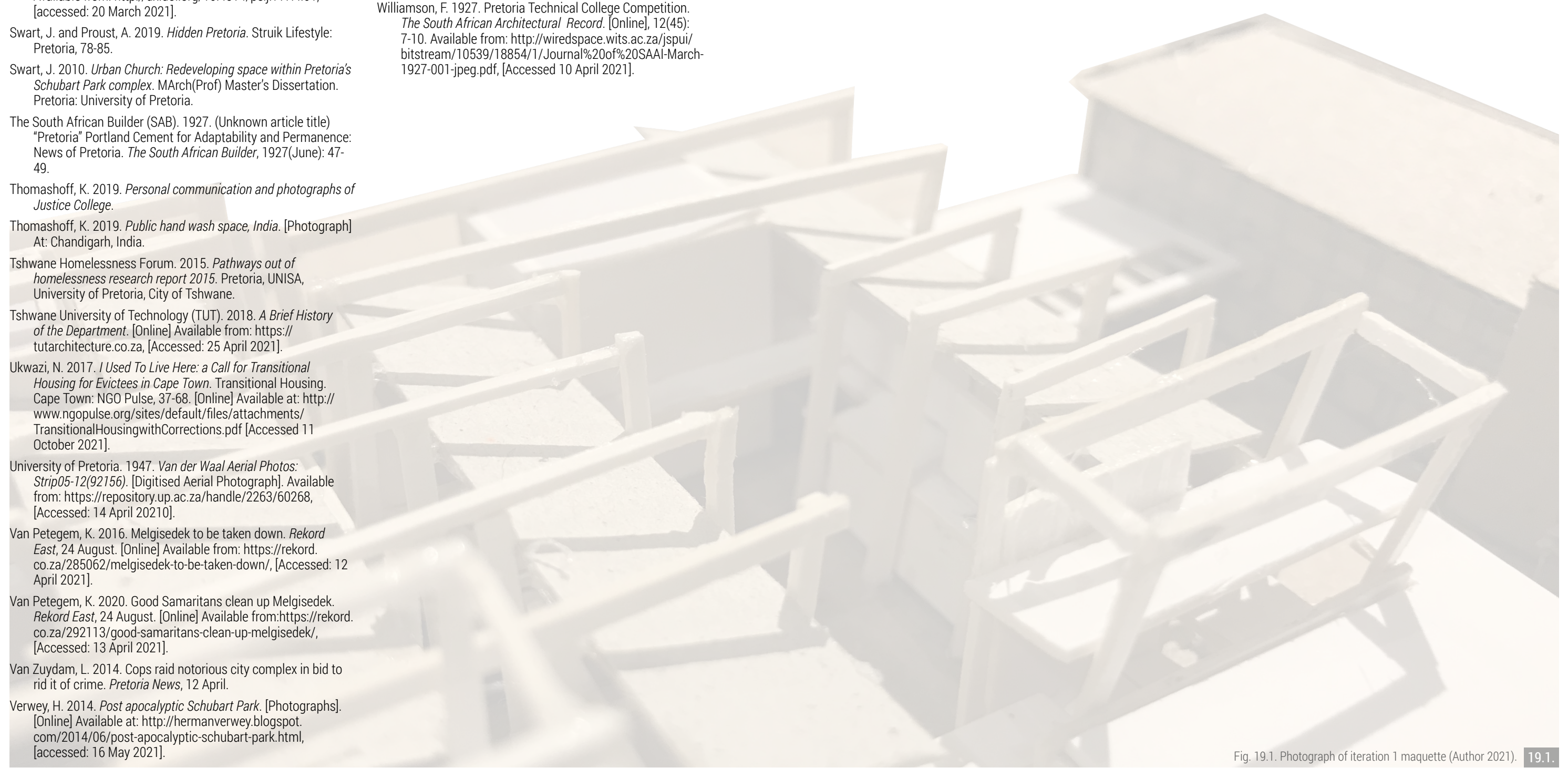


bibliography

- (Author undisclosed for ethical purposes). 2019. *Proposal for Development: Expression of interest to the City for Portion 103 Prinshof 349-JR (known as Melgisedek)*. [Unpublished document]. (Referred to in citations as: Melgisedek Proposal 2019).
- Abreu, V. 2013. Flat fire leaves 50 tenants homeless. *IOL News*, 30 July: 1-4. [Online] Available from: <https://www.iol.co.za/news/south-africa/gauteng/flat-fire-leaves-50-tenants-homeless-1554909>, [Accessed: 11 April 2021].
- andrewmarsh.com. n.d. *3D Sun-Path*. [Online] Available at: <http://andrewmarsh.com/apps/staging/sunpath3d.html> [Accessed 18 October 2021].
- Artefacts.co.za. n.d. (1). *Hostel and dining room for Pretoria Technical College*. [Online] Available from: <https://www.artefacts.co.za/main/Buildings/bldgframes.php?bldgid=5091>, [Accessed on 14 April 2021].
- Artefacts.co.za. n.d. (2). *LEITH, George Esselmont Gordon*. [Online] Available from: <https://www.artefacts.co.za/main/Buildings/archframes.php?archid=963>, [Accessed on 14 April 2021].
- Atelier d'architecture Auogerée (AAA). n.d. *Passage 56*. [Online] Available from: <https://www.urbantactics.org/projets/passage56/>, [accessed 31 May 2021].
- Awan, N., Schneider, T. and Till, J. 2011. *Spatial Agency: other ways of doing architecture*. New York: Routledge: 58, 105-106, 127.
- Bac, M. 2019. *Melgisedek Project 2019*. Powerpoint presentation to Department of Family Medicine. Pretoria: University of Pretoria.
- Bac, M. 2020. *Melgisedek or Mahala Flats status December 2020*. [Unpublished document].
- Bakker, K. & Müller, L. 2010. Intangible Heritage and Community Identity in Post-Apartheid South Africa. *Museum International*, 62(1-2): 48–54.
- Bakker, K. 2011. Heritage as transmission: toward achieving a more dominant narrative of inclusion. *Heritage & Society*, 4(2): 239-252.
- BC Housing. 2017. *Shelter Design Guidelines*. [ebook] British Columbia: BC Housing. Available at: <http://bchousing.org/publications/Shelter-Design-Guidelines.pdf> [Accessed 13 October 2021].
- Brownstone, S. 2013. *These Semi-Legal Shelters Clinging To City Walls Are A Housing Crisis Wake-Up Call*. [Online] Available from: <https://www.fastcompany.com/3023041/these-semi-legal-shelters-clinging-to-city-walls-are-a-housing-crisis-wake-up-call>, [accessed 27 May 2021].
- Bruinette, Y. 2017. *The Heritage Portal: an Experiential Narrative*. MArch(Prof) Master's Dissertation. Pretoria: University of Pretoria.
- City of Johannesburg. 2012. *SHSUP Chapter 4: Institutional Environment: Current Housing Delivery*. Johannesburg: City of Johannesburg. [Online] Available from: https://www.joburg.org.za/work/_Documents/Spatial%20Framework/SHSUP%20Chp%204.pdf, [accessed: 3 June 2021].
- City of Tshwane. 2010. Motion 104 in terms of Section 18. *Council Meeting 25 February 2010: Motion for Melgisedek Urgent Action Plan*. Pretoria: City of Tshwane. [Online] Available from: <http://www.tshwane.gov.za/sites/Council/Council%20Resolutions/Council%20Resolutions%202010/31.%20Council%2025%20February%202010/14.%20Motion%20104.pdf>, [Accessed 10 April 2021].
- City of Tshwane. 2011. *Draft City of Tshwane Metropolitan Municipality: Derelict Buildings Bylaw*. Pretoria: City of Tshwane. [Online] Available from: <http://www.tshwane.gov.za/sites/Council/Council%20Resolutions/Council%20Resolutions%202011/56.%20Council%2029%20September%202011/07.%20Draft%20City%20of%20Tshwane%20Derelict%20Buildings%20Bylaw%2029%2009%202011.pdf> [accessed 12 May 2021].
- City of Tshwane. 2018. (1) Call for Submissions of Proposals for Human Settlement Purposes. *Council Meeting 16 May 2018*. Pretoria: City of Tshwane.
- City of Tshwane. 2018. (2). City of Tshwane Aerial 2018 1M Contours. [Aerial Photograph]. At: Department of Geography, University of Pretoria.
- City of Tshwane. 2018. (3). *Regional Spatial Development Framework: Region 3*. Pretoria: City of Tshwane.
- City of Tshwane. 2018. (4). *Zoning*. [Online]. Available from: https://e-gis002.tshwane.gov.za/E_GIS_Web/, [Accessed: 19 May 2021].
- City of Tshwane. 2019. (1). *Street homelessness policy of the City of Tshwane*. Pretoria: City of Tshwane. [Online] Available from: <https://www.research.centreforfaithandcommunity.co.za/wp-content/uploads/2020/09/2019-CoT-Approved-Homelessness-Policy.pdf>, [Accessed: 26 April 2021].
- City of Tshwane. 2019. (2). Council Resolution approving the Street Homelessness Policy. *Council Meeting 25 July 2019*. Pretoria: City of Tshwane. [Online] Available from: <https://www.research.centreforfaithandcommunity.co.za/wp-content/uploads/2020/09/2019-CoT-Resolution-Homelessness-Policy.pdf>, [Accessed: 26 April 2021].
- Clark, M. 2018. *The Inner-City Federation: Fighting for Decent Housing in Inner-City Johannesburg*. Published in SERI Community Practice Notes. [Online] Available from: https://www.academia.edu/39224798/The_Inner_City_Federation_Fighting_for_Decent_Housing_in_Inner_City_Johannesburg [accessed: 26 October 2020].
- Clarke, N. 2016. *Westfort Village Tshwane*. [Online] theheritageportal.co.za. Available at: <http://www.theheritageportal.co.za/thread/westfort-village-tshwane> [Accessed 8 March 2021].
- climate-data.org. n.d. *Climate Pretoria (South Africa)*. [Online] Available from: <https://en.climate-data.org/africa/south-africa/gauteng/pretoria-154/> [Accessed 12 November 2021].
- Climb Any Mountain. 2013. *Climb Any Mountain: The TLC Programme*. [Online] Available at: <http://climbanymountain.org/wp-content/uploads/2013/11/Climb-Any-Mountain-The-TLC-Programme-Oct-2013.pdf> [Accessed 12 October 2021].
- Cochrane, M. 2018. *The Eventuality of Space*. MArch(Prof) Master's Dissertation. Pretoria: University of Pretoria.
- Coelho, C. 2015. The Living Experience as a design content: from concept to appropriation. *Ambiances*. [Online], 1(2015):1-19. Available from: <http://journals.openedition.org/ambiances/606>, [accessed on: 25 March 2021].
- Cohen, N. and Garson, F., 2016. *University of Mpumalanga, Mbombela, SA*. [Online] Available at: <https://www.cohengarson.co.za/ump-residence> [Accessed 12 October 2021].
- Cross, C., Seager, J., Erasmus, J., Ward, C., & O'Donovan, M. 2010. Skeletons at the feast: A review of street homelessness in South Africa and other world regions. *Development Southern Africa*, 27(1):5-20.
- Da Costa, M.A. & Van Rensburg, R. J. 2008. Space as Ritual: Rethinking Spatial Strategies in the African City. *South African Journal of Art History*, 23(3): 43–55.
- De Beer, S. & R. Vally. 2017. (1). Pathways out of homelessness: An engaged, trans-disciplinary collaborative in the City of Tshwane. *Development Southern Africa*, 34(4):383-384.
- De Beer, S. & R. Vally. 2017. (2). (Finding) Pathways out of homelessness: An engaged, trans-disciplinary collaborative in the City of Tshwane. *Development Southern Africa*, 34(4):385-398.
- De Beer, S., Nnorom, J. & Thomas, L. 2020. *Healing Urban Fractures: Inside a Pandemic: Vulnerability, imagination, innovation in the City of Tshwane*. Pretoria: Centre for Faith and Community.
- De Klerk. 2015. *Homelessness, housing and spatial justice: Three case studies in the Tshwane Inner City*. Unpublished article for the Tshwane Homelessness Forum Research Project, 1-23.
- De Kock, R. 2014. *Picketing sides: fence as social service urban device*. MArch(Prof) Master's dissertation. Pretoria: University of Pretoria.
- De Villiers, I. 2014. Tshwane 2055 and the (im)possibility of spatial justice. *De Jure Law Journal*, 47(2): 202-217. [Online] Available from: http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2225-71602014000300005, [accessed: 12 May 2021].
- Doron, G. 2000. The Dead Zone and the Architecture of Transgression. *City*. [Online], 4(2): 247-263, DOI: 10.1080/13604810050147857. Available at: <https://doi.org/10.1080/13604810050147857> [Accessed 24 May 2020].
- Dreifuss-Serrano, C. 2020. *Learning from Informality: Creativity interventions and appropriation strategies*. Presented at the 1st ICONA (International Conference on Architecture): CREATIVITY and REALITY: The art of building future cities, Piazza Borghese 9, Rome, 18-19 December 2019: 597-603.
- Du Toit, J & Mouton, J. 2013. A typology of designs for social research in the built environment. *International Journal of Social Research Methodology*. [Online], 16(2): 125-139. Available from: <http://dx.doi.org/10.1080/13645579.2012.657013>.
- Du Toit, J. 2009. Utopia on Trial Again: Perceived Residential Quality at Schubart Park in Post-Apartheid South Africa. *Architectural & Planning Research*. [Online] 26(2), 159-175. Available at: <https://www.jstor.org/stable/43030863>?ab_segments=0%252Fbasic_SYC-5055%252Ftest&refreqid=excelsior%3Ae05c40ea8c95cabed7ecb406bd96c7a0 [Accessed 8 March 2020].
- Duma, N. 2020. *Homeless turn boredom at eThekweni Covid-19 shelter into successful agri project*. [Online] Available at: <https://ewn.co.za/2020/10/14/homeless-turn-boredom-at-ethekweni-covid-19-shelter-into-successful-agri-project> [Accessed: 31 May 2021].
- Farbstein, J., Axelrod, E. Shibley, R. And Wener, R. 2009. *Urban Transformation: 2009 Rudy Bruner Award for Urban Excellence*. Cambridge: the Bruner Foundation, p. 84 - 107.
- Fisher, R.C. 1998. Chapter Six: The Third Vernacular. In: Fisher, R.C., Le Roux, S and Maré, E. 1998. *Architecture of the Transvaal*. University of South Africa: Pretoria: 123-140.
- Fisher, R.C. 2014. Pretoria, Limpopo & Mpumalanga: The built heritage of the Northern Transvaal in the time of the universal franchise. In: Heroldt, A. (ed.). *Architectural conservation in South Africa since 1994: 100+ Projects*. Port Elizabeth: DOT Matrix Publications: 360-361.
- Forder, C. 2019. *Photos of Justice College*. [Digital Photographs].
- Furner, S. 1926. Pretoria Technical College Competition. *The South African Architectural Record*. [Online], 11(44): 94-98. Available from: <http://wiredspace.wits.ac.za/bitstream/handle/10539/18855/Journal%20of%20SAAI-December-1926-001-jpeg.pdf?sequence=4&isAllowed=y>, [Accessed 9 April 2021].
- Gaetz, S. 2014. *Reimagining the Response to Youth Homelessness in Canada*. Coming of Age. Toronto: The Canadian Observatory on Homelessness Press, 86. [Online] Available at: https://www.homelesshub.ca/sites/default/files/attachments/ComingOfAgeHH_0.pdf [Accessed 11 October 2021].
- Gibberd, J. 2020. *Sustainable Building Assessment Tool Residential 1.04. Gauge Capability*. South Africa: Gauge Capability.
- Grunewald, T. and Breed, I. 2013. Cultural landscapes as a model for natural and human systems integration. *South African Journal of Art History*. [Online], 28(3): 51-76. Available from: <https://journals-co-za.uplib.idm.oclc.org/content/sajah/28/3/EJC149228?fromSearch=true> [Accessed 8 March 2020].
- Grunewald, T. 2013. *For(t)midable Landscapes: Past cultural landscapes as a model to aid ecological and social healing at Fort West Village*. MLArch (Prof). Pretoria: University of Pretoria.
- Halverstadt, L. 2019. *What We Mean When We Talk About Housing the Homeless*. [Online] Available at: <https://www.voiceofsandiego.org/topics/government/what-we-mean-when-we-talk-about-housing-the-homeless/> [Accessed 11 October 2021].
- Harper, P. 2020. *Hope grows on Durban beachfront*. [Online] Available at: <https://mg.co.za/news/2020-12-01-hope-grows-on-durban-beachfront/> [Accessed: 31 May 2021].
- Harper, P. 2021. *A year into Covid, Durban's beachfront farmers are still tilling the soil*. [Online] Available at: <https://mg.co.za>

