

Banks, Sweat and Shelter in Addis Ababa

Sites and Services in Performance

Nelson Mota¹

¹ Delft University of Technology, Julianalaan 134 - 2628 BL Delft, N.J.A.Mota@tudelft.nl



Photo: © Nelson Mota (2015)

ABSTRACT (max. 250 words)

In the 1970s and 1980s the politics of international development aid keenly promoted planned progressive development strategies as the primal method to produce affordable housing for the urban poor. Through this period, the World Bank used the so-called “sites and services” program to encourage staged development, flexibility, and the use of sweat equity in affordable housing production. This program aimed at providing security of tenure and a range of basic services to enable and encourage low-income households to improve their housing through time using self-help financing and/or construction.

In this paper I aim at examining the nexus between design decisions and the performance of a site and services settlement through time. To contribute for the production of knowledge on this topic, I will analyze the Nefas Silk sites and services settlement, a World Bank-funded project with approximately 3500 serviced plots developed in Addis Ababa in the 1980s. Launched in the heyday of the Derg - the socialist regime that overthrew the emperor Haile Selassie in 1974 - the settlement survived many political, social, economic and demographic transformations through the last three decades. With such an eventful history, Nefas Silk

provides an excellent case to analyze the performativity of the sites and services approach.

With a critical account of the results of this analysis I will single out the potentials and the threats of reconceptualising the sites and services programme to develop new affordable housing policies and support design decision-making processes for all the stakeholders engaged in actively promoting sustainable development in the global urban south.

KEYWORDS (up to 5)

Sites and Services, Housing, World Bank, Architecture, Ethiopia

AUTHOR BIOGRAPHY: (short, not more than 5 lines)

Nelson Mota is an Assistant Professor at TU Delft and guest scholar at The Berlage. He was the recipient of the Fernando Távora Prize in 2006 and authored the book *A Arquitetura do Quotidiano* (2010) runner-up in the Iberian FAD Prize 2011. In 2014 he received his Ph.D. from the TU Delft with the dissertation *An Archaeology of the Ordinary*. In 2015 he co-edited *Footprint 17* - "The 'Bread and Butter' of Architecture". Nelson is member of the editorial board of the academic journal *Footprint*.

1 Introduction (max. 250 words)

In June 1974, Ethiopia's emperor, Haile Selassie, instructed his Imperial Council to start making plans to build dams on the Nile. This ambitious project was announced while the country was facing a severe famine caused by yet another of Ethiopia's recurrent draughts. As the Polish journalist Ryszard Kapuściński reports in his *The Emperor*, Selassie's inclination for megalomaniac projects instead of concrete actions to deal with the people's burning needs infuriated a group of military that were conspiring to overthrow him.¹ In the next weeks the power and influence of the emperor was severely curtailed and a military group known as the *Derg* (committee in Amharic) eventually toppled him down on 12 September 1974.

The leader of the revolutionary committee, Major Mengistu Haile Mariam Mengistu, soon announced that the country should pursue three vital goals: land reform, national unity, and revolution. The first of these goals, land reform, would prove to be crucial for the politics of housing production in Ethiopia. In 1975, the *Derg* government published Proclamation n° 47 that determined the nationalization of urban lands and extra urban rental houses. This was meant to abolish the concentration of land-ownership that prevailed through Haile Selassie's rule, where 2% of the families owned 60% of the land.²

With Proclamation n° 47 nearly two-thirds of the houses in Addis Ababa became property of the state almost overnight. On the one hand, this political decision created the conditions to decrease the rents for low-income families and to access vacant land to develop housing.³ On the other hand, the destruction of the landlord class disrupted the existing system of shelter development in Addis Ababa and paved the way for a growing housing shortage that affected all income groups.

To cope with this challenge, from 1976 until 1982 the Ethiopian revolutionary government negotiated with the World Bank the terms to develop a program for the development of new affordable housing and to upgrade the environmental conditions of dilapidated districts in the city centre. Over the next decade, this program - called "Ethiopia Urban Development Project" - would contribute to develop in Ethiopia a carefully crafted integration of new financial instruments, sweat equity and shelter production.

¹ Ryszard Kapuściński, *The Emperor: Downfall of an Autocrat* (London: Penguin Classics, 2006), 129–31.

² The World Bank - Eastern Africa Projects Department, 'Staff Appraisal Report. Ethiopia Urban Development Project', Staff appraisal report (The World Bank, 1 November 1982), 2.

³ From 1976 until 1978 141 cooperatives were formed to develop housing on nationalized undeveloped plots. See *Ibid.*, 3.

2 Main Text (1500 words)

The goals for the Ethiopia Urban Development Project (UDP) were clear from the outset. The agreement between the World Bank (WB) and Ethiopia's new government aimed at a) improving health and environmental conditions, b) improve urban infrastructure and housing, and c) building capacities in the governmental institutions responsible for housing policies. Achieving these goals was instrumental to improve the country's productivity, rationalize public resources, and stimulate the construction industry.⁴ Furthermore, the project was also meant to cater for the low-income section of the society, those that have been disenfranchised by the feudal patterns of land ownership that prevailed in Ethiopia until 1974. These were ambitious goals for a country that was facing several challenges at that time, among which a civil war and a severe draught.

