

## Londoner 40

### Chapter 40. Ulrigan Smithies

Cedoron chuckled, a deep rumble that seemed to emanate from his very core. "Not just pirates, my Lord," he clarified, "they're quite common among sailors in general. But yes, I see your point. For clearing small branches, they would certainly be effective. I can definitely craft those for you."

"That's good," Kivamus said. He continued, "Taniok, the carpenter, mentioned you didn't have any apprentices to help you. With such a large order, it might be difficult to fulfill everything on your own. So, tell me, how much can you realistically handle? Knowing that will help me determine how much I need to buy from Cinran."

"When do you require these tools, my Lord?" Cedoron asked. "And what do you need first?"

Kivamus considered the question for a moment, his eyes scanning the grounds of the manor. He began, "I think we should already have at least half a dozen axes here in the manor, apart from whatever the villagers might own themselves. That should give us a good starting point for felling trees. But acquiring more axes is the first priority, so we can start clearing these forests at a large scale. Then we will need some machetes to prune the trees so we can convert them into logs for easy transport and storage."

He paused for a moment. "As for shovels, I believe Pydas, the merchant, already brought a few with him. It makes more sense to purchase those from him, freeing you up to focus on crafting the items we lack entirely. So, after axes and machetes, our next priority would be saws for Taniok so he can start making planks from the logs. He said that he already had two saws with him, but we will need more in case they break."

Kivamus paused, allowing Cedoron to absorb the information. "Hammers, nails and hinges," he added, "won't be needed immediately. We'll only need them later in the construction process, when the framework of the longhouses begins to take shape in a couple of weeks."

Cedoron listened intently, his brow furrowed in concentration as he mentally tallied the workload. "While I possess the skill to craft all the tools you've mentioned," he admitted, "I don't have enough iron ingots here to make all of it. I do have a small stock, of course, which will allow me to craft some of the tools, but I'll need more within the week. The thing is, my Lord," he explained, "my usual workload only revolves around repairing the mining tools that get damaged in the coal mines here. There's basically no demand for new tools in Tiranat, so I don't keep a large stockpile of iron ingots."

Kivamus considered this new information for a moment. "Very well," he said. "I can arrange to buy more iron ingots for you from Cinran. You should provide Duvas with an estimate of the amount of ingots you'll need later. But speaking of iron," he continued, a thought striking him, "can't you produce iron ingots from ore yourself? If I only needed to buy iron ore for you to smelt here, it would likely be significantly cheaper."

"Well, you see, my Lord," Cedoron explained, "I do have a small forge here. But like I mentioned earlier," he continued, "most of my work involves welding and reforging mining tools. Usually, that involves nothing more than heating the broken pieces in a hot coal fire in my forge. Once softened, I can weld them back together and reshape them to their original form."

Kivamus recalled seeing the wagons loaded with coal earlier. Upon closer inspection, it had looked like bituminous coal to him. It wasn't the best quality anthracite, but it was certainly better than some other types of coal. But it felt odd to him to hear Cedoron using coal instead of charcoal. "Duvas mentioned that you purchase coal from the manor," he said. "But wouldn't charcoal be a better fuel source?" Of course, coke, which was made after processing coal, would be the best fuel for it, but it was very likely that the process to make it was unknown in this era.

Cedoron's surprise was easily apparent from his expression. "I am surprised you know that much about smithing, my Lord."

Kivamus offered a wry smile. "I have a fondness for reading," he admitted, reaching for the most plausible excuse to explain his knowledge. "The libraries within Ulriga Palace held a wealth of information, and I devoured it all."

Gorsazo chimed in with a confirmatory nod. "Indeed," he said. "His Lordship is quite the scholar. I can attest to that."

Cedoron inclined his head in acknowledgment, seemingly satisfied with the explanation. He began, "It's true that charcoal is the preferred fuel for smelting iron ore. However, since my primary task involves welding and repairing existing tools, the coal I purchase from here serves the purpose well enough. It's only once in a few months, when I've accumulated a significant amount of scrap metal and enough tools which are too broken to be repaired, that I need to melt them further. That's when charcoal becomes essential, since using it can raise the temperature further within the forge."

He eyed Kivamus with a hint of respect. "Since you possess such knowledge about smelting, my Lord, you might also be aware that creating charcoal is a laborious task for one person. So once in a few

months, I have to dedicate an entire week to make charcoal - time I could be spending on other projects - just to have enough fuel for further softening of all that scrap metal by heating it a lot more than usual, so I can forge it back into usable iron ingots."

Cedoron concluded with a shrug. "So, for most of my day-to-day work, coal from the manor is sufficient for heating the broken tools for repairs and welding. Especially since there is not much of a demand for me to make new tools myself."

He straightened his posture, his gaze fixed on Kivamus. "So, my Lord, that answers your question about why I can't simply smelt the iron ore myself for your rather substantial order. It's just a matter of sheer workload. Producing charcoal, smelting the iron ore into ingots inside a bloomery I'd have to make from scratch, and then forging those ingots into the tools you need - it would simply take too long for one man to handle it all, especially since you need those tools immediately. And I can't just hire a new worker for that either, since most of those are specialized tasks which need years of experience to do it right."

Kivamus offered a reassuring nod. "I can understand that."

Cedoron's eyes took on a distant, almost nostalgic glint as he reminisced. "Though I've never set foot in Ulriga myself," he began, "my father used to tell me stories about a big smithy there, the one he worked at before he relocated to Tiranat. Apparently, they have a water-wheel powering a massive ore crusher, this ingenious contraption that could pulverize iron ore into much smaller pieces for smelting, in a fraction of the time it takes by hand. Moreover, their bloomeries for smelting the ore were behemoths compared to those found in Cinran, true marvels of engineering."