- /news/2021-03-27-a-year-into-covid-durbans-beachfront-farmers-are-still-tilling-the-soil/ [Accessed: 31 May 2021].
- Hartshorn, T. A. 1992. *Interpreting the city: An urban geography*. 2nd ed. New York: John Wiley.
- Henning, E. 2004. *Finding your way in qualitative research*. Paarl: Van Schaik.
- Henning, W. 2020. *Meet Durban's urban farmers*. [Online] Available at: <https://www.dailymaverick.co.za/article/2020-12-04-meet-durbans-urban-farmers/> [Accessed: 31 May 2021].
- Heppner, T. 2016. *Laundry Day in Chefchaouen*. [Online photograph]. At: Chefchaouen, Morocco. Available at: <https://followyourhearttours.com/2016/09/13/laundry-day-in-chefchaouen-real-morocco-travel-experience/> [Accessed 12 October 2021].
- Hill, J. 1998. *Occupying Architecture: between the architect and the user*. London: Routledge.
- Hill, J. 2003. *Actions of Architecture: architects and creative users*. London: Routledge.
- Hlahla, P. 2010. Gleam of hope for Melgisdek. *Pretoria News*, 1 July: 1-2.
- Hlahla, P. 2012. Tenants clamour for better living conditions. *Pretoria News*, 19 April. [Online] Available from: <https://www.iol.co.za/pretoria-news/tenants-clamour-for-better-living-conditions-1279580>, [Accessed: 26 April 2021].
- Horton, R.P. 2015. *Guerrilla Architecture: Hacktivist Urban Housing*. [Online] Available from: <https://www.urbangardensweb.com/2015/09/04/guerrilla-architecture-hacktivist-urban-housing/>, [accessed 27 May 2021].
- Interviews with stakeholders (essay 2):**
- Individual interviewees are anonymous to maintain confidentiality as per ethical clearance conditions.
- Interviewee A. 2021. *Interview with Karberg, H.R.* 8 June, Pretoria. [University of Pretoria Health Sciences Doctor].
- Interviewee B. 2021. *Interview with Karberg, H.R.* 8, 9 June, Online platform: Zoom. [COSUP Social Worker].
- Melgisedek Community Outreach group (MCO). 2021. *Interview with Karberg, H. R.* 7 June, Pretoria. [Self-organised outreach group from surrounding community].
- Johannssen, R. 2003. *Case Study Methodology. Speech presented at the International Conference "Methodologies in Housing Research"*. Royal Institute of Technology, Stockholm, 22-24 September: 1-14.
- Karberg, H. R. (Author). 2020. *Honours Quarter 4 Final Presentation*. University of Pretoria: Pretoria.
- Karberg, H.R. (Author). 2021. *Melgisedek Site photographs taken on 6 April, 11 April, 19 April*. [Photographs]. Pretoria.
- Kriel, I., Tembe, M. J. P. & Mashava, V. R. 2017. Homelessness in Pretoria: Exploring the survival challenges of the homeless and their right to the city. *Development South Africa*: 1-11.
- Kriel, J. D. 2017. International responses to homelessness: Lessons for the City of Tshwane. *Development Southern Africa*, 34(4): 399-413. [Online] Available from: <https://doi.org/10.1080/0376835X.2017.1310027>, [accessed 19 June 2020].
- Kruger, C. 2016. Melgisedek se mense praat. *Pretoria Moot Rekord*, 5 August: 1.
- Kuipers, M. 2015. *Heritage Mission to South Africa, 23-30 March, 2015. 'Mapping' Westfort Village at Pretoria, Tshwane*. [Online document] Amersfoort: Cultural Heritage Agency of the Netherlands. Available from: https://www.up.ac.za/media/shared/249/ZP_Files/rijksdienst_voor_het_cultureel_erfgoed_2015_mapping_westfort_village_at_pretoria_zp89750.pdf [Accessed 8 March 2020].
- Mahlangu, T. 2016. Melgisedek building catches fire. *Rekord East*, 2 November. [Online] Available from: <https://rekord.co.za/285490/melgisedek-building-catches-fire/>, [Accessed: 11 April 2021].
- Mahope, R. 2018. Unfortunate Melgisedek community surprised with Christmas party. *Rekord East*, 18 December. [Online] Available from: <https://rekord.co.za/289922/132703>, [Accessed: 12 April 2021].
- Mahope, R. 2020. City homeless remain hopeless for better living conditions. *Pretoria Rekord*, 27 November. [Online] Available from: <https://rekord.co.za/359848/video-city-homeless-remain-hopeless-for-better-living-conditions/>, [Accessed: 2 May 2021].
- Malka, S. n.d. *A-Kamp47*. [Online] Available from: <https://www.stephanemalka.com/portfolio/a-kamp47-i-inhabit-the-wall-i-marseille-2013/>, [accessed 27 May 2021].
- Maltzan, M. 2020. *Addressing Homelessness: What can (and can't) Architecture do?* Virtual Lecture: 20th Annual Dunlop Lecture on 13-10-2020.
- Mangayi, L. C. 2017. 'Not just numbers!' Homeless people as potential economic contributors in Tshwane. *Development South Africa*, 34(4): 450-467.
- Martin, B. & Hannington, B. 2012. *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. Beverly: Rockport Publishers.
- Medina, S. 2013. *A-KAMP47 / Stephane Malka*. [Online] Available from: <https://www.archdaily.com/461696/a-kamp47-stephane-malka>, [accessed 27 May 2021].
- meteoblue.com. n.d. *Simulated historical climate & weather data for Pretoria*. [Online] Available from: https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/pretoria-republic-of-south-africa_964137, [Accessed: 12 November 2021].
- meteoblue.com. n.d. *Climate Change Pretoria*. [Online] Available from: https://www.meteoblue.com/en/climate-change/pretoria-republic-of-south-africa_964137, [Accessed: 12 November 2021].
- Milford, J. 2016. Light at the end of the tunnel for Melgisedek. *Rekord East*, 3 December. [Online] Available from: <https://rekord.co.za/285689/light-at-the-end-of-the-tunnel-for-melgisedek>, [Accessed: 11 April 2021].
- mmaltzan.com. n.d. *Rainbow Apartments*. [Online] Available at: <http://www.mmaltzan.com/projects/rainbow-apartments/> [Accessed 12 October 2021].
- Moatshe, R. 2016. Tshwane fails to relocate Melgisedek residents. *Pretoria News*, 15 Feb. [Online] Available from: <https://www.iol.co.za/news/south-africa/gauteng/tshwane-fails-to-relocate-melgisedek-residents-1984703>, [Accessed: 12 April 2021].
- Moatshe, R. 2019. Illegal occupants of condemned Melgisedek to be relocated. *Pretoria News*, 17 April. [Online] Available from: <https://www.iol.co.za/pretoria-news/illegal-occupants-of-condemned-melgisedek-to-be-relocated-21470609>, [Accessed: 11 April 2021].
- Mollet, L. 2018. *Cultural landscape as a catalyst for social development: A case for Westfort Village*. Pretoria: MArch (Prof). University of Pretoria.
- Moore, N. 2007. *From dead city space to vibrant Hub of talent*. MArch(Prof) Master's dissertation. Pretoria: University of Pretoria.
- Mudzuli, K. 2014. Funds set aside for upgrades of home for destitute. *Pretoria News*, 4 June.
- Nakib, F. 2010. *Toward an Adaptable Architecture: Guidelines to Integrate Adaptability in the Building*. In Proceedings of CIB 2010 World Congress Conference: Building a Better World, Salford Quays, United Kingdom, May 2010. [Online] Available from: https://www.researchgate.net/publication/260277772_Toward_an_Adaptable_Architecture_Guidelines_to_Integrate_Adaptability_in_the_Building [Accessed 13 May 2021].
- National Alliance to End Homelessness (NAEH). 2021. *Permanent Supportive Housing - National Alliance to End Homelessness*. [Online] Available at: <https://endhomelessness.org/ending-homelessness/solutions/permanent-supportive-housing/> [Accessed 12 October 2021].
- Ndlazi, S. 2019. Foreigners caught up in fight between taxi drivers and drug dealers speak. *Pretoria News*, 4 September. [Online] Available from: <https://www.iol.co.za/pretoria-news/foreigners-caught-up-in-fight-between-taxi-drivers-and-drug-dealers-speak-31804250>, [Accessed: 25 April 2021].
- Ngwenya, M. 2017. *Johannesburg Inner City's Appropriated Buildings: Resident's responses to vulnerability and precarious living conditions*. Master's Dissertation. Johannesburg: University of the Witwatersrand. [Online] Available from: http://wiredspace.wits.ac.za/bitstream/handle/10539/24101/Signed_Final_PRINT_Aug_Research%20Report_2017_Report_Makale%20Ngwenya.pdf?sequence=2&isAllowed=y, [accessed on 5 April 2021].
- NHRA (National Heritage Resources Act) [as referred to in citations]: RSA (Republic of South Africa). 1999. *National Heritage Resources Act No. 25 of 1999*. Available from: www.dac.gov.za/sites/default/files/Legislations%20Files/a25-99.pdf [Accessed 28 April 2021].
- Noero Architects. 2013. *Transitional Living Centre*. [Online] Available at: <https://www.noeroarchitects.com/project/transitional-living-centre/> [Accessed 12 October 2021].
- Norberg-Schulz, C. 1996. The Phenomenon of Place. In: Nesbitt, K. ed. *Theorizing a New Agenda for Architecture*. New York: Princeton Architectural Press, 414-427.
- Noschis, K. 1978. Appropriation of space: a method and two case studies. *Ekistics*. [Online] 45(273): 451-466. Available at: <https://www.jstor.org/stable/43623631> [Accessed 8 March 2020].
- Ntakirutimana, E. 2015. *Facing homeless people in the inner city of Tshwane: A missiological conversation with the Wesleyan Tradition*. Doctor of Theology in Missiology thesis. Pretoria: University of South Africa.
- Ntakirutimana, E. 2018. Housing challenge and urban regeneration: A contribution of faith-based action with special reference to a case study from the City of Tshwane. *HTS Theologies Studies/Theological Studies*, 74(3): 1-9. [Online] Available from: <https://doi.org/10.4102/hts.v74i3.5151> [accessed on 12 April 2021].
- Oberholzer, J.P. and Lotter, C. 2002. *From Cantonments to Technikon: a chronicle of Technikon*. Pretoria: Technikon Pretoria.
- Orbasli, A. 2008. *Architectural Conservation*. Oxford: Blackwell Publishing, p.37-46.
- Pallasmaa, J. 1994. Architecture of the Seven Senses. In: Holl, S, Pallasmaa, J, and Perez- Gomez, A. eds. *Questions of Perception: Phenomenology of Architecture. Architecture & Urbanism*. July 1994 ed. (special issue), 27-37.
- Pallasmaa, J. 2000. Hapticity and Time: Notes on Fragile Architecture. *The Architectural Review*, 207(1239): 78-84. [Online]. Available: <http://iris.nyit.edu/~roody/Thesis/Readings/Pallasmaa%20-%20Hapticity%20and%20Time.pdf> [2014, 29 April].
- Pearse, G.E. 1930. Pretoria Notes and News. *The South African Architectural Record*. [Online], 15(60): 111, 129. Available from: <http://wiredspace.wits.ac.za>, [Accessed 9 April 2021].
- Pearse, G.E. and Howie, W.D. 1946. Dr. G. E. Gordon Leith, M.C., A.R.I.B.A., M.I.A. *The South African Architectural Record*. [Online], 1946(December): 279-286. Available from: <http://wiredspace.wits.ac.za/bitstream/handle/10539/22926/Journal%20of%20SAAI-December-1946-001.pdf?sequence=12&isAllowed=y>, [Accessed 9 April 2021].
- Penfold, T. 2012. Public and Private Space in Contemporary South Africa: Perspectives from post Apartheid Literature. *Journal of Southern African Studies*. [Online], 38(4):993-1006. Available from: <https://doi.org/10.1080/03057070.2012.751182> [Accessed 16 April 2021].
- Petcou, C. and Petrescu, D. 2013. Tactics for a transgressive practice. *Architectural Design*, 83(6): 58-65. [Online] Available from: <https://onlinelibrary-wiley-com.uplib.idm.oclc.org/doi/epdf/10.1002/ad.1675>, [accessed: 31 May 2021].
- Pretoria News. 2010. Conditions worsen for city's forgotten people. *Pretoria News*, 21 May: 1-2.
- Ramprasad, C. And Philip, L. 2015. Surfactants and personal care products removal in pilot scale horizontal and vertical flow constructed wetlands while treating greywater. *Chemical Engineering Journal*, 284(2016): 458-468. [Online] Available at: <http://dx.doi.org/10.1016/j.cej.2015.08.092> [accessed 12 October 2021].
- Ramprasad, C. and Philip, L. 2018. Greywater treatment using horizontal, vertical and hybrid flow constructed wetlands. *Current Science*, 114(1): 155-165. [Online] Available at: <https://web-p-ebshost-com.uplib.idm.oclc.org/ehost/pdfviewer/pdfviewer?vid=1&sid=20cf176f-244f-422a-adc4-af6e8adc922a%40redis> [accessed 12 October 2021].
- Rende, J. 1998. doing it, (un)doing it, (over)doing it yourself: Rhetorics of Architecture. In: Hill, J. ed. *Occupying Architecture: between the architect and the user*. London: Routledge, 135-145.
- rudybruneraward.org. 2009. *St. Joseph Rebuild Center*. [Online] Available from: <http://www.rudybruneraward.org/winners/st-joseph-rebuild-center/>, [accessed 27 May 2021].
- SANS 10400. 2011. *The Application of the National Building Regulations: Part C: Dimensions: 5-6, Part P: Drainage: 31-32, and Part S: Facilities for people with disabilities*. South Africa.
- SANS 204-2. 2011. *South African National Standard. Energy efficiency in buildings, part 2: The application of the energy efficiency requirements for buildings with natural environmental control*. SABS Standards Division. Schmidt, S. (siegsschmidt@gmail.com) 2021. *Melgisedek Terrein Inligting*. [Email to:] Karberg, HR. (heikeschroder@gmail.com) 2021-04-15.
- Schubart Park case [as referred to in citations]: Constitutional Court of South Africa. 2012. *Media Summary: Schubart Park Residents' Association and others v City of Tshwane Metropolitan, case CCT 23/12*.
- Searra, I. 2020. *Elangeni Green Zone in Durban sign with supermarket*. [Online] Available at: <https://www.getaway.co.za/travel-news/elangeni-green-zone-in-durban-sign-with-supermarket/> [Accessed: 31 May 2021].
- Sennett, R. 1993. Chapter Five: Exposure. In: *The Conscience of the Eye*. London: Faber and Faber: 121-149.
- Sennett, R. 1993. Chapter Six: Streets full of Life. In: *The Conscience of the Eye*. London: Faber and Faber: 150-167.