At the turn of the 1980s Ethiopia was one of the poorest countries in the world, with approximately three quarters of the population living below the poverty line.⁵ It was also one of the least urbanized countries in the world. At that time only 12% of Ethiopia's 33 million inhabitants lived in cities.⁶ With 1.3 million inhabitants, Addis Ababa, the country's capital city, accommodated one third of the urban population in Ethiopia and was the largest city in Eastern Africa, between Cairo and Johannesburg. The status of Addis Ababa as Ethiopia's "primate city" triggered migration processes that further strained its fragile infrastructure. The "Staff Appraisal Report" of the UDP, presented in November 1982 by the WB team, highlighted that sanitation problems in Addis Ababa were so severe that approximately 50% of the population did not have toilet facilities at all – neither private nor shared – while 25% shared pit latrines with other families. Further, next to the massive housing shortage and the sanitation challenges, the government was also trying to tackle the shockwaves of their land reform and the restructuring of credit institutions.

It was against this scenario that the WB settled with the government of Ethiopia the implementation of the UDP focused on three components: a) Site Development and Servicing; b) Construction Loans for slum upgrading; and c) Institutional Development. The site development and servicing component was based on the construction of 2,950 serviced plots in the Nefas Silk district, a location to the Southeast of the city center, close to the new airport and surrounded by many industrial facilities. The slum-upgrading component was meant to improve the Tekle Haimanot area, a congested and dilapidated part of the busy commercial center of Addis Ababa. Finally, the institutional development component was mainly focused in strengthening the expertise of the recently created Housing and Savings Bank (HSB) in dealing with mortgage lending and management of housing projects. In this paper I will focus on the first component of the project, the development and the performance through time of the new Nefas Silk neighborhood.

Sites and Services in Addis Ababa

The strategy to develop affordable housing in the Nefas Silk area was based on the sites and services approach. In the 1970s this approach gained momentum as the preferred system of affordable housing production in the developing world.⁷ The sites and Services approach was based on three fundamental premises: Resilient urban infrastructure, security of tenure and self-help housing practices. However, in the early 1980s these were three completely strange aspects to the majority of Ethiopia's urban dwellers. The urban infrastructure was inexistent or dilapidated, and there was neither tradition of homeownership nor of self-help. Indeed, most of Addis Ababa's urban dwellers had always been tenants and thus not responsible for the maintenance of the houses where they lived in.⁸

⁴ Ibid., 8.

⁵ The incomes of more than three quarters of the households living in Addis Ababa was below the absolute urban poverty threshold, which was set in the early 1980s at US\$186 per capita/per annum.

⁶ The World Bank - Eastern Africa Projects Department, 'Staff Appraisal Report', 1.

⁷ An insightful account of the Sites and Services approach can be found in Jan Van der Linden, *The Sites and Services Approach Renewed. Solution or Stopgap to the Third World Housing Shortage?* (Hants: Gower, 1986).

⁸ Before the 1974 revolution, most urban dwellers were renting houses from the landlord class and after the revolution, with the nationalization of urban land and extra rental houses they became tenants of the government.

The preliminary plan for the Nefas Silk site, presented in 1982, allocated 60% for private dwellings, 15% for circulation, and 25% for community amenities, including a market, primary schools, and collective open spaces (Figure 1). Most of the 130 ha of the project were occupied with the so-called serviced plots.⁹ Each plot had 160m², with the street or footpath side measuring nine meters and a total depth of eighteen meters (Figure 2). Next to the serviced plots, the plan included also 650 dual-use plots with up to 250m² for commercial purposes or housing for the higher income group. These dual-use plots were integrated in the residential area to promote “a balanced community of mixed-income families”.¹⁰ The plan estimated that 70% of the serviced plots would have 160m² and the remaining 30% could be as big as 250m². These two different plot sizes would cater for different income groups and should be combined in such a way as to avoid the creation of ghettos.

In their *Urbanization Primer* – a sort of bible for site and services developments published in 1978 - Horacio Caminos and Reinhard Goethert showed several models for optimizing the relation between the size and configuration of the lot and its relation with public and semiprivate land in a community settled on approximately 16 hectares (400mx400m) (Figure 3).¹¹ The layout of the whole Nefas Silk settlement, as well as the configuration of the serviced plots, followed the best practices recommended by these housing experts. The main infrastructural elements were built along two axes forming a backbone that reaches the individual plots in smaller ramifications. Next to the infrastructural component of the project, the social organization of the demand was also an important political goal of the project.

Self Help and Citizens' Participation

The Ethiopia Urban Development Project specified that no contractor-built core would be provided in the 160m² serviced plots. The construction of the dwellings in these plots should be funded by the HSB and developed through self-help or small informal contractors arranged by the participants. The HSB loans would be provided according to several variants of serviced plots, whose estimated cost should range from ETB 2,200 (US\$ 1,000) to ETB 3,500 (US\$ 1,700). The cheapest type - House type A – included only one 11m² room built in self-produced hollow concrete blocks and a detached block with kitchen and pit latrine. The intermediate type – House type B - had an estimated cost of ETB 3,300 (US\$ 1,600) and included two rooms of 11m² each built with wattle and daub (a building technique locally known as *chicka*) and a detached block with kitchen and pit latrine. Finally, the most expensive variant – House type C – had a similar size and layout as House Type B but was built in purchased concrete blocks. All these house types incorporated a combination of skilled labor and self-help, and were designed to accommodate growth and change over time.

According to Ethiopia's tenure system, the titles to land and dwellings are separate. In the Nefas Silk project, the project sites were government property and the participants would be granted use rights for which they would pay an annual rent to the municipality (then know as the Central Association, CA). The dwelling would be held on a tenant-purchase basis.¹² The tenure system proposed in the project was instrumental to give the participants enough incentives to maintain and expand their houses through time. Furthermore, the HSB's construction loans were given preferably to participants organized in cooperatives. While there were several strategic reasons for this preference, it also stimulated the development of community participation in the project's management and design decision-making process.

