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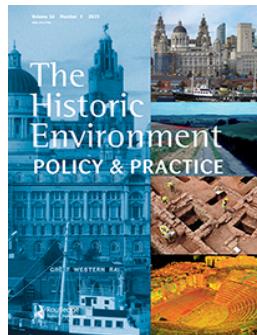
## **From Preservation to Compensation: Managing Historic Environment Loss in Planning Policy and Practice**

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## From Preservation to Compensation: Managing Historic Environment Loss in Planning Policy and Practice

Maitri Dore  <sup>a,b</sup>

<sup>a</sup>Department of Conservation, University of Gothenburg, Gothenburg, Sweden; <sup>b</sup>Department of Architecture and Civil Engineering, Chalmers University of Technology, Gothenburg, Sweden

### ABSTRACT

When large urban planning projects cause physical loss of historic environments, public actors face the challenge of mediating the twin goals of conservation and urban planning. Grounded in an understanding of conservation as the dynamic management of change, the paper analyses the responses to historic environment loss in policy and practice. The analysis is based on two diverse cases – the West Link train tunnel in Gothenburg, Sweden and the Mumbai Metro in Mumbai, India. Drawing on interviews with public actors and official documents, findings show a spectrum of conservation responses in practice. From least to most change-oriented, these are: avoid damage; minimise damage; restore historic environment; design for visual context; compensate by strengthening; and compensate by creating. ‘Preservation,’ dominant in the Mumbai Metro, was expressed by avoiding and minimising damage to the historic environment and preserving its visual integrity. ‘Compensation,’ mobilised in the West Link, was a creative response that involved conveying historical information about the affected sites through design. Both preservation and compensation emerged from their individual planning contexts and the constraints within them. The findings inform policymakers and practitioners on the possibilities for change-oriented conservation in practice, including compensation as a dynamic alternative for managing historic environment loss.

### KEYWORDS

Conservation; planning; historic environment; heritage; compensation; preservation; West Link; Mumbai Metro

## Historic Environments, Conservation, and Planning

Large urban planning projects built in old cities often result in the physical loss of historic environments. In response to such projects, public actors working within the planning system mobilise conservation. Conservation in practice broadly means any action towards maintaining or managing the historic environment. Theory and policy from the last few decades increasingly emphasise the need to approach conservation as the dynamic management of change rather than resistance to it.<sup>1</sup> Scholars in diverse contexts argue for greater integration of conservation and urban planning,<sup>2</sup> and policy endorses it as well.<sup>3</sup>

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### CONTACT Maitri Dore [maitri.dore@chalmers.se](mailto:maitri.dore@chalmers.se)

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This article has been corrected with minor changes. These changes do not impact the academic content of the article.

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This approach contributes to wider social and economic benefits, justice, and sustainable development as a whole.<sup>4</sup>

Conservation that is change-oriented can be referred to as 'heritage planning'<sup>5</sup> or 'conservation planning'.<sup>6</sup> Both terms connote a negotiation between historic environments and urban planning projects and acknowledge conservation as an agent of change.<sup>7</sup> Further, conservation is mediated and triggered by the systems, frameworks, and institutions within the planning system.<sup>8</sup> The result is that it can take various shapes that exist in parallel.<sup>9</sup> Ashworth refers to them as three paradigms: 'preservation,' 'conservation,' and 'heritage,'<sup>10</sup> and correspondingly, Janssen et al. conceptualise them as 'heritage as a sector,' 'heritage as a factor,' and 'heritage as a vector' in spatial planning.<sup>11</sup> The 'preservation paradigm' and 'heritage as a sector' emphasise material preservation of individual buildings and the need to separate historic environments from urban planning projects. The 'conservation paradigm' and 'heritage as a factor' are about the integration of historic environments with urban planning projects. The 'heritage paradigm' and 'heritage as a vector' connote creativity and new imaginations for historic environments in ways that actively enrich urban planning projects.

A mixed bag of approaches to the historic environment exists,<sup>12</sup> but preservation is the one that dominates in practice.<sup>13</sup> Heritage professionals often struggle to reconcile conservation and urban planning.<sup>14</sup> Nevertheless, new modes of conservation are emerging; one of them is 'compensation.' Compensation is nascent and still being developed in policy and practice as a change-oriented and dynamic response to urban planning projects, particularly in the Swedish context.<sup>15</sup>

This paper asks what the existing tools for conservation in policy and practice are, and how they can be enriched. It uses two case studies to do so: the West Link in Gothenburg, Sweden and the Mumbai Metro, Mumbai, India.

The rest of the paper is structured in four sections. The second section outlines the methodology and methods used in the research, including an overview of the two cases. The third section proposes a spectrum of conservation responses based on the two cases, and provides an analysis of it. The fourth section discusses the responses in the context of their individual planning systems. The fifth section is a conclusion on the complexity of planning and the implications of the research.

## Methodology

The paper uses a case study methodology to investigate how public actors mobilise conservation of listed historic environments within the planning system in cases of large infrastructure projects.