- Shaw, P and Hudson, J. 2009. *The Qualities of Informal Space: (Re) appropriation within the informal, interstitial spaces of the city*. In Proceedings of Conference of Occupation: Negotiations with Constructed Space, University of Brighton, Brighton, 2-4 July: 1-13. [Online] Available from: http://arts.brighton.ac.uk/_data/assets/pdf_file/0003/44850/41_Pamela-Shaw-Joanne.Hudson_The-Qualities-of-Informal-Space.pdf.
- SowetanLive. 2021. *Farming project gives homeless group a fresh start*. [Online] Available at: <https://www.sowetanlive.co.za/sebenza-live/2021-01-12-farming-project-gives-homeless-group-a-fresh-start/> [Accessed: 31 May 2021].
- Stauffer, B. and Spuhler, D. 2014. *Vertical Flow Constructed Wetland*. [Online] Available at: <https://sswm.info/factsheet/vertical-flow-cw> [Accessed 18 October 2021].
- Strijdom, J. And Viljoen, S. 2014. Unlawful occupation of inner-city buildings: a constitutional analysis of the rights and obligations involved. *PER Journal*, 17(4): 1207-1261. [Online] Available from: <http://dx.doi.org/10.4314/pej.v17i4.01>, [accessed: 20 March 2021].
- Swart, J. and Proust, A. 2019. *Hidden Pretoria*. Struik Lifestyle: Pretoria, 78-85.
- Swart, J. 2010. *Urban Church: Redeveloping space within Pretoria's Schubart Park complex*. MArch(Prof) Master's Dissertation. Pretoria: University of Pretoria.
- The South African Builder (SAB). 1927. (Unknown article title) "Pretoria" Portland Cement for Adaptability and Permanence: News of Pretoria. *The South African Builder*, 1927(June): 47-49.
- Thomashoff, K. 2019. *Personal communication and photographs of Justice College*.
- Thomashoff, K. 2019. *Public hand wash space, India*. [Photograph] At: Chandigarh, India.
- Tshwane Homelessness Forum. 2015. *Pathways out of homelessness research report 2015*. Pretoria, UNISA, University of Pretoria, City of Tshwane.
- Tshwane University of Technology (TUT). 2018. *A Brief History of the Department*. [Online] Available from: <https://tutarchitecture.co.za>, [Accessed: 25 April 2021].
- Ukwazi, N. 2017. *I Used To Live Here: a Call for Transitional Housing for Evictees in Cape Town*. Transitional Housing. Cape Town: NGO Pulse, 37-68. [Online] Available at: <http://www.ngopulse.org/sites/default/files/attachments/TransitionalHousingwithCorrections.pdf> [Accessed 11 October 2021].
- University of Pretoria. 1947. *Van der Waal Aerial Photos: Strip05-12(92156)*. [Digitised Aerial Photograph]. Available from: <https://repository.up.ac.za/handle/2263/60268>, [Accessed: 14 April 2021].
- Van Petegem, K. 2016. Melgisedek to be taken down. *Rekord East*, 24 August. [Online] Available from: <https://rekord.co.za/285062/melgisedek-to-be-taken-down/>, [Accessed: 12 April 2021].
- Van Petegem, K. 2020. Good Samaritans clean up Melgisedek. *Rekord East*, 24 August. [Online] Available from: <https://rekord.co.za/292113/good-samaritans-clean-up-melgisedek/>, [Accessed: 13 April 2021].
- Van Zuydam, L. 2014. Cops raid notorious city complex in bid to rid it of crime. *Pretoria News*, 12 April.
- Verwey, H. 2014. *Post apocalyptic Schubart Park*. [Photographs]. [Online] Available at: <http://hermanverwey.blogspot.com/2014/06/post-apocalyptic-schubart-park.html>, [accessed: 16 May 2021].
- Video Production Durban. 2020. *Elangeni Green Zone HD*. [Online video] Available at: https://www.youtube.com/watch?v=ZcgkszpKFJ4&ab_channel=VideoProductionDurban [Accessed: 31 May 2021].
- Vivier, T. 2020. *Durban homeless turn vacant lot into incredible food garden during lockdown*. [Online] Available at: <https://www.goodthingsguy.com/people/homeless-durban-urban-garden/> [Accessed: 31 May 2021].
- Vosloo, P., 2017. *Efficient urban storm water management and re-use*. Lecture to the ONT 300 class on 2017-07-18.
- weatherspark.com. 2016. *Climate and Average Weather Year Round at Pretoria*. [Online] Available from: <https://weatherspark.com/y/148605/Average-Weather-at-Pretoria-South-Africa-Year-Round> [Accessed: 12 November 2021].
- Wayne Troyer Architects. 2008. *St. Joseph Rebuild Center*. [Online] Available from: <https://studiowta.com/project/st-joseph-rebuild-center/>, [accessed 26 May 2021].
- Williamson, F. 1927. Pretoria Technical College Competition. *The South African Architectural Record*. [Online], 12(45): 7-10. Available from: <http://wiredspace.wits.ac.za/jspui/bitstream/10539/18854/1/Journal%20of%20SAAI-March-1927-001-jpeg.pdf>, [Accessed 10 April 2021].


 Fig. 19.1. Photograph of iteration 1 maquette (Author 2021). 19.1.

20

appendices



Fig. 20.1. Photograph of derelict staff building at Melgisedek (Author 2021).

20.1.

APPENDIX I: CASE STUDY DESCRIPTIONS

The following cases, each located in the City of Tshwane, were studied as an overview of the phenomenon of occupied neglected buildings from a local perspective, for site selection purposes and with a focus on the nature of appropriation. Each building is currently or has previously been occupied by vulnerable persons unable to afford alternative (urban) housing. Below is a brief description of the site and scenario of each case, as well as the icon for each case correlating to those on the scales of analyses in the document:



Fig. 4.6. Location sketch of case studies (Author 2021).

4.6.

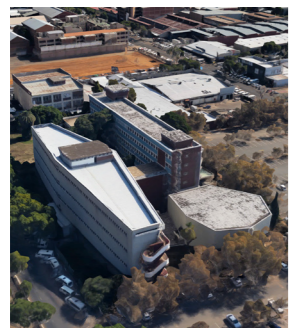


WESTFORT VILLAGE (WV)
former leprosy hospital



Fig. 4.7. ID photo of Westfort village (Swart & Proust 2019), case study icon and location sketch (Author 2021).

4.7.



JUSTICE COLLEGE (JC)
former training centre for National School of Government (NSG) Department

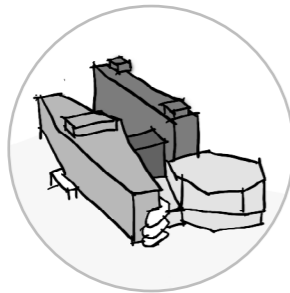


Fig. 4.8. ID photo of Justice College (Google earth 2021), case study icon and location sketch (Author 2021).

4.8.

Westfort Village is a former leprosy institution established in 1898 and designed by Dutch–South African architect Sytze Wierda. It is situated west of Pretoria at the foot of the old ZAR Fort Daspoort (Bruinette 2017, Kuipers 2015) and has a very complex and layered history and heritage. Due to the fear and stigma of leprosy at the time, the institution was isolated from the rest of the city. Abandoned in 1997 due to progress in medical treatment of leprosy that rendered the isolated institution unnecessary (Kuipers 2015: 10), the site gradually became inhabited by (eventually) approximately 4000 vulnerable people who have appropriated the site with informal structures, creches, shops and dwellings (Bruinette 2017, Kuipers 2015, Mollel 2018). Over the years, the community has taken ownership of the site; however, the landscape and buildings have deteriorated due to neglect (Grunewald and Breed 2013). Since 2016, the site has been earmarked for a large and controversial mixed housing development (Clarke 2016).

Situated in Pretoria Central, the site known as Justice College is a building that was designed by Brian Sandrock and built around 1960. It was originally used by the Extramural Department of the University of Pretoria, but after 1986, the building was used as a training centre for the National School of Government (NSG) Department, known as Justice College (Bates 2018: 32). In line for renovations in 2010, the building was vacated; however, for various reasons, the renovation project was halted, leaving the building to deteriorate as a result of neglect and vandalism (Thomashoff 2019). The building was gradually stripped or “mined” (Bates 2018: 37), while multiple street homeless and nyaope users occupied the building for shelter and to extract materials for illegal trade (Thomashoff 2019). In 2018, the commencement of the renovation-turned-restoration project by Thomashoff and Partner Architects was re-initiated and is currently underway. During the author’s internship at Thomashoff and Partner Architects, visits to the site revealed the dire situation reflected in the damage and inscriptions of plight by informal occupants.



MELGISEDEK (MG)
former Pretoria Technical College hostels, then NGO complex



Fig. 4.9. ID photo of Melgisedek (Author 2021), case study icon and location sketch (Author 2021).

4.9.



