Security and Risk in Colonial Contexts: The Enterprise-Security Nexus in the Construction of the Swakopmund Jetty, c. 1911–1920

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In 1911/1912, the construction companies *Grün & Bilfinger* (*G&B*), based in Mannheim in Germany, and *Benrather Brückenbau AG* (*Flender*), a bridge-building firm based in Benrath, began the construction of a six-hundred-metre-long iron jetty in Swakopmund in the German colonial territory "Deutsch-Südwestafrika" (German South West Africa or GSWA, today Namibia). This was to be one of the biggest projects *G&B* had ever undertaken outside Germany, and hopes were high that it would, among other things, help to expand a domestic building market that was stagnating, particularly in the area of infrastructure works. The German colonies appeared to promise a safe environment in which skills and knowledge could be grown and that would serve as an opportunity for further global expansion.[1] But when the contract was awarded, no-one could foresee that the project would never actually be finished.

The Swakopmund jetty project was one of many construction projects carried out by German companies in the *Schutzgebiet* ("protectorate") of German South West Africa shortly before the First World War. In the following, it is used as a case study to demonstrate the complicated interplay of security and risk that such projects involved. My focus here is not primarily on what these entanglements meant in terms of national politics. Rather, I am interested in the implications they had for businesses and thus, their significance for the history of commerce and companies. My argument here builds on earlier theoretical discussions within the "Dynamics of Security" research centre, in particular as understood within the enterprise-security nexus that was the focus of the first volume in this series; here, however, I apply the theories discussed to an empirical case.[2] The

1 The work on this article was funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – Project No. 227068724. Translation of the manuscript by Emily Richards.

On this see also *Stier/Krauss*, Wurzeln, 50–55.

2 *Jakob/Kleinöder*, Security.

chapter investigates colonial harbour- and jetty-building, in particular the building of the jetty at Swakopmund; in doing so, it illustrates the notion of securitisation applied to an infrastructural interface between maritime shipping and land transport in the colonial era. At the time, the jetty project was mainly conceived in terms of access to railway construction projects. This access was seen at the time as key to "entering global markets" and thus "opening up" the colonies to investors.[3]

A project aimed at creating access to and from the harbour in Swakopmund had already been discussed in the 1890s and initiated around 1899/1900, as nearly all trade between GSWA and the outside world had to go through this port. The natural choice would have been the harbour at Walvis Bay to the south, which was already well-established and geographically more suitable for shipping. But Walvis Bay was a British territory, so that the German colonists were forced to look for an alternative location where large volumes of traffic could easily access the shore.[4] From this perspective, the proposed harbour and jetty were to function as a kind of revolving door, with European settlers and products coming into German South West Africa on one side and goods intended for the world market going out on the other. In this situation, how did actors in the private sector deal with the political, military, technical and natural risks involved? Such a perspective, relatively unusual in the literature, can offer valuable insights; on closer examination, it becomes clear that the history of the harbour and jetty in Swakopmund in the period from the beginning of the century until well into the First World War is among other things a history of persistent failure.

Until now, research on harbour and jetty-building has mainly focused on the technical issues involved[5] and, more recently, on aspects relating to labour and environmental history.[6] A broad overview of the harbour and jetty at Swakopmund identifies various phases in its construction. First was the building of a mole from 1899–1903, which soon silted up and was replaced, second, by a temporary wooden jetty during the war against the

3 *Pfister, Bernhard*: Die wirtschaftliche Bedeutung der deutschen Kolonialhäfen vor und nach dem Kriege, in: Jahrbuch der Hafenbautechnischen Gesellschaft 17 (1938), pp. 3–20. On the concept of "opening up" (German "Erschließung") see the critique by *van Laak*, Hochstraßen, 104–105; cf. also *Kleinöder*, Bridging.

4 For an overview of harbour and jetty-building see *Kalb*, Empire, 70–72, 83–105, 159–168, 191–197, 229–231, 168–275; *Stengel*, Mole, 55–56.

5 Cf. e.g. *Rödel*, Landungsbrücke.

6 *Cf. e.g. Kalb*, Empire; *Todzi*, Unternehmen, 366–385.

Herero and Nama (1904–1908). In 1911, in a third phase, the construction of an iron jetty was begun, but due to the outbreak of the First World War never finished. It was eventually partly dismantled and repurposed under the South African Protectorate.

Research on the Swakopmund project has mainly been interested in the state-financed construction of the mole in the first phase, and the wooden jetty built by German troops during the colonial war in the second. There is also some literature on how landings were organised in general, for example the use of "Krumen" (also known as *Kroomen*, or the Kru people).[7] This chapter, by contrast, investigates the privately-funded construction of the iron jetty by a consortium formed specifically for this purpose, the "Bauunternehmung für die Landungsbrücke Swakopmund (DWSA)", hereinafter *BLS*. This consortium comprised the construction companies *Grün & Bilfinger* (*G&B*) and *Flender AG* (Benrath). It was registered in Mannheim, at *G&B*'s headquarters, and it was tasked with the construction of the iron jetty in Swakopmund from 1911.[8]

The starting point for my analysis is the general consensus in the literature that investors and commercial businesses were usually reluctant to become involved in infrastructure projects in the German colonies.[9] Yet the example of Swakopmund shows that by 1911, two construction projects managed by the public sector had already failed, and that subsequently, a third attempt was made through handing it over to the private sector. The central questions of this chapter are thus: Why were commercial companies apparently no longer reluctant to take on this clearly very difficult challenge, given what had happened in Swakopmund from the project's beginnings in 1899? And why, despite the previous failures, did they still anticipate a secure and attractive business opportunity?

Semantically, the history of the German colonies is profoundly marked by ideas of *Schutz* ("protection") and *Sicherheit* ("security"). Bismarck preferred to talk of the colonised territories as "Schutzgebiete" ("protec-

7 Krumen were migrated Black Africans who lived along the coast of West Africa and worked in a maritime environment, mainly on European vessels, in ports and in unloading. See *Gunn*, Labor.
For an overview of the work of the Krumen in GSWA see *Kalb*, Empire, 70–71; *Lyon*, Genocide, 45–49.

8 On Grün & Bilfinger see *Stier/Krauss,* Wurzeln; on Flender AG see e.g., Flender Act.-Ges. für Eisen-, Brücken- und Schiffbau Benrath, n.d. in: in: Scientific Society Swakopmund (hereafter SSS), 2004.14.33.

9 *Kleinöder*, "Place"; *Huber/Kleinöder/Krautter*, Entrepreneurial Expectations.

torates"), and this finds many echoes in contemporary terminology, with words like "Schutztruppe" ("protective troops") or "Schutzbriefe" (literally "protective letters", meaning letters of safe conduct issued to individuals or charters for companies). The official political annexation of German *Schutzgebiete* overseas from the mid-1880s was mainly motivated by military and political ambition (in the "scramble for Africa") but also financial considerations, especially the ongoing search for new markets and/or raw materials.[10] Such activities were underpinned by an imperialistic ideology concerned with issues of social *security* and order in the context of a colonialism that was based on the establishment of settlements.[11]

Business decisions are made on the basis of an imagined future that can never be entirely certain, based as it is on experience on the one hand and expectations on the other. As such, they are always characterised by uncertainty to some degree. This was no different in the colonial context.[12] However, as noted already by Frank Knight in the 1920s, it is important to differentiate between risk, which is measurable, and uncertainty which is not. While businesses and business leaders can draw upon their knowledge and experience in order to calculate and plan for risks (at least those risks which are already known to or anticipated by them), uncertainties always remain, especially in a colonial context where knowledge of the territory or the relevant markets, for example, is often lacking.[13] In terms of the theoretical scope of the "Dynamics of Security" research centre (CRC 138, discussed in detail in the introduction to this volume), the interesting question is how the actors involved dealt with the relationship between certainty and uncertainty and how they integrated these two factors into their decision-making processes and work processes during the period of the project. This involves the three analytical categories that are referred to here and in "Dynamics of Security" project as *situations*, *heuristics* and *repertoires* respectively. These categories are rooted in the Copenhagen School in Critical Security Studies (CSS) and are based on the general assumption that when a scenario is specifically addressed as a security issue,

10 On the workforce and the working conditions at the building site, see *Kleinöder*, On Site.
11 Cf. e.g, *Bade*, Fabri, 80–85.
12 Cf. *Huber/Kleinöder/Krautter*, Entrepreneurial Expectations.
13 *Knight*, Risk, 233–243.

certain processes unfold that are defined by the Copenhagen School as processes of securitisation.[14] These phenomena are understood as follows:

1. *Situations*: How, in a first instance, are contexts identified that indicate a specific "security situation"?
2. *Heuristics*: What are the strategies used by actors to address questions of certainty and uncertainty in such situations? Who are the driving actors and which audience do they address?
3. *Repertoires*: What instruments do actors (in this article, businesses) develop in these situations? Knight, for example, assumes that two instruments in particular play a role in dealing with uncertain contexts. These are *insurance* (that is, the externalisation of uncertainty) and specialisation, both of which can also be identified in this particular instance.[15]

On the basis of the microhistorical example of the Swakopmund jetty, this chapter aims to find out how quite different forms of risk arose in this specific colonial business context, how they were negotiated and how the businesses involved responded to them in practice, as well as the steps they took to mitigate them in advance. Initially, therefore, this article differentiates between various risks as they appeared to the businesses before and during the construction project. These risks can be broadly divided into three categories, and the chapter is broadly structured around them; however, it is clear that in practice, the different types of risk were always entangled to some extent.

