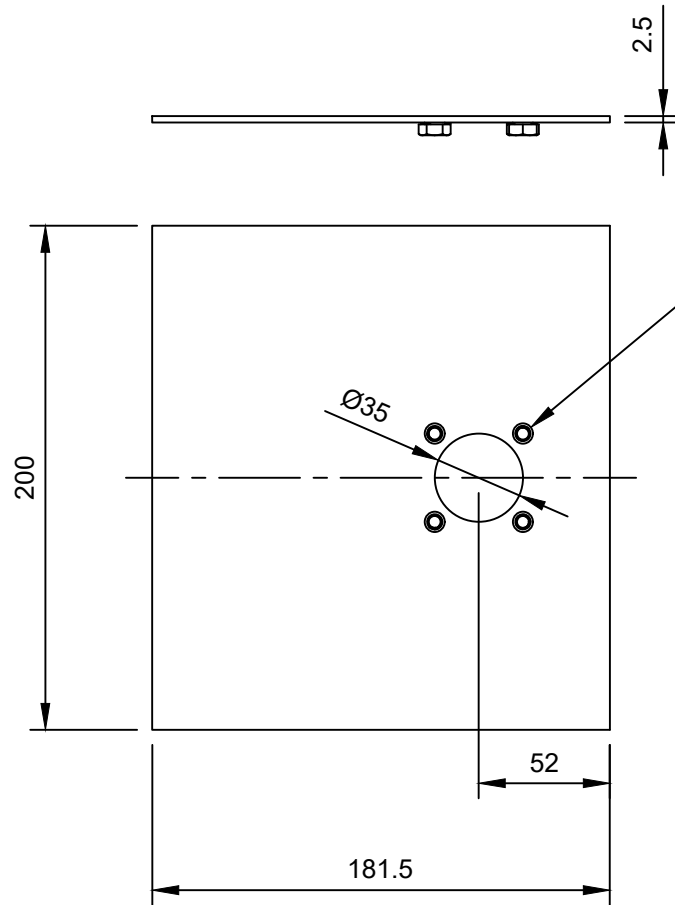
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 7 of 28	Sheet title Item 4: Box 2 LH end plate		Rev.	Default scale 1:8
			Revision date 25/3/21	



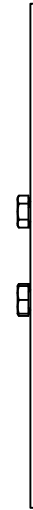
2-off holes Ø10
for removable fairings



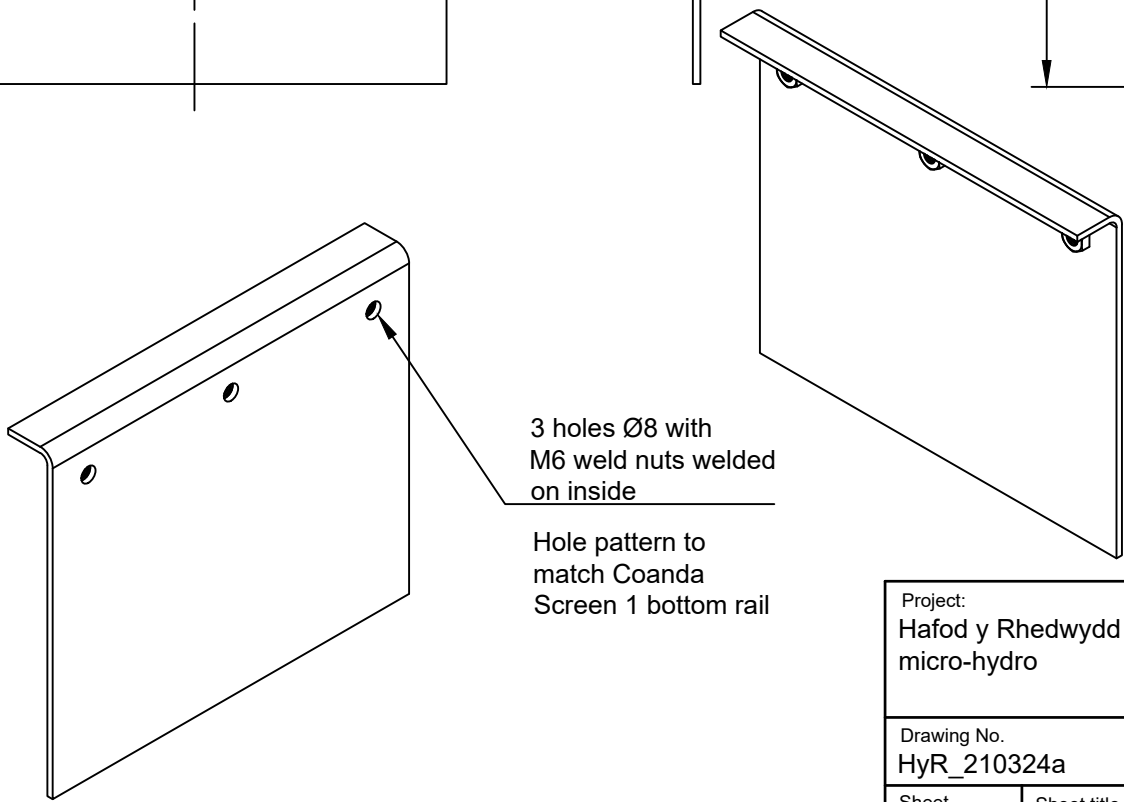
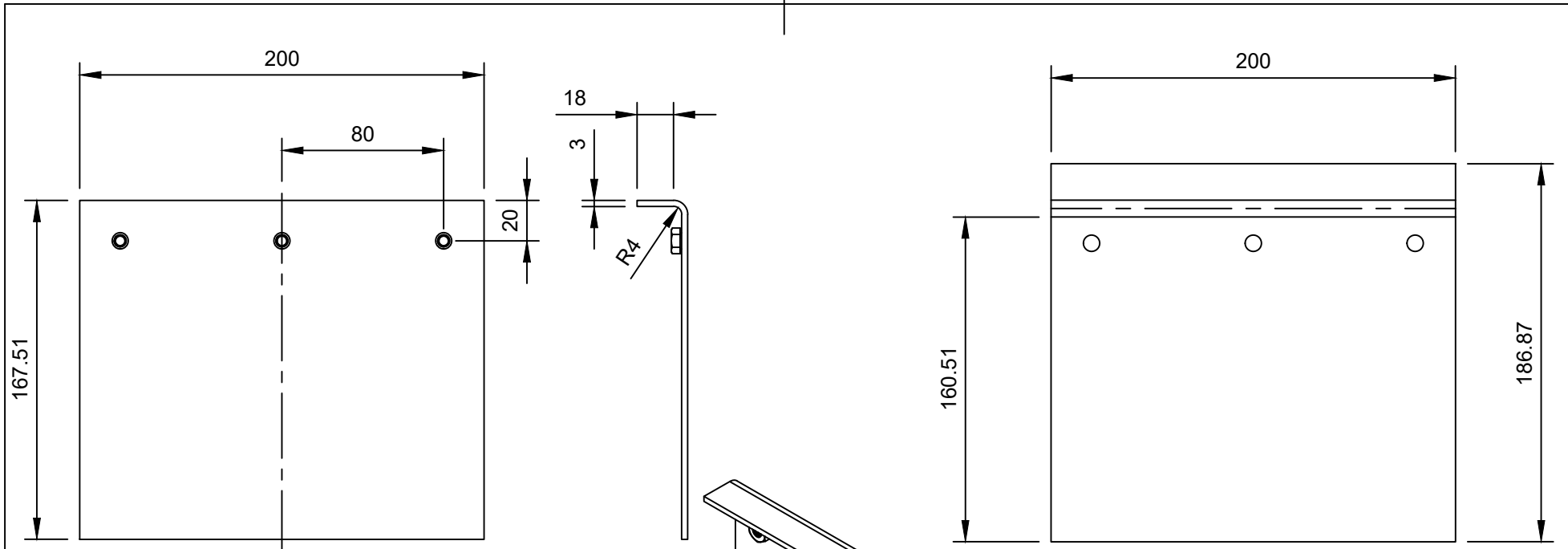
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss		Paper size A4	
Sheet 8 of 28		Sheet title Item 5: Box 1 top		Units: 1:3	
		Rev.		Revision date 25/3/21	



