

IRT PHASE 2A TRUNK ROUTE SECTION W8- PROPOSED EXPANSION OF THE ROAD AND DEVELOPMENT OF DEDICATED BUS AND NMT LANES AND ASSOCIATED INFRASTRUCTURE BETWEEN THE M5 INTERCHANGE AND MAIN ROAD – WYNBERG, PLUMSTEAD & YOUNGSFIELD.

DEA&DP NOI REFERENCE NUMBER: 16/3/3/6/7/1/A6/96/2194/23
HWC REFERENCE: 22100303CN1004

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EXECUTIVE SUMMARY

INTRODUCTION

The Metro South East South Road Scheme (known as the IRT W8) is a critical component in completing the Wynberg leg of the IRT Phase 2A corridor, linking the M5 Kromboom Parkway in the east to the M4 Main Road in the west. It is situated between two approved IRT Phase 2A work packages—W5 (M68 Ottery Road) to the east and W6 (Wynberg Couplet) to the west. The scheme has been under independent consideration as part of the City of Cape Town's broader road upgrade initiatives since before the IRT was conceptualized.

The Lansdowne-Wetton Corridor (LWC) road scheme was originally approved by Council in October 2011 as part of the broader planning and design approval for IRT Phase 2. A route alignment options analysis for the Wynberg leg of the LWC trunk route was completed in 2014, and its findings were incorporated into the approved 2032 IPTN plan in June 2014. Public participation with affected communities was conducted between October 2014 and July 2015. However, prior to the commencement of this process, City tenants of South Road CCT owned properties that overlap the IRT W8 construction corridor were issued termination notices, prompting the Wynberg Residents' & Ratepayers Association (WRRRA) and the South Road Families Association (SRFA) to file an urgent application with the Western Cape High Court on 26 March 2015. The court ruled in favour of WRRRA and SRFA on several key issues, particularly emphasizing the City of Cape Town's obligation to conduct meaningful public participation for Phase 2A. As a result, all work on South Road was suspended on 1 April 2016. The City appealed the High Court ruling, and on 10 February 2017, the appeal was upheld in favour of the City. To address concerns raised, the City commissioned a peer review of the Wynberg leg's routing options, conducted by PricewaterhouseCoopers. Following various assessments and reports, the Council approved the Ottery/South Road alignment on 28 March 2019. This alignment was recommended based on its ability to meet BRT needs while addressing road network deficiencies and minimizing property acquisitions compared to the Wetton Road alternative.

From a strategic road network perspective, the proposed development is essential for establishing a critical east-west connection in the southern Wynberg area and across the railway line, ensuring continuity with the proclaimed South/Constantia Road link west of Main Road. This road link is required independently of the IRT trunk alignment.

This text provides an executive summary for the Basic Assessment Report (BAR) for the IRT Phase 2A Trunk Route Section W8 of the Proposed Expansion of The Road And Development Of Dedicated Bus And NMT Lanes And Associated Infrastructure Between Main Road and the M5 Interchange within the suburbs of Wynberg, Plumstead and Youngsfield.

This application for Environmental Authorisation is limited to Work Package W8 of the larger MSEC project, which would connect Wynberg Main Road in the west to the M5 Interchange in the east, via South Road.

Refer to the duplication of Figure 1 below for the location of the affected stretch of roadway.

Application has been made to the Department of Environmental Affairs & Development Planning (DEDA&DP) for Environmental Authorisation and this document is currently being subjected to a 30-day public review period. All comments raised in relation to the Draft BAR will be considered, and where appropriate, changes will be incorporated into the Final BAR for submission to the competent authority (the DEA&DP) for their final decision-making. Note that while I&AP contact information is not disclosed as part of this report, all contact details of I&APs will be included in the final BAR to the DEA&DP and will become part of the public record.

The most pertinent details regarding the environmental process are captured in this executive summary. Full details are provided in the rest of the Draft BAR and the Appendices, which, *inter alia*, contains the full specialist reports.



Figure 1: Locality Map for the proposed IRT W8 route (Created using Google Earth Pro, 2025).

PROJECT DESCRIPTION

The proposed scope includes the following:

- The existing section of South Road would be extended westwards by $\pm 265\text{m}$ in order to connect to Wynberg Main Road via a newly constructed bridge over the railway line and Waterbury Road.
- The intersection between Prince George Drive, Rosmead Avenue, Ottery Road and South Road would be re-aligned and upgraded/widened.
- Sections of Wynberg Main Road, Prince George Drive, Ottery Road, Rosmead Avenue and Pluto Road will also be upgraded / widened.
- The inclusion of two dedicated bus lanes and additional vehicular use lanes along the entire route.
- New bus station located at the Pluto Road intersection;;
- Provision of improved non-motorised transport (NMT) routes;
- Development of a bridge to cross the railway line (refer to **Figure 2**~~Error! Reference source not found.~~);
- A road shoulder;
- Parking areas;
- Hard and soft landscaping using indigenous plant species and retaining , where possible, existing trees.
- Service infrastructure:
 - Stormwater interventions on site will cater for the minor (1:5 year) and major (1:10 year) storm recurrence return periods and will entail a network of concrete collector pipes, new catchpits, and the relocation of existing catchpits and manholes, all of which will integrate with the existing stormwater infrastructure.
 - The existing street lighting along the proposed roadway will be removed and replaced with new infrastructure.
 - A range of overhead and underground services (electrical, water, sewage, stormwater, telecommunication) are present within the site boundary. Accordingly, appropriate provisions must be made for the removal, relocation, upgrade (where necessary) or protection of existing infrastructure, including electrical, telecommunication, water, and sewer services. These will however all be within the development footprint being applied for or within existing road reserves.