STRUBEN SHELTER (SS)
city-owned homeless shelter

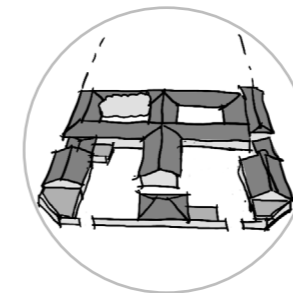
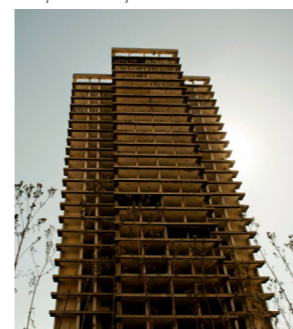


Fig. 4.10. ID photo of Struben Shelter (Google earth 2021), case study icon and location sketch (Author 2021).

4.10.



SCHUBART PARK (SP)
former housing development

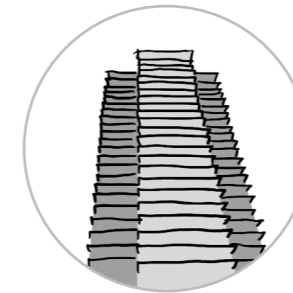
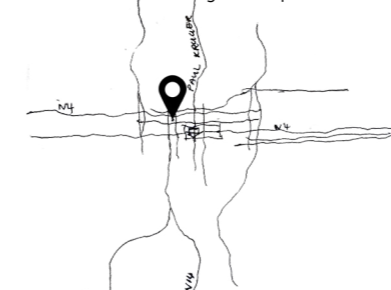


Fig. 4.11. ID photo of Schubart Park (Verwey 2014), case study icon and location sketch (Author 2021).

4.11.

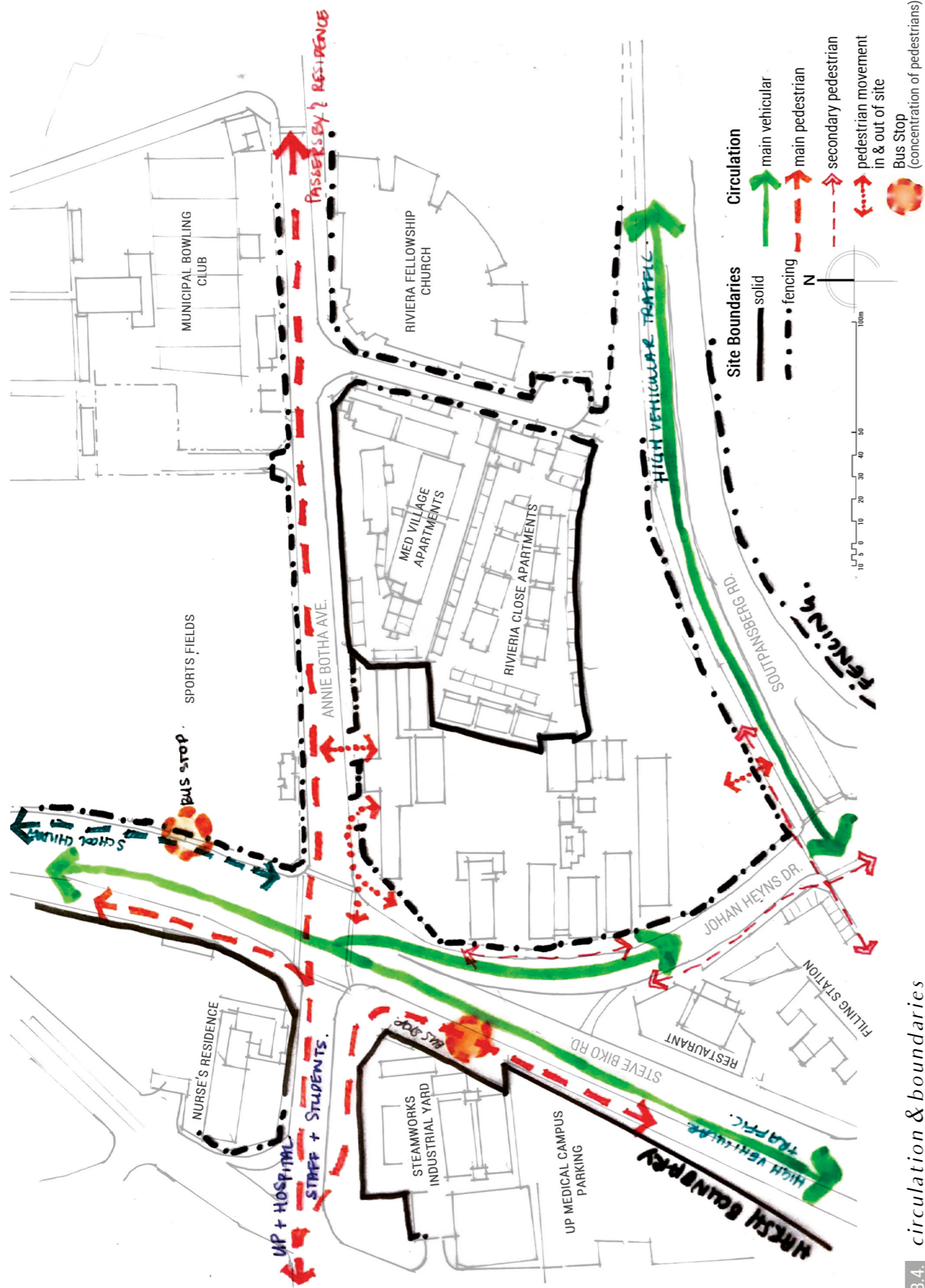


The city-owned site known as Melgisedek or “Mahala Flats” (De Beer 2021), situated in Prinshof close to the Tshwane District and Steve Biko Hospitals, was originally used as hostels for the Pretoria Technical College until 1986, and then as a homeless shelter run until 2009 (Bac 2020, Schmidt 2021). It has since been unmanaged, unmaintained and occupied by vulnerable people varying in numbers over the years, with about 500 current occupants (Bac 2020). The “near” homeless inhabitants have formed a legitimate community and taken ownership of the site by appropriating it with informal trade and dwelling structures and various communal and daily activities. There are numerous buildings on site in various states of decay, with the oldest built in 1927 and designed by Gordon E. Leith (SAB 1927). The site is currently earmarked for redevelopment into social and/or student housing (van Petegem 2020).

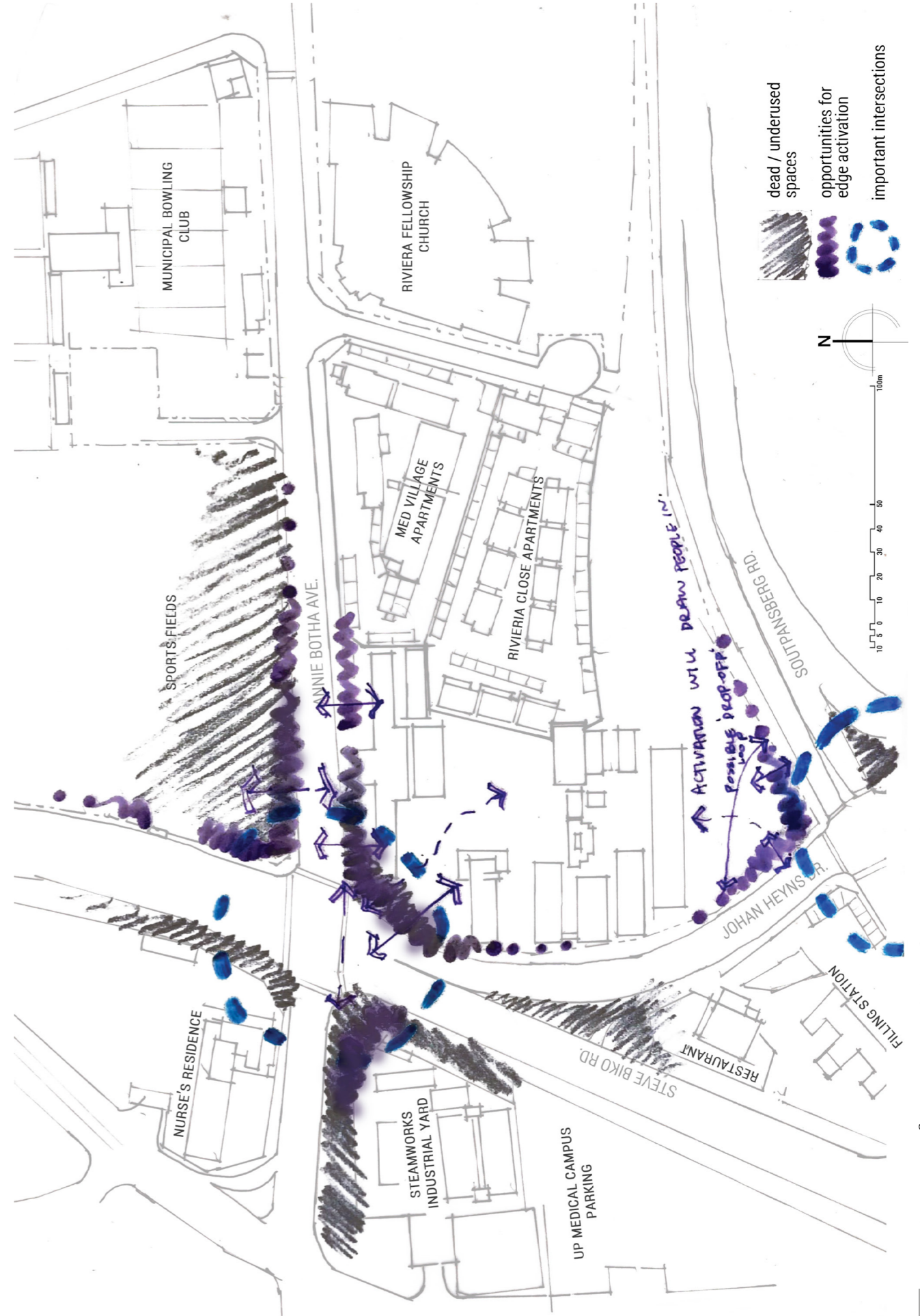
The Struben Street shelter is located on the western edge of Marabastad in a mixed-warehouse city-owned building built in the mid-twentieth century (De Klerk 2015: 3, 15). It is the only homeless shelter in Pretoria owned by the municipality (De Klerk 2015: 3). Intended as an overnight shelter for up to 150 homeless people, the site has been mismanaged, unmaintained and permanently occupied by up to 800 vulnerable people over the past 15 years (De Klerk 2015: 15). The inhabitants – many the elderly, substance users, people with “chronic psycho-social illnesses”, or mothers and children (Tshwane Homelessness Forum 2015: 3) – have appropriated the spaces to an extent; however, the site is considered “hijacked” by criminals who illegally exploit other vulnerable occupants (Mahope 2020). In 2014, a municipal notice of eviction without provision of alternative accommodation caused uproar and sparked discussions regarding the city’s policy and treatment of the homeless (Ntakirutimana 2015: 101, Tshwane Homelessness Forum 2015: 3).

Lastly, the Schubart Park high-rise housing complex close to Pretoria CBD was completed in 1976 as part of an inner-city urban renewal and housing development in the 1970s (Du Toit 2009: 160). Poor administration, social problems, neglect and mismanagement over the years and during the transition from apartheid to democracy has led to deterioration of the buildings and the residential life (Du Toit: 159, Swart 2010: 78). Eventually, the site became overcrowded and continuously dilapidated while housing a volatile community, with units being “hijacked” by criminals (Ntakirutimana 2015: 99, 100). In 2011, the residents were unlawfully evicted by the city without alternative housing, and in 2012, the Constitutional Court ordered the City of Tshwane to provide adequate alternative accommodation for the residents until it was safe to return home – which was never fully realised (Ntakirutimana 2015: 100, Schubart Park Case 2012). Through the years, the buildings have been stripped and vandalised, leaving only skeletons of the structures behind.