Natural and technical risks, for example, were often bound up with structural or other construction issues. The construction companies addressed such risks mainly through gathering as much information as possible in advance, and by seconding their own engineers and technicians to the site. But this did not protect them against uncertainty in relation to the topography of the site, for example, which could be severe or even catastrophic (storms, floods etc.).

Financial risks were often related to technical risks or arose out of the latter. They primarily affected the profits the businesses were likely to make from the project, and involved constant entrepreneurial risk management across the entire project, from drawing up the contract to organising the building work on site. Businesses were concerned, for example, with high transaction costs and principle-agent problems, as well as the question of

14 See Introduction and Christian Kleinschmidt's chapter in this volume.
15 *Knight*, Risk, 243–263.

whether they would have access to sufficient workers, and they developed and applied numerous instruments to address such questions.

There was also *political risk*. This was mainly linked to the colonial context and the complexities of imperialism around 1900. It represented the bigger framework within which businesses had to operate, but over which they had little influence; in Knightian terms, then, it represented uncertainty as opposed to risk.

Based on the findings of this initial analysis, this chapter will then identify the negotiations and strategies that formed the foundation for a supposedly secure financial and project framework within which the actual building work could take place.

Following an introduction that sets out the context of colonial harbour-building and focuses on the identification and description of the general (security) *situation* of the jetty-building project in Swakopmund, the article will discuss how the preparations for the project—including the contractual arrangements—were made, analysing the risks and security *heuristics* identified. In which ways were security issues successfully addressed, thereby externalising entrepreneurial risks?

The second half of the chapter concerns the building site itself, showing which risks and uncertainties (especially in regard to the progress of the construction work) actually became a reality, and what instruments (security *repertoires*) the companies used and developed in response.

Economic and Military Security: Colonial Jetty-Building in the Shadow of Imperial Competition and Colonial Warfare

The building of harbours and jetties was intended to create infrastructural "hubs" that would play a fundamental role in connecting the colonies to the wider world and making them accessible. This was particularly important in GSWA as a so-called "settler colony" that depended on the import and export of people and goods. The extraction of raw materials, and the growing importance of the military during the war against the Herero and Nama (1904–1908), were both areas in which territorial access was key.[16] The construction (in some respects more of an expansion) of the landing stages in Swakopmund and Lüderitzbucht took place during the heyday of

16 C.f. e.g., *Kreienbaum*, Fiasco; *Todzi*, Unternehmen; *Kalb*, Empire.

harbour construction and a general intensification of world trade. The latter can be quantified on the basis of historical records, which demonstrate not only an increase in tonnage at central ports but also increasing access to a growing number of ports at numerous outlying trading posts of the German Empire across the globe.[17] This development led to an increased need for expertise that could deal with the new situation, leading to new construction projects on different continents, through which such expertise could be built and consolidated. It is also reflected in the increased business volume of German construction companies that operated in global markets.[18] The example of *G&B* shortly before the outbreak of the First World War clearly shows that the colonial business carried out by larger construction companies such as *Philip Holzmann*, *MAN Gustavsburg* or the *Gutehoffnungshütte* (*GHH*) corresponds with the period in which these companies became international in scope, and/or represented a welcome incentive to increasingly move business abroad.[19] From a business perspective, it made sense to use the protected arena of the colonies to escape the usual competitive markets. Businesses could hope to rely on the "appreciation and trust" of the national and local governments that awarded them projects and commissions.[20] Swakopmund thus forms part of a small group of colonial building projects which also included the expansion of the harbours at Tanga in German East Africa and Duala in Cameroon.[21]

At the same time, these examples demonstrate how much of a role local factors played in the infrastructural "opening up" of the colonies and what this meant in terms of connecting—but also differentiating—colonial markets. The harbours and jetties in the colonies were to be crossroads for products and raw materials destined for global markets; they were sites where a two-way traffic could take place between land and maritime shipping. To "open up" the colonies, however, it was essential to provide enough loading and transport capacity to get materials, heavy tools, equipment etc.

17 *Hungerland/Wolf*, Panopticon.
18 For a broader context of the internationalisation of the construction industry see *Linder*, Capitalism, 35–90.
19 *Kleinöder*, Bridging; *Stier/Krauss*, Wurzeln, 50–55.
20 Annual Report of Grün & Bilfinger A.G. (Mannheim) for the eighth financial year from 1 January – 31 December 1913. On the General Assembly held in March 1914, see report for the supervisory board, p. 2, Unternehmensarchiv Bilfinger (hereafter UA Bilfinger), A 4465.
21 Tanga Hafenerweiterung 1911–1913 UA Bilfinger, A 2117; Duala Hafenanlagen, 1909–1914, UA Bilfinger, A 1650–1654.

onto land in the first place.[22] In Lomé (Togo), but also in Swakopmund, ships wishing to dock had to cope with making shore in the difficult conditions of the Atlantic coast with its heavy surf. The ships would lie up in the roadsteads, while goods and passengers were transported on small launches or special landing rafts. Sometimes, goods were even floated across to shore. This was dangerous, and often resulted in serious or fatal accidents. But it also led to material losses when goods sank and could not be recovered. In addition, the whole process depended on the workers (mainly West African "Krumen"). Men working in this field were generally in great demand due to their special skills and experience, and as a result were practised in negotiating good wages and working conditions for themselves. Thus, from around the turn of the century, an increase both in the volume of cargo and in the expense of hiring skilled workers to land it safely, meant that businesses were increasingly calling for suitable docking facilities to be built.[23]

The Colonial Department at the German Foreign Office (*Auswärtiges Amt*) in Berlin[24] responded with an extensive jetty-building project in the colonies, starting in Togo, where *Gustavsburg MAN* was commissioned with the building work from 1901. This decision was not only based on the needs of businesses. The Foreign Office was planning to build railways in the colonies, but this could not be done without some means of getting the necessary heavy machinery and materials to the shore. In this, they faced the problem of building jetties on sections of coast that were often topographically unsuitable, lacking natural harbours or other sites where ships could dock easily, and exposed to the strong surf of the Atlantic Ocean. This was a constant technical and logistical challenge for the construction companies.

22 Todzi discusses Swakopmund specifically, e.g. on the topic of the increased need to transport troops during the colonial war, in *Todzi*, Unternehmen, 370; see also *Rösser*, Prisms, 247–254; *Pfister, Bernhard*: Die wirtschaftliche Bedeutung der deutschen Kolonialhäfen vor und nach dem Kriege, in: Jahrbuch der Hafenbautechnischen Gesellschaft 17 (1938), pp. 3–20; *Schinzinger/Zapp,* Bedeutung.

23 Report of Customs Overseer Köhler, 11.7.1904, in copy held at the National Archives of Namibia (hereafter NAN), BSW 56/XXV.a. C.f. most recently *Kalb*, Empire, 70–71, 83–84; *Lyon*, Genocide, 45–49; for the period of the colonial war, *Todzi*, Unternehmen, 376–381.

24 The Colonial Department was only later transformed into a Colonial Office under the leadership of Bernhard Dernburg.

The situation in Swakopmund reveals the complications which ensued when a site was chosen based on colonial imperatives, as the decision to build in GSWA was based predominantly on growing imperial competition and the European "division" of colonial territories, rather than on its suitability for shipping. By contrast, the German occupation of the territory of Tsingtao (today's Qingdao) in China was chosen specifically because of its geographical and strategic assets, in particular its harbour. The German colonisers in (West) Africa, however, had to contend with sub-optimal local features. The "scramble for Africa" was a scramble too for infrastructural advantage. The British had already claimed an enclave at Walvis Bay, the only natural harbour in GSWA. The German colonial administration in Berlin and the governor at Windhoek, looking for an alternative, could hardly have chosen less suitable sites than Swakopmund and Lüderitzbucht, where both the geography and the technical possibilities made building a jetty almost impossible. This decision would ultimately lead not only to multiple technical and logistical difficulties, but also, in the end, to considerable financial losses. Yet even some forty years later, in 1939, a publication of the *Hafenbautechnische Gesellschaft* referred to the economic importance of harbours from a colonial perspective: "Harbours are not simply instruments with which to manage inbound and outbound shipping. They have a much higher function as organs of economic development and economic promotion."[25]

From the point of view of the colonial administration, the security problems in the colonies could be partially addressed through a politically independent landing jetty from which German South West Africa could be accessed. Thus, before construction had even begun, the project can be seen to embody the dual security heuristics that underpinned the colonial state, in which questions of military and economic security went hand-in-hand. Economically speaking, a harbour suitable for large volumes of shipping would ensure access to global markets and thus economic access to other European imperial powers. This thinking was motivated by fears of economic competition and of being "booted out" of global markets, something that for Germany, as a late starter in terms of colonialism, was a

25 *Pfister, Bernhard*: Die wirtschaftliche Bedeutung der deutschen Kolonialhäfen vor und nach dem Kriege, in: Jahrbuch der Hafenbautechnischen Gesellschaft 17 (1938), pp. 3–20, 4 ("Häfen sind nicht nur die Instrumente, um binnenwärts und seewärts gerichteten Verkehr zu bewältigen. Sie sind in einem viel höheren Sinn Organe der Wirtschaftsentwicklung und Wirtschaftsförderung"), author's translation.

very real concern, especially given the potential access to new seams of raw materials that the colony seemed to promise.