## Cases

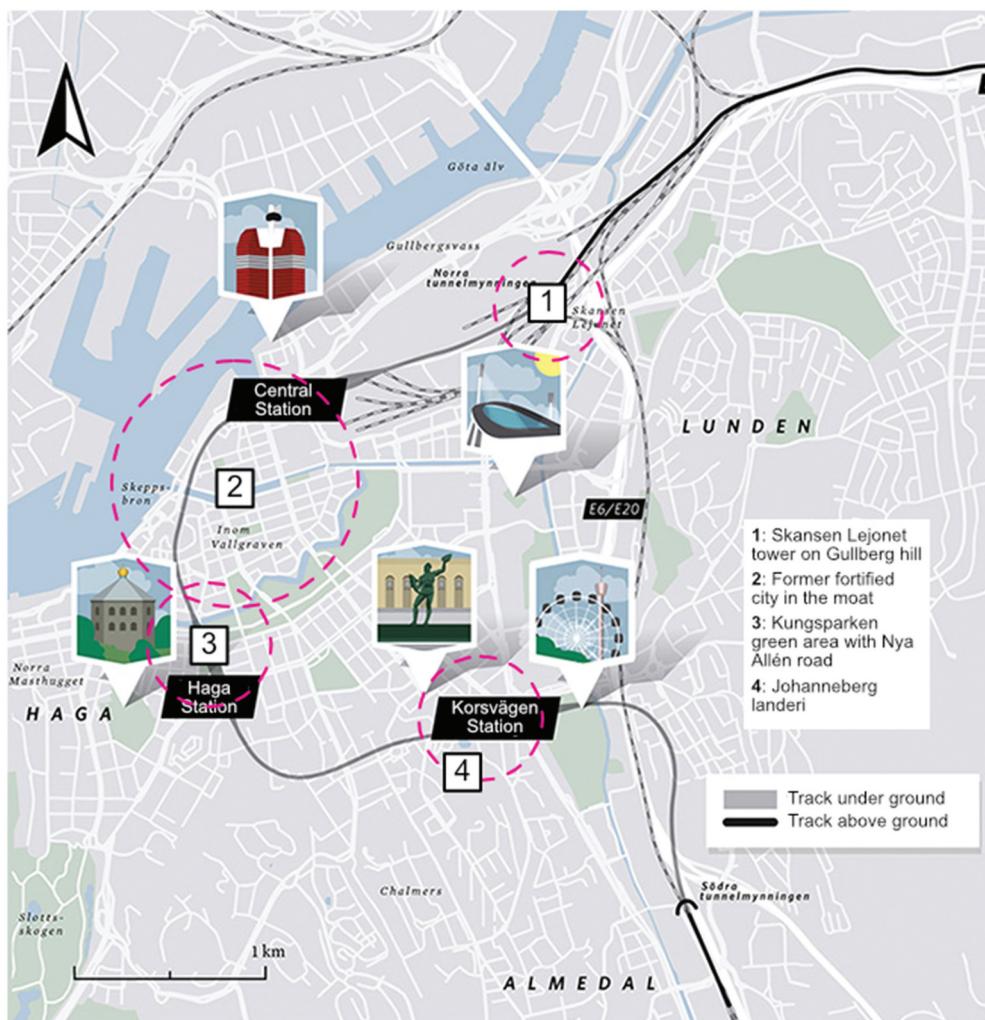
### *West Link, Gothenburg, Sweden*

The West Link is an 8-km-long train tunnel with three new stations. It was planned by the Swedish Transport Administration (STA) (Trafikverket) and due to be completed in 2030. Some 6.6 km of the track pass under the central city, including 17<sup>th</sup> century fortifications, 19<sup>th</sup> century historical parks, and *landeris*.<sup>16</sup> These areas are part of the 'national interest' – a legal designation for highly valuable historic environments. In light of this, the

Environment Ministry and Land and Environment Court called upon the STA to fulfil special legal measures for conservation.<sup>17</sup> The Court ruled that four areas should be the primary focus: Gullberg/Skansen Lejonet, the former fortified city of Gothenburg, Kungsparken green area/Nya Allén, and the Johanneberg *landeri*<sup>18</sup> (Figure 1). The STA further entered an agreement with the City of Gothenburg to implement their conservation.<sup>20</sup>

### **Mumbai Metro, Mumbai, India**

The Mumbai Metro<sup>21</sup> is a 33.5-km-long underground metro line, running in the north-south direction with 27 new stations. It is being constructed by the Mumbai Metro Rail Corporation Limited (MMRCL) and was partially completed in 2024. At its southern end, the metro tunnels under several listed historic environments: over 55 'heritage buildings'



**Figure 1.** Route of the West link showing affected historic environments mentioned in the P3 ruling. Base image source: Swedish Transport Administration.<sup>19</sup>

and four 'heritage sub-precincts'.<sup>22</sup> The public actors mainly discussed the conservation of buildings on DN Road. DN Road lies between the upcoming Hutatma Chowk metro station and Chhatrapati Shivaji Maharaj Terminus (CSMT) metro station (Figure 2). It is lined with Neo-Gothic, Indo-Saracenic, Neo-Classical, Art Deco, and Vernacular building types,<sup>24</sup> all of which are listed.<sup>25</sup>

The paper is restricted to data from the cases collected between October 2019 and November 2023. Many of the findings are based on proposals rather than realised actions, since at the time of the research, discussions on the historic environment were ongoing.

### **Methods**

The main research method was semi-structured interviews with key public actors, as outlined in Tables 1 and 2. The secondary method was analysis of official documents outlined in Tables 3 and 4.

The two main consultative parties in the West Link were the Swedish Transport Administration (STA) and, within the City of Gothenburg, the City's Historic Environment Group (CHEG). This group dealt with conservation in the West Link project and was made up of representatives from various departments of the City, including the City Museum (Göteborgs Stadsmuseum).

The main consultative parties in the Mumbai Metro were the Mumbai Heritage Conservation Committee ('Heritage Committee'), Mumbai Metro Rail Corporation Limited ('Metro Rail Company'), and Maharashtra Regional Development Authority ('Regional Development Authority'). The Heritage Committee is a body appointed by the state government; it consists of individuals in both bureaucratic and professional roles, such as architects, structural engineers, historians, and academics. The Metro Rail Company is building the metro, and the Regional Development Authority is the state's regional planning authority which prepared the masterplan for all the lines in the city and its wider region.

### **From Preservation to Compensation: A Spectrum of Responses to Historic Environment Loss**

The actors' negotiations over the historic environment resulted in a spectrum of conservation responses. From least to most change-oriented, it was:

- Avoid Damage
- Minimise Damage
- Restore Historic Environment
- Design for Visual Context
- Compensate by Strengthening
- Compensate by Creating

The spectrum is shown in Figure 3. The three responses on the left are damage-mitigating or restorative ones. 'Avoid Damage' reflected attempts to align and realign the project routes to prevent physical loss to the historic environment. 'Minimise Damage' aimed to



**Figure 2.** Route of the Mumbai Metro showing DN Road stretch. Base image source: Metro Rail Company.<sup>23</sup>

**Table 1.** Interviews in the West Link case.

Name	Affiliation/Role	Date
Interviewee 1a	Swedish Transport Administration (STA)	November 2020
		December 2020
		April 2021
		March 2022
Interviewee 2a	Swedish Transport Administration (STA)	November 2023
Interviewee 3a	Swedish Transport Administration (STA)	December 2020
Interviewee 4a	Architect Consulting on the Project	September 2022
Interviewee 5a	City's Historic Environment Group (CHEG)	November 2022
Interviewee 6a	City's Historic Environment Group (CHEG)	November 2020
Interviewee 7a	City's Historic Environment Group (CHEG)	September 2021
Interviewee 8a	City's Historic Environment Group (CHEG)	September 2022
		October 2022

**Table 2.** Interviews in the Mumbai Metro case.

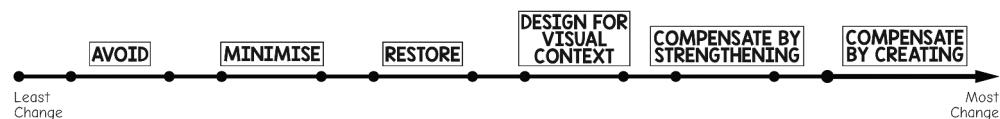
Name	Affiliation/Role	Date
Interviewee 1b	Heritage Committee	February 2021
Interviewee 2b	Heritage Committee	January 2022
Interviewee 3b	Heritage Committee	January 2022
Interviewee 4b	Metro Rail Company	March 2022
Interviewee 5b	Metro Rail Company	January 2022
		October 2023
Interviewee 6b	Heritage Committee	February 2021
Interviewee 7b	Heritage Committee	January 2022
Interviewee 8b	Heritage Committee	March 2021
		October 2023
Interviewee 9b	Tree Authority of the Municipality	March 2022
Interviewee 10b	Architect Consulting on the Project	July 2023

**Table 3.** Official documents in the West Link case.

Author	Year	Type of Document	Number of Documents
Swedish Transport Administration (STA)	2022–2023	Action Plan	2
Swedish Transport Administration (STA)	2015–2016	Vision Document	4
City Museum	2017–2018	Vision Document	2
City Museum	2014	Initial Proposal	1
Architects Consulting on the Project	2021	Initial Proposal	1

**Table 4.** Official documents in the Mumbai Metro case.

Author	Year	Type of Document	Number of Documents
Heritage Committee	2013–2019	Meeting Minutes	10
Metro Rail Company	2011	Report	1
Metro Rail Company	2020	Assessment	1

**Figure 3.** Spectrum of conservation responses. Source: Maitri Dore.<sup>26</sup>



mitigate loss through physical and structural measures. 'Restore Historic Environment' meant bringing back the affected historic environment to its state as before the projects.