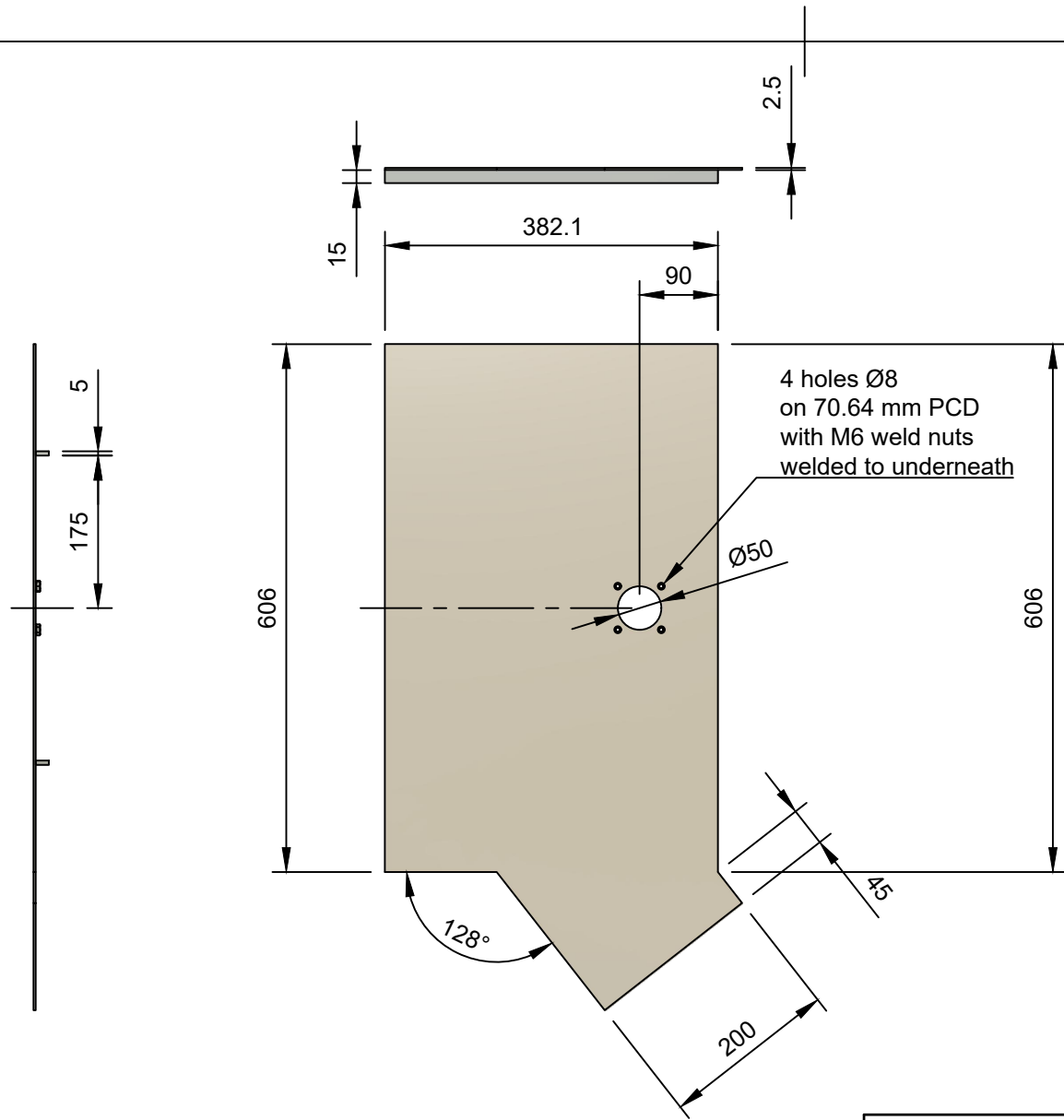
4 holes Ø8 on
49.5 mm PCD
with M6 weld nuts
welded to underside.

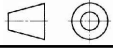


Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 9 of 28	Sheet title Item 6: Box 1 base		Rev.	Default scale 1:4
			Revision date 25/3/21	

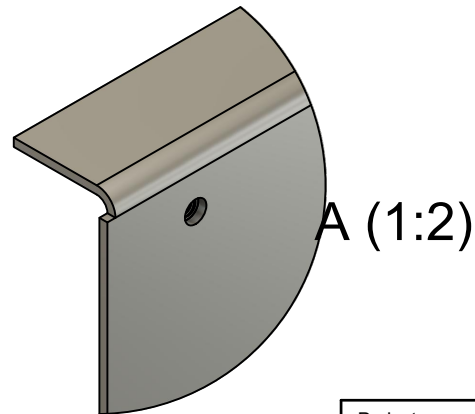
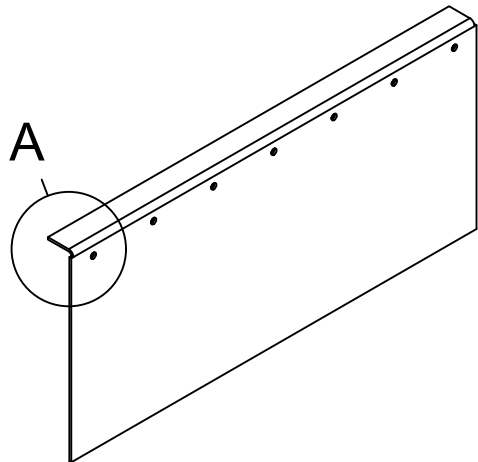
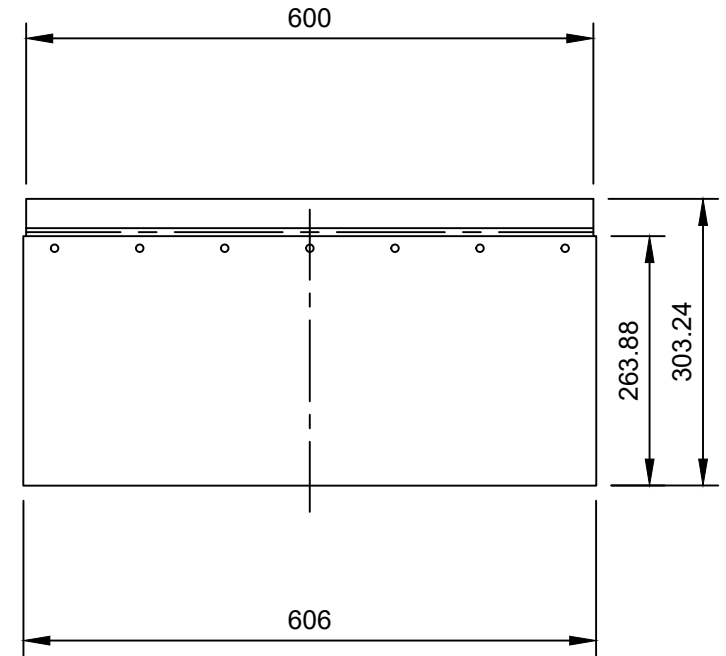
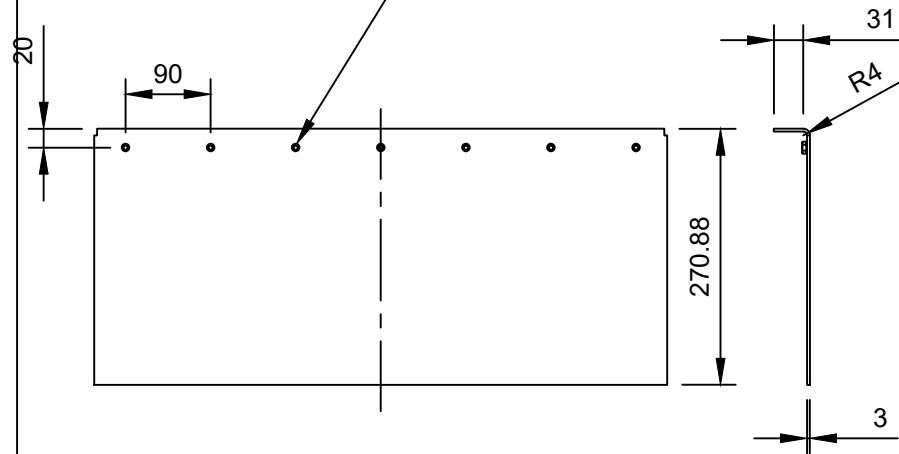



Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 10 of 28	Sheet title Item 7: Box 1 front		Rev.	Default scale 1:3
				Revision date 25/3/21

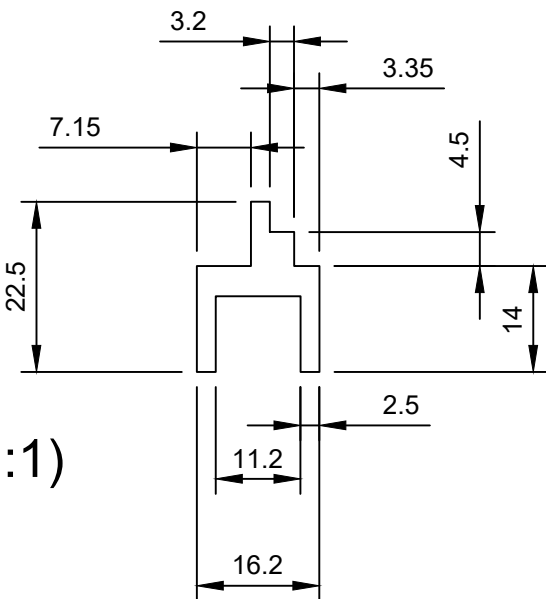
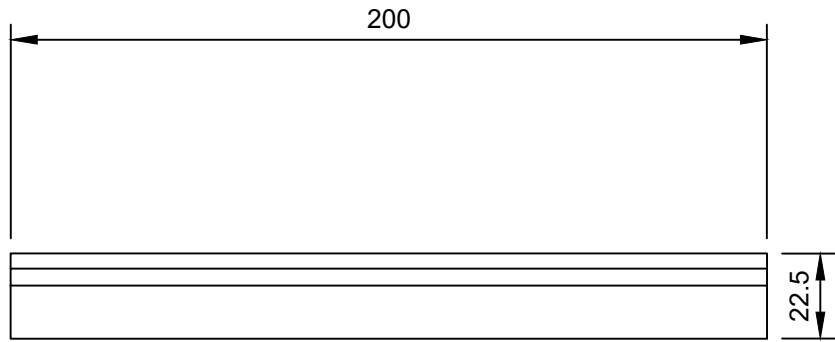


Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 11 of 28	Sheet title Items 8 (Box 2 base) & 22 (base ribs)		Rev.	Default scale 1:5
			Revision date 25/3/21	

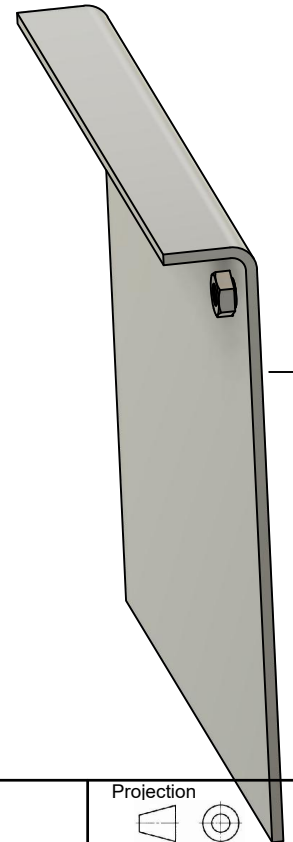
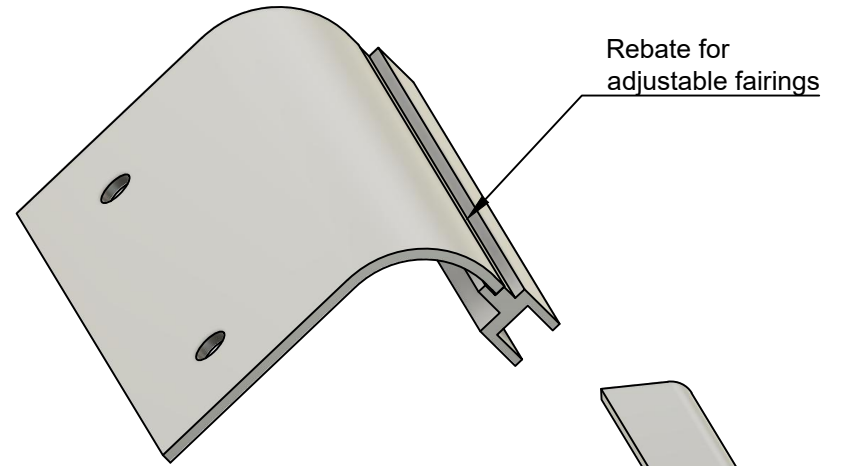
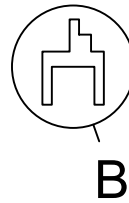
7 holes Ø8 with M6 weld nuts welded on inside.
Spacing to match Coanda screen 2 bottom rail.



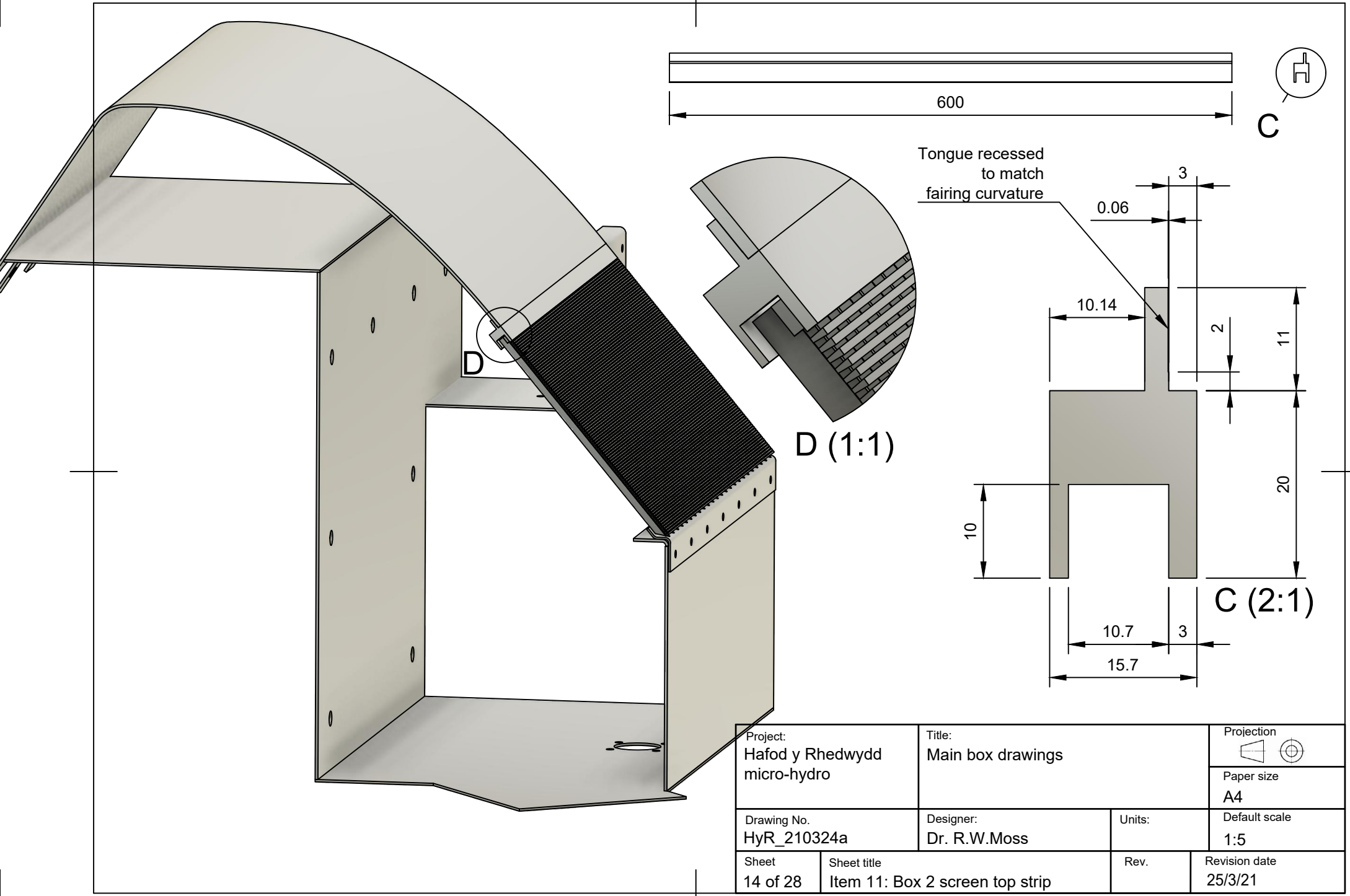
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss		Paper size A4	
Sheet 12 of 28		Sheet title Item 9: Box 2 front		Units: 1:8	
		Rev.		Revision date 25/3/21	



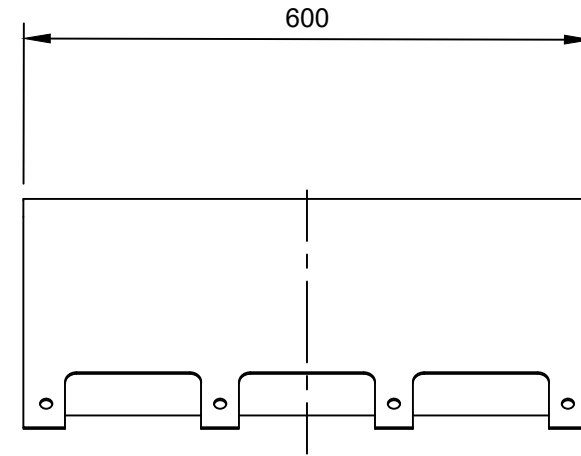
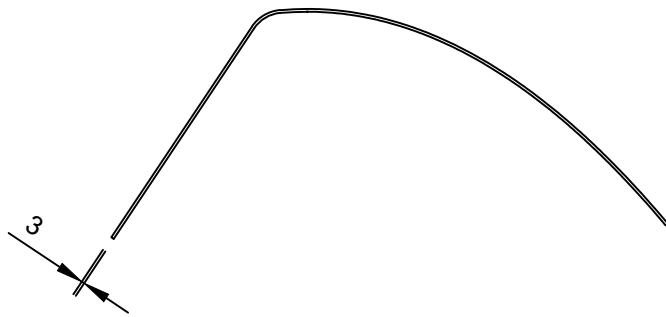
B (1:1)