But the question of military security—which was fundamentally also a question of power and the perceived "right to rule" of the colonisers—was also key to the German government's plans, especially given the experience of colonial warfare and the danger of uprisings and resistance. A major port facility would provide strategic access for the army, its troops and provisions. Infrastructural access to the colony was at the heart of this heuristic, and thus, it also represented a new business opportunity for companies. The German government wanted private companies to play a central role in the development of an enterprise-security nexus,[26] making access possible first through the construction of the jetty itself (via the *BLS* and then through the ongoing administration and clearances which were to be carried out by the firm of *Lührs, Woermann*).[27] Increasingly, the implementation of this nexus took the form of public-private partnerships.[28]

Public-Private Partnerships: Construction Companies and the Colonial State

As Swakopmund became more and more heavily populated by settlers during the 1890s, the colonial administration began to pay closer attention to its topography. At the same time, discussions about a possible landing jetty in response to the growing traffic in the colony were already underway. These discussions took firm shape from 1899, with the decision to build a mole at a site north of the Swakop River where there was a natural bay. The decision was motivated in particular by the construction of the Swakopmund-Windhoek Railway that had begun in 1897 and the plans of the *Otavi Mining and Railway Company* (OMEG) to ship the products of their industries via the German *Schutzgebiet*, rather than via Porto Alexandre to the north.[29] Interestingly, we know from the extant plans and expert reports that even at this stage, the various actors involved were sceptical of success, seeing the plan more as an experiment than a project that could ever be

26 *Jakob/Kleinöder*, Security.
27 *Kalb*, Empire, 85; *Todzi*, Unternehmen, 366–369.
28 See also for the military context *van de Kerkhof*, Partnership.
29 *Baltzer*, Kolonialbahnen, 78–84; *Stengel*, Mole, 55–60.

realised.[30] And indeed, the first construction phase turned out to be a "constant battle against the sea."[31] Building was continually delayed because of the surf and the weather. The works were carried out and coordinated by the Colonial Harbour-Building Office in Swakopmund (*Hafenbauamt Swakopmund*), which as the harbour authority also took on responsibility for landing operations once the mole was finished in 1903.[32] But even as the works neared completion, the mole was already beginning to silt up.

By 1904, the landing facilities were already more or less unusable, despite the expensive use of diggers to dredge the channel. The course of the Swakop River ran through the desert, and as a result, carried large amounts of sand which were then deposited in the harbour basin behind the mole, an unstoppable process that gained increasing momentum as time went on.[33] Yet with the outbreak of the colonial war in 1904, as we have seen above, the GSWA governorate and the colonial administration in Berlin urgently needed a site where large numbers of troops and heavy military equipment could be landed and moved further inland. Thus, the second phase of construction began at Swakopmund in 1904. This took the form of a provisional wooden landing jetty, built by the military railway construction battalion and intended primarily for direct use by the army.[34] But here, too, problems and limitations quickly became apparent. The jetty was not large or strong enough to cope with the growing amount of inbound traffic, and structurally, the pinewood that had been used (probably without being sealed first) gradually fell victim to the "shipworm" (German *Bohrwurm*, Lat. *Teredo navalis*).[35]

30 This is the interpretation favoured by *Stengel*, Mole, 60–61.

31 Report by harbour construction overseer Ortloff, cited in *Stengel*, Mole, 61; for a detailed description of the preparations and construction work, see *Kalb*, Empire, 86–90.

32 Cf. Hafen 1895–1904, NAN, BSW 10/H.1; Hafen- und Schiffahrtssachen 1903–1911, NAN, BSW 56/XXV.a.
On the construction itself and working conditions on site see also the detailed discussion in *Lyon*, Genocide, 49–58.

33 Notes of a discussion about the silting-up of the harbour between the colonial administration and the commanding officer of the *Schutztruppe*, 22.8.1904, NAN, BSW 67/B.7; *Kalb*, Empire, 159–166.

34 Supplement VII to the budget for the GSWA Protectorate for 1908. Denkschrift über die Ausgestaltung des Leichterhafens Swakopmund, p. 93, Scientific Society Windhoek (herafter SSW); more detailed report available in *Maercker, Georg*: Unsere Kriegsführung in Deutsch-Südwestafrika: Lecture held in Berlin 1908, 13–24.

35 Swakopmund District Office to the governor of GSWA, 16.6.1904, NAN, BSW 56/XXX.a; on shipworm see the detailed description in *Kalb*, Water.

Early Securitisation Processes and the Swakopmund Jetty

An analysis of the repeated failure of the building works in relation to both the mole and the wooden landing jetty reveals that even in the course of these early projects, securitisation processes were beginning to take on some importance. Arguments about security until 1908 were primarily to do with military concerns in the context of the colonial war. These arguments were based on an assumption that some form of uncomplicated solution was urgently needed to ensure that landing could take place swiftly and easily, an essential prerequisite for the prosecution of the war. The security situation addressed thus called for extensive, publicly-funded action.[36] Before this, the main motivation for improving access to the colony and linking it with global markets was economic, with less dramatic rhetoric and also less success. From 1904, however, the security *situation* was increasingly marked by threats to the local population and colonial interests in general. It is important to note here, however, that this securitisation analysis here refers only to the situation of the (constructed) risk to colonial interests; the threat to the African workers was not a matter of securitisation, but a real threat to their bodily survival. The improvements to the transport infrastructure were, however, portrayed as necessary to the war effort. This concerned the transport of both goods and people (troops), and indeed, such traffic increased heavily in Swakopmund over the following years.[37] But the double-sided nature of the security problem in wartime meant for example that the managers of the construction project also turned against the latter's own African workers. These workers were often prisoners of war who had been interned and forced to work on the jetty construction site.[38] The often terrible conditions in which they were forced to live and work were a constant threat to their survival. Mortality rates could be as high as 45 percent.[39]

36 A similar situation can be observed during the construction of the railway by the railway building battalion ("Eisenbahnbaubattallion"), *Kreienbaum*, Forced Labour.

37 Compare the statistics set out in *Todzi*, Unternehmen, 369–375.

38 We know little about the living and working conditions of the builders, as much of the evidence has not survived, but see for example recent overviews of the conditions at the jetty in *Kalb*, Empire, 166–168; *Todzi*, Unternehmen, 375–381. On dualism in the security debate, on what kind of negotiations took place regarding whose safety, and on the general invisibility of German colonial history in the records ("the silence of the archive") see also *Kleinöder*, Schutzgebiete.

39 Zeller, cited in *Kalb*, Empire, 168.

Up until 1911, the state was often the sole actor involved in creating this infrastructure in Swakopmund, although in 1906, the colonial administration was already considering handing over the contract for building/expanding the jetty in Swakopmund to the private sector in view of the scale and complexity of the project. However, there were concerns from a budgetary point of view that the agreement of any fixed price could be disadvantageous in that it would encourage businesses to submit disproportionately high quotes.[40] The German Reichstag's budget committee recommended that initially, the colonial administration should request quotes from various businesses along with suggestions as to how the future construction of the jetty could proceed. These businesses included established players in the construction of infrastructure projects for the colonies, such as the shipping company *Woermann-Linie* (seen as a future user of the proposed jetty), the railway company *Lenz & Co* with Arthur Koppel, the *Brückenbauanstalt Gustavsburg MAN*, a bridge-building firm, *Philip Holzmann & Co.* and the local *Otavi Mines and Railway Company* (OMEG). But with the exception of the *Woermann-Linie*, not one of these businesses put forward a quote for the construction project.[41] It seemed that it was not (yet) an attractive proposition, and too much uncertainty was involved given that this was a market with which the companies were not (yet) familiar.

The publicly-funded construction of the mole and then the wooden jetty since 1899 had also proved to be a massive failure and had revealed a number of unresolved questions. A look at the colony of Togo, however, shows that this was by no means a problem limited to the public sector. A jetty built there by the private firm *MAN Gustavsburg* collapsed in a storm in 1911 in a project linked closely to the Swakopmund project.[42] In 1908, the German Colonial Office, established just one year previously in Berlin, turned to companies it thought would have the expertise to manage a third attempt to build a landing operation in Swakopmund—this time in the form of an iron jetty. In doing so, it was following the logic of "risk minimisation through specialisation" (Knight). From documents held in the archive of *MAN Gustavsburg*, it appears that the Colonial Office went

40 Final report on the Swakopmund Harbour Question, copy, c. 1906, p. 13, NAN, HBS 5/2/4.

41 Supplement VII to the budget for the GSWA Protectorate for 1908. Denkschrift über die Ausgestaltung des Leichterhafens Swakopmund, p. 95, SSW.