The three responses on the right of the spectrum are creative ones. 'Design for Visual Context' introduced new built elements whose aesthetic choices foregrounded the surrounding historic environment or minimised visual interference to it. This response focused on the visual quality of the surroundings, including maintaining views. 'Compensate by Strengthening' comprised design additions along the project routes. 'Compensate by Creating' covered urban scale interventions that involved creating new spaces and programmes. The intentions with both 'Compensate by Strengthening' and 'Compensate by Creating' were to convey 'stories' about the city, which the actors interpreted as historical information.<sup>27</sup> However, unlike 'Compensate by Strengthening,' 'Compensate by Creating' was not restricted to the route of the infrastructure project and its station buildings.

The West Link expressed all six responses. The Mumbai Metro expressed the first four and to a minor degree, the fifth. The rest of this section analyses the responses as found in the cases, under one sub-section for each. In the West Link, 'Compensate by Strengthening' and 'Compensate by Creating' were mobilised in a big way, so, the analysis focuses on them. In the Mumbai Metro, the dominant responses were 'Avoid Damage', 'Minimise Damage,' and 'Design for Visual Context', and are therefore the focus.

### ***Avoid Damage***

#### ***West Link***

In 2007, the Swedish Transport Administration (STA) chose the current route from three main alternatives, each affecting the historic environment to different extents.<sup>28</sup> The City's Historic Environment Group (CHEG), however, found the chosen alternative to be the second least preferable.<sup>29</sup> They considered the alternative that skirted the former fortified city entirely to be the least invasive.<sup>30</sup>

In 2012, the STA prepared two alternatives within the chosen one and adjusted the track so that damage to the underground fortification remains could be further avoided.<sup>31</sup> In one alternative, they planned the track north of the former city wall, and the other, south of it. Ultimately the south route was judged to be less intrusive.<sup>32</sup>

#### ***Mumbai Metro***

In Mumbai, the Metro Rail Company planned the alignment of the track to avoid historical sites.<sup>33</sup> They further laid it underground because of the presence of 'heritage buildings' above.<sup>34</sup>

The Metro Rail Company/Regional Development Authority and the Heritage Committee also discussed the realignment of the track extensively. The Committee demanded that the route be altered so that it would not pass under DN Road.<sup>35</sup> They argued that the cut-and-cover construction method would endanger the 'heritage buildings' because of their proximity to the road and disturb their shallow foundations.<sup>36</sup>

A tussle ensued between the Metro Rail Company/Regional Development Authority and the Heritage Committee and lasted several months. The Regional Development Authority refused to realign the track saying that it was "almost frozen" while the Heritage Committee insisted that they keep "an open minded

approach" in the interest of historic environment conservation.<sup>37</sup> Following this the Regional Development Authority prepared two additional alternatives, insisting, however, that the chosen one under DN Road was most suitable.<sup>38</sup> They said that it had been vetted by experts and the public had been consulted.<sup>39</sup> The Committee continued to demand realignment, seeing it as "imperative from a heritage point of view."<sup>40</sup> The commissioner of the Regional Development Authority promised to reconsider<sup>41</sup> but ultimately deemed it unfeasible.<sup>42</sup> The reasons were technical: realignment, and the consequent removal of Hutatma Chowk station, would leave out "several important catchment areas" and hinder "smooth intermodal connectivity."<sup>43</sup> Additionally, locating the track under a parallel road was not possible because the road width was narrow and construction would pose a risk to the foundations of the 'heritage buildings'.<sup>44</sup> Finally the Committee's recommendations for realignment were overruled by the Municipal Commissioner of the municipality and the original plan held.<sup>45</sup>

### ***Minimise Damage***

#### ***West Link***

The STA proposed measures to assess and deal with the structural and physical impact of the project on the historic environment, including buildings and underground remains.<sup>46</sup> Their actions addressed settlement of soil, vibrations from blasting, piling, and excavation, seepage of groundwater damaging the wooden piles and rust beds, and heavy traffic damaging the underground remains.<sup>47</sup>

#### ***Mumbai Metro***

The Metro Rail Company produced surveys, assessments, and plans for minimising physical damage to the buildings on the route. They documented the cracks, deteriorating timber elements, walls for missing bricks, and bulging and exposed reinforcement bars.<sup>48</sup> Their work mainly focused on vibration control measures before, during, and after construction.<sup>49</sup> The Metro Rail Company deployed the Tunnel Boring Machine to minimise impacts from vibrations on the surrounding buildings<sup>50</sup> and architectural and decorative elements.<sup>51</sup> They tested it in six 'most sensitive' locations, including on the 125-year-old CSMT railway station.<sup>52</sup>

The Regional Development Authority assured the Heritage Committee that they would address potential damage to the 'heritage buildings' on DN Road by maintaining a 4-m distance from the building fronts as a safety buffer.<sup>53</sup> The Heritage Committee further demanded studies on each of the buildings and their foundations so that the required safeguarding actions could be taken.<sup>54</sup> They also asked for various assessments and plans, including a building condition survey, fabric status, conservation strategy, and preservation/restoration strategy for affected buildings.<sup>55</sup> The Committee also wanted the Regional Development Authority to set up an internal mechanism to monitor their work with the historic environment, and to communicate with the Heritage Committee and an independent structural engineer.<sup>56</sup> The Metro Rail Company promised to take all precautions against damage and to set up a monitoring and communication system.<sup>57</sup>



## ***Restore Historic Environment***

### ***West Link***

The STA would restore the land in consultation with the City of Gothenburg at the ground level in the affected green areas<sup>58</sup> and in land they did not own.<sup>59</sup> The restoration plans for the green areas were based on the “detailed plans” developed by the City.<sup>60</sup> Given their cultural significance, special plans were drawn up for the Skansen Lejonet tower on Gullberg hill and the Kungsparken green area.

The excavations at Skansen Lejonet resulted in the discovery of remains from various time periods. On the eastern side of the hill, the findings included a 16<sup>th</sup> century tower room and items such as a sun dial and beer taps.<sup>61</sup> On the western side, findings included a 19<sup>th</sup> century artillery house, the remains of a small 17<sup>th</sup> century house, and an entrance to fortifications from even before the birth of Gothenburg as a fortified city in 1621.<sup>62</sup> The STA would cover up the remains of the built structures<sup>63</sup> and restore the hill to its pre-West Link state.<sup>64</sup> The aim was to cause minimal visual interference to the Skansen Lejonet tower and the hill.<sup>65</sup>

At Kungsparken, several trees were removed for the construction of the project. The STA would replant some of them, including 52 lindens, in their former locations.<sup>66</sup> The restoration of trees would be done through a different part of the planning process, to fulfill a separate legal mandate.<sup>67</sup>

### ***Mumbai Metro***

The Metro Rail Company would restore the land to its former condition wherever the project was being constructed.<sup>68</sup> One such green area was the Colaba Woods garden where the ground would also be restored<sup>69</sup> and trees replanted.<sup>70</sup>

## ***Design for Visual Context***

### ***West Link***

The actors planned the design of the service shaft at Kvarnberget in the city centre to reference the former fortifications through a contemporary reinterpretation.<sup>71</sup> Its height and volume would re-create those of the former fortification wall,<sup>72</sup> it would be sited where the former St. Eriks bastion was<sup>73</sup> and be clad in natural stone<sup>74</sup> to resemble the high stone wall behind it.<sup>75</sup>

In the Kungsparken green area, the actors tried to plan the West Link to encroach on as little of the park as possible.<sup>76</sup> They laid out the built structures so that the views and sightlines within the park would be preserved.<sup>77</sup>

### ***Mumbai Metro***

The Metro Rail Company and the Heritage Committee extensively discussed the design and location of the overground structures for the upcoming Hutatma Chowk station on DN Road. ‘Design for Visual Context’ was expressed through four actions.