To be sure, the active community organization became a vital component for the success of the project from

⁹ The project for the Nefas Silk site was based on a previous experience with serviced sites for lower income groups developed by Ethiopia's Ministry of Urban Development and Housing (MUDH) with the assistance of the European Economic Community (EEC) in nine secondary towns in Ethiopia.

¹⁰ The dual-use plots were serviced by the same standards as the other plots but were positioned to have a privileged access to individual water and electrical connections. The aim to avoid ghettoization was explicitly mentioned by the WB team. See The World Bank - Eastern Africa Projects Department, 'Staff Appraisal Report', 16.

¹¹ The reasoning for the choice of the format and size of the models researched by Caminos and Goethert can be found in Horacio Caminos and Reinhard Goethert, *Urbanization Primer* (Cambridge, Mass: The MIT Press, 1978), 104–8.

¹² The tenant-purchase scheme meant that the Housing and Savings Bank (HSB) would hold the land use rights and the title to the dwelling until payment of the final loan instalment.

the moment it was approved, in 1983, until its completion in 1991. In effect, according to the Project Completion Report, “sensitive community organization efforts mounted by the project unit resulted in the formation of cohesive and effective housing cooperatives whose self-help efforts were responsible for the efficient construction of low-income dwellings for owner occupation.”¹³ After completion, as anticipated in the project’s guidelines, the houses expanded further and the whole project site became a consolidated community.

Sites and Services in Performance

Twenty-five years since the completion of the Ethiopia Urban Development Project the incremental growth in the serviced plots in Nefas Silk show many variations. In some plots the dwellings expanded horizontally maintaining the same basic material qualities as in the early 1990s. In other cases, the plot was informally subdivided to create additional rental units and thus generate income for the owner occupant. In these cases, there is a clear material separation between the carefully plastered and painted house where the owner lives and the shacks for informal rental. While these are the most common occurrences, there are some exceptional cases where the plot is occupied with multi story houses built with reinforced concrete load bearing structure (Figure 4).

This process of incremental growth follows other cases of self-initiated transformations of dwellings in Addis Ababa. In the Gerji area, for example, Demissachew Shiferaw described how basic emergency shelters built with corrugated metal sheet cubicles were upgraded to dwelling compounds (Figure 5).¹⁴ In the Kolfe area, Shiferaw surveyed how a core houses built through an aided self-help program evolved to structures able to respond to the dynamics of family growth and income generation (Figure 6).

In the Nefas Silk district the relation of the plots with the street reveals clear patterns of border definition. Most of the plots are fenced off with corrugated metal sheets, impermeable to the sight from the public space. However, despite the anonymous and somewhat shaky character of the border, there are many “brick and mortar” houses hidden within the limits of the plot. The elaborated metal gates that usually announce the entrance to the plot are the most conspicuous sign of this harsh transition between the public space and the domestic realm (Figure 7). The reliance of the sites and services scheme on individual plots for owner occupation stimulated a clear drive to secure the limits of the property and to remove the domestic realm from the public realm.

The detachment of the domestic activities from the street is noticeable everywhere in the Nefas Silk settlement. Some of the 160m² serviced plots became small compounds where several families live. Others became spaces for production and commercial activities. The figure of the corner shop is arguably the most visible instance of the latter. Overall, the Nefas Silk area has been consolidated as a low-rise neighborhood with a dense occupation of the plots. (Figure 8) In this respect it reproduces a great deal of the social and spatial patterns observed in the traditional settlements built in the inner city and other cases of housing production in Addis Ababa through aided self-help processes as discussed above.

3 Conclusion (max. 500 words)

In the 1980s the sites and services approach received both appraisal and criticism as the primal instrument for housing production as part of development aid. To be sure, the implementation of sites and services projects has to cope with very many different contingencies, physical, economical, and political to name but a few. In fact, as Jan van der Linden noted in 1986 there is “an enormous variety in sites and services projects, ranging

¹³ The World Bank - Eastern Africa Department, ‘Project Completion Report on Ethiopia Urban Development Project (Credit 1366-ET)’, Project Completion report (The World Bank, 12 June 1992), iii. According to the World Bank rapporteur the process of group formation based on the workplace of the participant was instrumental to facilitate the coordination of mutual self-help construction activity.

¹⁴ For an insightful account of patterns of incremental growth in housing in Addis Ababa, see Demissachew Shiferaw, ‘Self-Initiated Transformations of Public-Provided Dwellings in Addis Ababa, Ethiopia’, *Cities* 15, no. 6 (December 1998): 437–48.

from absolute flops to success stories.”¹⁵ For example, a shelter programme based on the sites and services approach developed in El Salvador in 1973 and sponsored by the WB delivered affordable houses for the a wide range of income groups (between the 17th and the 65th percentiles of the national urban income distribution) and in 1982 had one of the best loan repayment records of any shelter programme financed by the WB.¹⁶ On the other hand, Peter Ward’s review of sites and services projects developed in Mexico in the 1970s and 1980s stresses the threats of using these projects to cater for a well established class of salaried workers – which are more likely to make the repayments – rather than to the urban poor.¹⁷

Essentially, the assessment of the performance of the sites and services projects as an approach to housing provision for the urban poor is closely linked with the cost of acquiring urban land. When there is plenty of land available at low or no-cost the process unfolds with relative success. When land is scarce and / or expensive the development of sites and services projects usually caters only for a constituency of beneficiaries from the higher echelons of the urban income groups.