42 *Kleinöder,* Labour.

for a "belt-and-braces" approach, seeking *Gustavburg*'s services as well as those of *G&B*. In an internal meeting in February 1910, *Gustavsburg*'s managers discussed submitting a proposal to the public authorities. But it is interesting that both *G&B* and *Gustavsburg* also took multiple steps to obtain the jetty contract. *G&B*, for example, approached *Gustavsburg* with the suggestion that they should submit a joint proposal, but insisted on retaining the right to work with *Flender*, while *Gustavsburg* stipulated that they should also retain their own right to submit a joint proposal with another company.[43] Whoever was ultimately to be awarded the contract, however, it is clear that by this point, the colonial administration wanted to get the project off their hands and have it finally managed by a private firm.

An analysis reveals the technical and financial risks that initially preoccupied the companies, but also the various strategies with which they attempted to address these risks even before the contract was awarded and the building work began. *Gustavsburg*, for example, decided to gather more information on the technical risks and the associated financial issues. To do so, they exploited their direct contact with the railway magnate Friedrich Lenz. Lenz was a well-known expert on the situation in the colonies, being responsible for numerous construction projects through the *Deutsche Kolonial-Eisenbahnbau- und Betriebs-Gesellschaft* (German Colonial Railway Construction and Operation Company). Lenz recommended that *Gustavsburg* should have nothing to do with the project; technically, it was too difficult and he "believed that a jetty would be an absolute error."[44] *Gustavsburg*'s managing directors agreed. In any case, they were under the impression that the jetty was only being planned in order to meet the demands of the *Woermann-Linie*. As a result, *Gustavsburg* gave up on the Swakopmund project, although it continued to work together with *G&B* to submit a proposal for the Lomé jetty.[45] On the basis of (prior) knowledge and experience, *Gustavsburg*'s directors clearly decided that they should stick with a site that they knew—Togo—rather than entering into a new and risky contract for a project in GSWA. *G&B*, on the other hand, took on the management of both projects.

43 File note on discussion held on 6.2.1910, Nuremberg, 5, MAN Archive, fonds Gustavsburg, n.s.

44 File note of a meeting on 16.02.1910, Nuremberg, p. 5, MAN Archive, fonds Gustavsburg, n.s.

45 Contract between the State Treasury of the *Schutzgebiet* of Togo, MAN Gustavsburg and G&B, 1911, UA Bilfinger, A 2001.

Here, it is interesting that *G&B* was already using the provisions of the contract in an attempt to minimise financial risk and further uncertainties. The wording of the contract and each party's obligations from 1911–1912, documented in records held at *G&B*'s company archive, provide a more extensive insight into how the building project was planned. The subject of the contract was a "fully operational" landing jetty in Swakopmund, to be erected next to the wooden jetty.[46] The basic provisions of this contract reveal several ways in which the contractual parties addressed financial risks, to be resolved through the financing arrangements.

Initially, the project was to be subsidised by the state through fixed-price agreements.[47] The contract stipulated a fixed sum for administrative costs, and an agreed lump sum of around RM 3.5 million to cover all expenses. This was known as a *Stichsumme*. If we compare the *Stichsumme* of RM 3.5 million with *G&B*'s total estimated annual income of RM 21.5 million from construction projects (RM 12 million) and new contracts (RM 9.5 million), it is clear that for *G&B*, the Swakopmund contract represented an important business opportunity. In 1913, the majority of *G&B*'s new work was in the area of railway and bridge construction, with a further significant proportion of their turnover deriving from harbour and canal-building (worth around RM 1 million).[48] By comparison, then, the Swakopmund project, although it was in an area that had not previously formed part of *G&B*'s core business, was now to become a key component in their financial planning.

Additionally, the provisions stipulated a company bonus of 10 percent of their overall costs (which was quite usual for companies managing infrastructure projects in the colonies) and a highly attractive "savings bonus" of 25 percent if it did not spend the RM 3.5 million of total costs by an agreed date.[49] The contract wording thus externalised the risk to some

46 Contract between the Treasury of German South West Africa / Colonial Office and the two companies Brückenbau Flender Aktiengesellschaft in Benrath and Grün & Bilfinger Aktiengesellschaft in Mannheim, 27.12.1911/2.1.1912, copy, Section 1, UA Bilfinger, A 830.

47 On this see also *Stier/Krauss*, Wurzeln, 54–55.

48 Annual Report of Grün & Bilfinger A.G. (Mannheim) for the eighth financial year from 1 January – 31 December 1913. On the General Assembly in March 1914, see report for the supervisory board, 1, UA Bilfinger 4465.

49 Contract between the Treasury of German South West Africa / Colonial Office and the two companies Brückenbau Flender Aktiengesellschaft in Benrath and Grün & Bilfinger Aktiengesellschaft in Mannheim, 27.12.1911/2.1.1912, copy, Section 3, UA Bilfinger, A 830.

degree (so that although there was no insurance as such, it offered a certain financial assurance). It guaranteed a 10 percent bonus in addition to a potential further profit in the form of the 25 percent savings bonus. The general contractual terms stipulated three and a half years of building time following the award of the contract, with each week of delay triggering a fine of RM 1,000. This implies that there was a good deal of pressure to make sure that no problems arose in the course of construction, especially considering the bonuses that were at stake. The estimated costs were mainly for materials (just under RM 2 million) and the complex construction works in Swakopmund (RM 1.2 million); of the latter sum, RM 180,000 was reserved for the building overseers, RM 500,000 for the drilling works and over RM 200,000 for erecting the jetty. The contract also foresaw extensive cargo costs (RM 270,000) plus travel and equipment costs of RM 60,000.[50] It was planned that there would be four electric cranes with a load capacity of 2.5 to 3.5 tons each, enabling the processing of around 150,000 tons of cargo over 200 working days annually.[51]

These arrangements show how the companies attempted to minimise the financial risks. But what of the political risks? How did the companies involved view the role of the colony in their business at this juncture?

After the end of the colonial war in 1908, the colonial state was able to claim that things had settled down somewhat. GSWA was seen as a "pacified" ("befriedete") colony. During earlier construction projects, for example at the start of the railway's construction around 1900, the situation had been very different, and companies had expected to be dealing with a much greater level of political risk. The colonial state could also offer the advantages of exemption from customs taxes and the reimbursement of expenses for building materials and machinery. Expenses incurred by the company were not subject to taxation, and additionally, they were permitted to use the equipment belonging to the harbour authority free of charge. One very important aspect in terms of financial security was the fact that the consortium was able to receive ongoing payments as the building work progressed, as long as it provided evidence of its costs. In addition, the bonus to which it were contractually entitled was paid out in

On the contractual terms see also *Rösser*, Afrika.

50 Quote for the delivery of a landing jetty in Swakopmund for the Colonial Office in Berlin, UA Bilfinger, A 830.

51 13.10.2004. (III), Harbour Authority to *Bauunternehmung für die Landungsbrücke Swakopmund*, 15.6.1912, Scientific Society Swakopmund (SSS hereafter).

instalments for each 100 metres of jetty that they completed, rather than following completion.[52]

But this did not mean that the consortium bore no remaining risk at all. Above all, it was still faced with considerable technical risks, such as the uncertainties arising out of the site's topography and climate that had already bedevilled earlier phases of construction. If things went wrong here, there could be huge financial implications. Costs might increase dramatically for materials. This was not all. There were also financial risks associated with potential transport delays—which could imply a potential loss of the bonuses—and with the availability of workers, not to mention the possibility of rising inflation leading to losses or even sanctions in the case that the work was not finished on time. In weighing up the technical, financial and political risks, the consortium eventually made its decision to proceed on the basis of the contractual arrangements—which were fundamentally secure—and above all, based on the profits that they anticipated. Last but not least, their payments were also backed by state guarantees.

The contractual arrangements underpinning this public-private partnership were therefore decisive. This was a contract of the sort that had developed into an effective instrument in the security *repertoire* available to colonial infrastructure projects: the uncertainty of the colonial context was *securitised* by the businesses involved (*heuristics*) and the colonial administration, in need for partners in the infrastructural constructions in the colonies, reacted with public guarantees and subsidies. Clearly, in this case, it offered a safe enough business framework for the consortium to take on the residual (and still unpredictable) risks and uncertainties.[53]

But other considerations, besides those of immediate financial gain and the associated security and risk, also played a role in the consortium's decision-making process. To understand this, it is necessary to look beyond Swakopmund and to see the wider world from a business perspective.

52 Contract between the Treasury of German South West Africa / Colonial Office and the two companies Brückenbau Flender Aktiengesellschaft in Benrath and Grün & Bilfinger Aktiengesellschaft in Mannheim, 27.12.1911/2.1.1912, copy, Section 5, UA Bilfinger, A 830.

53 Cf. *Rösser*, Afrika.

The Global Business Context

From 1906, *G&B* had consistently pursued a strategy of expansion, based on a belief that its domestic competitors were becoming an increasing threat.[54] From 1911 onwards, the company took on multiple commissions in the German colonies simultaneously, adding to its continually lengthening list of publicly-financed projects. *G&B* pushed through its plans for global expansion at a period when despite the stability of its position, it was coming under increasing pressure to lower its prices in Germany, where construction was now a buyer's market.[55] In consequence, the company began from 1906 to look further afield, mainly towards South America, where it attempted to pick up business in Brazil, Argentina and Peru. It is interesting in this context that as early as 1906, West Africa was discussed as a possible market for overseas business. *G&B*'s supervisory board believed that "big projects" ("große Arbeiten") would be coming the way of the building sector in the next few years.[56] This prognosis proved to be correct as far as *G&B* was concerned, as the company was awarded the contracts to build the harbour in Cameroon and the jetty in Togo.[57] The supervisory board and the board of trustees repeatedly noted that the company ought to be getting a foot in the door in this area through business contacts, study trips and joint projects with export companies. Their aim was to create links to foreign shareholding companies—such as the Argentinian and Brazilian Shareholding Association—with the goal of eventually submitting joint bids for tenders.[58] However, the First World War put an end to

54 Annual report of Grün & Bilfinger A.G. (Mannheim) for the first business year from 1 January – 31 December 1906, UA Bilfinger, n.s.