APPENDIX 2: ENLARGED MESO-CONTEXT MAPS



8.4. circulation & boundaries



8.5. dead spaces & opportunities for activation

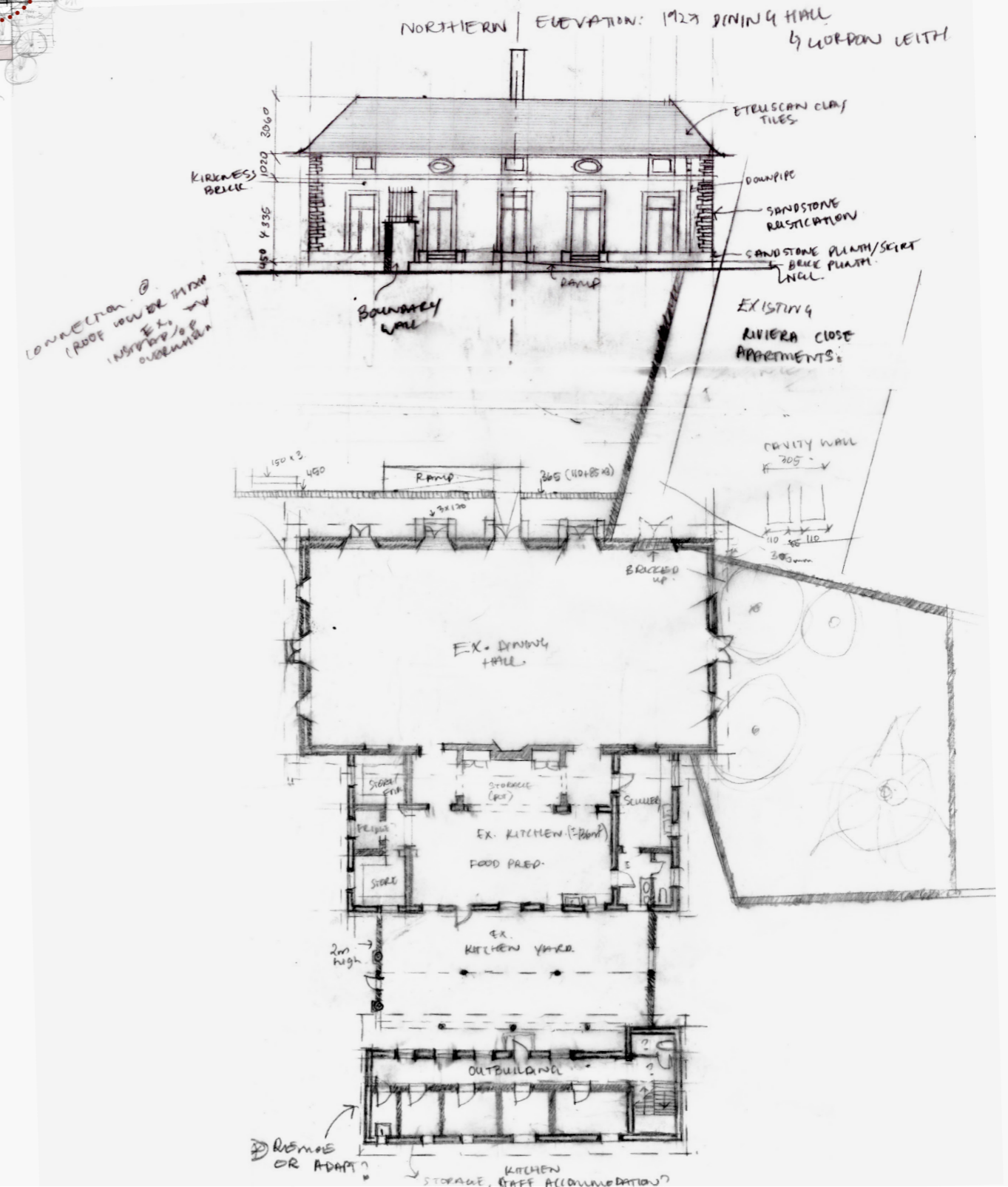
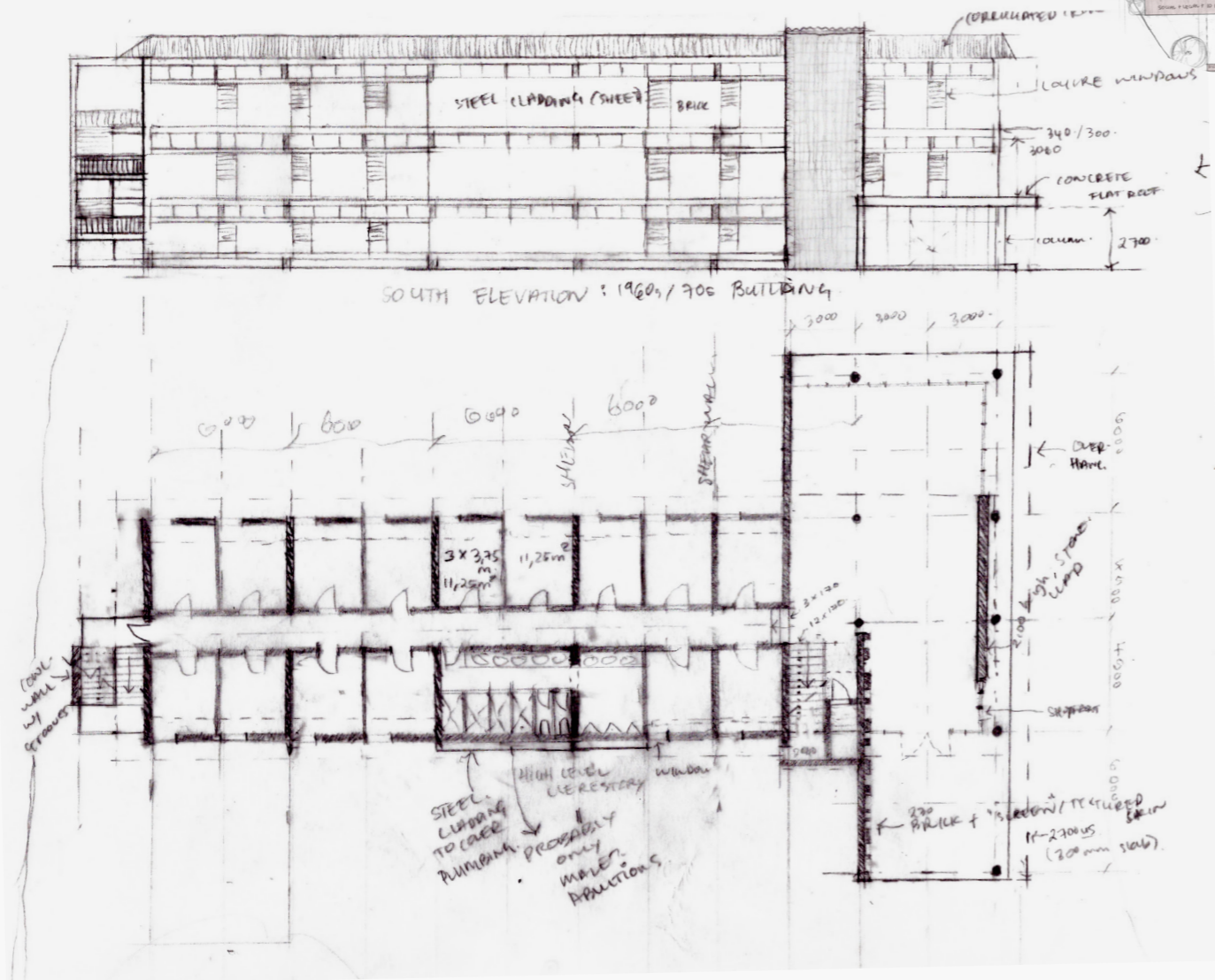
APPENDIX 3: ENLARGED SKETCH PLANS OF
SELECTED EXISTING BUILDINGS



1960s/70s Hostel Building:
Functional Regionalist / International Style



1927 G.E. Leith Dining Hall:
Baker-school classicist "Traditional Style"



APPENDIX 4 ACCOMMODATION SCHEDULE

(Social Welfare Pocket only)

Programme / Function (Description)	Size / Area	Quantity	Total Area	Level on Scale of Permanence
I. TRANSITIONAL HOUSING				
Shelter Admin (1 storey)				
Reception & waiting area	60m ²	1	60m ²	Level 2 - Admin & support service threshold
Staff room	11m ²	1	11m ²	
Staff toilet (1 wc, 1 hwb)	2,4m ²	2	4,8m ²	
Store	8m ²	1	8m ²	
Visitor / new arrivals toilet (Accessible wc, hwb, bath)	7m ²	1	7m ²	
Admin open plan offices (5 cubicles/desks)	35m ²	1	35m ²	
Meeting room	21m ²	1	21m ²	
Admin Store	8m ²	1	8m ²	
Cluster A (3 storeys)				
accommodates +- 75 residents				
Comunal ablutions (Per floor - Male: 3 showers, 1 wc, 2 urinals, 3 hwb, lockers and changing space; Female: 3 showers, 3 wc, 5hwb, lockers and changing space; 900mm wide wet duct)	76m ²	3 (1 per floor)	226,5m ²	Level 2 - Permanent Cores
Common Room (Shared kitchen: 2 fridges, 2 stoves; Wash-up: 2 sinks, shelving; Lounge: 2 couches, 2 small dining tables)	40m ²	2 (on second & third floors)	80m ²	Transition between level 2 and 3
Communal wash area (Laundry hand-washing facilities: 8 wash troughs; seating)	30m ²	1	30m ²	
Clothes hanging/drying	34m ²	1	34m ²	Level 4
Single unit (1 pax)	3x3 = 9m ²	8	72m ²	Level 3 - flexible/ adaptable living spaces
Double unit (2 pax)	3x6 = 18m ²	9	162m ²	
Family unit (4 pax)	6x6 = 36m ²	9	324m ²	
New Arrivals unit (1 pax; 1 wc, 1 hwb)	3x4 = 12m ²	3 (1 per floor)	36m ²	
Accessible unit (1-2 pax; 1 accessible wc, 1 hwb, 1 bath)	3x6 = 18m ²	3 (1 per floor)	54m ²	
Staff unit (1 pax)	3x3 = 9m ²	1	9m ²	
Cleaning store	8m ²	3 (1 per floor)	24m ²	
DB room	7m ²	3 (1 per floor)	21m ²	
Vertical circulation core (1000kg/12 passenger lift; staircase with 170mm risers and 280mm tread)	Plan area per floor: 20m ²	3	60m ²	Level 2 - Permanent Cores
Open private courtyard (Surrounded by open, shaded circulation space)	14,7 x 10,7 = 157m ²	n/a	157m ²	Level 4
Constructed wetland in courtyard (Hybrid Horizontal flow section and vertical flow section)	Each = +32m ² Total = 2 x 32m ² = +64m ²	n/a	+64m ²	

Programme / Function (Description)	Size / Area	Quantity	Total Area	Level on Scale of Permanence	
Cluster B (3 storeys)					
accommodates +- 40 residents					
Comunal ablutions (Per floor - Male: 3 showers, 1 wc, 2 urinals, 3 hwb, lockers and changing space; Female: 3 showers, 3 wc, 5hwb, lockers and changing space; 900mm wide wet duct)	76m ²	3 (1 per floor)	226,5m ²	Level 2 - Permanent Cores	
Common Room (Shared kitchen: 2 fridges, 2 stoves; Wash-up: 2 sinks, shelving; Lounge: 2 couches, 2 small dining tables)	40m ²	2 (on second & third floors)	80m ²	Transition between level 2 and 3	
Communal wash area (Laundry hand-washing facilities: 8 wash troughs; seating)	30m ²	1	30m ²		
Clothes hanging/drying	32m ²	1	32m ²	Level 4	
Single unit (1 pax)	3x3 = 9m ²	5	45m ²	Level 3 - flexible/ adaptable living spaces	
Double unit (2 pax)	3x6 = 18m ²	6	108m ²		
Family unit (4 pax)	6x6 = 36m ²	3	108m ²		
Accessible unit (1-2 pax; 1 accessible wc, 1 hwb, 1 bath)	3x6 = 18m ²	6 (2 per floor)	108m ²		
Staff unit (1 pax)	3x3 = 9m ²	1	9m ²		
Cleaning store	3m ²	3 (1 per floor)	9m ²		
DB room	3,5m ²	3 (1 per floor)	10,5m ²	Level 2 - Permanent Cores	
Vertical circulation core (1000kg/12 passenger lift; staircase with 170mm risers and 280mm tread)	Plan area per floor: 20m ²	3	60m ²		
Open private courtyard (Surrounded by open, shaded circulation space)	15m x 10m = 150m ²	n/a	150m ²	Level 4	
Constructed wetland in courtyard (Hybrid Horizontal flow section and vertical flow section)	Each = +25m ² Total = 2 x 25m ² = +50m ²	n/a	+50m ²		
Skills development workshops (Flexible workshop spaces open up onto public internal street, 1 store room)	34m ²	3	34m ²	Level 2 - Admin & support service threshold	
Support Services (1 storey)					
Reception & waiting area	50m ²	1	50m ²	Level 2 - Admin & support service threshold	
Ablutions (Male: 1 wc with 1 hwb, 1 urinal, 2 hwb; Female: 2 wc with own hwb, 2 hwb; 1 unisex Accessible wc with hwb)	27m ²	1	27m ²		
Legal aid office	3 x 4 = 12m ²	2	24m ²		
Social work office	3 x 4 = 12m ²	1	12m ²		
ID (documentation) assistance	24m ²	1	24m ²		
Multipurpose room	35m ²	1	35m ²		
Open private courtyard (Surrounded by open, shaded circulation space)	12,5m x 10m = 125m ²	n/a	125m ²		Level 4
Food service & existing dining space (1927 Dining hall)	260m ²	n/a	260m ²		Level 1 - Existing heritage buildings

Programme / Function (Description)	Size / Area	Quantity	Total Area	Level on Scale of Permanence
Preparation Kitchen (Hot & cold prep.; wash-up; dry store; equipment & pot store; 1 wc; cold rooms, freezer room etc.)	127m ²	n/a	127m ²	Level 1 - Existing heritage buildings
Kitchen yard	95m ²	n/a	95m ²	
New service & refuse yard	250m ²	n/a	250m ²	
New flexible dining space (Multipurpose hall - suitable for 25-30 beds or sleeping pods for emergency temporary shelter; store rooms)	220m ²	n/a	220m ²	Level 3 - flexible/ adaptable living spaces
Open public courtyard (Extended outdoor dining space with pergolas)	515m ²	n/a	515m ²	Level 4

3. ADDITIONAL SOCIAL SUPPORT SERVICES






Medical clinic (Reception, pharmacy, exam rooms, accessible wc, store)	165m ²	n/a	165m ²	Level 2 - Admin & support service threshold
Daycare centre (Toilets, kitchenette, common play room, classrooms)	148m ²	1	148m ²	
Psychological therapy/counselling clinic (Adapted ex. 2 storey building - therapy rooms, ablution, offices)	80m ²	2	160m ²	Level 1 - Existing heritage buildings
Open courtyard (With secure, fenced-off children's play area)	300m ²	1	300m ²	Level 4