In the Nefas Silk settlement the physical and strategic targets of the project were successfully achieved. One of the fundamental reasons for this outcome is that the site for the development of the project was owned by the state. It was just a small fraction of an immense stock of urban land created after the nationalization in 1975. The development costs could thus be kept low and effectively provide an affordable solution for low-income families. While this goal was partially achieved, through the implementation of the project, the percentage of plots allocated to low-income families decreased. Indeed, the housing shortage in Addis Ababa was so severe and affected such a wide range of the urban population that the demand for housing came from all income groups. To try and cope with this demand, during the implementation of the project, while the area of the site was kept (130 hectares) the number of residential plots increased from 2,300 to 3,150, of which 2,025 (or 65%) for low-income families and 1,125 (or 35%) for middle/high-income families.¹⁸ (Figure 9)

In the Nefas Silk Sites and Services Scheme, next to the 3,150 purely residential plots (for low, and middle / high income groups) 160 mix-use (residential / commercial) plots were also created. Moreover, there were 1,100 families previously living on site that were incorporated in the plan. I would contend that the co-existence of these different groups became one of the main assets of the project. Still, the density of the whole settlement is relatively low. With 4,410 serviced plots on a site with 130 hectares, the overall density is roughly of 34 households per hectare. This density seemingly compares badly with the densities of the inner city areas, which were around 80-100 households per hectare. However, as Demissachew Shiferaw’s research on the incremental housing schemes developed in the areas of Kolfe and Megenagna shows, some of the households eventually grow into extended families with 10 people or more. (Figure 10) This is hardly a size that could be accommodated in most of the inner city plots, without sacrificing the sanitary conditions of the house. In the sites and services scheme, however, the configuration of the plot and the efficient design of the service core and the site infrastructure are able to accommodate successive transformations to the physical and social structure of the household. Further, it also caters for the development of different types of income generation, which become an essential contribution to reduce the burden or the loan repayment costs.

With these conditions properly aligned, the sites and services scheme has a great potential to become a sustainable solution for affordable housing, replicable, efficient in the use of resources, and catalyzing community participation. Increasing the density of the settlements is vital to avoid ghettoization and promote good connectivity and proximity to urban services and employment. An insightful response to this challenge requires, I would contend, a joint venture between design expertise, community participation and progressive politics. This shared responsibility is fundamental to promote cities as “densities of stories, passions, hurts, revenge, aspiration, avoidance, deflection, and complicity”, as AbdouMaliq Simone puts it.¹⁹ Or, as Simone

¹⁵ Van der Linden, *The Sites and Services Approach Renewed.*, viii.

¹⁶ Michael Bamberger and Alberto Harth Deneke, ‘Can Shelter Programmes Meet Low-Income Needs? The Experience of El Salvador’, in *Low-Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading*, ed. Geoffrey K. Payne (Wiley, 1984), 49.

¹⁷ Peter Ward, ‘Mexico: Beyond Sites and Services’, in *Low-Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading*, ed. Geoffrey K. Payne (Wiley, 1984), 149–58.

¹⁸ The World Bank - Eastern Africa Department, ‘Project Completion Report’, 13.

¹⁹ AbdouMaliq Simone, *For the City Yet to Come: Changing African Life in Four Cities* (Durham: Duke University

asserts, “how people from different walks of life can be engaged in each other’s lives without necessarily obliging specific transaction and obligations.”²⁰ The current predominance of managerial decisions in the definition of policies for the transformation of the built environment needs to be critically assessed. I would contend that design decisions are key processes to achieve the goal of promoting an inclusive city where mutual interest in social collaboration is the driving force for sustainable development. The reconceptualization of the sites and services approach can contribute to bring back a sophisticated scheme of pro-poor housing policies. As Jan Bredenoord and Paul van Lindert argued in 2010, these policies should be developed to “build upon the power of self-help efforts and that both promote and support self-build initiatives institutionally, financially, technically and politically.”²¹ In conclusion, I would contend following Bredenoord and Van Lindert, that assisted self-help housing should reappear on the development agendas and reaffirming collaboration should be perceived as a key aspect to bring together the diverse urban actors engaged in promoting sustainable urbanization.

Acknowledgements

The author thanks Dick van Gameren and Dirk van den Heuvel for their insightful comments on the outline of this paper. I would also like to thank Brook Teklehaimanot and Anteneh Tesfaye for their collaboration in gathering information and material on Ethiopia’s housing policies and urban transformation. Finally I would like to thank the students of the Graduation Studio Global Housing at TU Delft’s Faculty of Architecture for the great work in preparing analytical drawings for the case studies examined in this paper.