55 Annual report of Grün & Bilfinger A.G. Mannheim for the eighth financial year from 1 January – 31 December 1913. On the General Assembly in March 1914, see report for the supervisory board, 1, UA Bilfinger 4465.

56 Minutes of the supervisory board meeting on 20 March 1906, 4, UA Bilfinger, A 4460. Cf. the similar global expansion in bridge-building for the same period of MAN Gustavsburg. File notice on meeting held on 16.02.1910 in Nuremberg, MAN Archive, Gustavsburg, n.s.; and also for GHH cf. *Kleinöder*, Bridging.

57 One example for this is the close connection that the company representative Böhmlein enjoyed with the Cameroon governorate, for example when planning further excavations and building of the shore wall, as late as May 1914. Cf. Vol. 1, Minutes of directors' meeting on 2 May 1914, 62, UA Bilfinger, A 4442.

58 The directors also discussed acquiring shares in Porto Alegre, Brazil. Cf. Vol. I, minutes of the directors' meeting on 5 November 1912, 18, UA Bilfinger, A 4442.

these plans.[59] Indeed, the board of trustees noted in 1914 that the domestic competition was getting even worse: "[I]t is the German competitor that we have to fear most. German companies are the worst for fighting amongst each other rather than standing in solidarity against these foreign interests that have the banks behind them."[60]

The publicly-funded contracts, including those in connection with the colonies, went some way towards compensating for growing national competition. But *G&B*'s annual report of 1911 also notes critically that despite the increase in contracts with the public sector, "we do not anticipate making much from them."[61] Thus, the colonial projects offered a welcome addition to *G&B*'s portfolio, although it is clear that the company saw them mainly as a stepping stone to a global market. Even at the time when they were beginning to do business with the Colonial Office, it appears that their goal was not primarily to make a profit in the short term. Instead, the contracts were intended to compensate for other losses, and to bring long-term advantages and income. For the company, this meant a qualitative advantage over its competitors, especially where the public contracts were concerned, as the company would benefit from the "recognition and trust of its customers in government, whether nationally or locally, and this puts us in a position where we can ask for, and achieve, higher prices."[62] This was to be their strategy in relation to the Colonial Office as well.

The company's decision to take on the high-risk project in Swakopmund was therefore also made in the context of its perception that German construction companies often blocked each other, not only at home but also in foreign and colonial markets. It was therefore important to secure a contract with specific provisions relating to the colony, as this could prove

59 Minutes of the supervisory board meeting of 20 March 1906, pp. 3–4, UA Bilfinger, A 4460; minutes of the supervisory board meeting of 16 June 1913, pp. 43–48, UA Bilfinger, A 4460; minutes of the 14th supervisory board meeting of 7 March 1914, p. 50, UA Bilfinger, A 4460; annual report of Grün & Bilfinger A.G. Mannheim for the eighth business year from 1 January – 31 December 1913. On the General Assembly in March 1914, see report for the supervisory board, p. 3, UA Bilfinger, A 4465.

60 Annual report of Grün & Bilfinger A.G. Mannheim for the eighth business year from 1 January – 31 December 1913. On the General Assembly in March 1914, see report for the supervisory board, p. 3, UA Bilfinger, A 4465.

61 Annual report of Grün & Bilfinger A.G. Mannheim for the sixth business year from 1 January – 31 December 1911, UA Bilfinger, n.s.

62 Annual report of Grün & Bilfinger A.G. Mannheim for the eighth business year from 1 January – 31 December 1913. On the General Assembly in March 1914, see report for the supervisory board, p. 3, UA Bilfinger, A 4465.

helpful later when submitting proposals for other projects. Thus, *securitisation* in the context of the harbour and jetty-building at Swakopmund, in the sense of marking it successfully as a security issue, was mainly motivated by military considerations, but was also based on economic ideas of "opening up the market" and "adding value" to the colony, ideas entertained by the state and the business alike. In the eyes of the companies involved after 1908, the attraction and security of doing business in the colony derived above all from the way in which political risk was minimised in the colony as a whole, and the mitigation of technical and financial risk through the contractual provisions of a public-private partnership. Another attraction was the chance to grow the company financially as well as growing its skills base through new forms of specialisation (Knight). This was the basis on which the company was prepared to accept the residual risks: in other words, it attempted to transform situations of uncertainty into a quantifiable business risk.

The contract with the Colonial Office was also attractive to *G&B* because the company had not found it possible to get a foothold in other parts of the world without this protective state framework. At the same time, the domestic market was increasingly coming under strain. Evidence of how attractive the contract was—and of the success of the public-private partnership—can also be found in the record of a follow-up quote submitted jointly in 1913 by the three companies involved in Lomé und Swakopmund, namely *MAN Gustavsburg*, *Flender* and *G&B*—this time for an entirely new jetty in Lomé. This represented another form of specialisation based on the increasing knowledge that the companies were garnering in relation to the construction of jetties and harbours in the colonies.[63]

Risk and Security on Site[64]

We turn now to the view from the construction site itself. Which of the anticipated risks were relevant once construction had started? What new uncertainties—and thus new threats for the company—became apparent?

63 Construction schedule and proposal with quote submitted by MAN Gustavsburg, Brückenbau Flender Benrath and G&B for the building of a new jetty, 1913, UA Bilfinger, A 2002.

64 The question of the workforce is limited here to questions about security and risk from the employer's perspective. For a more detailed discussion of labour and the workforce on this site, see *Kleinöder*, On Site.

What instruments were developed and applied by the site directors during construction to mitigate these?

The two partners, *G&B* and *Flender*, had formed a new consortium, the *BLS*, specifically for the purpose of building the 600-metre-long jetty.[65] *Flender* was a company that specialised in iron construction and bridge-building, with close links to the iron and steel industry in the Rhine Valley and the Ruhr. Its chief engineer, Rudolf Hitzemann, was tasked with designing the jetty for Swakopmund.[66] The consortium's registered office was based at the head office of *G&B*, a civil engineering company in Mannheim. Any correspondence to do with the construction site passed through this office, which functioned as the project's administrative headquarters.[67] From the sources, we are unable to tell how decisions were reached by the organisation, nor do we know exactly how administrative tasks were shared out between the staff working on the jetty project or at head office in Mannheim. However, we do have the construction documents from the site in Swakopmund. These indicate some disagreements over which member of the consortium was in charge of which parts of the project. The construction site itself was managed by two engineers, one from each of the two companies: Richard Riesenkamp for *Flender* and Carl Wick—later replaced by Mathaeus Richter—for *G&B*.[68]

We also have the record of Riesenkamp's interrogation by the South African authorities after the First World War. This provides some retrospective details of the general way in which the site was organised. The administration of the South African Protectorate interrogated Riesenkamp in the hope of obtaining a more precise picture of how the business had been run and what activities had taken place on the construction site. The latter had come under South African control during the First World War, and the new authorities needed to clarify ownership questions relating to the site and its facilities. According to Riesenkamp, *G&B* and *Flender* were the only companies in the consortium, which had been formed purely for the purpose of building the jetty; the jetty was also the consortium's only project. Riesenkamp's statement confirms that the total value of the con-

65 For technical details of the construction see *Rödel*, Landungsbrücke, especially 74–91.

66 Photographs and documents in private ownership, "Objects built by Flender AG" (photocopy), 1979, SSS, 2004.14.33.

67 For examples, see various letters to and from the *Bauunternehmung für die Landungsbrücke Swakopmund*, SSS, 2004.14.1 – 11.

68 Cf. *Rödel*, Landungsbrücke. Report on new build of the jetty at Swakopmund, Staff, June 1912, p. 26, Federal Archive (BArch), R 151/1755.

tract was RM 3.5 million, but also that the budget had increased by 500,000 marks over the course of construction because of unspecified "problems." This is the only record of an increase in the project's budget. The funding was probably negotiated with the Colonial Office on the basis of technical adaptations that would need to be made in the course of construction; these did in fact become necessary due to structural changes in the placing of the diagonal stakes supporting the jetty from 1913. The changes were costly;[69] we have no record of the final invoice for the project, but in April 1914, the Colonial Office advised the governor in Windhoek that two thirds of the calculated total sum of around RM 3.9 million (as compared to the original agreement for RM 3.5 million) had already been paid out, while only one third of the total structure, measured by surface area, had been completed. There was thus "a discrepancy between what has been done and the amount of money paid for it."[70] In practice, then, like many other infrastructure projects, this too turned out to be more expensive than planned. From the company's point of view, however, this had already been successfully mitigated through the form of the public-private partnership.

