

Scottish Prison Service

Exploring Intermediate Bedding Solutions for Young People in Prison Custody: A Market Research Report

Responding to FAI Recommendation 6: Exploring Safer Bedding
Options for Young People in Custody

Scottish Prison Service

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Executive Summary

This research was commissioned in direct response to Recommendation 6 of the Fatal Accident Inquiry (FAI) into the deaths of Katie Allan and William Lindsay (Brown). The FAI recommended that the Scottish Prison Service (SPS) explore the availability and cost of alternative bedding materials for young people in custody specifically, materials that, while not certified as anti-ligature, are significantly more resistant to tearing or manipulation than standard bedding.

The aim was to identify options that could reduce ligature risk while maintaining a more normalised and dignified custodial environment. In response, the SPS procurement team conducted a comprehensive market review. This included:

- Engagement with suppliers across the custodial, healthcare, and institutional sectors
- Review of product specifications and safety standards
- Consultation with other jurisdictions and care providers, including The State Hospital and secure care environments, to understand whether similar needs had been identified or addressed elsewhere

The research found that no bedding products currently exist that bridge the gap between fully anti-ligature and standard bedding. There is also no recognised standard or certification for such an intermediate category. While some materials are marketed as rip-resistant or tamper-resistant, no material was found to be completely rip-proof. The team explored a range of options, including:

- Stronger materials that are more difficult to tear but may still be manipulated under sustained effort
- Weaker, lightweight materials that are less likely to bear weight or be used to form a ligature, but which may compromise comfort and durability

The research reaffirmed that anti-ligature bedding is designed for crisis use and individuals at acute risk and is not appropriate for use across an entire population. These products often lack the comfort, warmth, and familiarity that contribute to a young person's sense of dignity and wellbeing. Overuse of such materials may inadvertently undermine therapeutic and rehabilitative goals.

Furthermore, none of the external organisations consulted either in custodial or secure care settings had considered or implemented such a bedding solution, suggesting that this is a largely unexplored area across sectors.

Through the research, no suitable intermediate product was identified at this time, with suppliers citing that that the solution to the issue is not a re-engineering of existing anti ligature bedding products, as it will ultimately not reduce the chances or ease of creating a point of ligature. Many also emphasised that wellbeing-focused interventions such as trauma-informed care, staff training, and supportive environments are often more effective in reducing ligature risk than material restrictions alone.

This report is published in response to the FAI recommendation and is intended to inform future procurement decisions, stimulate innovation in custodial product design, and support a more balanced approach to safety and dignity for young people in custody.

1. Introduction

In 2023, the Fatal Accident Inquiry (FAI) into the deaths of Katie Allan and William Lindsay (Brown) at HMP & YOI Polmont highlighted a number of systemic issues in the care and management of young people in custody. Among the 25 recommendations made by Sheriff Collins, Recommendation 6 specifically addressed the need to review the bedding materials used in standard cells. The Sheriff noted that while anti-ligature bedding is available for individuals at acute risk, there may be alternative materials that, although not certified as anti-ligature, are significantly more resistant to tearing or manipulation than standard bedding. The recommendation stated:

“SPS should undertake or commission a research project in relation to the availability and cost of alternative bedding materials for use in cells by young prisoners in Polmont. This should determine whether there are bedding materials available which, even if not certified as anti-ligature and inappropriate for use in standard cells (such as Crown Production 38), are nevertheless rip-resistant, to the extent that they are significantly less amenable to being cut or torn by a prisoner so as to form a ligature than are the bedding materials currently in use. SPS should publish the findings of this research project and review its choice of bedding materials in standard cells at Polmont in the light of it.”

The Sheriff’s rationale was grounded in the need to strike a balance between safety and dignity recognising that while anti-ligature bedding plays a critical role in crisis management, it is not suitable for widespread use due to its institutional appearance, lack of comfort, and potential impact on wellbeing.

Objective of the Research

In response to this recommendation, the Scottish Prison Service (SPS) initiated a market research project to:

- Identify whether any intermediate bedding materials exist that are more resistant to tearing than standard bedding but less restrictive than anti-ligature products
- Assess the availability, cost, and practicality of such materials for use in standard cells
- Explore whether such materials could be developed or manufactured in-house, using SPS’s internal textile expertise

2. Methodology

The research included:

- A market review of commercially available bedding products across custodial, healthcare, and institutional sectors
- Engagement with suppliers to understand material properties, safety features, and potential for customisation
- Consultation with textile experts within SPS to assess the feasibility of developing or adapting materials internally
- Outreach to other jurisdictions and care providers, including The State Hospital and secure care environments, to determine whether similar needs had been identified or addressed elsewhere
- Anecdotal feedback gathered from young people in HMP & YOI Polmont.