References

- Bamberger, Michael, and Alberto Harth Deneke. ‘Can Shelter Programmes Meet Low-Income Needs? The Experience of El Salvador’. In *Low-Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading*, edited by Geoffrey K. Payne, 37–54. Wiley, 1984.
- Bredenoord, Jan, and Paul van Lindert. ‘Pro-Poor Housing Policies: Rethinking the Potential of Assisted Self-Help Housing’. *Habitat International* 34, no. 3 (July 2010): 278–87.
- Caminos, Horacio, and Reinhard Goethert. *Urbanization Primer*. Cambridge, Mass: The MIT Press, 1978.
- Kapuscinski, Ryszard. *The Emperor: Downfall of an Autocrat*. London: Penguin Classics, 2006.
- Shiferaw, Demissachew. ‘Self-Initiated Transformations of Public-Provided Dwellings in Addis Ababa, Ethiopia’. *Cities* 15, no. 6 (December 1998): 437–48.
- Simone, AbdouMaliq. *For the City Yet to Come: Changing African Life in Four Cities*. Durham: Duke University Press, 2004.
- The World Bank - Eastern Africa Department. ‘Project Completion Report on Ethiopia Urban Development Project (Credit 1366-ET)’. Project Completion report. The World Bank, 12 June 1992.
- The World Bank - Eastern Africa Projects Department. ‘Staff Appraisal Report. Ethiopia Urban Development Project’. Staff appraisal report. The World Bank, 1 November 1982.
- Van der Linden, Jan. *The Sites and Services Approach Renewed. Solution or Stopgap to the Third World Housing Shortage?* Hants: Gower, 1986.
- Ward, Peter. ‘Mexico: Beyond Sites and Services’. In *Low-Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading*, edited by Geoffrey K. Payne, 149–58. Wiley, 1984.

Press, 2004), 11.

²⁰ Ibid.

²¹ Jan Bredenoord and Paul van Lindert, ‘Pro-Poor Housing Policies: Rethinking the Potential of Assisted Self-Help Housing’, *Habitat International* 34, no. 3 (July 2010): 286.

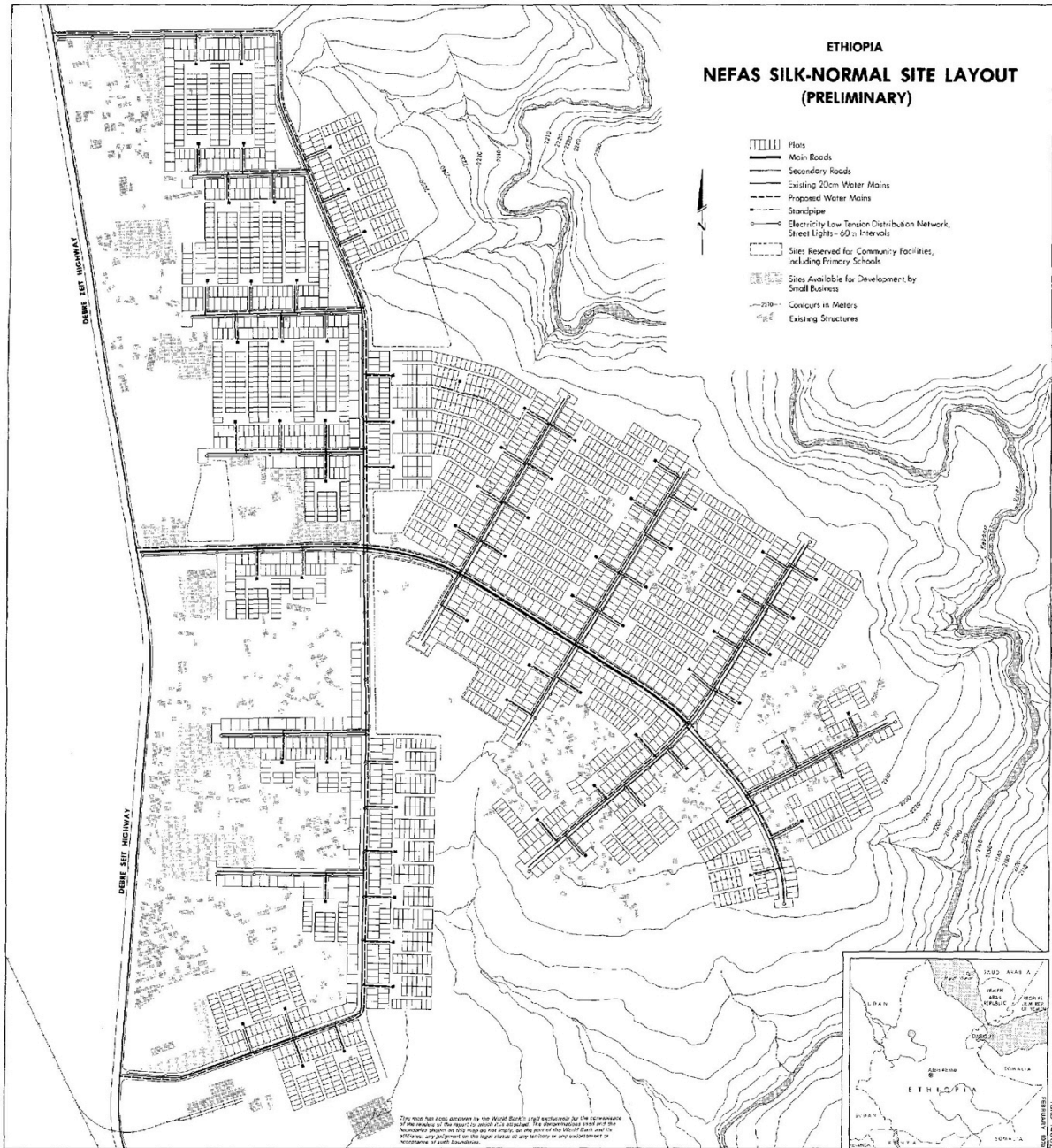


Figure 1

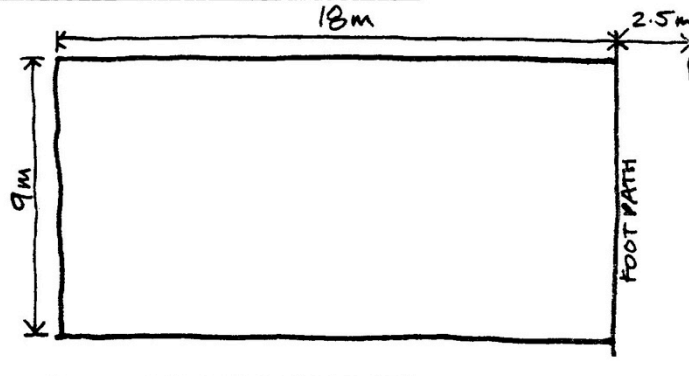
Preliminary plan for the Nefas Silk site (1982)