In the first action, the consulting architects proposed that the underground station building be relocated so that its overground elements would not hamper the view of the historic, 19<sup>th</sup> century, stone-sculpted Flora Fountain.<sup>78</sup> The architects

wanted to create a pedestrian quality around the station, arguing that it would be compromised by the presence of the overground structures.<sup>79</sup> Finally, the station was not relocated because of procedural hurdles with the Traffic and Roads Department.<sup>80</sup>

In the second action, the discussion pertained to keeping most built elements, below ground. The actors discussed having roofless structures,<sup>81</sup> however, both the Heritage Committee and Regional Development Authority were against the idea.<sup>82</sup> The Committee did not want rainwater entering the underground stations and the Development Authority wanted to avoid the cost of draining the water. The Committee reiterated their position a few years later, when the architects proposed roofless staircases and escalators.<sup>83</sup> Eventually roofs were done away with<sup>84</sup> and rain protection would be designed into the railings.<sup>85</sup>

In the third action, the Heritage Committee proposed relocating four lift shafts to interior roads so that they would not obstruct the visibility of the "heritage buildings."<sup>86</sup> The Metro Rail Company and its consultants considered the proposal unfeasible: relocation would increase the travel distance for users<sup>87</sup> and also compromise pedestrian safety, as people would have to step off a narrow pavement and onto a busy main road.<sup>88</sup>

In the fourth action, the Heritage Committee and the Metro Rail Company/Regional Development Authority discussed the material and stylistic choices of the overground structures. There were two approaches: one was to use materials and an architectural language similar to the surrounding historic environment, and the second was to use glass.<sup>89</sup>

The Regional Development Authority and their consultants proposed an "art deco styled alternative" for the entries/exits<sup>90</sup> and the use of cast iron railings and Malad stone,<sup>91</sup> a yellow basalt stone used in many of the surrounding 'heritage buildings.' The consultant architects also later proposed<sup>92</sup> that the railings and street furniture be in alignment with the existing DN Road design guidelines which include the use of cast iron, cobblestones, and an overall revivalist aesthetic.<sup>93</sup>

In the case of a relocated police kiosk and lift shafts, the architects suggested cladding of Malad stone or precast Malad-crete panels.<sup>94</sup> They favoured a "period style," because "any contemporary intervention would be incongruous and obtrusive to the heritage fabric."<sup>95</sup> The Heritage Committee on the other hand wanted lighter, more transparent materials to be used.<sup>96</sup> After discussing alternatives, they approved the architects' proposal for the police kiosk and suggested the use of sandstone and a sloping roof so that the new design would be similar to its surroundings.<sup>97</sup> In the case of the lift shafts, they also felt that glass would make the structures clearly distinguishable from their surroundings.<sup>98</sup> Finally, it was decided that lift shafts at four-way road junctions would be in glass to enable "corner visibility" and "transparency."<sup>99</sup> Those on interior roads or for fire safety would be of reinforced cement concrete with Malad stone cladding.<sup>100</sup>

The Heritage Committee also suggested using hydraulic lifts instead of regular ones.<sup>101</sup> Their shafts would be shorter, mechanical elements would be invisible,<sup>102</sup> and views of surrounding historic environment would be retained.<sup>103</sup> Eventually hydraulic lifts were not chosen as they were considered unsuitable for the kind of traffic expected.<sup>104</sup>



## Compensate by Strengthening

### West Link

The STA planned to instal information signs, display excavated objects, and add new design elements, along the route of the West Link and inside the new stations.

At Skansen Lejonet, they would introduce markings at the excavation sites, with information on the history of the area, including its newly discovered history.<sup>105</sup>

In Haga and Korsvägen Stations, they would exhibit found objects, some of which were pipes, pieces of porcelain and ceramic, and utensil bits.<sup>106</sup> They would also display artefacts, old botanical prints, and images and videos on life in a *lander*.<sup>107</sup> At Central Station, the STA would exhibit large rocks from the former fortified city as art works.<sup>108</sup> The individual stones would have visible hand imprints to convey the toil of the labourers who built the city.<sup>109</sup>

In addition to the displays, there would be new design elements in the stations. The STA planned to strew words such as 'bastion,' 'glacis,' 'curtain wall,' and others associated with the fortification history of Gothenburg, across Haga Station.<sup>110</sup> They would also engrave the names of the former *lander* residents in the granite tiling and make historical patterns in the concrete in Korsvägen Station.<sup>111</sup> Further, the STA would physically mark the boundary of the former fortifications in and around Central and Haga Stations<sup>112</sup> and indicate the change between what used to be land and water with different types of flooring.<sup>113</sup> They also planned to restore the former wall, re-create cultivation areas, and build an orangerie in the Johanneberg *lander*.<sup>114</sup>

### Mumbai Metro

The Metro Rail Company planned to design the interiors of the stations to reflect the history of the surrounding areas.<sup>115</sup> They cited 'the popular and contemporary kind of culture' of the Dharavi area and the 'very old Mumbai *chawl*'<sup>116</sup> culture' of the inner city areas of Girgaon and Kalbadevi as potential histories to depict in their corresponding stations.<sup>117</sup> The renderings would be made by local artists.<sup>118</sup>

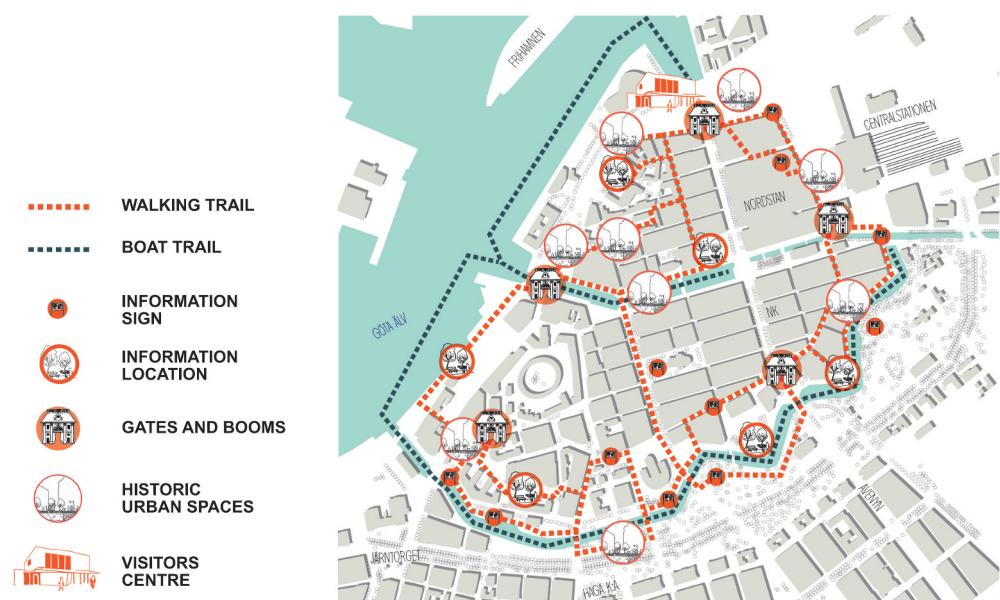
At an early stage, the consulting architects to the Regional Development Authority also proposed creating an underground museum.<sup>119</sup> Eventually, the idea was abandoned because the tunnelling method rendered it impossible to save any potential archaeological remains.<sup>120</sup>

## Compensate by Creating

### West Link

The actions focused on city planning initiatives that were extensive in geographic scope and scale. The CHEG proposed creating new urban spaces and programmes, even in parts of the city that were not physically affected by the West Link.