The research did **not** include:

- Clinical or psychological assessments of bedding impact
- Laboratory testing of materials
- Procurement or piloting of new products

3. Findings

The research identified two broad categories of bedding currently available for use in custodial and institutional settings:

- **Standard Bedding:** Typically made from cotton or polyester blends, standard bedding is designed for comfort, warmth, and durability. However, it can be easily torn or manipulated.
- **Anti-Ligature Bedding:** Designed for high-risk individuals, this bedding is made from reinforced, tear-resistant materials and often features one-piece construction to prevent manipulation. While effective in crisis situations, it is widely recognised as unsuitable for general use due to its institutional appearance, reduced comfort, and potential negative impact on wellbeing.

The research found no commercially available bedding products that occupy a middle ground between these two categories. There is also no recognised standard or certification for “intermediate” bedding i.e., products that are safer than standard bedding but less restrictive than anti-ligature options.

Material Properties

The team explored a range of materials marketed as rip-resistant or tamper-resistant.

These included:

- Heavier-duty fabrics that are more difficult to tear but could still be manipulated under sustained effort
- Lightweight or low-tensile materials that are less likely to support weight or form a ligature, but which may tear easily and lack durability

No material was found to be completely rip-proof, and all options involved trade-offs between safety, comfort, and practicality. Three suppliers confirmed that while some materials offer enhanced resistance, none could be confidently positioned as a safe alternative without compromising on other essential qualities.

Consultation with Suppliers

For bedding items including fitted sheets, pillow slips, duvet covers etc. across the prison estate in Scotland and the other areas of the UK, the principle stipulated requirement is for them to be compliant to BS7175 Crib 7 for flammability.

The SPS procurement team carried out market research with a number of key suppliers within the supply of bedding items. This was done twofold;

Initially via a Prior Information Notice (PIN) that is utilised as a means of engaging with the market prior to any procurement exercise. This highlighted a number of suppliers and allowed the SPS procurement team to engage in some exploratory pre-market engagement.

As part of the research, a range of stakeholders were consulted on the feasibility of introducing an intermediate bedding solution specifically for young people in custody, and on the market's capacity to support such a product. Feedback indicated that there is currently no off-the-shelf solution that meets the necessary requirements for use in custodial settings.

Suppliers highlighted that to comply with the Crib 7 fire safety standard essential in custodial environments the standard polyester bedding currently used across the SPS estate remains the most viable option. It offers a balance of durability, comfort, affordability, and ease of maintenance. Alternative materials, such as cotton, were found to be significantly less durable and more prone to tearing, making them unsuitable for this context.

The SPS procurement team engaged directly with the three primary suppliers currently contracted to provide bedding to SPS establishments: Thomas Kneale Ltd, Decotex Ltd, and Charles Fellows Ltd. Each supplier independently confirmed the broader market finding that no existing product could be classified as an "intermediate" bedding option between standard polyester and high-risk anti-ligature bedding.

Following extensive consultation, Thomas Kneale Ltd submitted a detailed research report (Annex A), drawing on over 25 years of experience supplying custodial environments. Their analysis concluded that:

"Specialist anti-ligature products are not indestructible. If the user is not supervised in accordance with surveillance/monitoring guidelines, and if the items are not inspected for signs of damage, the product can in enough time and with enough determination, be deconstructed to create a ligature. Therefore, by providing any product at a lower risk specification to the special risk items increases the possibility of a ligature being created. Ultimately, standard bed linen and duvet items, whatever changes are made to the materials, thread count, weave and/or other aspects, mean they are ultimately able to be torn with relative ease. It is our professional view based on several decades of

experience, that the solution to the issue is not a re-engineering of the existing product as it will ultimately not reduce the chances or ease of creating a point of ligature. Without deep knowledge of the circumstances for the project, we would advise that a wider provision of the anti-ligature items along with other mental health support and a surveillance programme review would be more appropriate to making changes to the bedding items, unless all young offenders were to be switched to anti-ligature items.”

This insight reinforces the conclusion that product innovation alone is unlikely to address the underlying risks without systemic changes in care and monitoring.

Consultation with Other Sectors

Engagement with other jurisdictions and care providers including The NHS State Hospital and secure care environments revealed that none had considered or implemented intermediate bedding solutions. This suggests that the issue remains underexplored across sectors, despite its relevance to safety and wellbeing in high-risk populations.

The SPS procurement team engaged with other custodial settings and service providers to explore potential alternative bedding options. However, this engagement did not yield any new or viable alternatives. For example, The NHS State Hospital currently offers patients the same two-tier bedding provision as SPS: a standard polyester option and a high-risk anti-ligature option.

