



**CONTOUR HEATING PRODUCTS**

# Safe Specification In Mental Health Settings



**A best practice guide**



## *Introduction*

# We're experiencing change in mental health settings

We have experienced significant changes in attitudes towards mental health in recent years, and this cultural shift in awareness, acceptance and understanding has most certainly impacted the way in which our psychiatric environments are designed.

On the whole, general mental health environments are now less restrictive, with Service Users having more access to home comforts as a way of facilitating a therapeutic, nurturing and trusting environment to truly aid rehabilitation. Items such as mobile phones, chargers, and other electrical components are more accessible, and Users are now more responsible for their own individual comfort levels – having greater access to heat controls.

As a result, furniture, fixtures and fittings should be closely considered – now more than ever. What was once considered 'acceptable' as an anti-ligature solution, may need to be reassessed to ensure that it fosters optimised anti-ligature characteristics.

Are your 'anti-ligature' heating solutions truly fulfilling their intended purpose?

## Introduction

## What Can You Expect From This Guide?

This guide should be seen as the 'Part 2' to our successful Guide to Anti-Ligature. To date, it has achieved over 200 downloads and has helped countless mental health care providers and specifiers in the provision of safe heating for vulnerable Service Users.

In this guide, we share a selection of on-site images demonstrating effective and equally ineffective practice. It is during these visits that we've concluded

*It's no longer enough to specify any radiator or guard that claims anti-ligature credentials. Care and attention must be paid to specific design characteristics and installation for the heating solution to be truly effective.*

Please be aware that some of the issues discussed in this guide may be confronting at times.

## About Contour Heating

**Contour design, produce and install a range of innovative safe surface temperature heating solutions.**

Their continual work within the mental health sector has led them to develop a range of anti-ligature solutions, specifically designed for use in mental health and challenging environments.

Alongside Contour's anti-ligature radiators and guards, their latest innovations include low surface radiators and guards, anti-ligature light switch covers, ventilation grilles and much more.

**Contour is dedicated to helping educate the marketplace on safe specification in mental health environments, and we hope you find this resource useful for all future projects.**

Changing  
**DEMANDS**

*Chapter 1*

## What Happens When You Don't Use Open-Ended Shoulders?

When a radiator is located close to the corner of a room, it may be necessary to consider the use of a radiator guard with an open-ended shoulder (OES).

Contour's Regional Sales Manager, Richard Holland explains the purpose of an OES:

*"In many instances, radiators will be positioned tightly to a corner. Our radiator guards have a standard tolerance of 100 millimetres from the edge of the radiator to the side of the casing.*

*If the radiator is only 130 millimetres to the wall, a standard cover will finish 30 millimetres short of the wall. This presents significant health and safety risks to individuals within a mental health setting".*

# Chapter ONE

Chapter 1

# Benefits of Open-ended Shoulders

An OES allows the radiator guard to fit tightly up to a corner without creating gaps, rather than only covering the radiator itself.

This will serve a multitude of benefits, including:

- 1.Minimising stash points
- 2.Reducing Ligatures
- 3.Eliminating dust traps
- 4.Improving room aesthetics

On the next page, we explore each benefit in detail, highlighting how the use of an OES can help facilitate a safer mental health setting.



# #1 Minimising Stash Points

If, for example, there is a 30-millimetre gap between the wall and the edge of the radiator cover, you will be enabling a stash point in which Service Users can use to hide prohibited contraband.

*A gap of around 30 millimetres is large enough to hide items, yet small enough to conceal them with the naked eye, making it the ideal hiding place for blades, cords or other harmful accessories.*

## Open-Ended SHOULDERS

1. Minimising stash points
2. Reducing Ligatures
3. Eliminating dust traps
4. Improving room aesthetics

## #2 Reducing Ligature Risks

A vulnerable Service User with suicidal thoughts will seek any opportunity to inflict harm on themselves, and a small gap between the radiator cover and wall will present a significant ligature risk.

It is not uncommon for a Service User with suicidal tendencies to tie their bedsheets into a knot and wedge it between a tight gap. This, then, will allow an individual to tie the other end of the material around their neck and roll, at speed, along the floor in a method known as the 'crocodile roll'.