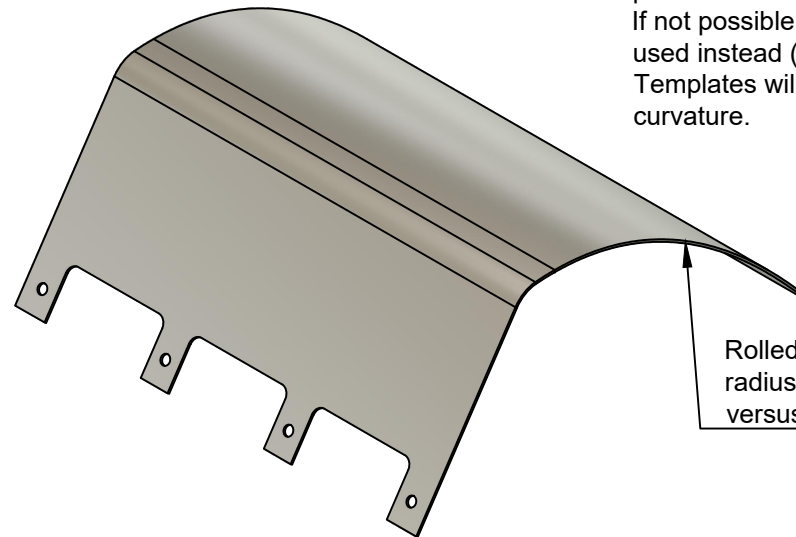
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 13 of 28	Sheet title Item 10: Box 1 screen top strip	Rev.	Default scale 1:2	
			Revision date 25/3/21	



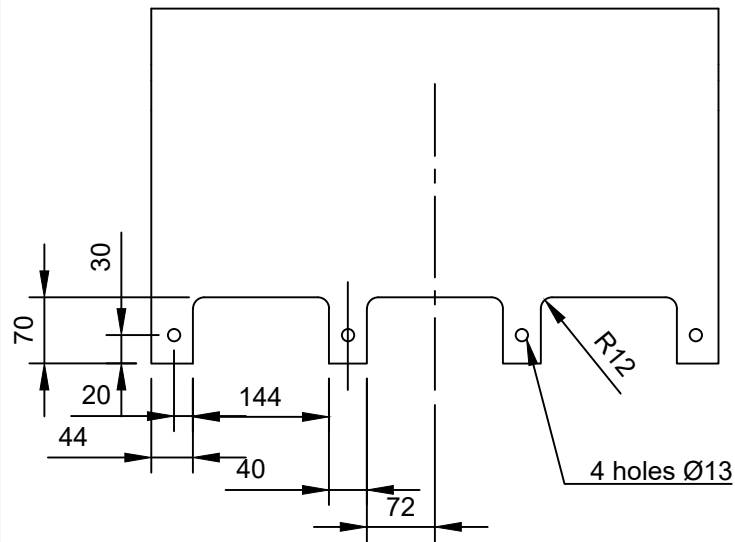
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss		Paper size A4	
Sheet 14 of 28		Sheet title Item 11: Box 2 screen top strip		Units: 1:5	
		Rev.		Revision date 25/3/21	

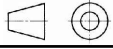


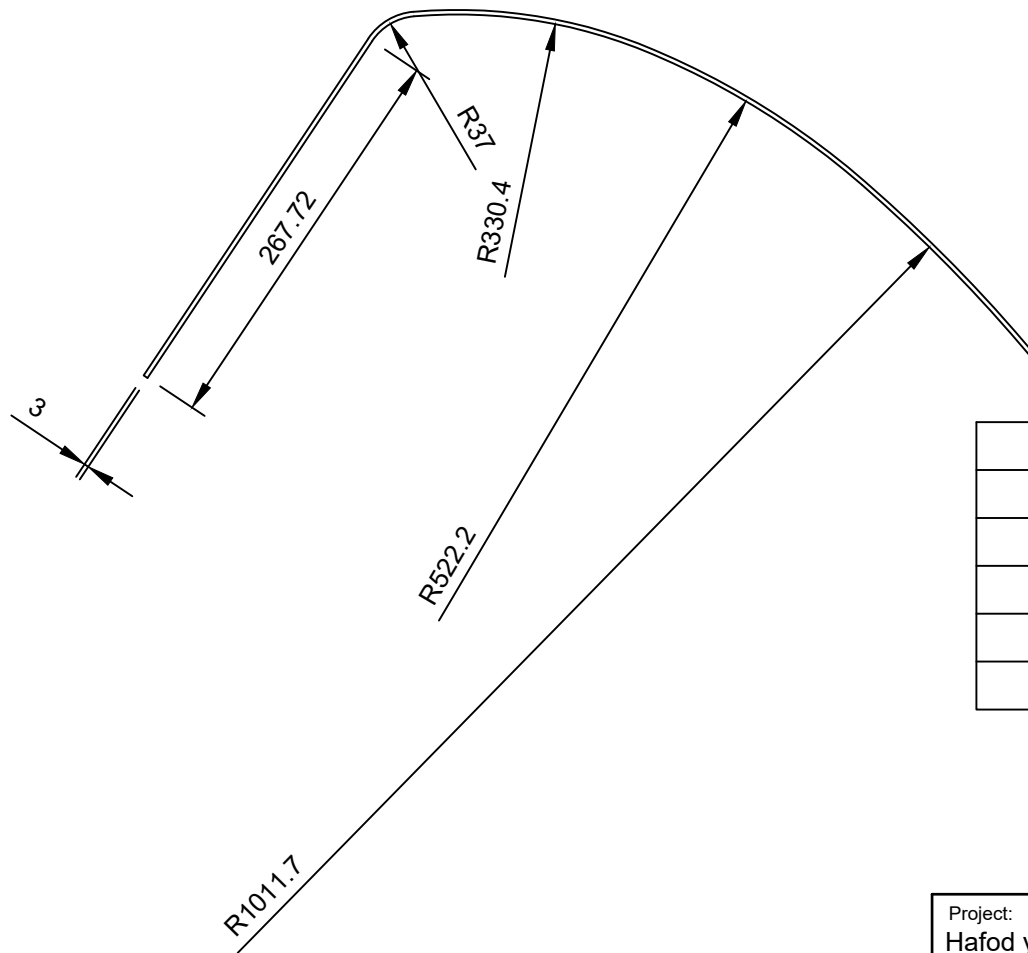
Ideally this would be rolled to a parabolic profile.
 If not possible a series of arcs could be used instead (see next page).
 Templates will be supplied to check the curvature.



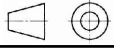
Rolled to a varying radius (CSV file of radius versus arc length)

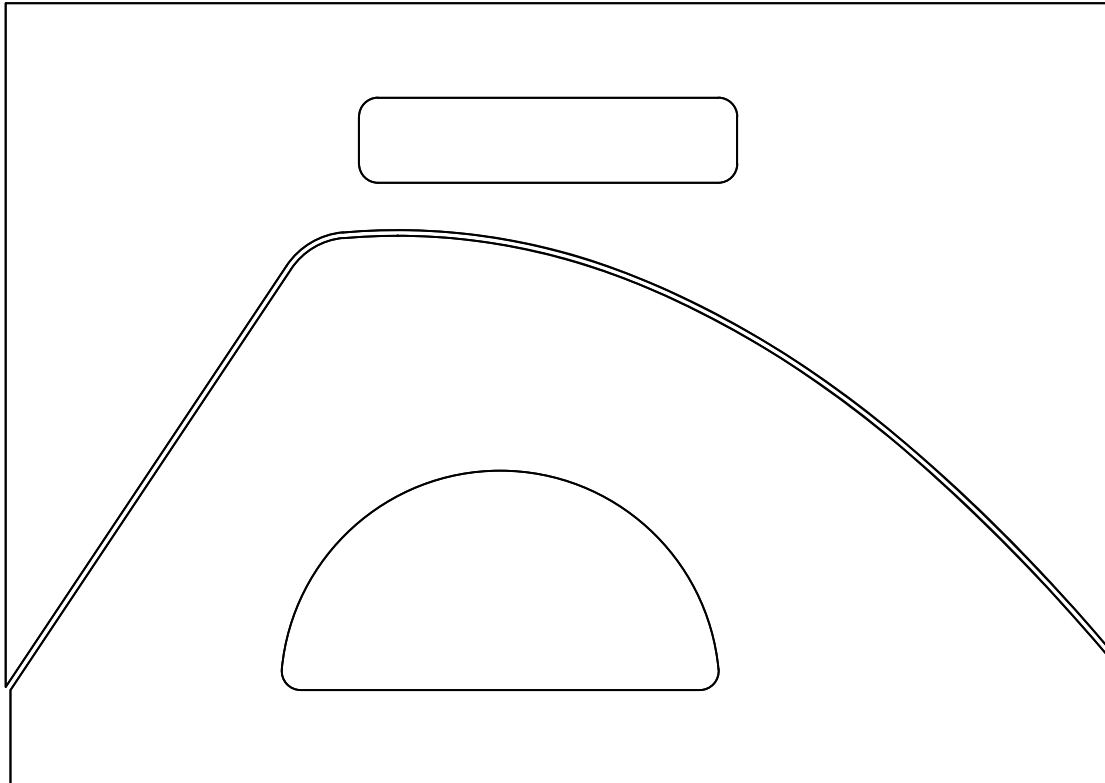


Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 15 of 28	Sheet title Item 12: Fairing 3 (continuous curve)		Rev.	Default scale 1:4
				Revision date 25/3/21