Source: World Bank – Staff Appraisal Report Ethiopia Urban Development Project

Ethiopia
First Urban Development Project

PROGRESSIVE DEVELOPMENT OF DWELLING

Serviced plot 160 m²
with footpath access
to shared standpipe
(1 per 44 plots)



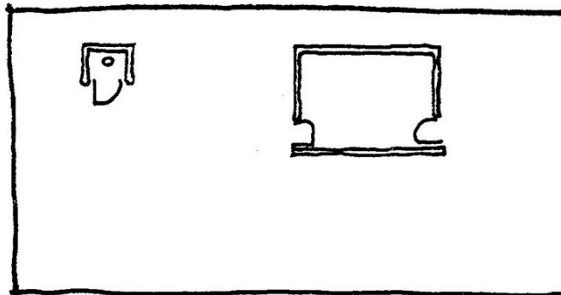
Pit latrine plus
1 room 13.5 m²

Total area: 14.5 m²

Cost (chicka):

pit latrine	B	200
dwelling	B	1,000
Total	B	1,200

(US\$600)



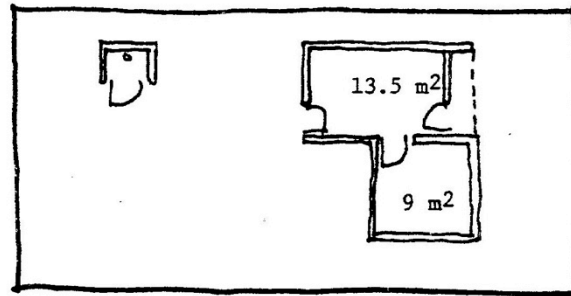
Pit latrine plus
2 rooms, one 13.5 m²
the second 9 m²

Total area: 23.5 m²

Cost (chicka):

pit latrine	B	200
dwelling	B	1,600
Total	B	1,800

(US\$900)



Pit latrine plus
Separate kitchen of 6.7 m²
and 3 rooms, one 13.5 m²
2 rooms 9 m²

Total area: 39.2 m²

Cost (chicka):

pit latrine	B	200
dwelling	B	2,500
Total	B	2,700

(US\$1,350)

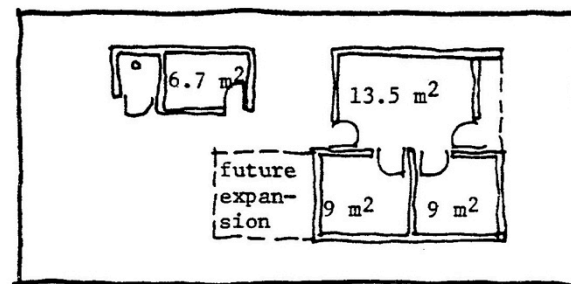


Figure 2

Nefas Silk Urban Development Plan – Progressive Development of Dwelling (1982)