The response covered the area of the whole former fortified city,<sup>121</sup> as depicted in Figure 4, as well as 13 *lander*s strewn across Gothenburg,<sup>122</sup> as in Figure 5. The plans included creating visual connections and access to historical spaces, establishing walking tours, boat trails, plaques, and information signs, pedestrianising certain areas, and setting up pop-up markets, play spaces, and jogging and cycling tracks.<sup>123</sup> Newly built structures would include gates to the former fortified city in contemporary style, a sculpture and



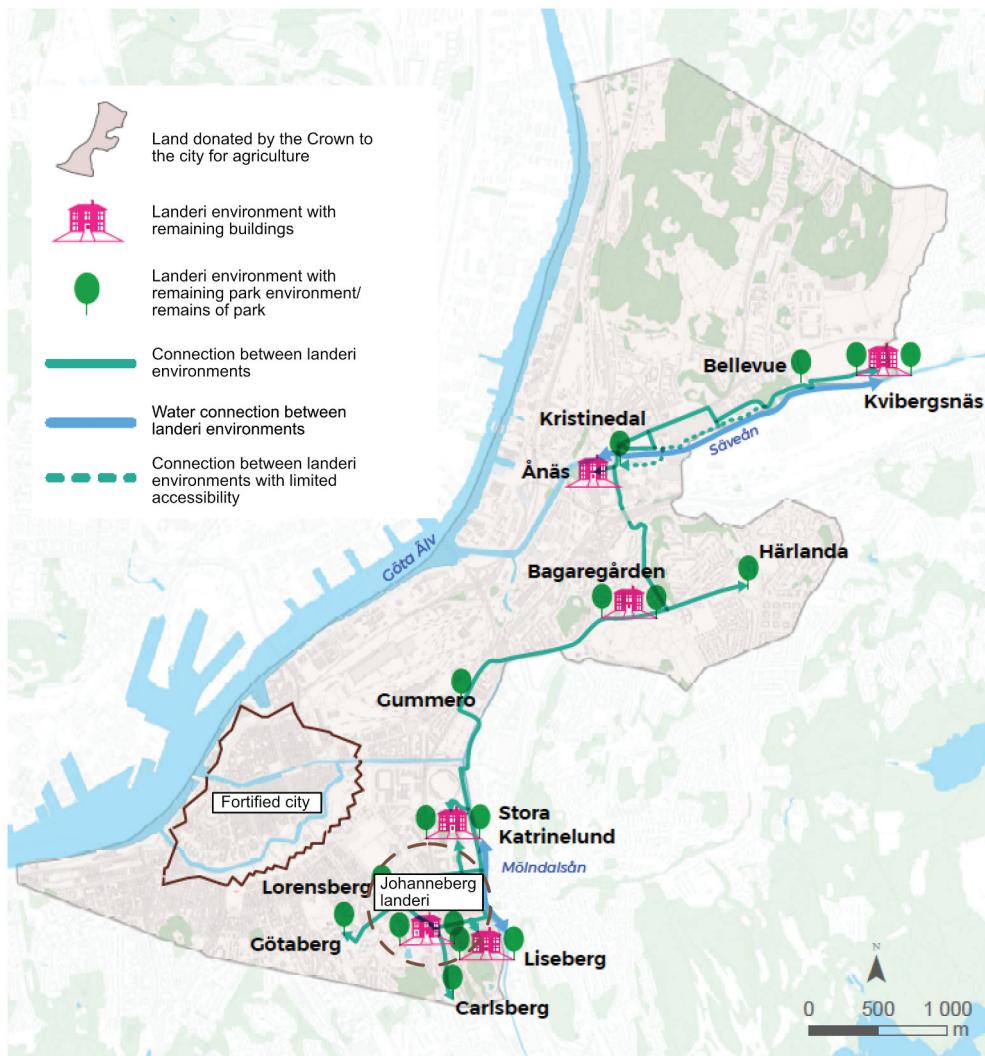
**Figure 4.** 'Compensate by Creating' in the former fortified city in the West link case. Source: City Museum,<sup>130</sup> author's translation.

bridge in the Kungsparken green area, a 'rain garden,' visitors centres, and water barriers or booms between the landmass and river.<sup>124</sup> The CHEG also proposed creating a common graphical identity and educational tools such as maps and a website.<sup>125</sup> They put forth an idea to design a new park connected to the historical Kungsparken<sup>126</sup> that would include contemporary functions and be inviting for children, young and old people, and other vulnerable groups.<sup>127</sup> At Kungsparken, they also proposed changing the material of the pathways from asphalt to gravel, and having new furniture, lamp posts, and fences.<sup>128</sup> These would evoke the second half of the 1800s when the park was laid out as an English garden.<sup>129</sup>

### Contextualising Preservation and Compensation in Planning

'Avoid Damage,' 'Minimise Damage,' and 'Design for Visual Context' were the dominant responses in the Mumbai Metro case. The first two were damage-mitigating responses targeted at preserving the physical and structural integrity of the surrounding 'heritage buildings.' The third, while additive, aimed at preserving the buildings' visual integrity. The three responses collectively comprise 'preservation.' In the West Link case, 'Compensate by Strengthening' and 'Compensate by Creating' were mobilised in a significant way and comprised a broader concept of 'compensation.'

Preservation and compensation were found to be embedded in the planning contexts and the wider constraints within the two projects. This section contextualises the two responses, preservation in the Mumbai Metro and compensation in the West Link, by



**Figure 5.** 'Compensate by Creating' in 13 *landeris* in the West link case. Source: City Museum,<sup>131</sup> author's translation.

analysing the way historic environments are considered in planning policy and practice at local, regional, and national levels.

### **Resistance to Historic Environment Loss**

Historic environment conservation and urban planning are considered independently of each other in the planning context of Mumbai. 'Heritage' corresponds to 'heritage buildings' and 'heritage precincts,' which, as understood by law,<sup>132</sup> are buildings and areas inventoried on the Heritage List. Municipal planning applies only to listed structures.<sup>133</sup> 'Heritage buildings and precincts' are further categorised into various grades, which correspond to how much physical change is permissible to them. Allowable change

ranges from not touching the building fabric at all, to making minimal physical alterations, to demolishing the building altogether.<sup>134</sup> Options for productive ways of dealing with the historic environment are lacking. In national law too, historic environments and planning projects are treated separately. The Ancient Monuments and Archaeological Sites Act prohibits construction within a 100 m radius of "protected monuments," and limits it over the next 200 m.<sup>135</sup>

In the case of the metro, DN Road became the focal point of preservation efforts. The road is a "heritage streetscape" according to the Bombay Heritage Regulations of 1995 and every building is listed.<sup>136</sup> Called the Heritage Mile, it is routinely celebrated,<sup>137</sup> and upheld for being the only part of the city with a continuous collection of "heritage buildings."<sup>138</sup> With heritage viewed as a finite quantity of objects, preservation was a means of retaining "a small oasis of heritage structures" in "a desert of concrete structures."<sup>139</sup>

The roles and responsibilities of the actors further marginalised heritage in planning. The Heritage Committee kicks into action when a new construction is proposed close to listed heritage. The Committee has a purely advisory role; its recommendations are non-binding. The presence of a Heritage Committee is itself not a given; in 2011, the state's Urban Development Department failed to renew its term, leaving the city without a Heritage Committee for 11 months.<sup>140</sup> Further, the Municipal Commissioner has the final say in heritage decisions. In the Mumbai Metro case, the Commissioner overruled the Heritage Committee's recommendations for realigning the track from under DN Road. As quoted in the media, he considered the metro of "extremely vital importance" and found there to be "no viable alternative."<sup>141</sup> The veto provision is rarely mobilised,<sup>142</sup> but the regulations<sup>143</sup> enable it to be.