Arc definitions		
Inner radius	Angle	Mid-line extent
37	51.3	34.5
330.4	28	162.2
522.2	18	164.5
1011.7	9	159.2

Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 16 of 28	Sheet title Item 12: Fairing 3 (multiple arcs)		Rev.	Default scale 1:5
			Revision date 25/3/21	

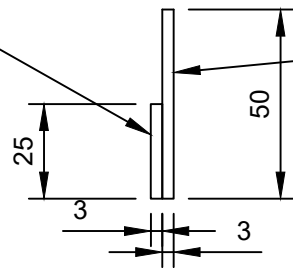


Laser cut from 3 mm
plywood

Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Sheet 17 of 28	Sheet title Fairing inner & outer templates	Rev.	Default scale 1:8	
			Revision date 25/3/21	

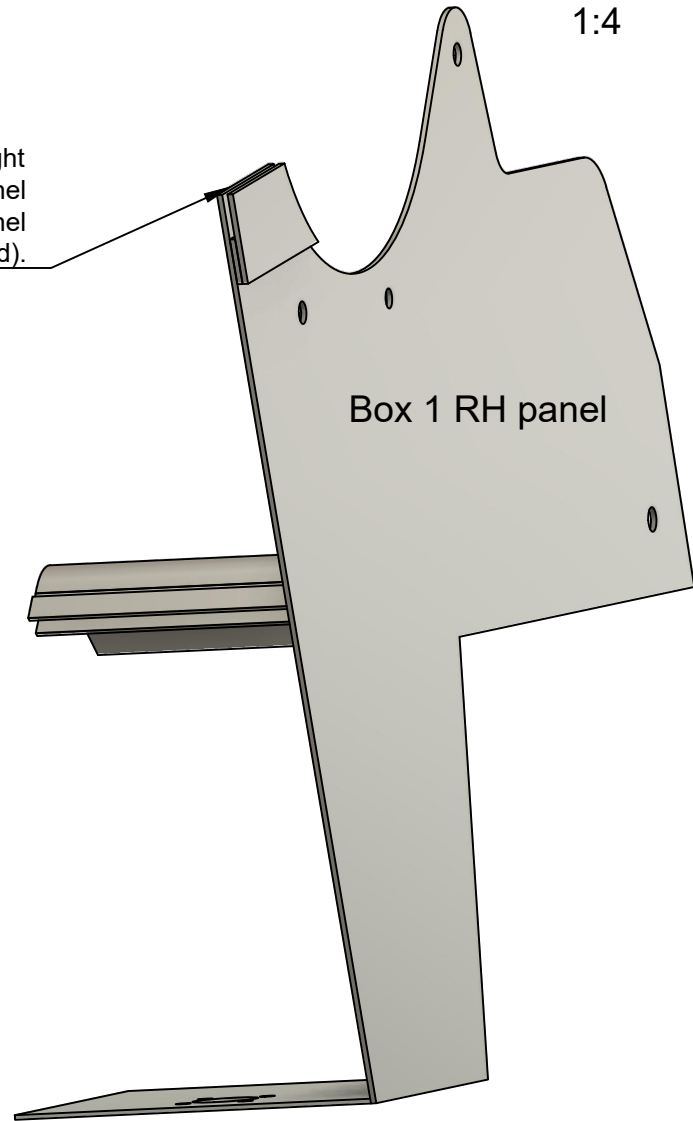
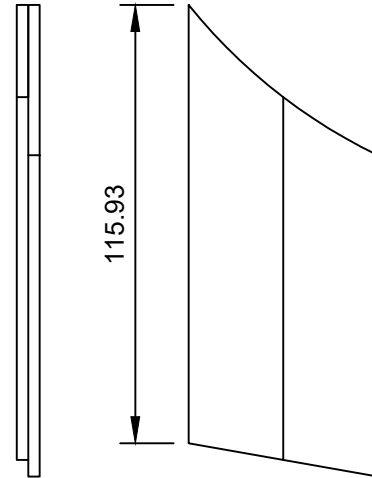
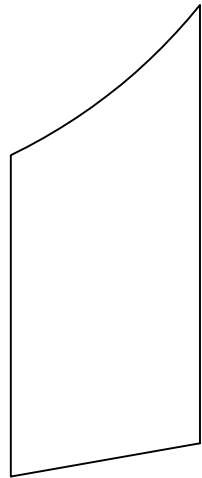
13: Support tab

14: Side tab

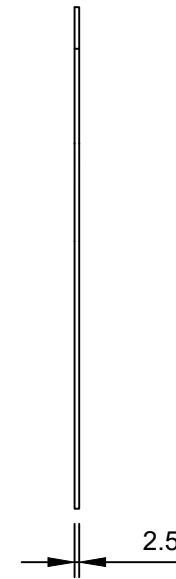
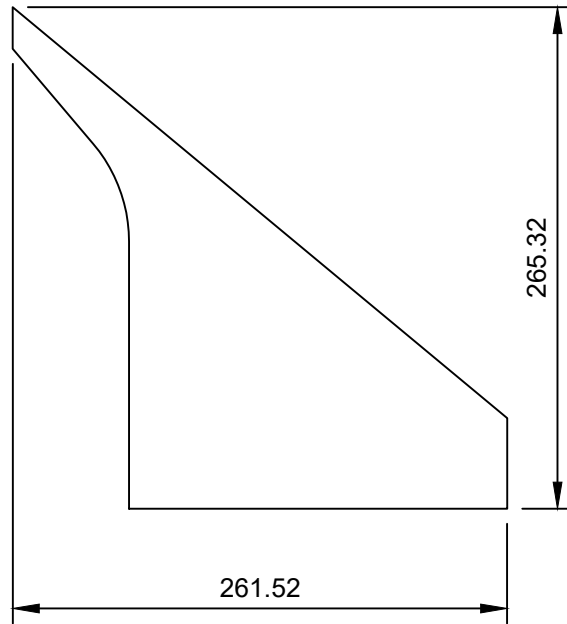


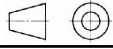
Slit tabs welded to right side of Box 1 RH panel and Box 2 LH panel (n.b. NOT mirrored).