Staffing and Recruitment

In contrast to the contracts that were drawn up for railway construction projects, the contract for the jetty did not stipulate that the colonial administration—in this case, the governorate of GSWA or the harbour authority in Swakopmund—would be responsible for providing local workers. Legally, the consortium was responsible for all recruitment.[71] Regarding the management and technical functions of the construction site, the wording of the contract already implied a racist hierarchy, as well as clearly

69 Rödel even speaks of a plan to reduce the building costs as part of the fleet construction project. *Rödel*, Landungsbrücke, 86. Unfortunately, not all the sources listed are fully evidenced, so it is not possible to state this with any certainty. See also *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to the construction site, 17.1.1913, SSS, 2004.12.2.

70 State secretary at the Colonial Office to governor of Windhoek, 23.4.1914, BArch, R 151/1755. See also Claims Jetty Construction, interrogation of Riesenkamp (Flender), n.d., NAN, ADM 234/SWAKOP97.

71 Building contract from 1911/12 between the consortium of G&B and Brückenbau Flender AG/Benrath with the State Treasury of the German South West Africa / Colonial Office (copy), Section 11, UA Bilfinger, A 830. On the workforce and the practice of recruitment, see *Kleinöder,* On Site, 5–13.

excluding imperial competition on-site. Anyone responsible for overseeing the technical engineering elements, as well as anyone with management responsibilities, was contractually obliged to be a "Reichsdeutscher"—a German from Germany or its European territories. As a result, around 30 qualified personnel—which included engineers, foremen and craftsmen—were seconded to Swakopmund by their employers in Germany.[72]

From the consortium's perspective, a reliable, qualified workforce on site was key to the project's progress.[73] This continued to be the case at later stages of construction, too, as the site supervisors attempted to keep staff turnover on site as low as possible. Any conflict related to working conditions or pay could easily risk slowing down the progress of the jetty. But the respective staff of *Flender* and *G&B* were also competing with each other, as each company not only operated different wage systems (especially where bonuses were concerned) but also stipulated different working conditions in the different construction areas of the site. We can also observe how gradually, the responsibility for decisions relating to wages, performance and working conditions was increasingly transferred from Mannheim head office to the managers based at the construction site.[74]

Around ten people were employed as managers (engineers) or overseers there, plus around 20 German craftsmen and labourers. Over the construction period, they were joined by a few (European) day labourers and by over 80 Herero, Ovambo and Cape workers. Cape workers made up around half of all these additional staff.[75] Recruiting a reliable workforce that was prepared to stay long-term, not to mention recruiting enough of them, was a structural problem for the site managers over the whole phase of construction. Staff turnover was consistently high, and it is clear that overall, there were simply never enough workers on site. Although the

72 Building contract from 1911/12 between the consortium of G&B and Brückenbau Flender AG/Benrath with the State Treasury German South West Africa / Colonial Office (copy), Section 11, UA Bilfinger, A 830; *Bauunternehmung für die Landungsbrücke Swakopmund*, SSS, 2004.13.1 – 19, 33, 14.8 – 33.

73 Cf. also *Kleinöder*, Labour.

74 Cf. e.g., overseer to G&B (Mannheim), 6.3.1914, SSS, 2004.13.6; *Bauunternehmung für die Landungsbrücke Swakopmund* to overseer Schmid, 3.4.1914, SSS, 2004.13.6; *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to the construction site, 22.4.1912, SSS, 2004.13.2.

75 As documented in the records of the *Bauunternehmung für die Landungsbrücke Swakopmund*, 1911–1914, SSS, 2004.13.1 – 14.33; the numbers are also confirmed in the calculation for the cost of building a canteen. *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to construction site, 19.6.1913, 2004.14.18.

management of local recruitment for this project was not regulated by the state (unlike, for example, labour in the railway sector) it was influenced to some extent by the colonial administration. Yet even the colonial authorities had little influence compared to the local commercial employment agencies. Individual workers could also have a considerable impact on the labour market, for example through migration, flight, protest, etc.[76] Skilled workers in particular were in a comparatively strong position on the labour market, as demand for their services was high (and always growing) and they were in short supply.

The political situation, and the working conditions especially for African workers on site, often led to workers downing tools and abandoning the site at short notice, even if it meant they were in breach of contract. The site managers reacted with a policy of terminating the employment of anyone breaking their contract in this way, and with the immediate suppression of any protest. This made it impossible for them to re-employ staff. The priority of the managers was to avoid any form of unrest among the workers. Punishment—which usually took the form of physical punishment such as whippings—was outsourced to the local police, while workers who tried to obtain better working conditions or wages were sent back to South Africa immediately.[77]

The colonial labour market, in fact, was a source of constant uncertainty for the companies involved. The German actors could only rely on their usual repertoires to a certain extent in dealing with this. The site managers attached a good deal of importance of roll-over contracts, and on retaining their workforce through incentives (for example, with bonuses for German workers). But the options for companies were limited. For example, contractual terms could not be extended beyond what was standard for the local area.[78]

76 Cf. for example the turnover of Cape workers who moved to Walvis Bay, described in the report of the Imperial Harbour Authority to the Governorate in Windhoek, 12.12.1912, p. 64, BArch, R 151/1755.

77 *Bauunternehmung für die Landungsbrücke Swakopmund* to the Swakopmund Police Authority, 26.1.1912 und 1.8.1912, SSS, 2004.14.9; *Bauunternehmung für die Landungsbrücke Swakopmund* to Poppe, Schunhoff & Guttery, 24.8.1912, SSS, 2004.14.9; Poppe, Schunhoff & Guttery to *Bauunternehmung für die Landungsbrücke Swakopmund*, 24.8.1912, SSS, 2004.14.9. For a detailed discussion see *Kleinöder*, On Site, 19–22.

78 *Kleinöder*, On Site, 11–13.

Organisational and Financial Risk

Similarly to the problems faced on the local labour market, staffing was subject to difficult local framework conditions. This in turn endangered the progress of construction, yet it had never been factored into the risks that could affect costs. Through employing their own site managers and mechanics (as foremen) locally, the consortium tried to pre-empt any principal-agent problems that might arise as a result of the distance to head office. Local employment was thus an instrument used to minimise the long-distance situation. In the same way, the secondment of engineers employed by the consortium companies as site managers was intended to ensure that the flow of communication and information, especially in relation to technical issues and in regard to the official reporting duties of the harbour authority and the colonial governorate, could be easily maintained.

Despite this, however, there is clear evidence of increased transaction costs for reporting and communication in the early construction phase. These costs could only be reduced gradually. Clearly, all the actors in the communication triangle between head office, the site management and the colonial authorities, needed time to find an effective way of working together. Even at the very beginning of construction in January 1912, when the first mechanics and materials arrived in Swakopmund, delays crept in as a result of the travel time. Work could not start until the joiners arrived. The plans only arrived on site section by section.[79] There were also regular communication issues between the site and head office. The many instructions sent back and forth on how to label and document items destined for shipping, and the discussions about who was authorised to sign for them when delivered, reveal the initial organisational difficulties involved in communicating with a site that was so far away when correspondence took such a long time to arrive. In urgent cases, it was possible to resort to multiple telegrams, but here, too, it was first necessary to find a shared vocabulary. Thus, there were often problems on both sides in decoding what was meant by the abbreviations and condensed information used in telegraphic communications. For example, requests for money made by telegram had first to be interpreted, then if there were any errors, these had to be corrected retrospectively by post.[80] Often, these questions concerned

79 E.g., *G&B Mannheim* to the construction site, 4.1.1912, SSS, 2004.13.2.

80 E.g., *Bauunternehmung für die Landungsbrücke* (Mannheim) to the construction site, 4.1.1912 und 10.4.1912, SSS, 2004.13.2.

how expenditure should be correctly recorded and how reporting should be carried out for the construction budget on the one hand, and how the costs for the project as a whole should be calculated for the Colonial Office on the other.[81] These examples show clearly how the head office in Mannheim initially attempted to monitor the progress of construction closely, requiring comprehensive reports on a more or less continual basis.[82] But due to the time lag, this was often very difficult, as complex and detailed decisions regarding materials, tools or staff had to be made on the spot. Essential technical questions, for example about how to mix the concrete correctly or whether to change the location of the various stakes used to hold up the jetty, often had to wait a long time for an answer by post. The construction site managers responded in an increasingly pragmatic way to these issues. We can observe a gradual alignment in communication and reporting between the site managers and head office over the course of 1912. Increasingly, too, the managers were beginning to anticipate delays in receiving information and building instructions as well as delays to tools and materials. They would bridge the wait by assigning the men to do various other tasks such as painting or tidying. It was soon evident that security of supply would be an elementary factor in the progress of the project.[83] The result was a reorganisation of production and pre-production tasks, but also a restructuring of the way the site was managed overall. The experience that the managing engineers gained through these restructures resulted in significant specialisation and expertise, which in turn helped to minimise further uncertainty.

Other risks, however, could be externalised in the form of insurance. This included individual risk in relation to the German employees, for whom the company took out general accident and liability insurance against risks incurred during travelling to the colony.[84] Working on a construction site in the colonies was clearly seen as an especial risk in insurance terms, meaning that both the workers and the company had to take out extra cover. Old age and invalidity insurance cover that the employees might have had at home, for example, was not valid in the colony, so that

81 On the misunderstandings that arose as a result of the multiple reports, see for example *Bauunternehmung für die Landungsbrücke* (Mannheim) to construction site, 27.12.1911, SSS, 2004.13.2.