4. ADAPTED 1960S HOSTEL (3 storeys)

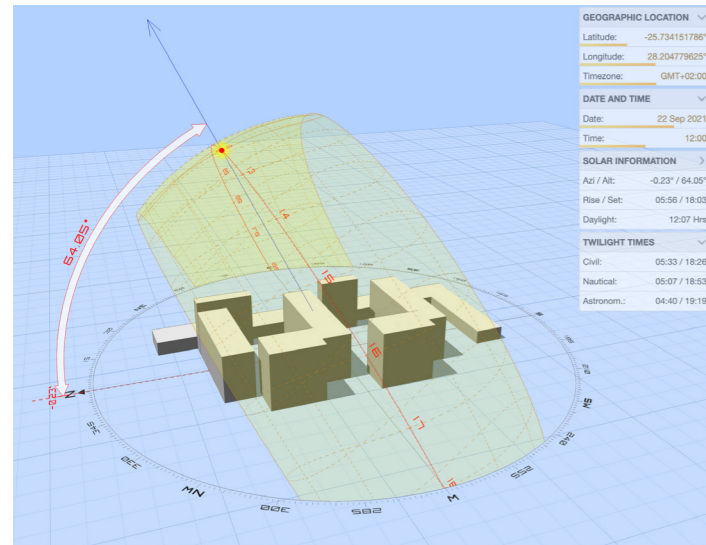
Culinary workshop & exhibition space (Ground floor: Flexible space for weekend markets - movable panels, sliding partitions, mobile cooking islands and prep. tables, fixed sinks, small cleaning store)	145m ²	n/a	145m ²	
Culinary workshop storage & ablutions (Existing hostel rooms adapted and retrofitted: cleaning store, pot store, dry store, 1 cold room, 1 freezer, 1 male wc and hwb, 1 female wc and hwb, wash-up space, 2 market store rooms)	134m ²	n/a	134m ²	Level 1 - Existing heritage buildings
Overflow transitional housing accommodation (Half of ground floor, entire second and third floors, includes male and female shared ablutions)			accommodates +- 35 additional residents	
Transitional Housing accommodates a total of +- 150 residents (cluster A + cluster B + overflow accommodation)				

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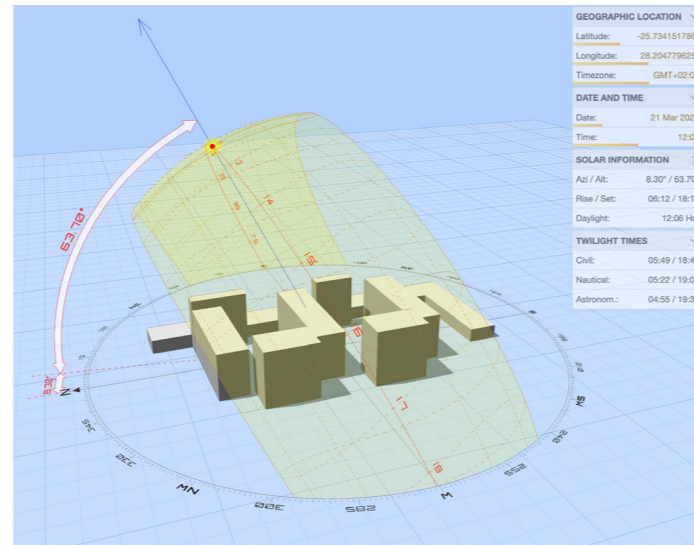
Level on Scale of Permanence:

-  1
-  2 - cores
-  2 - admin threshold
-  3
-  4

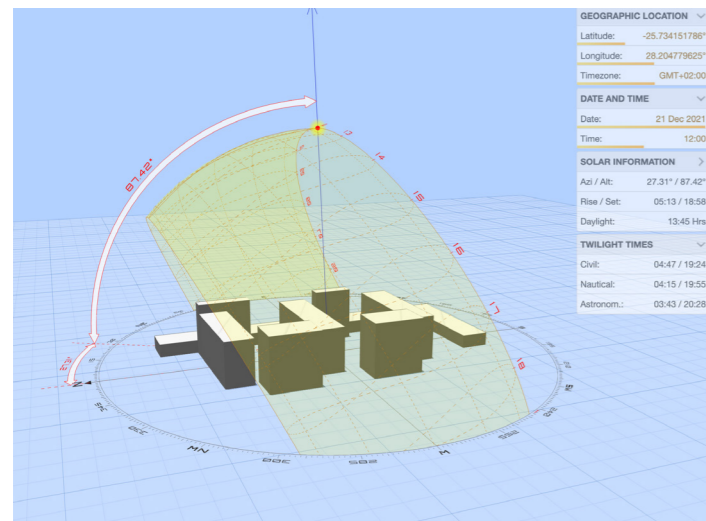
APPENDIX 5: ENVIRONMENTAL INVESTIGATIONS & DATA



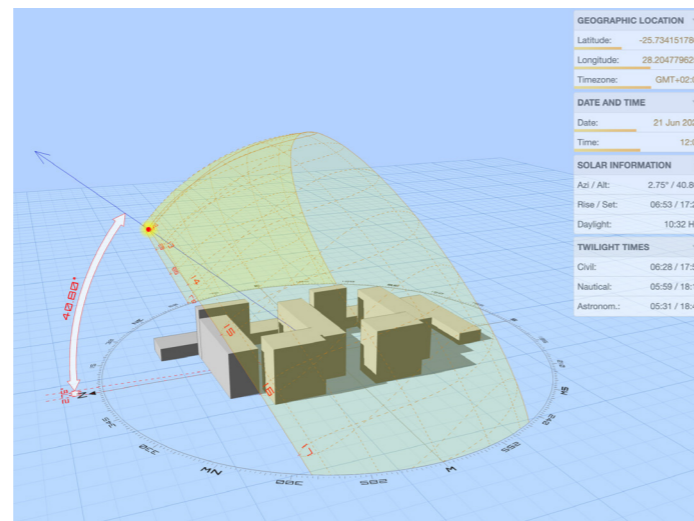
22 September 12pm - Spring Equinox: 64,05°



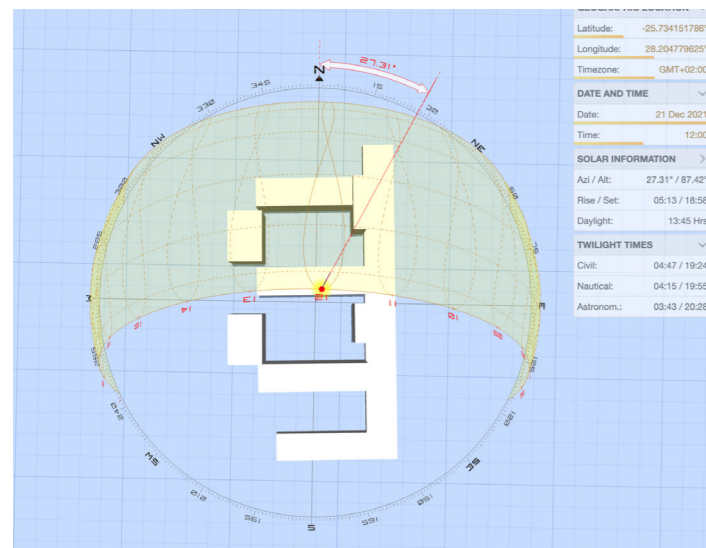
21 March 12pm - Autumn Equinox: 63,7°



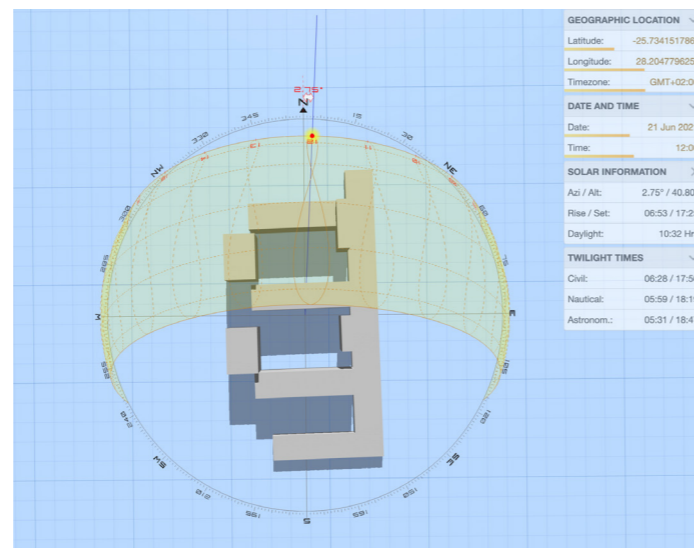
21 December 12pm - Summer Solstice: 87,42°