*It is a common misconception that 'hanging' can only occur above head height, yet our experiences in such settings have taught us that death by hanging doesn't always conform to a 'standard' method.*

## Open-Ended SHOULDERS

1. Minimising stash points
- 2. Reducing Ligatures**
3. Eliminating dust traps
4. Improving room aesthetics

## #3 Eliminating Dust Traps

The build up of dust, dirt and bacteria is unpleasant in any setting and whilst it can look unsightly, it will also present a significant health and safety risk.

Of course, the smaller the gap between radiator cover and wall, the more difficult it is to clean. An OES will mean that the radiator cover is fitted tight to the wall, eliminating dust traps and making it easier for cleaning operatives to control the build up of dust and other harmful particles.



### BIOCOTE® Anti-Microbial Protection

Working alongside open-ended-shoulders, BioCote® anti-microbial coating technology will help to improve overall hygiene standards in a mental health setting, providing an effective, safe and long-lasting solution to combatting a wide range of dangerous bacteria, including MRSA and E.coli.

To learn more about the cleaning efficacy of BioCote® and how it is incorporated into each one of Contour Heating's anti-ligature radiators and guards, [click here](#).

## Open-Ended SHOULDERS

1. Minimising stash points
2. Reducing Ligatures
- 3. Eliminating dust traps**
4. Improving room aesthetics



## #4 Improving Room Aesthetics

In the quest to provide a safe environment, room designers in mental health settings can sometimes place functionality over aesthetics.

It is possible, however, to achieve both aims, and open-ended shoulders will help with this – providing a radiator that is secured neatly to the wall without any shadow gaps.

*Service Users will be calling these mental health settings home for months at a time and a large contributor to a comfortable environment is one that is aesthetically pleasing.*

### Open-Ended SHOULDERS

1. Minimising stash points

2. Reducing Ligatures

3. Eliminating dust traps

4. Improving room aesthetics

*Chapter 2*

## Eliminating 'Weak Spots' At The Top of the Radiator

### The use of a Butt Strap Feature

Many radiator covers will have a drop-down cover to provide easy access for cleaning and maintenance.

In some cases, however, this seemingly useful design feature may be its biggest downfall, particularly when discussing mental health environments.

To put this in context, on the next page, there is an image of a car key being wedged between the dropdown (door) section of the radiator cover and its frame.

## Chapter TWO



As you can see, this presents a significant opportunity for a Service User to wedge an item between the points where the two sections meet, creating a ligature point. Continued tampering will also damage the radiator, exposing any sharp edges that could be weaponised.

A butt joint is a technique in which two pieces of material are joined by simply placing their ends together without any special shaping. The name 'butt joint' comes from the way the material is joined together. Without some form of reinforcement,

A butt joint is incredibly weak, and even when members are brought together and a number of nails are driven in to hold them in place, this doesn't stop a Service User from wedging an item between the joint to weaken it.



Eliminating  
**WEAK SPOTS**

# How Do We Overcome This Problem?



The butt strap feature is a piece of 'plate' or bar covering the joint of two plates or bars at their ends where they abut against each other, giving continuity of strength.

It has taken Contour Heating years of engineering and development to produce this unique feature, demonstrating the hard work and commitment to providing a safer environment to vulnerable individuals in mental health settings.

*How can you mitigate the risk of a Service User wedging an item between the door and frame of the radiator guard?*

This problem can be overcome with a **butt strap feature**, known as an 'overlapping lip detail'. This will stop any individual from penetrating the joints as the overlap will physically stop an item at 1.5 millimetres (i.e., the thickness of the steel).



## Eliminating WEAK SPOTS

*Chapter 3*

## Overcoming Unwanted Gaps Between the Radiator & Wall

A manufactured fixture or fitting that has perfectly straight edges will always fall victim to a man-made plastered wall.

When you marry a perfectly manufactured straight edge with a manmade surface, measures must be put in place to accommodate the inevitable gaps that will be created between radiator cover and wall.

The obvious (and favoured) solution to this would be to seal the perimeter of the guard with anti-pick mastic.

However, by securing your guard to the wall in such a way, you are potentially preventing essential access to the radiator for maintenance and cleaning.