82 *Bauunternehmung für die Landungsbrücke* (Mannheim) to construction site, 27.12.1911, SSS, 2004.13.2.

83 Various letters between construction site and head office, 1911–1912, SSS, 2004.13.2.

84 Employees' insurance, 1911–1913, SSS, 2004.14.14.

workers employed directly by the consortium had to purchase their own insurance in the form of insurance stamps sent out from Germany.[85] The company also had to pay for insurance against fire for the entire site, and there is evidence of far-reaching shipping insurance being taken out to help minimise any financial liability in the case of material losses, the latter being no seldom occurrence on the construction site.[86]

Apart from all these issues, however, one problem in particular remained. This was the fact that the whole construction project was essentially based on a process of trial and error, resulting in regular interruptions. Most of these delays were due to technical issues, which in turn were predominantly related to the topographical and natural features of the site itself. The archives offer ample evidence, in the form of documents and correspondence between the site managers and head office in Mannheim, not only of high transactional costs (especially in relation to the above-mentioned communication issues) but also of the increasingly crucial question of how to transfer the necessary technical know-how between the various actors involved. To address this, the managers took steps to rotate personnel and placed great weight on developing and retaining expertise, for example by exchanging information and workers with the Togo construction site and overseeing a significant process of professionalisation at the Swakopmund site.

In addition, the materials had to be constantly tested, from the concrete to the boring tools to the paint. Expensive and repetitive paint tests were carried out seemingly endlessly. The early phase of construction involved laying concrete foundations, and at this point it became obvious that the site managers had only limited decision-making powers. Not they, but the Government Materials Testing Office in Germany had to authorise the use of concrete in advance, even before the decision to use a specific technique could be made.[87] Only a few weeks later, there were problems with the winches used to construct the foundations. They had to be replaced

85 *Bauunternehmung für die Landungsbrücke* (Mannheim) to the construction site, 27.12.1911, SSS, 2004.13.2.

86 Insurance certificate of the *Nord-Deutsche Versicherungsgesellschaft* in Hamburg, SSS, 2004.13.11; details of the transport insurance can be found in, for example, *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to the construction site, 17.9.1912, SSS, 2004, 12.2.

87 E.g., *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to construction site, 12.4.1912, SSS, 2004.13.2; *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to construction site, 22.4.1912, SSS, 2004.13.2; *Bauun-*

after it became evident that the materials being used were too weak.[88] As construction went on, it becomes clear that the head office in Mannheim became less and less interested in monitoring the technical situation on site and more and more interested in making sure that the work could progress as seamlessly as possible. Orders for new materials, tools etc. were almost automatically approved, "as stoppages must be avoided in all circumstances."[89]

Because of the pressure to complete the project as soon as possible, the construction managers were thus soon in a position to make decisions more independently. This development was partly triggered by the fact that the materials that had already been used were suffering from their exposure to the extreme weather, and partly because of the regular loss of materials during transportation or unloading, when they often sank in the surf conditions. If they were not lost prior to or during arrival, they often perished or broke soon afterwards (the boring tools were particularly subject to this problem).[90] Tools were sometimes also stolen from the building site.[91]

The site managers used a good deal of improvisation in addressing these problems. The problems arising out of the geography of the site itself in particular remained a constant threat, as had already become obvious during the construction of the mole and the wooden jetty in the earlier construction periods. Especially the surf and weather conditions regularly meant that work had to be stopped, thus delaying the project's progress more and more.[92] The records also include reports by workers of phases in which the work had to be suspended alternating with high-pressure phases

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ternehmung für die Landungsbrücke Swakopmund to the Harbour Authority, Swakopmund, 27.3.1913, SSS, 2004.13.10 (IV).

88 *Bauunternehmung für die Landungsbrücke* (Mannheim) to construction site, 27.12.1911, SSS, 2004.13.2.

89 *Bauunternehmung für die Landungsbrücke* (Mannheim) to construction site, 27.12.1911, SSS, 2004.13.2.

90 E.g., *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to construction site, 12.6.1912, 20.6.1912, 17.9.2012, 17.1.1913 und 3.1.1914, SSS, 2004.13.2; *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to the harbour office, Swakopmund, 12.11.1912, SSS, 2004.13.10 (III).

91 *Bauunternehmung für die Landungsbrücke Swakopmund* to the Swakopmund District Office (Police), 14.8.1912, SSS, 2004.14.12.

92 For example, letter from the *Bauunternehmung für die Landungsbrücke Swakopmund* to the Harbour Authority, Swakopmund, 27.3.1913, SSS, 2004.13.10 (IV). Numerous photographs also document the repeatedly strong surf and the periods where it was not possible to continue work, for example in July and August 1912; cf. UA Bilfinger, F 10_1, Swakopmund.

in which they were expected to undertake extra work, for example through working night shifts.[93]

The Return of Political Risk: The End of the Construction Works in 1914

With the outbreak of the First World War, the Swakopmund jetty project came to an abrupt end. When the South African troops marched into the colony, everything changed. Contact to the consortium's head office in Germany ceased almost immediately.[94] The jetty was partly demolished; building materials were moved, mainly to Walvis Bay; and at least according to reports received by the South African authorities, documents relating to the building works were destroyed, most of them by blowing up the safe in the construction office where they were kept.[95] From this point on, the head office in Mannheim had very little idea of what was happening on site. The focus was now on the managing engineers who had remained in Swakopmund, who now bore sole responsibility for their workforce and the building materials. There was a new protectorate, run by a South African administration, and it was this administration that interrogated the former construction supervisor Richard Riesenkamp, the civil engineer sent out by *Flender AG*. From the record of the interrogation, it is clear that all building work stopped permanently as soon as war broke out, and as a result, the jetty was never used, not even in part. There is also evidence that the jetty was abandoned by the Germans almost immediately. Unlike other construction sites in the colonies, it was not demolished or blown up by its managers.[96] Riesenkamp, too, left with the German troops. He later reported, however, that he had gone back to the site repeatedly during the war. According to a claim against the authorities that he brought in

93 E.g., construction site to *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim), 10.4.1912, SSS, 2004.13.3.

94 Annual Report of Grün & Bilfinger A.G. Mannheim for the ninth financial year from 1 January – 31 December 1914. On the General Assembly in May 1915, see report for the supervisory board, p. 3, UA Bilfinger 4465.

95 Interrogation of Richard Riesenkamp by the South African Administration/Office of the War Losses Commission, n.d., NAN, ADM 234/SWAKOP97.

96 On railway-building in Cameroon see *Kleinöder*, Kolonialwirtschaft, 322.

the name of the company, the South African administration of the new protectorate had soon begun to remove materials from the site.[97]

Riesenkamp also stated in the interrogation that the first 100 metres to have been built had not yet been accepted by the Colonial Office. However, this contradicts evidence in the records of the site managers showing initial part-payments (to cover at least the costs already incurred) of around RM 2.5 million, including administrative overheads and company profits.[98] We can only speculate whether Riesenkamp deliberately falsified his statement in order to emphasise to the South African administration that the company was still the sole owner of the jetty, which in turn would have supported the claims for payment submitted by the former managers. It is noticeable, however, that in all his statements, Riesenkamp was very careful to avoid implying any links between the construction site and the governorate of the former colony. Instead, he aimed to show that all business transactions had been directly processed and approved within the German Empire and agreed between Berlin and Mannheim.[99] From his statements, we can also deduce that around 270 metres of the total facility had been built by the time war broke out. The remaining 330 metres remained unfinished, although enough materials for a further 400 metres or so had already arrived at the building site.

In statements to the South Africans made during his interrogation, Riesenkamp assumes that the jetty still belongs to the consortium, although at this point he had also already begun to sell off materials and parts in order to finance wages and other ongoing costs during the war.[100] This was clearly a step that he and the other managers felt they had to take, as they had lost all contact with their head office and thus no further payments would come from Germany. Their main problem was how to pay the workers who had remained in Swakopmund, who, during the war years, only received enough money to cover essential costs. A large part of the income from the sales of material was organised locally. According to Riesenkamp, again in the statements he made when under interrogation,

97 Interrogation of Richard Riesenkamp by the South African Administration/Office of the War Losses Commission, n.d., NAN, ADM 234/SWAKOP97.

98 *Bauunternehmung für die Landungsbrücke Swakopmund* (Mannheim) to construction site, 20.6.1912, on the subject of the fifth payment on account, SSS, 2004.13.2.

99 Interrogation of Richard Riesenkamp by the South African Administration/Office of the War Losses Commission, n.d., NAN, ADM 234/SWAKOP97.