Further, corruption is part of the process and enables planning policy to be subverted to the detriment of heritage. Developers might "manoeuvre and manipulate" to get building permissions or attempt to have a building removed from the Heritage List.<sup>144</sup> This is especially true for Mumbai, where the builder lobby is strong, real estate is of prime value, and politicians are susceptible to manipulation.<sup>145</sup> In such situations, listed heritage becomes a casualty because it is seen as coming in the way of an area's redevelopment for more commercially viable purposes.<sup>146</sup>

There is an overall government apathy towards conservation.<sup>147</sup> This is not only true at the city level but also at the state level where the State Archaeology Department is "a very weak department" with hardly any staff, the director post is largely vacant, and where "very, very little work is being done."<sup>148</sup> At the national level too, there is a lack of commitment to heritage issues, seeing as even after over 70 years of independence, there is no dedicated conservation ministry.<sup>149</sup> Inadequate funds are allocated for the management of even listed heritage<sup>150</sup> and there are no economic incentives in policy for conservation.<sup>151</sup>

In the context of insufficient regulations and loopholes, even the preservation response, which focuses on material fabric, can become a battleground. More productive responses are then a distant dream. Nevertheless, in the case of the metro, the Committee consistently pushed back against the Metro Rail Company/Regional Development Authority's plans, demanding various actions to avoid and minimise damage. They also attempted to tackle urban planning issues that went beyond preservation of the material fabric of 'heritage buildings.' They demanded restrictions on building heights of new

constructions by limiting Floor Space Index<sup>152</sup> and considered the risk of congestion from car traffic if high rises with car parks were allowed to proliferate the area.<sup>153</sup> They pushed, not only for heritage, but other utilities, traffic, and pedestrian movement to be considered.<sup>154</sup> They even questioned whether the metro was required at all<sup>155</sup> while also asking that it be extended into the nearby central business district.<sup>156</sup>

Individual members of the Committee also militated against received norms more generally. They recognised gaps in policy, including the overemphasis on built heritage in the Heritage List<sup>157</sup> and the exclusion of intangible heritage.<sup>158</sup> They critiqued how built heritage is dealt with in isolation from its wider environment,<sup>159</sup> and commented on the need to, not only try to avoid building around heritage, but create an enriching physical setting around it.<sup>160</sup> They also acknowledged wider social and economic issues and said that it was crucial that conservation be flexible and consider common people's aspirations.<sup>161</sup>

### ***Integration of Historic Environment Loss***

There have been increasing attempts in law and policy in Sweden to make historic environment conservation an active part of planning. In 2017, a Swedish government investigation pointed to gaps in the Environmental Code with regard to compensation for the loss of values associated with the historic environment and called for strengthening its provision.<sup>162</sup> In the same year, the Swedish Transport Administration (STA) drew up a landscape policy for holistic planning,<sup>163</sup> and in 2019, in response to a national government assignment, they produced guidelines to sharpen compensation.<sup>164</sup> Here, they identified the need for working effectively with the historic environment, its sustainable planning and management, and making it more accessible.<sup>165</sup> In 2021, the STA produced a further report on concepts and tools related to compensation in transport infrastructure projects.<sup>166</sup> They have also funded research on the practical application of "strengthening."<sup>167</sup>

More broadly, in 2013, the government put in place four progressive national goals which consider the historic environment an active, dynamic agent in change.<sup>168</sup> In 2014, they acknowledged historic environments as essential to social inclusion though the '2030 Vision for cultural heritage management in Sweden'.<sup>169</sup> Further, the 2018 policy on 'designed living environments,' asserted that new designs must integrate the existing environment and its values.<sup>170</sup> Internationally, Sweden is a signatory to the European Landscape Convention which considers sustainable development through the lens of larger sites and the social needs of all groups.<sup>171</sup>

Conservation in the West Link case was embedded in a legal and policy ecosystem that was fertile ground for the compensation response to emerge. Three specific legal measures made it possible: Condition 1, the P3 ruling, and the Implementation Agreement. Under Condition 1, the Swedish government mandated that the STA not only minimise negative effects to the historic environment but also make it more visible and incorporate it into the new project.<sup>172</sup> Under the P3 ruling, the Land and Environment Court stated that the STA should 'compensate' for the impact caused to the historic environment, and propose concrete measures for 'strengthening' it.<sup>173</sup> Under the Implementation Agreement, signed between the City of Gothenburg and the STA, the STA was to work on making the various parts of the national interest 'stronger' and its 'stories' 'clearer' in the urban space.<sup>174</sup> Collectively, the three legal measures asked for more than damage

mitigation; they asked for the 'stories' of the city to be highlighted in urban space in concrete ways. They created the grounds for change-oriented and productive ways of approaching the historic environment and called upon the STA to fulfil them. Nevertheless, the actors acknowledged gaps in how the response was mobilised. They were critical that certain important parts of history were excluded while presenting the city's history. These were Sweden's involvement in the colonial slave trade<sup>175</sup> and the mass exodus of Swedes to U.S.A.<sup>176</sup>

Further, the geographic scope and scale of compensation were expressed differently by the actors. The STA veered towards the 'Compensate by Strengthening' response, which consisted of smaller actions on and around the West Link route and in the stations. The CHEG conceived of compensation as 'Compensate by Creating' which additionally consisted of more robust and permanent actions, and in far flung areas of the city. The difference is owed to their own institutional mandates. The STA is a project-based organisation with a shorter timeline for completing the West Link and instituting compensation measures.<sup>177</sup> The CHEG is part of the City of Gothenburg, which oversees city planning as a whole and deals with longer planning timelines.<sup>178</sup> For the City, the West Link was only one part of broader city planning.<sup>179</sup> In some areas, development would only begin several years after the West Link's completion.<sup>180</sup> The STA also did not own all the areas that they impacted, limiting their options for where they could work.<sup>181</sup> Against this backdrop, installing compensation actions in the underground station buildings, which they own, became feasible.

Another significant issue for the STA was having to liaise with multiple departments of the City. The City did not have one voice, making it challenging to communicate and collectively arrive at decisions.<sup>182</sup> Having to discuss how compensation would be executed in the project, the actors faced various barriers. The planning process involved different understandings of the compensation mandate, difficulties in coordination and collaboration, and miscommunication and mistrust between the parties.<sup>183</sup>

## The Complexity of Planning

The cases show that conservation emerges in the context of technical, practical, and institutional considerations, as exercised by a range of diverse actors and their interests that jostle for space in the process. The actors draw their legitimacy from their institutional mandates and roles and responsibilities in the planning system. As their various positions meet in the negotiations over the affected historic environment, they give shape to the conservation response, whether preservation or compensation.