21 June 12pm - Winter Solstice: 40,80°

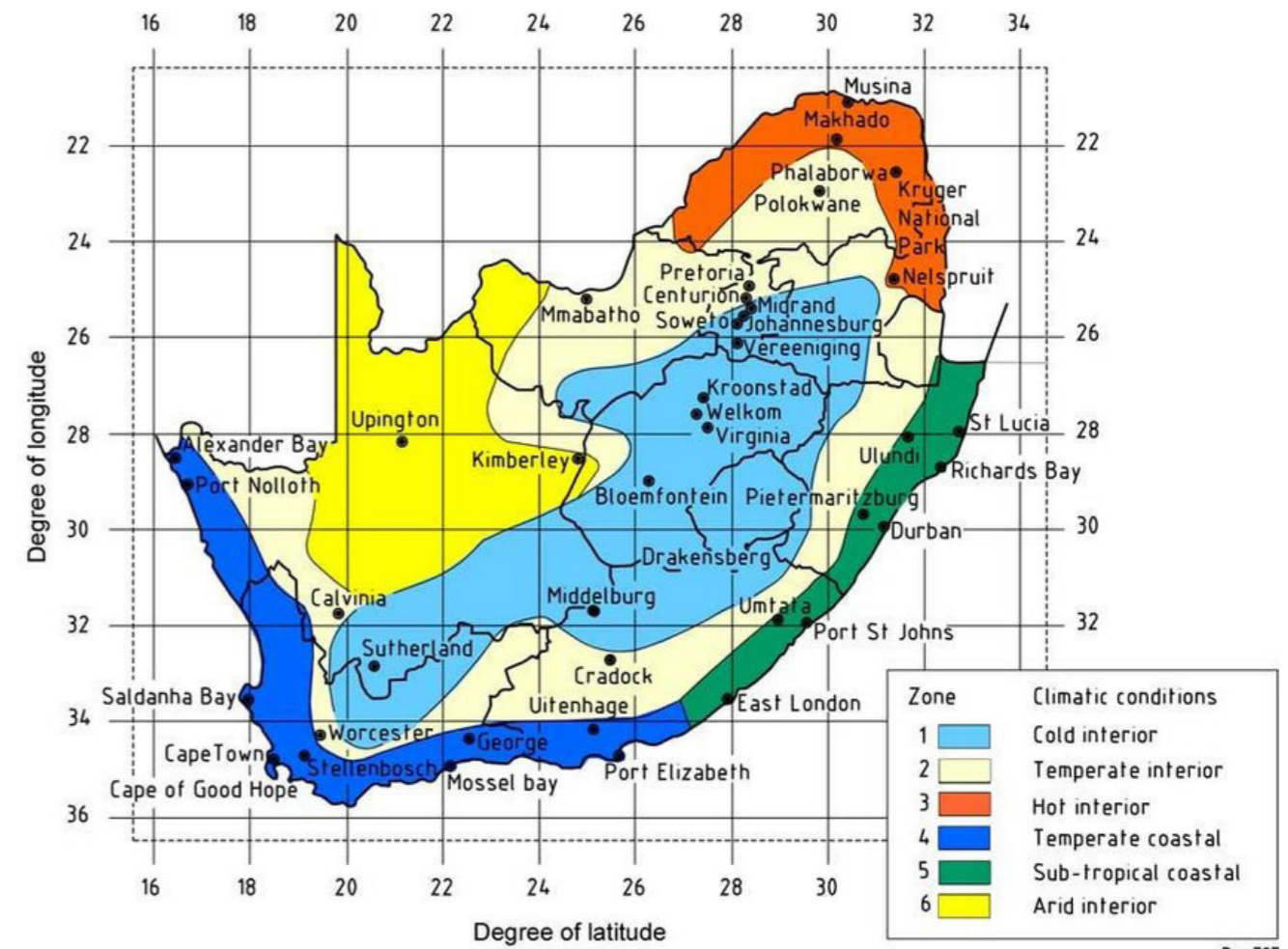


sun path diagram plan of 21 December 12pm - Summer Solstice



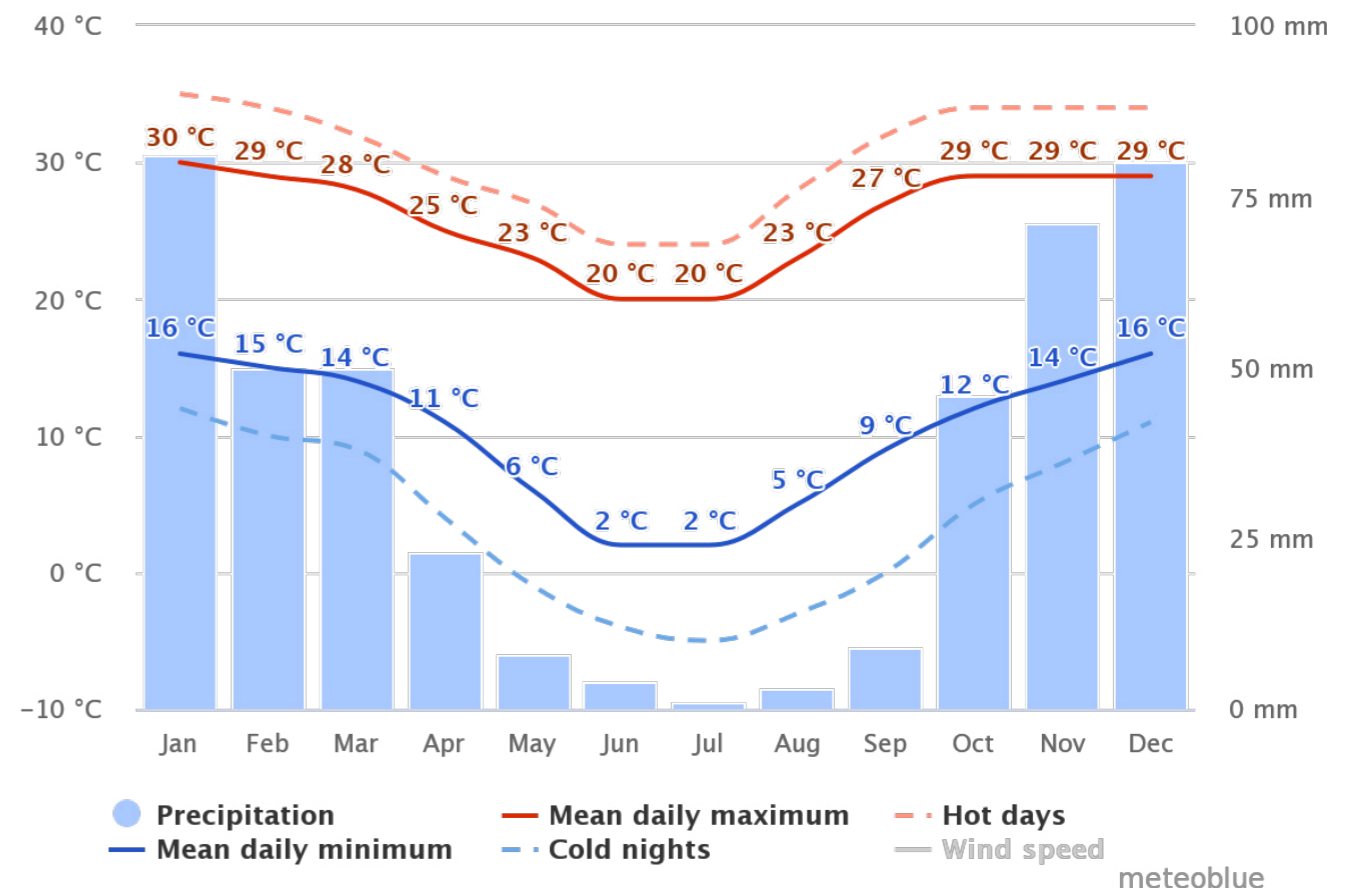
sun path diagram plan of 21 June 12pm - Winter Solstice

20.2. 3D Solar angles and sun path study (andrewmarsh.com n.d.).

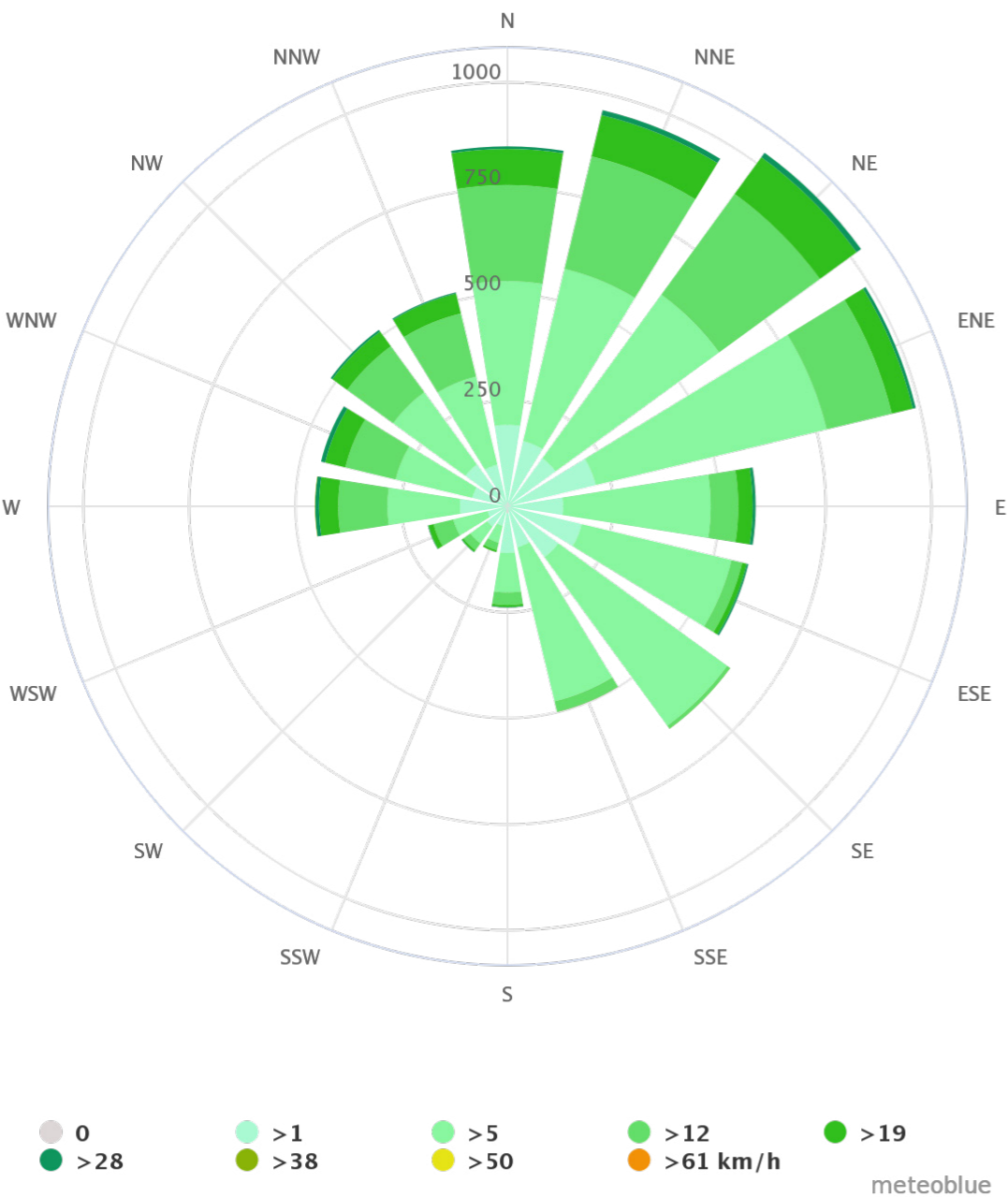


Drg 727

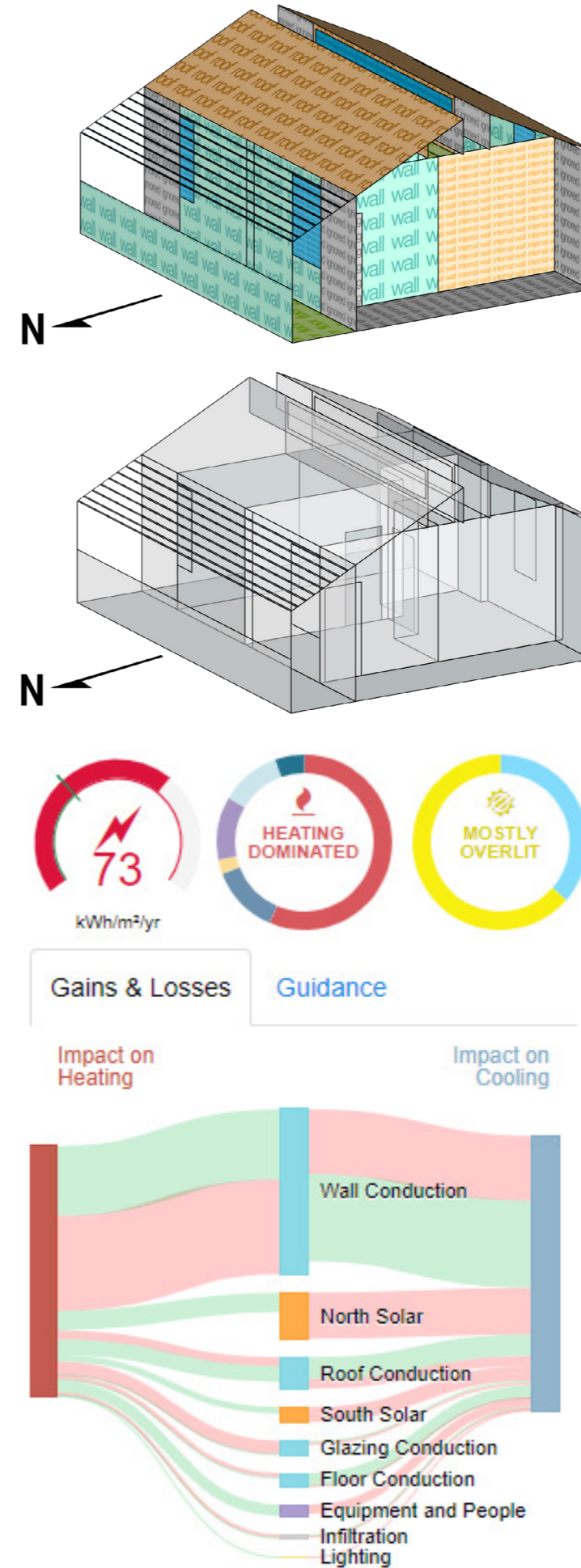
20.3. Climatic Zone map of South Africa. Pretoria falls in zone 2 – temperate interior (SANS 204-2 2011).



16.10. Average temperatures and precipitation for Pretoria, Gauteng (meteoblue.com n.d.).



16.9. Wind rose for Pretoria, Gauteng (meteoblue.com n.d.)



16.7. Sefaira evaluation of thermal performance based on envelope u-values, orientation and shading (Author 2021).

Sefaira Energy & Daylight

Upload to Sefaira

Open Daylighting Visualization

Entity Palette

Analysis Update Analysis

Residenti in Pretoria, GT, ZA, G...

Model Properties Close

HVAC type: Fan Coil Units and Central Plant

Baseline: SANS 10400

Wall Insulation Poorly Insulated

Floor Insulation Insulated

Roof Insulation Well Insulated

Glazing U-Factor 1 Pane

Visible Light Transmittance 2 panes

Solar Heat Gain Coefficient Clear Single Glazing

Infiltration Rate Normal practice

Ventilation Rate Typical Ventilation

Equipment Excellent

Lighting Excellent

Total Floor A Close 54 m²

SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL

1,04

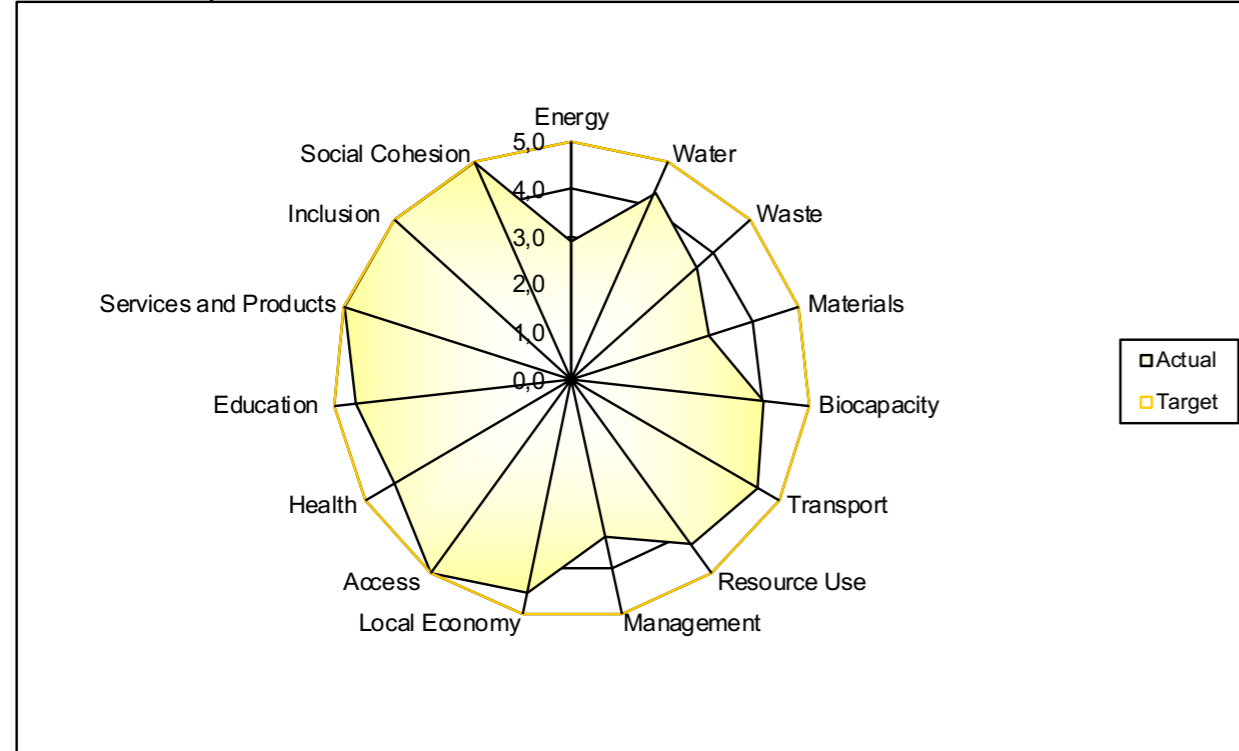
Achieved
4,2

SB SBAT REPORT
SB1 Project

Score	0
-------	---

SB2 Address

Score	0
-------	---

SB3 SBAT Graph

SB4 Environmental, Social and Economic Performance

	Score
Environmental	3,6
Economic	4,3
Social	4,8
SBAT Rating	4,2

SB5 EF and HDI Factors

	Score
EF Factor	3,9
HDI Factor	4,6

SB6 Targets

	Percentage
Environmental	71
Economic	87
Social	95

SB7 Self Assessment: Information supplied and confirmed by

Name	Date
Signature	

SB8 Validation: Documentation validated by

Name	Date
Signature	

SB9 Validation Report Version

IVR

SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL

1,04

Target	Achieved
5,0	4,2

BI Building Information
BI 1 Building Targets

	Target	Achieved
EN	5,0	2,9
WA	5,0	4,3
WE	5,0	3,5
MA	5,0	3,0
BI	5,0	4,0
TR	5,0	4,5
LE	5,0	4,5
MN	5,0	3,3
RE	5,0	4,3
SP	5,0	5,0
AC	5,0	4,3
HE	5,0	4,5
ED	5,0	5,0
IN	5,0	5,0
SC	5,0	5,0