100 See also the comprehensive inventory of all buildings, materials etc. taken by the construction site; general inventory taken May 1916, SSS, 2004.13.1.

the South Africans had taken down and removed the capacitor bank along with tools, office buildings and stationery, all of which had been taken to Walvis Bay. He claimed that documents had been confiscated and he had been personally threatened with imprisonment.[101] It is interesting that the South African administration was unsure for a long time who actually owned the jetty. As a result, negotiations of possible compensation for the consortium continued into the 1920s. Ultimately, however, the consortium received nothing. Indeed, far from receiving any compensation, the engineers were themselves faced with claims by the protectorate administration, who demanded that they pay rent for their continued use of the site's living quarters after the outbreak of war.[102]

In terms of construction, the South Africans soon decided to dismantle the jetty's cranes and sell the materials, leaving the jetty to be used simply as a pier. The former engineer Mathaeus Richter even offered to do this work for them, as we know from a quote he submitted to the South African administration. It would have been a sad irony for Richter if he had had to dismantle the jetty that he had built, now that the political situation had changed so drastically and there was an urgent need for new sources of income.[103] However, the work was awarded to another, cheaper business from Lüderitzbucht, which eventually dismantled the cranes with some difficulty in 1924. With this, the jetty took on the character it still has today as a pier, without ever having been used as a jetty for either goods or passengers.[104]

What can we learn from the story of the German building site in Swakopmund and above all, from its ending? The First World War indeed represented a form of political risk. But it was on an entirely different scale and had an entirely different origin from the risks that had been anticipated by the colonial administrators. The government in Berlin and

101 Interrogation of Richard Riesenkamp by the South African Administration/Office of the War Losses Commission, n.d., NAN, ADM 234/SWAKOP97.

102 Interrogation of Richard Riesenkamp by the South African Administration/Office of the War Losses Commission, n.d., NAN, ADM 234/SWAKOP97; M. Richter to Director of Public Works, 30.3.1921, Director of Works to Secretary for South West Africa, 12.9.1921, NAN, PWD 25/PWD304; Secretary of South West Africa to Director of Works, 27.2.1925, NAN, PWD 25/PWD304.

103 Richter to Director of Public Works Dept, 23.1.1923; Director of Works to Imperial Cold Storage Co. Capetown, 31.1.1923, NAN, PWD/PWD304.

104 Director of Works to Secretary of South West Africa, 16.6.1924; Director of Works to Swakopmund Magistrates' Office, 27.8.19124; Brechlin, 22.10.1924, NAN, PWD 25/PWD304.

the colonial governorate had expected to have to deal with local "uprisings" or other forms of resistance, not with a war between the European colonial powers. There was one uncertainty, too, that the consortium had never factored into its calculations, but that eventually spelled the end of the entire jetty project. With the First World War and the transition of the colony to a South African protectorate, from 1915 the site was entirely lost to the consortium, with no compensation. Thus, the building of the jetty eventually proved to be a very high-risk project, albeit in a way that had not been foreseen. Besides the financial loss incurred by the consortium, there was also a bodily threat to the (German) employees after the outbreak of war, and even without this, they were subject to considerable financial insecurity, as no further payments came into the site and they were thus forced to rely on themselves from 1914.

The history of the jetty at Swakopmund reveals itself to be the story of a failure. Looking back from the present day to the initial idea mooted in the 1890s, it can be seen that the plan to build a harbour and landing operation was based on the premise that the German colonies would survive for many decades and even flourish, both economically and politically. Once this premise was disproved by the South African takeover, it became clear that the entire project was not, and perhaps never had been financially viable. The South African government had direct access to Walvis Bay as a central entry point from the sea, and thus saw a jetty in Swakopmund as completely pointless. They had no hesitation in announcing that far too much money had already been wasted on the project, and made plans to turn it into a recreational facility as part of a new "Swakopmund seaside resort." Discussions about the future of the Swakopmund jetty were held at the highest level, even with the South African prime minister in Pretoria. It was in the course of these discussions that the administrator of the Protectorate, Howard Gorges, wrote to General Smuts in December 1919, "The place is, as you know, dead as a port. […]." The South African government was therefore keen to repurpose the putative jetty—soon to be a pier—, and considered gifting it to the residents of Swakopmund, which, it was hoped, would become "the 'Brighton' of the Protectorate."[105]

105 Sir Howard Gorges to General Smuts, 11.12.1919, copy with answer from 18.12.1919, NAN, ADM 154/ W10; cf. also Sir Howard Gorges to Colonel Wallace, Director of Railways, Swakopmund, 24.12.1919. NAN, ADM 154 / W10.

Conclusion

Any larger construction projects undertaken in the colonies were subject to a complex constellation of natural, technical and political risk, a fact that is epitomised by the Swakopmund jetty project. They were activities undertaken in unknown environments characterised by poor infrastructures and many uncertainties. In this case, too, the site chosen for the landing jetty at Swakopmund was an inherently high-risk site, with a host of technical and natural uncertainties that had to be managed through a process of trial and error.

Even before the contract was signed, there were a number of general risks including natural and technical risks (uncertainty about the building foundations and the natural, above all the climatic conditions), as well as the connected financial risk. This had already led to the project being rejected by some of the consortium's competitors. But entering into a colonial contract with its specific legal form (a fixed-price contract) triggered a security *repertoire* for *G&B* that had been established and proved useful in the course of other colonial infrastructure projects. It is clear that from *G&B's* point of view, the contract offered adequate security in terms of the planned successive payments and the related bonuses. Both the Colonial Office and the consortium seem to have placed a good deal of weight on an anticipated reduction in political risk following the end of the colonial war in 1908, which gave both parties the confidence to enter into a public-private partnership.

Once work had begun on site, the problems that did indeed occur were thus addressed according to this repertoire. But it was to prove inadequate in this case. For example, the difficulty in recruiting workers represented a continual risk to the project's progress. The consortium tried to address this through various instruments such as longer contracts, direct recruitment etc., but these had only short-term success, if any. This reveals the colonial labour market as a factor of structural uncertainty for companies: it did not function according to the normal mechanisms of capitalist markets, and was also very different from the labour market that the consortium had experienced in Germany. Security repertoires established in the domestic context proved unhelpful in the colony. Judging from the way in which the building site was organised generally, the constantly changing labour market in the colony was the main financial threat to the jetty's punctual completion, and this never changed over the entire course of the project. One may therefore speak of a specifically *colonial risk*.

Once construction started, this problem was compounded by the geographical distance of the site from the head office in Mannheim, which resulted in high logistical and transportation costs and frequent losses of building materials. Although any damage incurred during shipping could be paid for out of the consortium's insurance cover, the monetary compensation could not make up for the ensuing delays. Thus, the threats to the security of supply and to a seamless building operation (caused for example also by climatic or topographic circumstances) would prove to be the construction site's Achilles' heel, and any delays to the project's progress meant a financial risk.

An additional, related problem was the principal-agent issue. This was particularly obvious during the first phase of the project, as information was lacking and there were constant gaps in communication, which were reduced only gradually as the project went on. To mitigate this, the consortium resorted to a variety of (new and familiar) repertoires to minimise risk and to establish mechanisms to reduce the principal-agent problem and remedy the difficulties of asymmetrical information flows. The actors concerned also became more experienced in dealing with these problems. They strengthened communication networks and externalised risk where possible (through specialisation and insurance cover). As a result, the control over decisions and the tempo in which they were taken—for example when ordering replacement parts or agreeing bonus payments—was increasingly transferred from head office in Mannheim to the managers on site, in order to benefit the security of supply. It became clear that responsibilities and competencies were increasingly moving away from the principal and towards the agent; once the First World War began, the agent became almost completely independent of the principal, making decisions about the workers and the construction itself without any contact to the head office in Germany.

From 1904, the war against the Herero and Nama was a political risk that led colonial actors to see security as a critical issue and thus to view the expansion of the colony infrastructure as an essential response. At this time, the risk was borne (mainly) by the state. When the colonial war ended in 1908, both the (colonial) state and businesses saw the political risk in the "pacified" colony as significantly reduced. Reducing political risk and ensuring a politically stable environment were seen as key to attracting business investment to the colonies. In this case, it worked, as the building of the iron jetty in Swakopmund was placed entirely in the hands of a private consortium. But in 1914, the consortium was blindsided by a

political risk coming from an entirely different quarter—Europe. With the outbreak of the First World War, the company lost all access to the site and was unable to complete the project.

An analysis of the securitisation at Swakopmund offers a clearer perspective on the relationship between the state and the private sector in a colonial context. Attempts to securitise the building project started with the provisions of the contract itself, which implicitly made the whole undertaking a political security issue: it was up to the state to foster construction of the infrastructure (here specifically the building of the jetty) in order to "open up" the colony. The Colonial Office had a strong political and military interest in the success of the project, and was thus prepared both to fund it and to offer considerable financial incentives—in the form of anticipated profits—to potential contractors. The enterprise-security nexus is demonstrated here above all in the intersection of the "political and military abilities to provide security"[106] for economy and enterprises. The securing of economic and military land access to GSWA was so important that it outweighed even topographical and other natural constraints. The company, however, successfully externalised most of the investment risk and became a securitising agent in its own right as a non-state entity, becoming an actor in the opening up of the colony and incurring the dependence of the colonial administration. In this way, the consortium was propping up national expansionism. But on the other hand, from the consortium's perspective, colonial expansion also offered (or appeared to offer) access to new markets,[107] underpinned by the security of a public contract complete with the relevant guarantees and the prospect of specialising in order to minimise the risk on (global) markets. Thus, from the point of view of the consortium, the provisions of the contract and the political situation in the colony offered an environment that appeared to be secure. It was on this basis that the consortium was prepared to accept the commercial risk inherent in the project—or, to put it another way, it believed that no major risk was in fact involved.

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