In the Mumbai Metro, the actors included urban planners within the Metro Rail Company and Regional Development Authority, bureaucrats, members of the Heritage Committee, other departments of the municipality, as well as the judicial system which was constantly drawn into the process through various cases that were lodged against the project in court.<sup>184</sup> Practical and technical considerations that impacted the conservation response came from maximising commuter volume, safety issues, and flooding possibilities, among others. In the West Link, the actors were planners and heritage professionals within the Swedish Transport Administration (STA) and City's Historic Environment Group (CHEG), as well as architects consulting on the project, artists, and representatives of other departments in the City, such as the Real Estate Office, Parks and Nature Department,



Traffic Department, and entrepreneurs who were contracted to execute the construction. With the range of actors, their individual positions, and official departments involved, the negotiations often became fraught. This was seen in the strained communication both between the Heritage Committee and the Metro Rail Company/Regional Development Authority and between the STA and the CHEG. In the Mumbai Metro, the main conflict lay in the realignment of the track, as pushed for by the Heritage Committee. In the West Link, the task of compensation was understood differently by the STA and the CHEG. The issues exemplify planning in the West Link, and in general, as a 'wicked problem' or essentially unresolvable exercise.<sup>185</sup>

Overall, the paper finds that a spectrum of conservation responses exists in response to urban planning projects. The responses are deeply embedded in planning structures, the constraints associated with them, and the way policy is mobilised by actors. These factors shape the response, whether it is damage-mitigating, like preservation, or productive, like compensation. The paper contributes to the discourse on historic environment policy and practice: it offers policymakers and practitioners a framework for understanding the spectrum of possible conservation responses in practice, when the basis for decision-making is to work with rather than against change. The spectrum also offers a language for actors to talk across their individual positions. Further, by discussing compensation as a response in planning, the paper provides concrete direction for what change-oriented conservation can look like. The impact of this is holistic urban development rather than islands of heritage dissociated from new projects. Such an approach is especially necessary in contexts where policy and practice still largely consider conservation and urban planning separately.

While compensation is a step in the direction of change-oriented conservation, a further response would be to locate common people more centrally in the planning process. This would enable the development of environments that are not only culturally and historically rich but also socially and economically sustainable.

## Notes

1. Feilden, *Conservation of Historic Buildings*, 3; Ashworth, "Heritage Planning"; Fairclough, "A New Landscape"; Veldpaus et al., "Urban Heritage," 11; Kalman, *Heritage Planning*; and UNESCO, "Historic Urban Landscape."
2. Veldpaus et al., "Urban Heritage"; Fouseki et al., "Heritage and Sustainable Urban Transformations"; Menon, "Imagining the Indian City"; Menon, "Overwriting Historic Space"; and Mehrotra, "Conservation and Change."
3. UNESCO, "Historic Urban Landscape"; and Council of Europe, "Landscape Convention."
4. Veldpaus et al., "Urban Heritage."
5. Ashworth, "Heritage Planning"; and Kalman, *Heritage Planning*.
6. Pendlebury, "Conservation Values," 710.
7. Ibid.
8. Ibid., 710–11.
9. Ashworth, "Preservation, Conservation and Heritage"; and Janssen et al., "Heritage as Sector, Factor, Vector."
10. Ashworth, "Preservation, Conservation and Heritage."
11. Janssen et al., "Heritage as Sector, Factor, Vector."
12. See note 9 above.
13. Janssen et al., "Heritage as Sector, Factor, Vector," 1666; and Menon, "Imagining the Indian City."

14. Getty Conservation Institute, *Historic Urban Environment Conservation*, 18.
15. Rönn and Grahn Danielson, "Cultural Heritage Compensation"; Rönn, "Architecture, Heritage, and Compensation"; Rönn et al., "Compensation in Planning"; Grahn Danielson et al., "Policies and Compensation"; Holtorf and Smits, "Kulturmiljöstarkande åtgärder i transportinfrastrukturprojekt"; Toreld et al., "Vägledande Strategi för kulturmiljöstarkande åtgärder"; Trafikverket, "Regeringsuppdrag: Trafikverkets kulturmiljöstrategi"; and Trafikverket, "Miljökompensation i transportinfrastruktur."
16. *Landeris* were agricultural sites, formerly outside the fortified city that supplied produce to it. They were built roughly between 1621 and 1900 and today lie within the city limits.
17. Miljödepartementet, "Tillätlighetsprövning enligt miljöbalken"; and Mark- och miljödomstolen, "Saken: tillstånd för anläggandet."
18. Mark- och miljödomstolen, "Saken: tillstånd för anläggandet," 12.
19. Trafikverket, "The West Link Project."
20. Göteborgs Stad and Trafikverket, "Genomförandeavtal: Västlänken."
21. The metro line that is referred to as the Mumbai Metro in this text is one of 14 lines planned or under construction in the city. It is officially called Mumbai Metro III or Aqua Line, however, in this text, I refer to it as Mumbai Metro simply for convenience.
22. Rites and Mumbai Metro Rail Corporation Limited, "Detailed Project Report," 4–65; and 'Heritage Buildings' and 'Heritage Precincts' refer to officially listed buildings and ensembles, respectively, in the Mumbai Metro case.
23. Mumbai Metro Rail Corporation Limited, "Map of MML-3".
24. Narain Lambah and MMR-HCS, "Design Handbook for Heritage Streetscape," 9–11.
25. Rites and Mumbai Metro Rail Corporation Limited, "Detailed Project Report," 4–62.
26. Dore, "From Gone to Gain," 101.
27. See Dore, "Storytelling and Storyreading," for a full analysis of how compensation can take the form of conveying "stories."
28. Trafikverket, "Handlingsplan kulturmiljö," 9–10.
29. Interviewee 6a, CHEG, September 17, 2021.
30. Göteborgs Stadsmuseum, "Västlänken – en tägtunnel."
31. Trafikverket, "Västlänken – PM kulturmiljö."
32. Ibid.
33. Maple and Mumbai Metro Rail Corporation Limited, "Updated Environmental Impact Assessment," 79; 401; and Rites and Mumbai Metro Rail Corporation Limited, "Detailed Project Report," 7–15.
34. Rites and Mumbai Metro Rail Corporation Limited, "Detailed Project Report," 4–76.
35. Municipal Corporation of Greater Mumbai, "Minutes of 29th meeting."
36. Ibid.
37. Municipal Corporation of Greater Mumbai, "Minutes of 30th Meeting".
38. Municipal Corporation of Greater Mumbai, "Minutes of 34th Meeting."
39. Ibid.
40. Ibid.
41. Municipal Corporation of Greater Mumbai, "Minutes of 36th Meeting."
42. Municipal Corporation of Greater Mumbai, "Minutes of 49th Meeting."
43. Ibid.
44. Ibid.
45. Municipal Corporation of Greater Mumbai, "Minutes of 60th Meeting."
46. Trafikverket, "Handlingsplan kulturmiljö," 23–24.
47. Trafikverket, "Handlingsplan kulturmiljö Fornlämningar," 14.
48. Rites and Mumbai Metro Rail Corporation Limited, "Detailed Project Report," 4–77.
49. Maple and Mumbai Metro Rail Corporation Limited, "Updated Environmental Impact Assessment," 15–16, 324.
50. Ibid., 321.
51. Interviewee 4b, Metro Rail Company, March 3, 2022.

