GHD’s Proactive Construction Management Delivers Successful Closure of Polluted Dump

ProjectWise® Construction Management enabled GHD to utilize an enormous amount of data to save time, mitigate claims, and keep a dispersed project team on track.

A Significant Threat to Guam’s Environment

The government of Guam needed to close a 50-acre dump that was introducing millions of gallons of polluted leachate into the Lono River, which feeds into the island’s Pago Bay. Originally built in the 1940s by the US Military, the Ordot Dump was also the source of significant air pollution from methane gas emissions. The site was known as a dangerous eyesore with occasional fires, and was overrun with flies, feral pigs, and dogs. In 2004, the Government of Guam, the US Department of Justice, and the Environmental Protection Agency agreed to a consent decree for the closing of the site, and in 2008, Gershman, Brickner & Bratton took over the site as the US District court-appointed receiver.

Collaboration and Accountability

The Ordot Dump Closure project was located in a remote, harsh tropical environment, surrounded by pristine rivers and jungle, and required the collaboration of numerous contractors and specialty subcontractors. As the construction manager, GHD recognized that they would need a construction management system that could facilitate collaboration and accountability for the entire project team and stakeholders—including the owner, Gershman, Brickner & Bratton, located 10 time zones away. The system would also need to accommodate a large volume of construction documents and communications. For this USD 42 million project, GHD chose ProjectWise Construction Management (formerly ProjectWise® EADOC®). The system enabled the team to manage, mine, and utilize an enormous amount of data to mitigate challenges and make the closure project a success.

“ProjectWise Construction Management helped us collaborate more effectively with contractors, and the overall organizational and archival capability has been very important in making this project a success.”

— Paul Baron, PE, Principal / Pacific Business Group Manager, GHD

and stream relocations, wetland mitigation, and roadway improvements. The project had two phases and overall project deadlines, and the delivery method was design-build for construction with Owner Agent CM.

Fast Facts

- Guam needed to close a former military dump that was introducing polluted leachate into the Lono River.
- The complex project required a construction management system that could connect geographically dispersed team members and organize a huge volume of project data.
- ProjectWise Construction Management allowed the team to mine and utilize project data to successfully mitigate weather-related claims and other challenges.
- GHD was able to collaborate more effectively with contractors and stakeholders spread across 10 time zones around the globe to make the project a success.
- The automated workflow saved approximately 800 work hours in submittals and RH management.
- The GHD team saved over USD 340,000 in change order costs through negotiations backed by ProjectWise Construction Management data.
- By leveraging project data, GHD was able to negotiate a time extension of 107 work days, instead of the 202 days requested by the contractor.
- GHD reduced the use of paper documents by 99 percent.
- Project completed 55 days before deadline.
“ProjectWise Construction Management provided us with a broad, collaborative solution for a complex project, with multiple stakeholders spread across 10 time zones, and it has won us over as our go-to construction management tool.”
— Paul Baron, P.E., Principal / Pacific Business Group Manager, GHD

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Automated Workflow Saves Hundreds of Hours

GHD used ProjectWise Construction Management’s cloud-based workflow to efficiently manage the project’s communications including 262 submittals, 76 RFIs, 36 design clarification memos, 163 documents related to the design clarifications, 711 contractor daily production reports, 553 daily CM construction quality control reports, 32 correction required notices, and thousands of photographs.

GHD estimates that the system saved them approximately 800 work hours in managing RFIs and submittals, and significantly increased efficiency for the entire project team, which they considered invaluable. “ProjectWise Construction Management eliminated the potential for delivery gaps for RFIs and submittals,” explained Baron. “Because it’s all in the system electronically, you can see what is pending or closed, and stay on top of things through the dashboard. The reporting functionality is also very powerful for aggregating the information you need. For example, we were able to create our own customized submittal reports using the native capabilities of the software.”

The system was also used to manage project drawings, specifications, onsite weather station logs, site video monitor imagery, aerial drone photography, and archaeological, environmental, and UXO (unexploded ordinance) monitoring reports. The use of the ProjectWise Construction Management system also reduced the amount of paper used and hard copies required by 99 percent, eliminating the need to print tens of thousands of pages.

Managing Weather-related Claims

During the first year of the project, Guam experienced record rainfall, and a total of six major storms occurred during the project with peak rainfalls of over 12 inches (30 cm) in one day, and winds exceeding 110 miles per hour (177 kilometers per hour). As a result of these conditions, the contractor filed multiple weather-related claims, totaling 202 days. GHD was able to fairly evaluate the claims based on the meticulous and extraordinary records that were developed, managed, and archived in ProjectWise Construction Management, and negotiate a time extension of 107 work days, to which both the owner and contractor amicably agreed.

Tracking Contract Changes

GHD used ProjectWise Construction Management’s finance module to track contract change requests and change orders. The total construction cost was USD 42 million, and the GHD team saved over USD 340,000 in change order costs through negotiations backed by the data in the ProjectWise Construction Management system. Cost increases were less than 5 percent, and were primarily due to owner and design driven changes.

“The ProjectWise Construction Management database still serves us today, well after construction has finished, for the execution of warranty requirements and other follow-up work that we are assisting with.”
— Paul Baron, P.E., Principal / Pacific Business Group Manager, GHD

Broad, Collaborative Solution

The ProjectWise Construction Management system allowed GHD to efficiently manage a hazardous and technically challenging project under harsh conditions. The team was able to successfully mitigate and overcome obstacles by leveraging the vast amount of data stored in the cloud-based, project management system. “I would dread going back to the old days where I had to place things in folders and manage things in a file system on a server,” said Baron. “ProjectWise Construction Management provided us with a broad, collaborative solution for a complex project, with multiple stakeholders spread across 10 time zones, and it has won us over as our go-to construction management tool.” Although the dump was officially closed in March 2016, the team is still using the project data archived in the system. “The ProjectWise Construction Management database still serves us today, well after construction has finished, for the execution of warranty requirements and other follow-up work that we are assisting with.”

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