None of the proposed service infrastructure (pipelines, transmission lines etc.) meet the thresholds considered in the respective Listed Activities.

The typical cross section for the route will comprise a 3.5m bus lane, 3.4m general traffic lane and 1.5m shoulder on either side. The NMT is made up of a 2m wide sidewalk and 1.8m wide dedicated cycle lane on both sides. The route and road extent are depicted in **Figure 1** above. Site Plans are included in Appendix B1 and Appendix N for the draft Landscaping Plan of the Basic Assessment Report.

The proposal will necessitate:

- Acquisition of approximately 22 privately owned properties along the route;
- Demolition of a number of existing structures;
- The permanent or partial closure of certain roads / intersections for vehicles (**Table 1**).

Table 1: Proposed permanent or full road closures along the IRT W8 route.

Affected Road Intersections	Closure	Impact
Waterbury Road and Main Road	Full	No direct access between Waterbury Road and Main Road.
Ashbury Road and South Road	Full	No direct access between Ashbury road and South Road.
Honitan Road and South Road	Full	No direct access between Honitan Road and South Road.
Chudleigh Road and South Road	Partial	Left-in left-out access only to Chudleigh Road from South Road.
Batts Road and South Road	Full	No direct access between Batts Road and South Road.
Stella Road and South Road	Full	No direct access between Stella Road and South Road.
Lympleigh Road and South Road	Full	No direct access between Lympleigh Road and South Road.
Sussex Road and South Road	Full	No direct access between Sussex Road and South Road.
Rotherfield Road and South Road	Full	No direct access between Rotherfield Road and South Road.
Pluto Road and South Road	Full	No direct access between Pluto Road and South Road
Woodley Road and South Road	Full	No direct access between Woodley Road and South Road.
Milford Road and South Road	Partial	Left-in access only to Milford Road from South Road. No access to South Road from Milford Road.
Platoon Road and South Road	Full	No direct access between Platoon Road and South Road.
Evremonde Road and South Road	Full	No direct access between Evremonde Road and South Road.
Troop Road and South Road	Full	No direct access between Troop Road and South Road.
Churchill Road and South Road	Full	No access to Ottery Road and South Road via Churchill Road.
Napier Road and Ottery Service Road	Full	No direct access between Napier Road and Ottery Service Road.
Portswood Road and Ottery Service Road	Full	No direct access between Portswood Road and Ottery Service Road.



Figure 2: Conceptual view of three-span bridge (road-over-rail) (source : HHO Conceptual Design Review Report, August 2023)