## Chapter THREE

# Cleaning and Maintenance

In hostile environments, quick and easy access to cleaning and maintenance is essential, particularly when you consider the risk of dirty protests and vandalism - common occurrences in a mental health setting.

It is not viable or practical to remove and re-seal the anti-pick mastic every time operatives are required to carry out cleaning and maintenance, and continued use will compromise the integrity of your fixings. So how can a radiator guard remain sealed to the wall whilst still fulfilling these vital maintenance functions?

## full frame design



As you can see from the image, the radiator guard door can be sufficiently removed via simple, quarter-turn locks\* to provide essential access whilst the outer perimeter remains firmly sealed to the wall.

\*In addition, the patterned hinges mean that operatives won't need to remove the door completely, eliminating any manual handling requirements.

Note: The full frame also provides additional fixing points for enhanced safety.

*Chapter 4*

## Radiator Covers & Windowsills

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A common issue in older buildings is when a radiator is located very near to (or in some cases - at the same height as) the windowsill. Historically, room design layouts didn't accommodate for the application of radiator guards, so as you can imagine, installing one near a windowsill in a high-risk environment can be problematic.



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## Chapter FOUR



Inevitably, your radiator guard will be higher than the windowsill, as seen in the image on the previous page.

This will present visible flat edges where the radiator guard goes above the windowsill, presenting a very clear and obvious opportunity for the Service User to pull away the guard with force, inflicting damage and exposing a ligature.

### What's The Solution?

A sloped back edge that is secured firmly to the windowsill will mitigate any opportunity that the Service User may have at gripping and pulling away at the guard.

### An Argument For Cleaning Efficiency

In addition, a vertical edge will conceal any dirt and dust build up that will occur on the radiator's surface, making it difficult for operatives to detect and eliminate the problem during their cleaning practices.

A sloping edge will expose dust no matter which angle you are looking at it from, making cleaning much more efficient.



# Radiator Covers & WINDOWSILLS



*Chapter 5*

## Giving Service Users the Ability to Control Their Heating

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In the quest to remove ligatures and create the ultimate safe setting, we often overlook the individual comfort levels of the Service User.

At its core, a radiator is an appliance that provides warmth when we're cold. Yet, when a room is too warm, a person can very quickly experience discomfort, and this feeling can be amplified in a mental health setting.

It doesn't take an expert to know that increased levels of discomfort will lead to increased hostility amongst Service Users.

And that's where anti-ligature TRV kits play a crucial role in a resident's wellbeing and comfort.

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## Chapter FIVE

## Giving Service Users Control of Their Warmth

To eliminate ligatures, many specifiers will opt for an internal TRV, yet this can only be controlled by an authorised person who has access, potentially fuelling feelings of anxiety and discomfort amongst Service Users.

### What The Contour Anti-Ligature TRV Kit?

Contour's back-to-wall TRV kit allows Service Users to control the temperature of the radiator without increasing ligature risk.

This is achieved via the back-to-wall shroud casing which encapsulates the TRV kit, whilst being secured to the wall via anti-pick mastic, reducing the risk of Users looping and cords around it.



You may question the small holes around the perimeter of the valve, and you could be forgiven for thinking that these present a ligature risk. However, they have been cut in a zig-zag pattern, making it virtually impossible for a small cord to be threaded through.

These small air holes are necessary to ensure airflow gets to the TRV to accurately take a temperature reading.

The addition of a back-to-wall shroud will present substantial benefits to the Service User, allowing them to control their own comfort levels, alleviating feelings of stress and discomfort.

Control over  
**COMFORT**

*Chapter 5*

## Concluding Thoughts

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Mental health settings house some of the most vulnerable and unpredictable individuals in the country, many of whom will exhibit hostile, challenging and, at times, violent behaviours.

Redesigning a mental health setting will require you to think differently about how your products are manufactured, installed and used.

We actively encourage specifiers to look beyond the anti-ligature grilles that you'll find on so many products and seek those 'hidden ligatures' that will be exploited when in the hands of a vulnerable individual.

When you pay close attention to the intricate design features and those seemingly minute details, you are helping to facilitate a safe, calm environment where users feel safe, secure and rehabilitated.

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# CONCLUSION