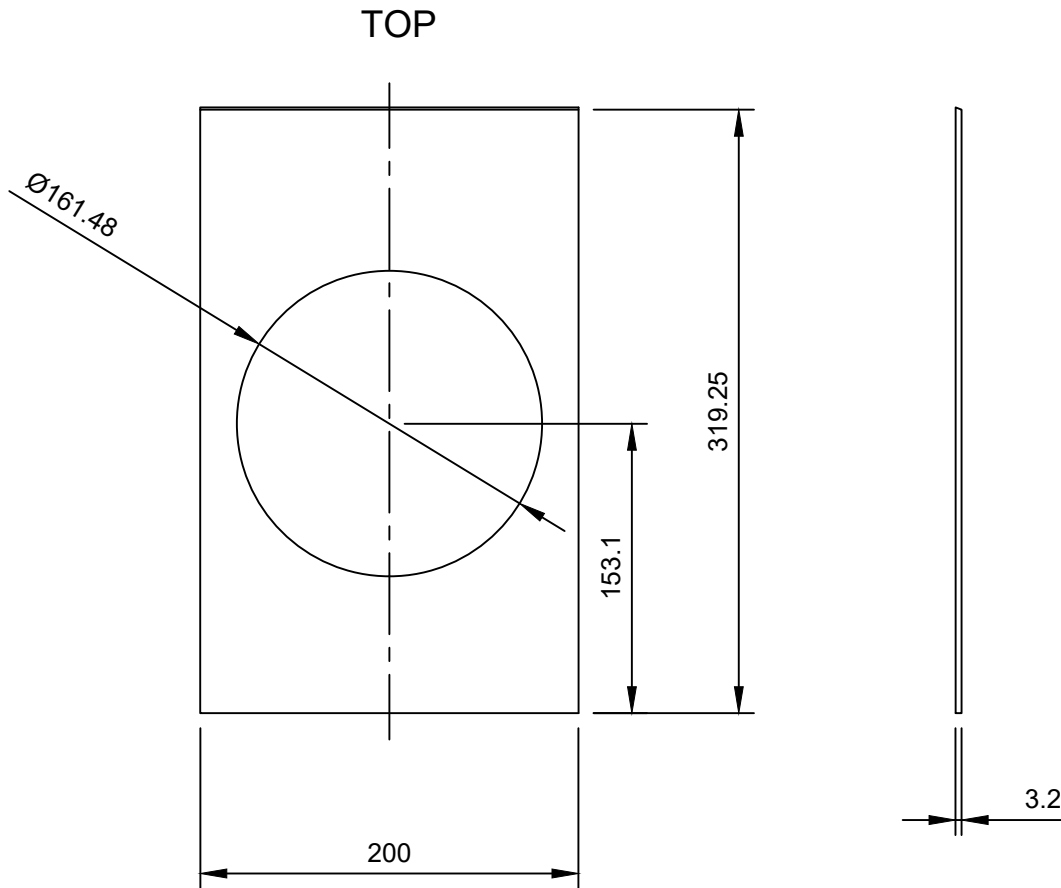
1:4

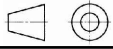


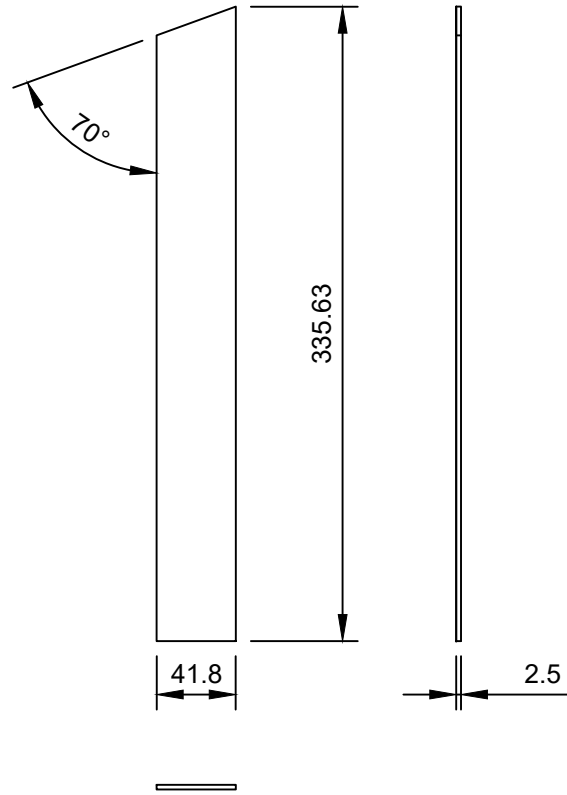
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material:		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:2	
Required: 2-off	Sheet 18 of 28	Sheet title Items 13&14: Sun shield support tabs	Units:	Rev.:	Revision date 25/3/21



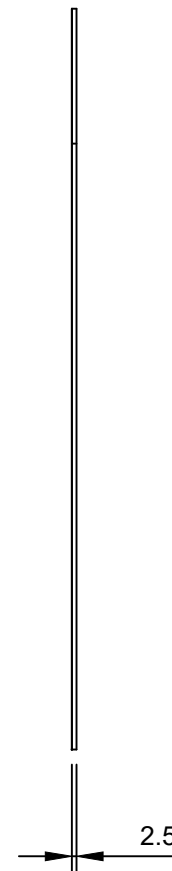
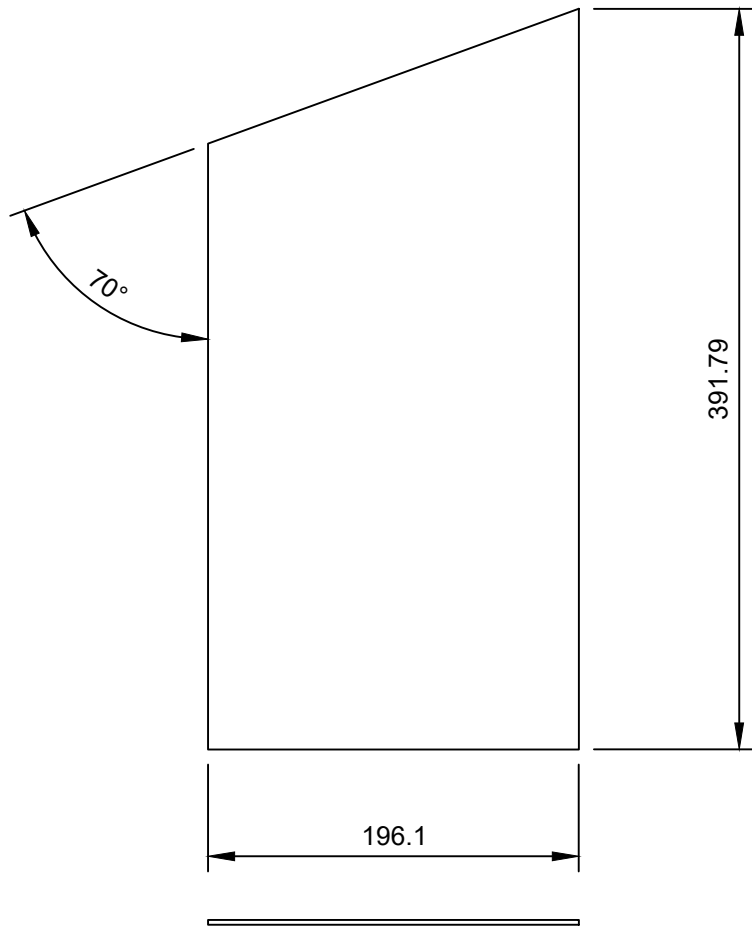
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 
Drawing No. HyR_210324a		Designer: Dr. R.W.Moss	Units:	Paper size A4
Material:	Sheet 19 of 28	Sheet title Item 15: House roof	Rev.	Default scale 1:2
Thickness:	Required: 1-off	Revision date 25/3/21		



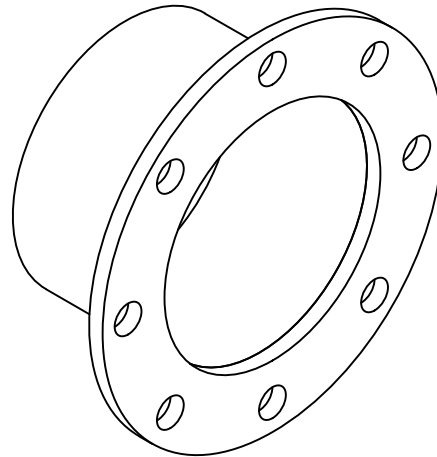
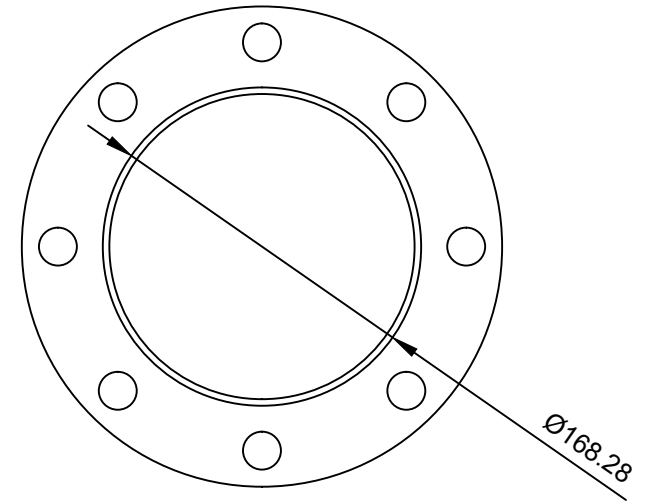
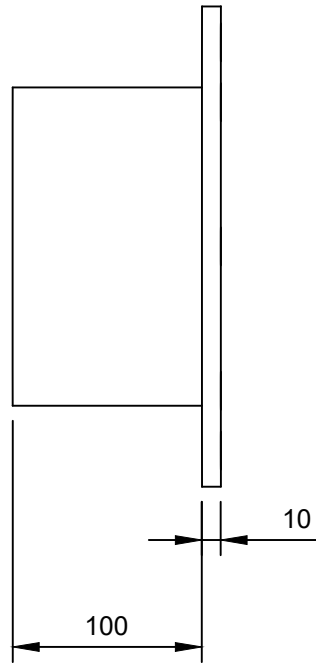
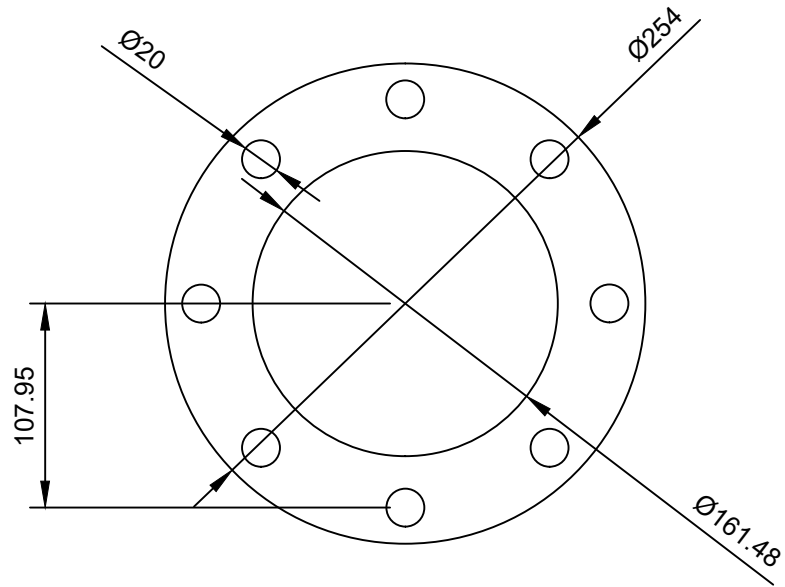
Material:		Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
		Drawing No. HyR_210324a		Designer: Dr. R.W.Moss		Paper size A4	
Thickness:	Required: 1-off	Sheet 20 of 28	Sheet title Item 16: House end wall		Units:	Default scale 1:2	
		Rev.	Revision date 25/3/21				