Further engagement took place with the Ministry of Justice (MoJ) to understand the bedding provision across Her Majesty’s Prison and Probation Service (HMPPS). It was found that HMPPS also provides only the same two options currently used by SPS. Notably, HMPPS manufactures all bedding in-house through its textile workshops, producing both standard polyester and high-risk bedding. Their production team shared specifications with SPS, confirming that the finished products are equivalent in quality and design to those supplied to SPS by external vendors.

In light of this, SPS Industries is currently assessing the feasibility and cost implications of establishing internal workshops to manufacture all bedding in-house. This “make versus buy” approach could not only ensure consistent supply and quality but also support the development of meaningful work opportunities for individuals in custody.

Anecdotal Feedback from Young People

As part of the research, focus groups were conducted with a group of young people at HMP & YOI Polmont to explore their views on current bedding provision and the potential to broaden out the use of “stronger” or change their current bedding.

Participants included individuals with and without experience of being managed under the *Talk to Me* strategy, offering a range of perspectives from across remand and mainstream populations.

The feedback revealed a strong preference for retaining standard bedding, which was consistently described as a source of comfort and normality. Many participants expressed concern that stronger bedding would be “much harder to sleep” with, and one young person noted that “the beds are bad enough without having a hard duvet.” The current bedding was seen as one of the few elements in their environment that felt familiar and personal, with one participant describing it as “a link to home,” while another remarked that “the duvet is the most normal thing in their cell.”

There was also a clear recognition of the stigma associated with stronger bedding, particularly its association with those managed under *Talk to Me*. This stigma was seen as potentially disruptive, with one young person warning that a change in bedding “could disrupt boys,” and another emphasising that “boys find the duvets they have a comfort.”

These insights highlight the emotional and psychological significance of standard bedding for young people in custody. They also underscore the potential unintended consequences of introducing anti-ligature alternatives, reinforcing the importance of centring lived experience in decisions about safety and wellbeing.

Internal Feasibility Assessment

The SPS procurement team also engaged with in-house textile experts to assess whether a bespoke solution could be developed internally. While there was interest and expertise available, the same material limitations applied. Without access to new or specialised fabrics, it was not feasible to produce a product that met the desired balance of safety and comfort using existing resources. In addition, there was no identified standard to work to for an intermediate bedding solution.

4. Conclusion and Recommendations

This research has provided a comprehensive overview of bedding options currently available for use across the SPS estate, with a particular focus on identifying a potential intermediate solution suitable for young people in custody. The findings clearly indicate that the market is limited to two distinct categories: standard bedding, and high-risk anti-ligature bedding. No commercially available product currently bridges the gap between these categories, and there is no recognised standard or certification for an intermediate option.

Material analysis revealed that while some fabrics offer enhanced resistance to tearing or manipulation, none are entirely rip-proof. All options involve trade-offs between safety, comfort, durability, and practicality. Supplier feedback consistently reinforced the conclusion that modifying existing products would not sufficiently reduce ligature risk. Instead, broader use of anti-ligature items, combined with enhanced mental health support and improved surveillance practices, was recommended as a more effective approach.

Consultation with other custodial and care sectors, including The NHS State Hospital and HMPPS, confirmed that intermediate bedding solutions are not currently in use elsewhere. These organisations also rely on the same two-tier system as SPS, further highlighting the lack of viable alternatives in the wider market.

In response to these findings, SPS will proceed with a national procurement exercise for bedding across the prison estate. While it was initially hoped that this would include an intermediate option tailored for young people, the research has shown that such a solution is not currently viable. SPS will continue to explore the possibility of developing a bespoke product in collaboration with suppliers, but this will require careful consideration of the inherent limitations and risks associated with ligature prevention.

Additionally, SPS Industries is assessing the feasibility of manufacturing bedding in-house. This “make versus buy” approach could offer greater control over product quality and supply, while also creating meaningful work opportunities for individuals in custody.

Ultimately, the research underscores the complexity of balancing safety, comfort, and operational practicality in custodial environments. Any future developments must be informed not only by material innovation but also by a holistic understanding of care, supervision, and wellbeing.

Annex A – Thomas Kneale – Supporting Evidence



Scottish Prison Service risk management review project- YOI Polmont

Please note: The information contained in this document is based on the knowledge and understanding of the Thomas Kneale (TK) team. TK has been working with prisons and other custodial settings for over 25 years, and we have built up significant information from working with and visiting prisons, and providing & developing products.