52. Maple and Mumbai Metro Rail Corporation Limited, "Updated Environmental Impact Assessment," 179–90.
53. See note 35 above.
54. *Ibid.*
55. *Ibid.*
56. See note 41 above.
57. See note 42 above.
58. Trafikverket, "Åtgärdsprogram bevarande av träd," 9; and Trafikverket, "Handlingsplan kulturmiljö gröna kulturarvet," 4.
59. Interviewee 1a, STA, November 1, 2023.
60. Trafikverket, "Handlingsplan kulturmiljö gröna kulturarvet," 16.
61. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 11.
62. *Ibid.*, 12.
63. See note 59 above.
64. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 13–14.
65. *Ibid.*, 13–14.
66. *Ibid.*, 43.
67. *Ibid.*, 5.
68. Interviewee 5b, Metro Rail Company, October 27, 2023.
69. See note 35 above.
70. Interviewee 9b, Tree Authority, March 8, 2022.
71. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden," 26; and Interviewee 3a, STA, September 23, 2022.
72. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden," 26.
73. *Ibid.*, 26.
74. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 29.
75. See note 59 above.
76. Interviewee 8a, CHEG, October 18, 2022.
77. *Ibid.*
78. Municipal Corporation of Greater Mumbai, "Minutes of 45th Meeting".
79. Interviewee 10b, architect, July 28, 2023.
80. *Ibid.*
81. Municipal Corporation of Greater Mumbai, "Minutes of 34th Meeting".
82. *Ibid.*
83. See note 78 above".
84. Interviewee 5b, Metro Rail Company, January 24, 2022; and Interviewee 10b, architect, July 28, 2023.
85. See note 79 above.
86. See note 83.
87. *Ibid.*
88. Municipal Corporation of Greater Mumbai, "Minutes of 3rd Meeting".
89. See note 51 above.
90. Municipal Corporation of Greater Mumbai, "Minutes of 30th Meeting".
91. Municipal Corporation of Greater Mumbai, "Minutes of 34th Meeting".
92. See note 83.
93. Narain Lambah and MMR-HCS, "Design Handbook for Heritage Streetscape," 38.
94. See note 83 above.
95. See note 88 above.
96. Municipal Corporation of Greater Mumbai, "Minutes of 45th Meeting"; and Municipal Corporation of Greater Mumbai, "Minutes of 3rd Meeting".
97. Municipal Corporation of Greater Mumbai, "Minutes of 13th Meeting".
98. See note 96 above.
99. See note 79 above.
100. *Ibid.*

101. See note 83 above.
102. *Ibid.*
103. See note 99 above.
104. See note 88 above.
105. Interviewee 1a, STA, November 1, 2023; and Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 11.
106. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 49; and Arkeologerna, "Fynden Under Sankt Eriksgatan".
107. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 47–52; and Interviewee 4a, architect, November 2, 2022.
108. Trafikverket, "Kulturmiljöåtgärder för Västlänken 2023," 16.
109. *Ibid.*, 16.
110. See note 108 above.
111. *Ibid.*, 49.
112. *Ibid.*, 21, 24, 42.
113. *Ibid.*, 21, 24.
114. *Ibid.*, 53.
115. See note 51 above.
116. *Chawls* are tenement housing blocks that were designed for migrant mill-workers in the late 19th and early 20th centuries.
117. See note 51 above.
118. *Ibid.*
119. Municipal Corporation of Greater Mumbai, "Minutes of 34th Meeting."
120. Interviewee 4b, Metro Rail Company, March 3, 2022; and Interviewee 8b, Heritage Committee, March 2, 2021.
121. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden."
122. Göteborgs Stadsmuseum, "Göteborg förstärkt: Landerierna."
123. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden"; Göteborgs Stadsmuseum, "Göteborg förstärkt: Landerierna."
124. *Ibid.*
125. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden," 30.
126. Göteborgs Stadsmuseum, "Åtgärdsförslag för Kungsparken/Nya Allén," 14–15.
127. Interviewee 7a, CHEG, September 19, 2022.
128. See note 126 above.
129. See note 126 above.
130. Göteborgs Stadsmuseum, "Göteborg förstärkt: Fästningsstaden," 17.
131. Göteborgs Stadsmuseum, "Göteborg förstärkt: Landerierna," 5.
132. Law and Judiciary Department, "Maharashtra Regional and Town Planning Act."
133. Municipal Corporation of Greater Mumbai, "Development Control and Promotion Regulations."
134. *Ibid.*, 402–8.
135. Government of India, "Ancient Monuments and Archaeological Sites," 3–5.
136. Narain Lambah, "Heritage Streetscape."
137. Narain Lambah, "Heritage streetscape"; Narain Lambah and MMR-HCS, "Design Handbook for Heritage Streetscape."
138. Interviewee 1b, Heritage Committee, February 9, 2021.
139. *Ibid.*
140. Express News Service, "Heritage panel."
141. FPJ Bureau, "Does BMC care?"
142. Interviewee 6b, Heritage Committee, February 24, 2021.
143. Municipal Corporation of Greater Mumbai, "Development Control Regulations."
144. *Ibid.*
145. Interviewee 1b, Heritage Committee, February 9, 2021.

146. Interviewee 1b, Heritage Committee, February 9, 2021; and Interviewee 3b, Heritage Committee, January 15, 2022.
147. Interviewee 1b, Heritage Committee, February 9, 2021; and Interviewee 8b, Heritage Committee, March 2, 2021.
148. Interviewee 1b, Heritage Committee, February 9, 2021.
149. Interviewee 8b, Heritage Committee, March 2, 2021.
150. See note 148 above.
151. See note 149 above.
152. See note 35 above.
153. Interviewee 8b, Heritage Committee, October 1, 2023.
154. Municipal Corporation of Greater Mumbai, "Minutes of 30<sup>th</sup> meeting".
155. See note 35 above.
156. Ibid.
157. Interviewee 7b, Heritage Committee, January 22, 2022.
158. Interviewee 2b, Heritage Committee, January 21, 2022.
159. See note 149 above.
160. Interviewee 2b, Heritage Committee, January 21, 2022.
161. See note 149 above.
162. Statens offentliga utredningar, "Ekologisk kompensation," 34.
163. Trafikverket, "Landskapet är arenan."
164. Trafikverket, "Regeringsuppdrag: Trafikverkets kulturmiljöstrategi."
165. Ibid., 3.
166. Trafikverket, "Miljökompenstation i transportinfrastruktur."
167. Holtorf and Smits, "Kulturmiljöstarkande åtgärder i transportinfrastrukturprojekt"; and Toreld et al., "Vägledande strategi för kulturmiljöstarkande åtgärder."
168. Regeringskansliet, "Mål för kultur."
169. Council of Europe, "2030 Vision for cultural heritage."
170. Boverket, "Politik för gestaltad livsmiljö."
171. Council of Europe, "Landscape Convention."
172. Miljödepartementet, "Tillåtlighetsprövning enligt miljöbalken."
173. Mark- och miljödomstolen, "Saken: tillstånd för anläggandet."
174. Göteborgs Stad and Trafikverket, "Genomförandeavtal. Västlänken."
175. Interviewee 6a, CHEG, September 17, 2021.
176. Interviewee 2a, STA, December 1, 2020; Interviewee 6a, CHEG, September 17, 2021.
177. Interviewee 1a, STA, December 9, 2020; Interviewee 7a, CHEG, September 19, 2022.
178. See note 176 above.
179. Interviewee 5a, CHEG, November 26, 2020.
180. Interviewee 1a, STA, December 9, 2020.
181. Interviewee 1a, STA, November 27, 2020.
182. Interviewee 1a, STA, November 27, 2020; Interviewee 1a, STA, December 9, 2020; Interviewee 1a, STA, April 7, 2021; and Interviewee 1a, STA, March 17, 2022.
183. Fredholm et al., "Professionella aktörer."
184. Adimulam, "J N Petit library"; and Deshpande, "Parsis move SC."
185. Fredholm et al., "Strategic Responses."

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## Notes on contributor

**Maitri Dore** received her PhD in cultural heritage conservation from the Department of Conservation, University of Gothenburg in January 2024. She is currently doing postdoctoral research on the role of heritage in sustainable housing design, partly within the Dwellingology project at the Department of Architecture and Civil Engineering, Chalmers University of Technology, Gothenburg. Maitri holds a bachelor's degree in architecture from Mumbai University, and a master's degree in urban studies through the Erasmus Mundus+ 4Cities programme.

## ORCID

Maitri Dore  <http://orcid.org/0000-0002-1552-9316>

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