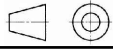
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 		
				Paper size A4		
Material:		Drawing No. HyR_210324a	Designer: Dr. R.W.Moss	Units:	Default scale 1:4	
Thickness:	Required: 1-off	Sheet 21 of 28	Sheet title Item 17: House front wall		Rev.	Revision date 25/3/21



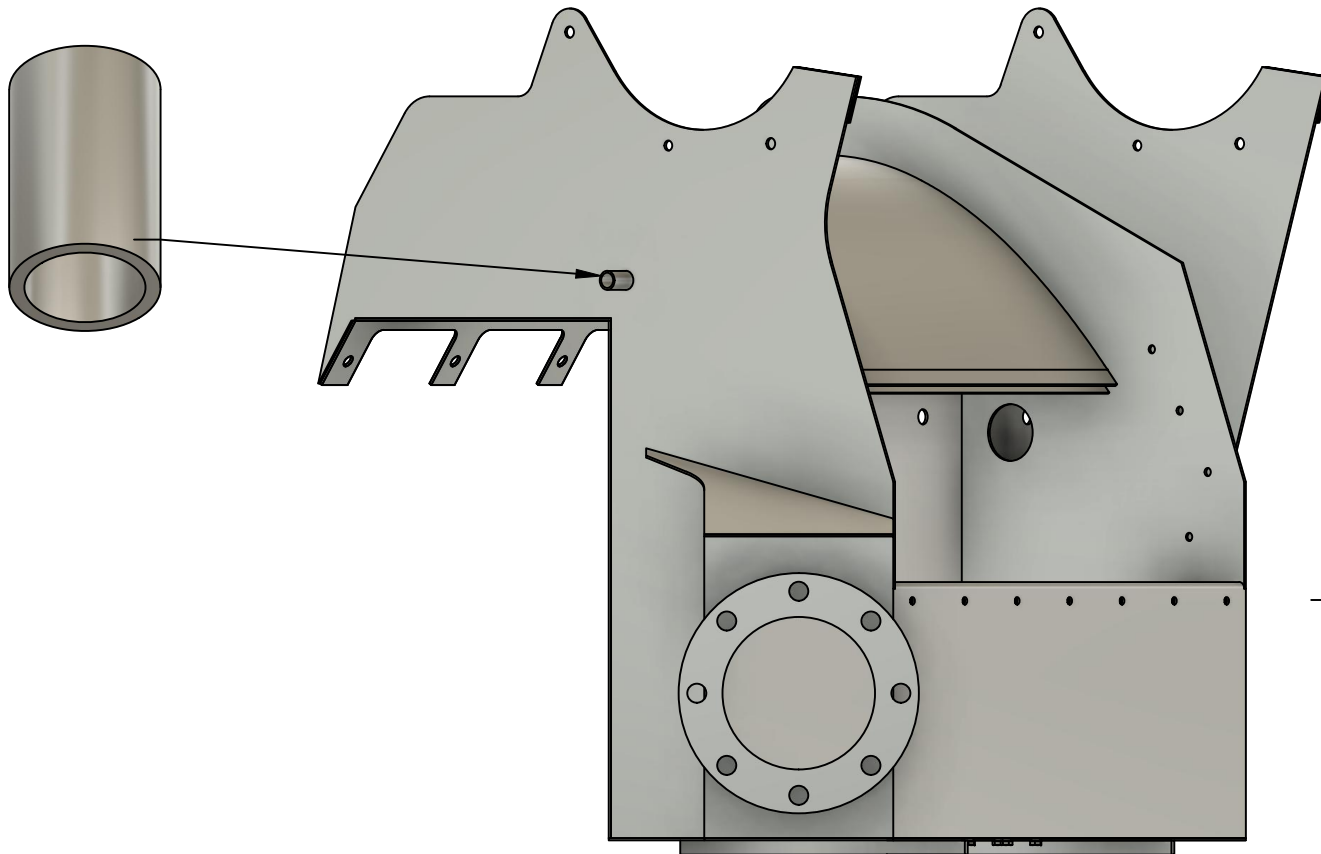
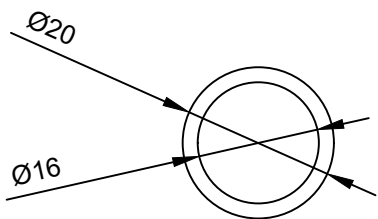
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection
Material:		Drawing No. HyR_210324a		Paper size A4
				Designer: Dr. R.W.Moss
Thickness:	Required: 1-off	Sheet 22 of 28	Sheet title Item 18: House rear wall	Default scale 1:4
		Rev.	Revision date 25/3/21	



Flange holes to match
Akatherm 160 mm fitting.

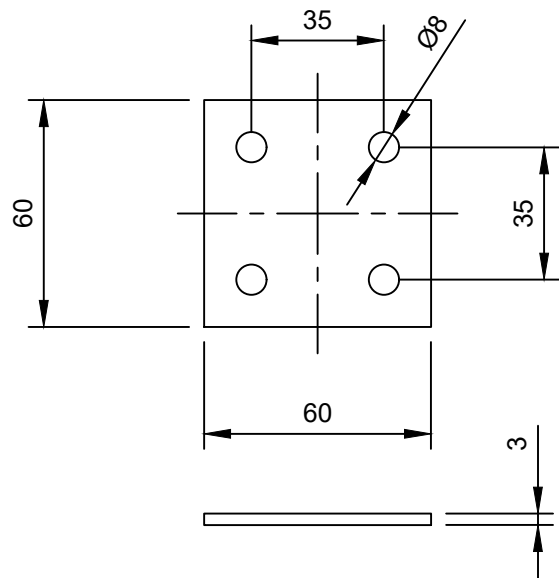
Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material:		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:4	
Required: 1-off		Sheet 23 of 28		Revision date 25/3/21	
		Sheet title Items 19&20: Outlet pipe and flange		Rev.	

1:5

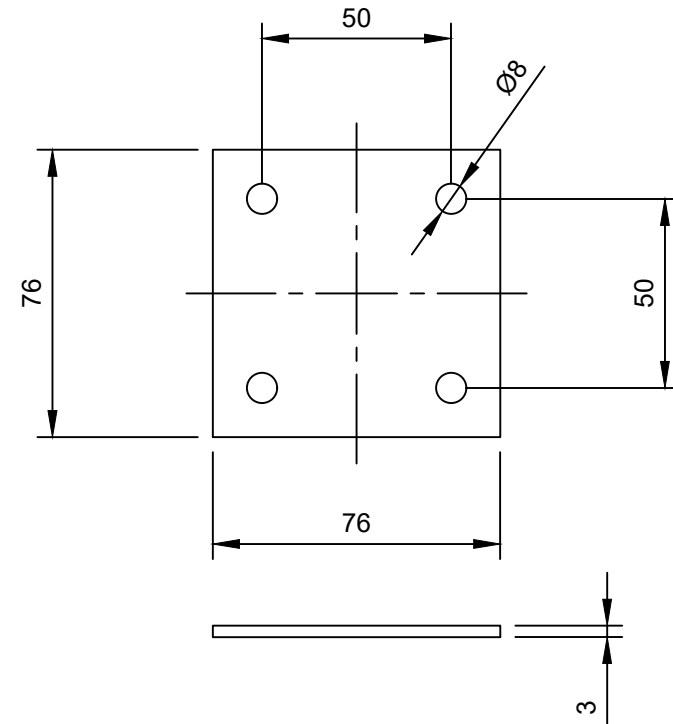


Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material:		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:1	
Required: 1-off	Sheet 24 of 28	Sheet title Item 22: Vent pipe		Units: Rev.	Revision date 25/3/21

24: Box 1 cover

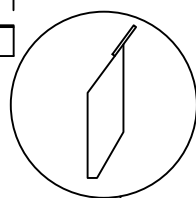
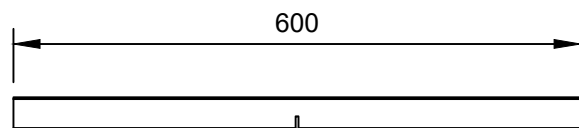


25: Box 2 cover.