Introduction

For bedding items (comprising of flat linen and duvets) across the prison estate in Scotland and the other areas of the UK, the principle stipulated requirement is for them to be compliant to BS7175 Crib 7 for flammability. TK has developed products where all of these items are now of inherently fire retardant (FR), meaning the items will remain fully certified and compliant to BS7175 Crib 7 for their full product lifecycle, regardless of the number of times the items are washed, and regardless of whether cleaning chemicals such as bleach are used to remove tough stains. Some providers will still provide items with a chemical finish over a base cotton layer, which can lose its FR status in as little as one wash, especially when bleach is used as the cleaning agent. Secondly to this, with the importance of prisoner comfort, to aid better quality of sleep, and with rehabilitation in mind, we have developed items that are more comfortable in touch, through processes such as additional spinning which makes the polyester base fabric of our bed linen items much softer than traditional Polyester linens.

The specifications of the standard items

Bed linen- The TK FR linen and duvets are provided across a wide range of sectors, including custodial and immigration settings, to vulnerable people in the community through fire and rescue services across the UK including Scottish F&R Service, care homes, healthcare settings, sleeper trains and marine locations with confined spaces, and others. The items are 100% FR polyester, where the FR status is achieved at the start of the manufacturing process in the initial created structure with the polyester chips created before being melted down. The weight of the linen items are 145gsm and contain a thread count of 136 per square inch. Our items are known as spunsoft, due to the extra processing that takes place with the yarn, taking away the harsh nature of a regular polyester feel, and also preventing pilling from occurring, which extends the products life cycle.

Anti-ligature- Like SPS prison industries, TK manufacture a range of special risk (anti-ligature) products, covering a blanket (standard and a reinforced version), clothing which includes tops, shorts and smocks, and a pillow. All of the items are fire retardant, and are supplied to sectors including custodial and immigration, and private and public healthcare. The items are manufactured using a mass of stitching that contrasts with the fabric colour for ease of identification of damage. The items can not be rolled to create a ligature and are difficult to deconstruct. However, we make it known to customers that the items are not indestructible.

They are to be used in accordance with regular surveillance in line with guidelines. When the items are damaged and could become utilised for a ligature, they should be removed and replaced immediately.

When anti-ligature is provided

We developed our anti-ligature product range in association with the late Sir David Ramsbotham, when he served as The Chief Inspector of Prisons in the late 1990’s. For over 25 years, we have provided these items across various sectors, in significant quantities, including some of the highest profile NHS settings such as Rampton and Broadmoor. We have worked with each sector to understand the processes which determine the issuing of these items, over and above standard bedding items. For the police custody sector, this is based on a series of questions asked when the individual is taken into custody, in mental health settings they are in some cases provided as standard to all users, and in prison settings, they can be issued from the individual’s arrival, or due to changes in their behaviour and mindset.

Providing an ‘in between’ product range

Standard bedding items can easily be made into a ligature with limited effort, and very quickly. This is why those perceived to be at, or mentioning that they are wishing to self-harm, should be issued anti-ligature products. To our knowledge, as one of the UK’s leading providers of both standard fire retardant bedding, and anti-ligature products across high risk sectors, there is currently no in-between items on the market to our knowledge that will make it harder to create a ligature, without providing the anti-ligature range. Furthermore, TK has been in consultation with partner mills, testing laboratories, and textile industry groups to review this possibility. The following options have been discussed, with pro’s and con’s, but ultimately, all are not believed to reduce the chances of creating a ligature and therefore are advised against.

Lightweight bed linen	Pros	Cons/ unsuitability
A product that can not hold the weight of the individual who has created a ligature	Composite item may not be strong enough to hold the individual’s weight	<ul style="list-style-type: none"> - The ripped item can be used to create layers, twisted for strength, and/or be used in combination with other items to overcome the lightweight nature - The item may not withstand regular use and not be fit for purpose as bed linen

Heavyweight bed linen	Pros	Cons/ unsuitability
A product that has high strength, principally through a close weave and a higher thread count, or another material	The item will be harder to tear compared to a lower weight/TC product	The item will still be able to be rolled, and whilst harder to tear, with a combination of sharp implements such as

		teeth, along with force, it will be able to be torn
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Conclusion

Specialist anti-ligature products are not indestructible. If the user is not supervised in accordance with surveillance/monitoring guidelines, and if the items are not inspected for signs of damage, the product can in enough time and with enough determination, be deconstructed to create a ligature. Therefore, by providing any product at a lower risk specification to the special risk items increases the possibility of a ligature being created. Ultimately, standard bed linen and duvet items, whatever changes are made to the materials, thread count, weave and/or other aspects, mean they are ultimately able to be torn with relative ease. It is our professional view based on several decades of experience, that the solution to the issue is not a re-engineering of the existing product as it will ultimately not reduce the chances or ease of creating a point of ligature. Without deep knowledge of the circumstances for the project, we would advise that a wider provision of the anti-ligature items along with other mental health support and a surveillance programme review would be more appropriate to making changes to the bedding items, unless all young offenders were to be switched to anti-ligature items.