BI 2 Priority Key (Not Performance Key)

VH	Very High	5,0	
HI	High	4,0	
ME	Medium	3,0	
LO	Low	2,0	
VL	Very Low	1,0	
NA	None / Not Applicable	0,0	

APPENDIX 6: GREY WATER & RAINWATER DATA & CALCULATIONS

DOMESTIC WATER DEMAND (Cluster A)

Fixture	Qty	Daily water usage per person (L)	Total daily water usage (L)	Total water usage per month (m ³)
<i>Transitional Housing</i> 75 Residents (including 1 with disabilities)				
Showers	18	50	3 700	111
Baths	1	100	100	3
Toilets	14	No. of 6L flushes pp/day: 5 30	2 250	67,5
Wash hand basins	26	No. of 0,5L washes pp/day: 12 6	450	13,5
Kitchen sinks	6	No. of 45L loads pp/week: 1 = 0,14/day 6,43	482,14	14,46
Communal wash troughs	8	No. of 60L loads pp/week: 1 = 0,14/day 8,57	642,86	19,29
Cooking		1	75	2,25
Subtotal			7 700	231
<i>Admin/reception</i> 10 Staff				
Bath	1	100	300	9
Staff Toilets	2	No. of 6L flushes pp/day: 3 18	180	5,4
Visitors toilet	1	No. of 6L flushes per day: 20 120	120	3,6
Staff Wash hand basins	2	No. of 0,5L washes pp/day: 5 2,5	25	0,75
Visitors Wash hand basins	1	No. of 0,5L washes per day: 30 15	15	0,45
Kitchen sinks	6	No. of 45L loads per week: 2.5 16,07	16	0,48
Subtotal			656	19,68
Total			8356,00	250,68

20.5. Domestic water demand calculations of Cluster A of the transitional housing programme (Author 2021).

IRRIGATION DEMAND (Cluster A)

	Area of planting (m ²)	Depth per month (m)	Monthly Demand (m ³)	
Planted roofs	225	0,12	27	
Landscaped courtyard	81,4	0,16	13,02	SUMMER
Total	306,4		40,02	
Planted roofs	225	0,12	27	
Landscaped	81,4	0,125	10,18	WINTER
Total	306,4		37,18	

20.6. Irrigation demand calculations of Cluster A's landscaping and planted roofs (Author 2021).

WATER VALUES (Cluster A)

	Monthly (m ³)	Daily (m ³)
Non-potable water demand - Summer (worst case scenario) (toilets, laundry, irrigation)*	135,81	4,53
Total grey water output to be recycled (wash hand basins, kitchen sinks, wash troughs/laundry, showers)	159,93	5,33

16.16. Table of non-potable water demands and grey water to be recycled (Author 2021).

CLUSTER 'A' CATCHMENT AREA (A)

	Area (m ²)	C (runoff coefficient)	C (weighted)
<i>Roofs</i>			
Reception & admin offices (planted roofs)	225	0,5	0,10
TH living units (pitched metal sheeting)	252	0,9	0,21
Subtotal	477		
<i>Paving</i>			
Permeable	102	0,75	0,07
Non-permeable	493	0,9	0,41
Ground floor	201		
First floor	147		
Second floor	145		
Total	1072		0,80

16.17. Table of water catchment area calculations (Author 2021).

APPENDIX 6: GREY WATER & RAINWATER DATA & CALCULATIONS

AVERAGE MONTHLY PRECIPITATION (P)

(PRETORIA, GAUTENG)

Month	Precipitation (mm)
January 2020	107
February 2020	99
March 2020	82
April 2020	38
May 2020	14
June 2020	5
July 2020	2
August 2020	5
September 2020	18
October 2020	51
November 2020	88
December 2020	98
Annual Total	607

16.18. Table of average monthly precipitation (Author 2021). Data collected from climate-data.org (n.d.), meteoblue.com (n.d.) and weatherspark.com (2016).

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RAINWATER YIELD

Month	Average monthly precipitation (m)	Yield (m ³) Yield = P x A x C
January	0,107	91,97
February	0,099	85,09
March	0,082	70,48
April	0,038	32,66
May	0,014	12,03
June	0,005	4,30
July	0,002	1,72
August	0,005	4,30
September	0,018	15,47
October	0,051	43,83
November	0,088	75,64
December	0,098	84,23
Annual Total	0,607	521,72

16.19. Monthly rainwater yield calculations (Author 2021).

APPENDIX 7: GLOSSARY

Abandoned / vacant buildings:

A building that has been deserted permanently by the owner of such building (City of Tshwane 2011: 1) and is no longer used for any formal or official function. These buildings are often left neglected and vacant, without official occupants.

Homelessness:

“According to Shelter SA Snapshotz (2004), homelessness means to live without conventional accommodation or to live in sub-standard accommodation. It is also to live in places of insecure tenure or to be unable to afford adequate housing. As a result, victims feel extremely unsafe, unwell, alienated, isolated, and excluded from the social, economic and civic opportunities that most citizens enjoy.” “Homeless people are part of shack-dwellers, informal settlers, the poorest of the poor people, destitute unwanted, and squatters.” (Ntakirumana 2015: 14) Homelessness includes people living on the street or ‘rough sleepers’, temporary overnight sleepers and informal dwellers (Ntakirumana 2015: 16, Tshwane Homelessness Forum 2015: 5).

Informal Appropriation:

Spontaneous and creative place-making and transformation of space “appropriated by ‘marginal groups’” where the “original, but now defunct, function is transgressed” (Shaw and Hudson 2009: 1). New uses and activities emerge outside of the original, previously prescribed or formal uses and ownership of the space(s). In the case of vulnerable groups such as the homeless, it is often in response to basic physical, spatial and psychological needs including shelter, privacy, safety, belonging and a place to call home (Dreifuss-Serrano 2020: 601). It is usually characterised by illegal occupation of property or land and “insecurity of tenure” (Ngwenya 2017: 13). The materiality of such appropriation depends on the immediately available materials, but is usually a “bricolage” of found objects (Rende 1998: 141) and materials including, but not limited to, reclaimed timber pallets, planks, shutter board, branches and poles; pieces of corrugated steel sheeting; plastic and fabric tarp or shade netting; corrugated cardboard; and thatch from palm, pine or banana trees in the vicinity.

Neglected / derelict buildings:

A building that is inhabitable but unsuitable for occupancy by humans and has fallen into a state of decay. This may include a building which:

1. Appears to have been abandoned by the owner with or without the consequence that rates or other service charges are not being paid.
2. Is the subject of numerous complaints of derelict buildings from the public, including complaints of criminal activity.
3. Is illegally occupied in terms of the Prevention of Illegal Eviction from Unlawful Occupation of Land Act 19 of 1998 (PIE).
4. Refuse or waste is stored, dumped or accumulated in and around such building.
5. Is partially completed and abandoned, or structurally unsound and posing a risk.

(City of Tshwane 2011: 1-2)

Re-appropriate:

(Verb) to appropriate (something) again: such as

a: to allocate or assign (something) in a new or different way

b: to take back or reclaim (something) for one’s own purposes

(<https://www.merriam-webster.com/dictionary/reappropriate>)

Author’s interpretation in the context of the topic:

To appropriate, occupy and use space in a new way that differs from the original or assigned use and ownership.

The informal appropriation of space by vulnerable people, which results from an effort to “(re)claim space”, establish a sense of belonging or express identity, is spontaneous, creative and innovative as it leads to new emerging uses and meanings of place (Shaw and Hudson 2009: 4).

Fig. 20.7.: Photograph of derelict building at Melgisedek (Author 2021).



20.7.

APPENDIX 8: ETHICS CLEARANCE

departmental blanket approval



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

9 June 2021

Reference number: EBIT/79/2021

Ms A van Aswegen
Department: Architecture
University of Pretoria
Pretoria
0083

Dear Ms A van Aswegen

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Conditional approval is granted.

This means that the research project entitled "Masters Professional Mini-Dissertation in Architecture, Landscape Architecture and Interior Architecture (Group / Blanket)" is approved under the strict conditions indicated below. If these conditions are not met, approval is withdrawn automatically.

Conditions for approval

This application is approved based on the summaries provided.

Applications from each student (including application forms and all necessary supporting documents such as questionnaire/interview questions, permission letters, informed consent form, etc) will need to be checked internally by the course coordinator/ supervisor. A checklist will need to be signed off after the checking.

All of the above will need to be archived in the department and at the end of the course a flash disc / CD clearly marked with the course code and the protocol number of this application will be required to be provided to EBIT REC administrator.

No data to be collected without first obtaining permission letters. The permission letter from the organisation(s) must be signed by an authorized person and the name of the organisation(s) cannot be disclosed without consent.

Where students want to collect demographic the necessary motivation is in place.

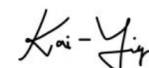
This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Ethics Committee.

If action is taken beyond the approved application, approval is withdrawn automatically.

According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.

The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.



Prof K.-Y. Chan

Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

faculty of health sciences approval



Faculty of Health Sciences

Institution: The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 22 May 2002 and Expires 03/20/2022.
- IORG #: IORG0001762 OMB No. 0990-0279 Approved for use through February 28, 2022 and Expires: 03/04/2023.

Faculty of Health Sciences Research Ethics Committee

27 May 2021

Approval Certificate New Application

Dear Mrs HR Karberg

Ethics Reference No.: EBIT/77/2021

Title: Uncovering the latent potential of informally appropriated vacant spaces: the adaptive reuse of Melgisedek towards addressing issues of homelessness

The **New Application** as supported by documents received between 2021-04-29 and 2021-05-26 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2021-05-26 as resolved by its quorate meeting.

Please note the following about your ethics approval:

- Ethics Approval is valid for 1 year and needs to be renewed annually by 2022-05-27.
- Please remember to use your protocol number (EBIT/77/2021) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

Ethics approval is subject to the following:

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely



On behalf of the FHS REC, Professor Werdie (CW) Van Staden

MBChB, MMed(Psych), MD, FCPsych(SA), FTCL, UPLM

Chairperson: Faculty of Health Sciences Research Ethics Committee

*The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

Research Ethics Committee
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Gezina 0031, South Africa
Tel +27 (0)12 356 3084
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Fakulteit Gesondheidswetenskappe
Lefapha la Disaense Sa Maphelo

APPENDIX 8: ETHICS CLEARANCE

deans permission letters



Faculty of Health Sciences

Deputy Dean of Teaching and Learning Preliminary Approval

29 April 2021

Mrs HR Karberg
Department of Family Medicine
Faculty of Health Sciences
University of Pretoria

Dear Mrs HR Karberg

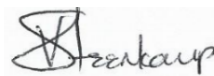
ETHICAL APPROVAL FOR RESEARCH PROJECT EBIT/77/2021

The letter serves to confirm that I am supportive of the following Masters research project:

UNCOVERING THE LATENT POTENTIAL OF INFORMALLY APPROPRIATED VACANT SPACES: THE ADAPTIVE REUSE OF MELGISEDEK TOWARDS ADDRESSING ISSUES OF HOMELESSNESS

I have no objection to the research team requesting the staff/students from the Faculty of Health Sciences to participate in this research project, **subject to ethics approval by the Faculty of Health Research Ethics Committee.**

Kind regards



Professor V Steenkamp
Deputy Dean: Teaching and Learning
Faculty of Health Sciences



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Theology and Religion

Prof Jerry Pillay
Dean: Theology and Religion

29 April 2021

Ms Heike Karberg
Department of Architecture
EBIT Faculty
University of Pretoria

Dear Heike,

Re: PERMISSION TO INTERVIEW STAFF

Thank you for your correspondence requesting permission to interview staff in the Faculty of Theology and Religion for your Master's research.

Permission is hereby granted for you to interview relevant staff in our Faculty to assist you with information you may require. As you have indicated, Prof Stephan de Beer would be most resourceful given the topic of your research.

Best wishes for your research.

Yours sincerely,



PROF JERRY PILLAY
DEAN: FACULTY OF THEOLOGY AND RELIGION