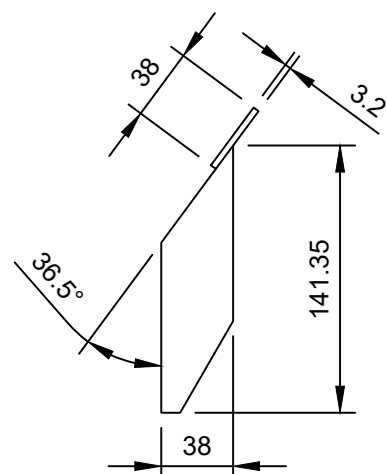


Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings			Projection 	
Material:		Drawing No. HyR_210324a			Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:2		
Required: 1-off each	Sheet 25 of 28	Sheet title Items 24&25: Box 1 & 2 drain covers		Rev.	Revision date 25/3/21	

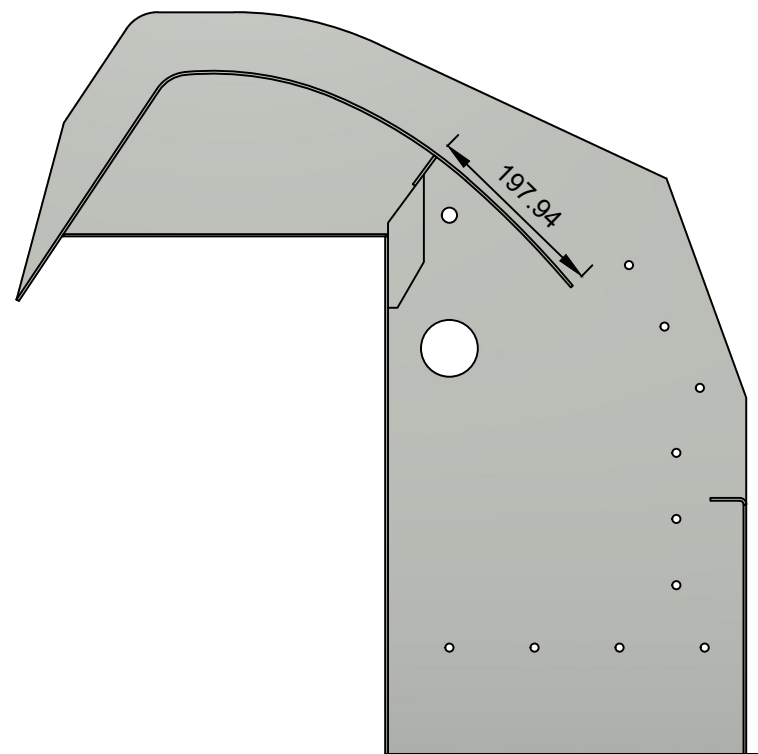
1:8



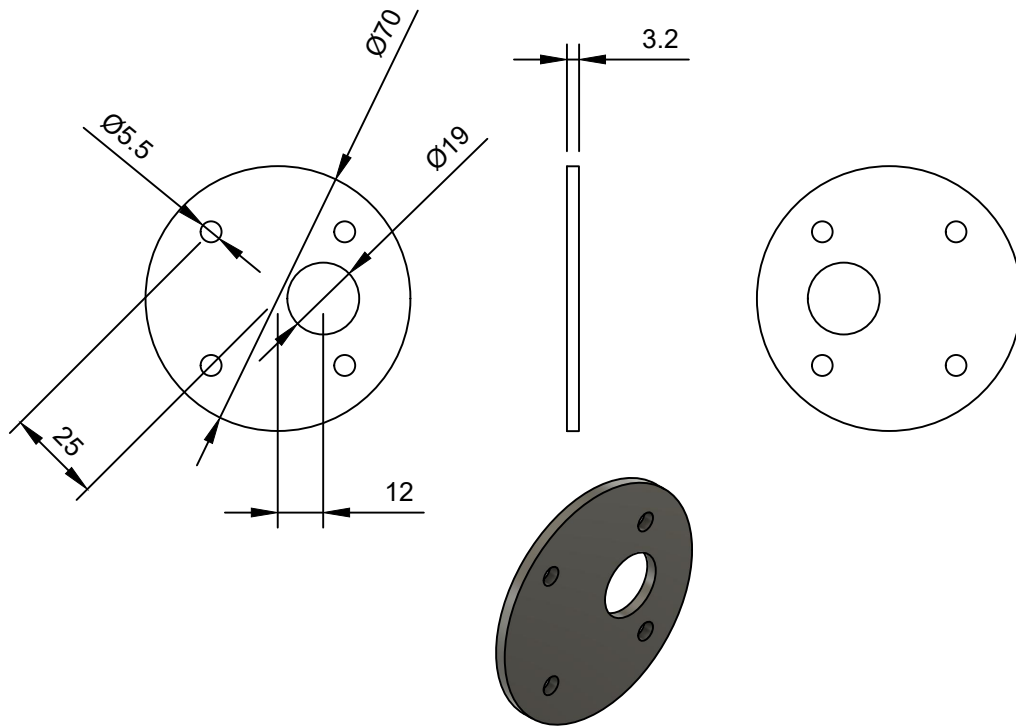
E

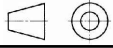


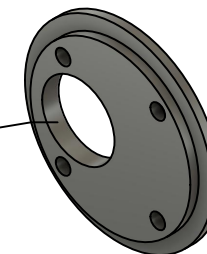
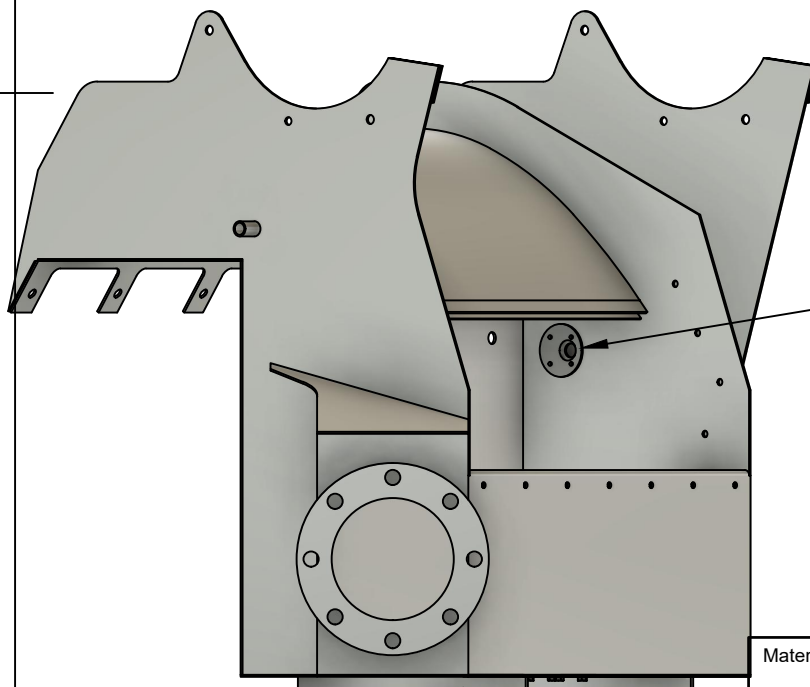
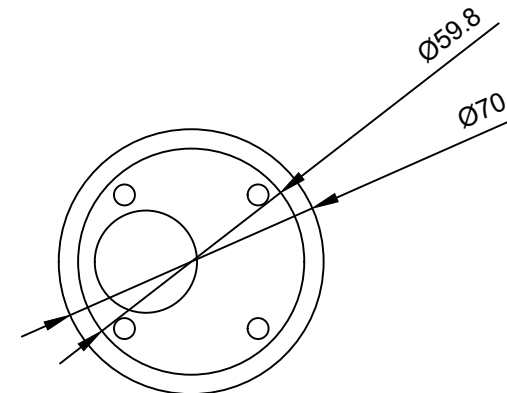
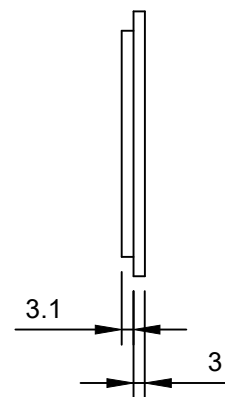
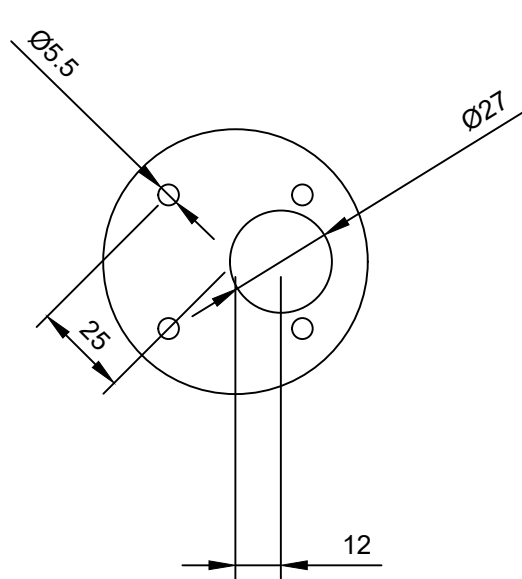
E (1:4)



Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings			Projection 	
Material:		Drawing No. HyR_210324a			Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:8		
Required: 1-off each	Sheet 26 of 28	Sheet title Items 26&7: Fairing 3 longitudinal rib & sppt web		Rev.	Revision date 25/3/21	



Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material:		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:2	
Required: 1-off	Sheet 27 of 28	Sheet title Item 28: Metering orifice plate		Units: Rev.	Revision date 25/3/21



Project: Hafod y Rhedwydd micro-hydro		Title: Main box drawings		Projection 	
Material:		Drawing No. HyR_210324a		Paper size A4	
Thickness:		Designer: Dr. R.W.Moss		Default scale 1:2	
Required: 1-off	Sheet 28 of 28	Sheet title Item 29: Metering orifice clamp ring	Units: Rev.	Revision date 25/3/21	