Source: World Bank – Staff Appraisal Report Ethiopia Urban Development Project

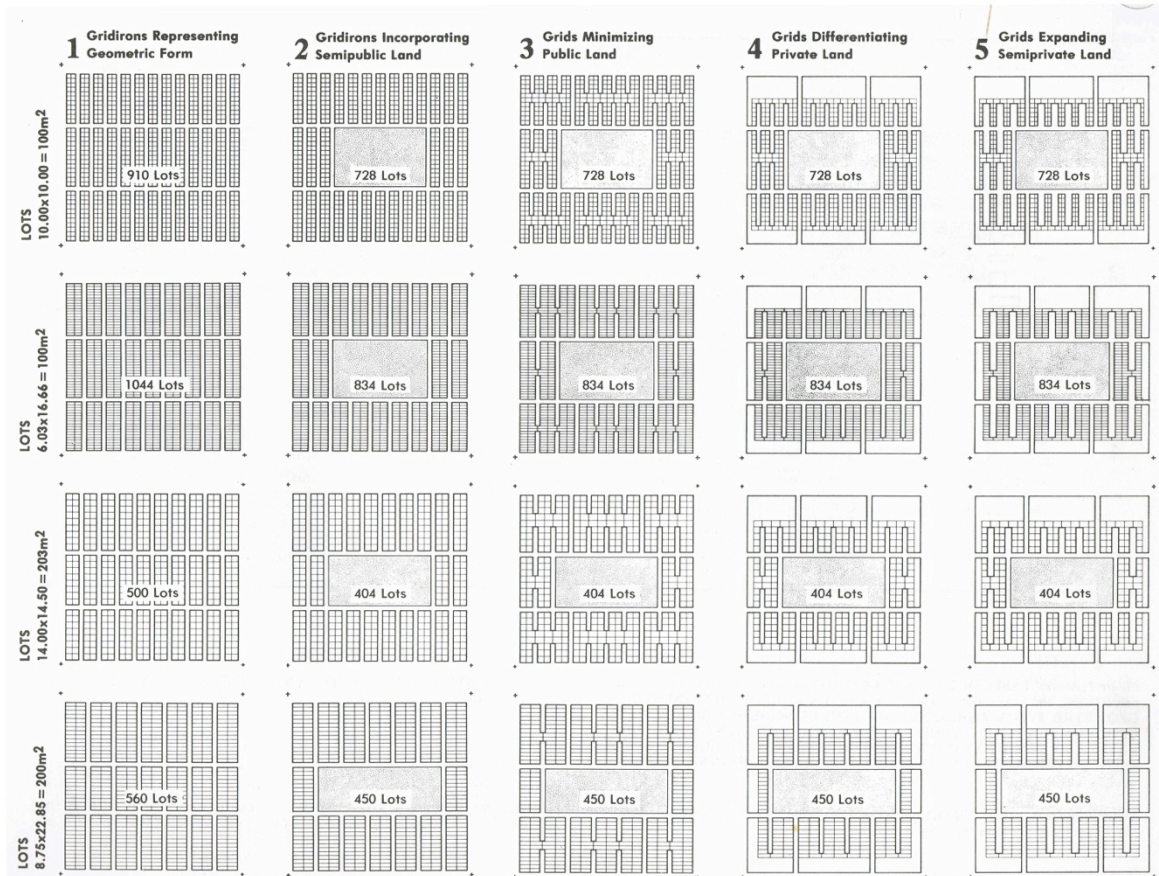


Figure 3

Matrix of Variations of the Typical Model for Sites and Services Schemes (1978)

Source: Horacio Caminos and Reinhard Goethert. *Urbanization Primer*. Cambridge, Mass: The MIT Press, 1978.



Figure 4

Nefas Silk District, Addis Ababa (2015)

Photo: Nelson Mota

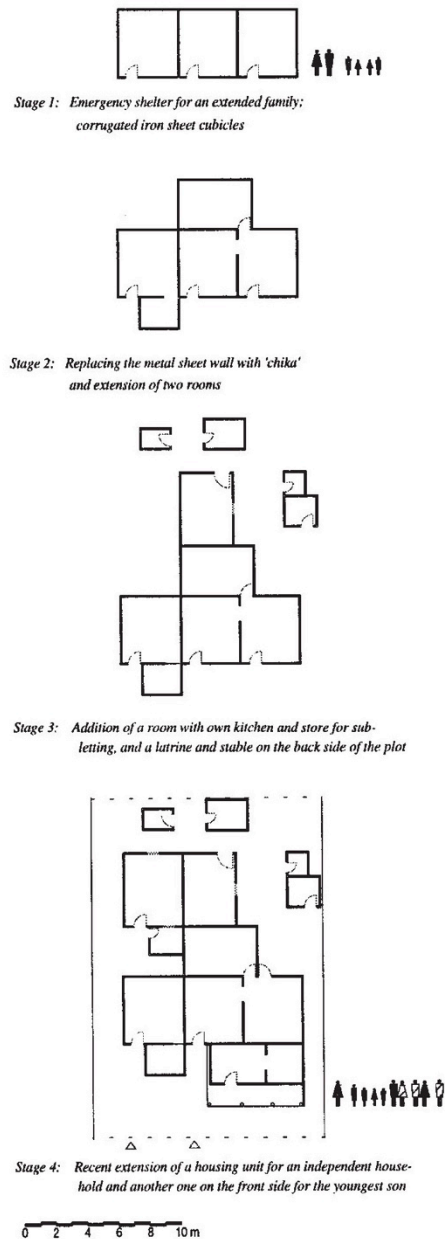


Figure 5

Extension pattern in "gerji" (1986–97): from a three-room provisional cubicle (46.6 m²) to a compound with a total net area of 121 m²

Source: Demissachew Shiferaw. 'Self-Initiated Transformations of Public-Provided Dwellings in Addis Ababa, Ethiopia'. *Cities* 15, no. 6 (December 1998)