A spark of yearning flickered in Cedoron's voice as he continued. "He even mentioned that many smithies there even employed water-powered trip hammers for drawing out the iron blooms into workable bar iron for easy transport and storage. If I had access to such equipment, my Lord," he sighed wistfully, "I could smelt as much iron ore as you desired. However, that is a big operation, requiring dozens of skilled workers to keep everything running smoothly. Not only do we lack a river powerful enough to sustain such a system, but there simply hasn't been a need for it here in Tiranat."

Gorsazo elaborated on the economic factors at play. "It all boils down to scale, my Lord," he said. "Ulriga has a constant need for a substantial amount of iron," he explained. "All those knights the Duke employs require a lot of armor and weapons, you see. Also, Ulriga is a huge city - seven or eight times larger than Cinran, I'd estimate, which is itself nearly ten times larger than Tiranat. That means a much bigger market for various goods - a greater demand for horseshoes, cooking utensils, farming implements, mining tools, as well as weapons like swords, axes, maces... you name it. Apart from that, Ulrigan

blacksmiths supply the Fort Aragosa as well. That's why they have huge smithies producing iron at such a large scale."

Kivamus couldn't stifle a small, rueful smile as he compared these medieval smithies to their counterparts back on Earth. While these waterwheel-powered primitive machines seemed cutting-edge to the people here, they were nothing compared to the colossal, modern blast furnaces that dominated Earth's industrial landscape.

Yet, despite the vast knowledge he possessed, the construction of a blast furnace here remained a distant fantasy for now. The limitations were simply too stark - a lack of proper resources and the necessary skilled workforce to build and operate such a marvel were only a small part of it. But that did give him an idea of where he could use his modern knowledge in the future. If he could locate a nearby source of iron ore or even a cheap supplier for it, and establish a system for large-scale iron production, then simply exporting the unprocessed iron ingots could become a significant source of income for Tiranat.

The benefit from economies of scale would be undeniable as well. His production methods, informed by his modern knowledge, would drive the manufacturing cost down dramatically, allowing him to undercut even those waterwheel-powered smithies in Ulriga. The potential profits were staggering, and the possibilities for improving the lives of his people were even more enticing. He could use these profits to invest in infrastructure, healthcare and education, not to mention defense - a far cry from the current state of affairs.

Of course, selling finished products, for which there seemed to be a significant demand in Ulriga, would only be a long-term goal. And Ulriga wouldn't be an immediate market anyway. Initially, he'd need to focus on capturing Cinran's market. But there was a potential problem he saw already - the blacksmiths in Cinran themselves. If he managed to establish iron production in Tiranat, they might become his competitors.

With his brow furrowed in contemplation, he asked the burly blacksmith, "And what about Cinran? Do they have any capabilities for iron production?"

Cedoron shook his head. "Not really, my Lord. From what I've gathered," he replied, "in the past, Cinran did have a few small bloomeries, but not anymore. Nowadays, the blacksmiths there usually purchase their iron ingots directly from Ulriga, which is cheaper than smelting the ore locally. Of course, they do have forges to recycle scrap metal and heavily damaged tools, as well as to make new tools."

Kivamus gave a slow nod as reply. He steepled his fingers, his mind already racing with possibilities. He'd need to tread carefully, perhaps even consider striking a permanent deal with them - offering them iron ingots at a lower price than they could get from Ulriga, creating a mutually beneficial partnership. This approach could establish Tiranat as a reliable source of iron, fostering trust and potentially opening doors for future trade deals involving more complex goods.

That meant he would have to figure out a way to not only establish iron production but also navigate the existing market dynamics. These were all details to be ironed out later, but the potential for a brighter future for Tiranat, fueled by his unique knowledge was undeniable. The path wouldn't be easy, but with careful planning and strategic execution, he was confident he could turn this dream into a reality.

As he moved his gaze around the manor, thinking about something that was easily a futuristic technology for the people here, he remembered the burnt houses in the village, as well as the sight of hungry villagers who didn't know where their next meal would come from. He sighed, shaking his head slowly. Although he had started doing what he could to improve the current situation of the village, he had to stop himself from wasting too much time daydreaming about things which were too far in the future, before he got carried away like this. He took a deep breath, trying to clear his head, and to ground himself with the current reality of Tiranat.

He turned back to Cedoron, his gaze settling on the blacksmith's broad frame. "Very well, Cedoron," he said. "Now tell me, how much of this order can you realistically handle on your own?"

Cedoron gave a nod. "This is a substantial order, my Lord," he acknowledged. "To forge such a large quantity of tools efficiently, I would need to hire one or perhaps even two assistants. Naturally, that would add to the overall cost of production."

He added, "But I'm confident I can deliver all the tools you require within the coming weeks. That is, with the exception of the iron nails. And rest assured, my Lord, even with the added cost of hiring assistants, my prices will still be lower than what you'd pay to purchase and transport them from Cinran."

"That's excellent!" Kivamus nodded with a smile. "Speaking of which," he inquired, "why haven't you taken on an apprentice before now? Surely an extra pair of hands would have allowed you to produce tools at a faster rate. Pydas, the trader, mentioned he always brought a few pickaxes and shovels with him to sell here. But with an apprentice or two assisting you, couldn't you have made those tools yourself to sell to the manor, for use in the coal mines?"

Cedoron gave a rueful chuckle. "Unlike you, my Lord," he explained, "the previous Baron had a different approach. He preferred to buy most of the village's necessities, including new tools, from the traders who visited from Cinran, just so he could levy hefty taxes and duties on the visiting traders." He paused for a moment, seemingly weighing whether to speak more, then he added, "Perhaps I shouldn't be speaking this, but to be frank, my Lord, this way, the Baron could line his own pockets while keeping the villagers dependent on external trade, so the traders would keep coming and he could keep getting his profits."