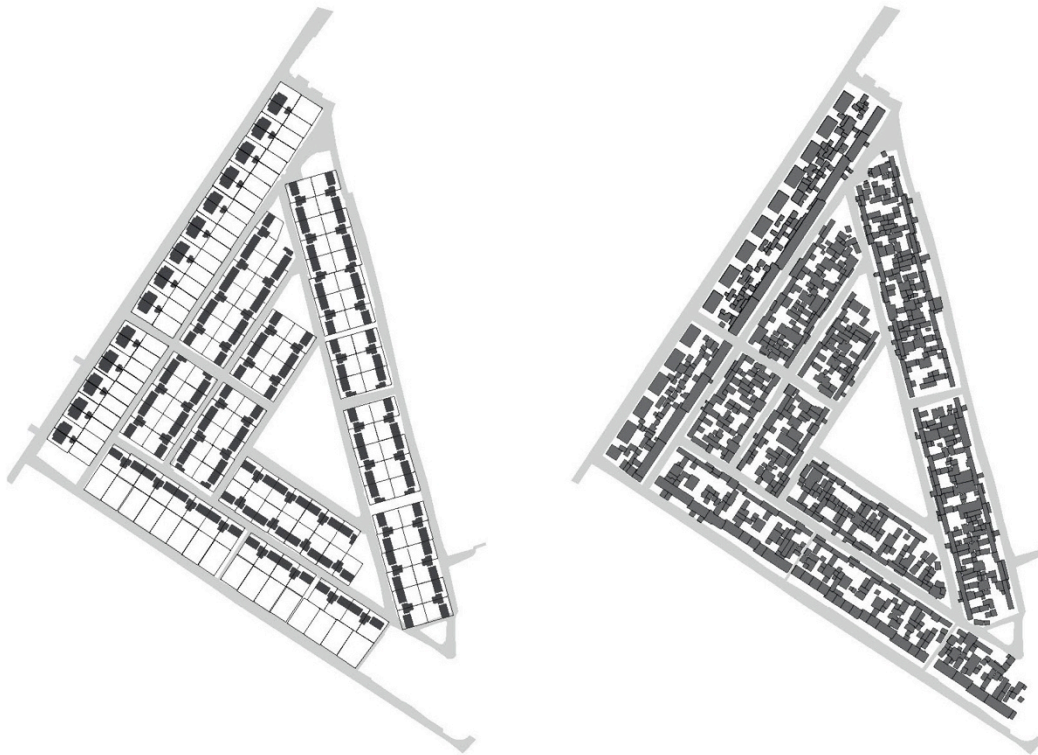


Figure 6

Plan of the “kolfe” area. Initial morphology (1970, left), and current situation (2015, right)

Drawings: Juanjo Tenorio de Peroy, Lara Spagnol, Siqi Fan, Yildiz Haseki



Figure 7

Nefas Silk District, Addis Ababa (2015)

Photo: Nelson Mota

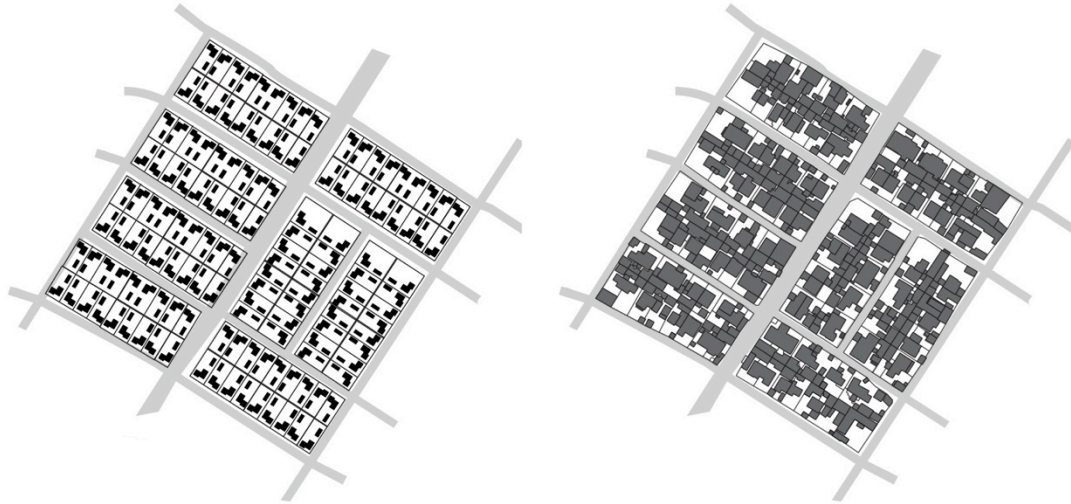


Figure 8

Plan of the Nefas Silk area. Preliminary Plan (1990, left), and current situation (2015, right)

Drawings: Juanjo Tenorio de Peroy, Lara Spagnol, Siqi Fan, Yildiz Haseki



Figure 9

Aerial View of the Nefas Silk area (Addis Ababa, 2016)

Source: Google Earth

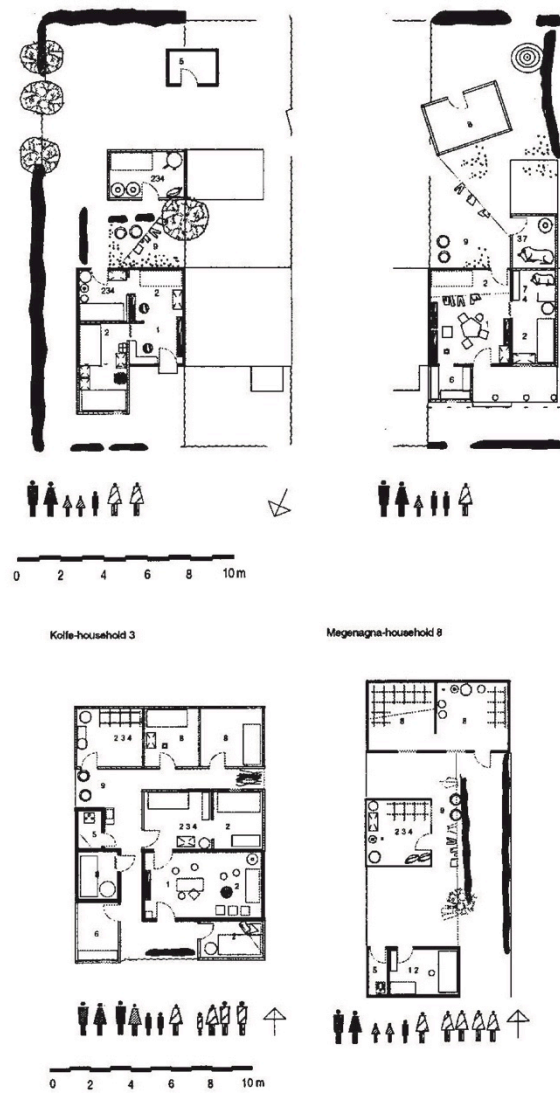


Figure 10

Examples of Dwelling layouts surveyed by Demissachew Shiferaw in Addis Ababa, 1997

Source: Demissachew Shiferaw. 'Self-Initiated Transformations of Public-Provided Dwellings in Addis Ababa, Ethiopia'. *Cities* 15, no. 6 (December 1998)