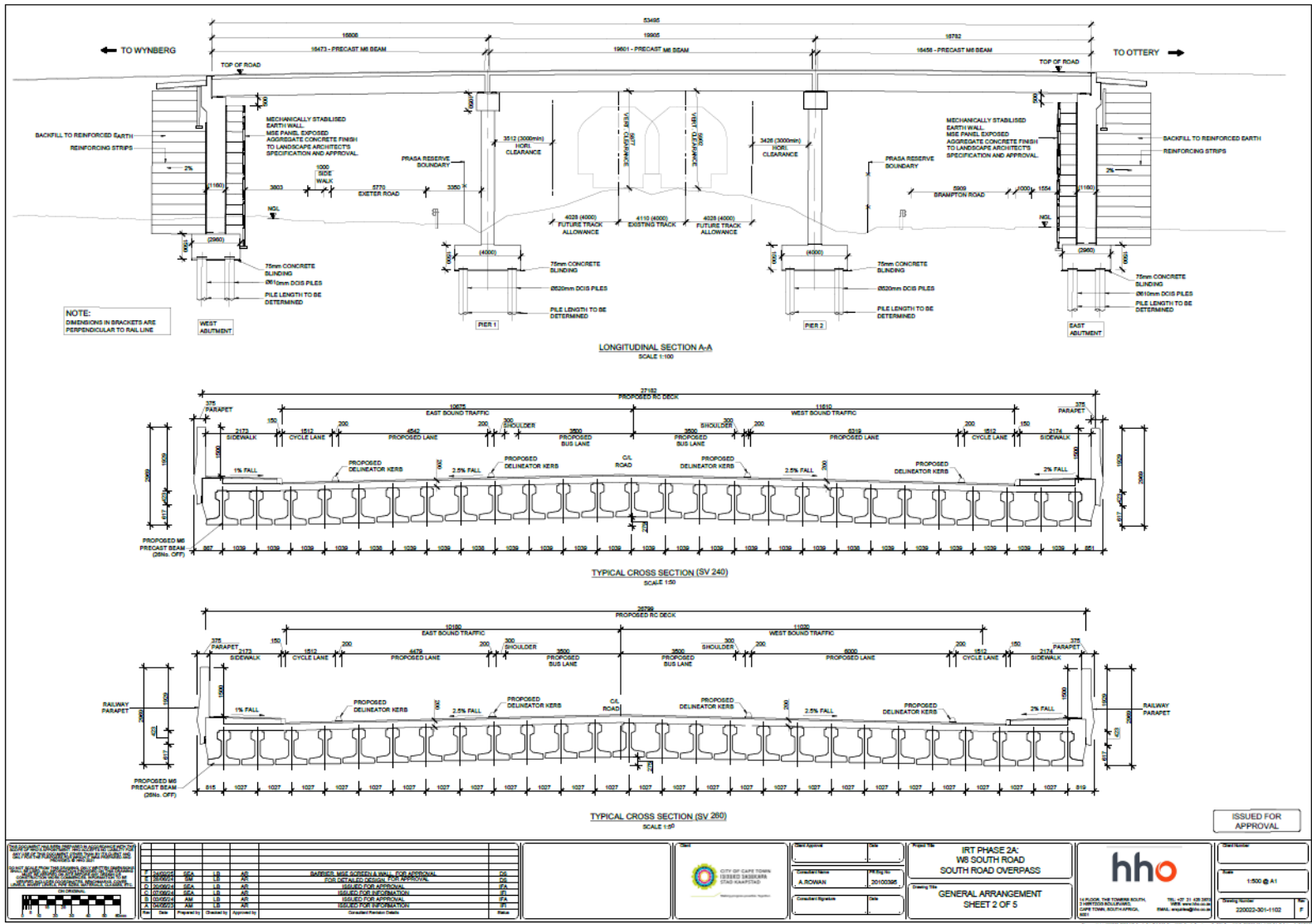


Figure 3: Typical cross section for bridge structure (rail overpass) (source: HHO, 2025)

Table 2: Geometric Engineering Design Considerations & Traffic and Bus Operations Specifications (source: HHO Conceptual Design Review Report, August 2023)

Parameter	Specifications
Road Reserve Width	32 - 40m
Overpass	The overpass bridge structure is proposed to have an approximate length 54,2m and width 26,4m. It is proposed to be a three-span structure with two closed wall abutments and two open column piers with both the abutments and piers supported by piled foundations. The approach embankments will be retained and could comprise tiered or interlocking reinforced concrete blocks, mechanically stabilised earth panels, sloped reinforced concrete walls or stone-clad concrete walls.
On Street Arrangement Median width Lane width Shoulder width Parking width	0.8 - 5m 3.4 - 3.7m 1.5m - 3m 2.5m
NMT Total Width Pedestrian footway Cycle facility	1.8 - 3m ≥1.8m 1.2 - 1.5m
Design Speed	60 km/h
Vertical Bridge Clearance	≥5.2m
Retaining walls	Significant retaining structures might be required at the railway underpass. This design is to meet the relevant SANS and CCT specifications.
Infrastructure deviation / relocation design	Existing services may require relocation or rerouting pending the final geometry of the W8 route.
Drainage	A stormwater management plan for the route is to be completed in line with the CCT's "Management of Urban Stormwater Impacts" policy.
Dedicated bus lanes	<ul style="list-style-type: none"> • In both directions in the median. • Lane widths to conform to BRT Guide (Min 3.5m). • Self-enforcing physical separation required. • Red colourisation of concrete required. <p>Peak hour bus flow of 49 buses per direction (12m and 18m buses).</p>
Station/Stop	<ul style="list-style-type: none"> • Open median stops at Sussex to be provided for 2027 & ultimate. • Passing lane to be provided in each direction. if possible, 1 platform per direction
Cycle ways	3m facility or shoulder (cycle lane) in the road plus 2m sidewalk, on each side of the road
General traffic lanes	<ul style="list-style-type: none"> • Minimum of one lane per direction - Main Road to Kent Rd. • Two lane per direction – Kent Rd to Prince George Drive. <p>Lane widths to conform to CoCT Geometric Design Guidelines</p>

Service Road	Access to properties off old South Road to be rationalised and provided for.
Intersection openings (all signalised)	<ul style="list-style-type: none"> • Prince George Drive • Kent/Pluto • Main Road • Dedicated right turn lanes to be provided for general traffic at each intersection. <p>Intersections to be designed to SARTSM standards & specifications.</p>
Intersection bus movements to be accommodated	<p>Main Road – movements to and from New South Road bus lanes.</p> <p>Prince George Drive/Rosmead Avenue – through movement</p> <p>From Ottery Road east to New South Rd – right turn movement from Ottery Road east to Ottery Rd west.</p> <p>Bus movements to be accommodated at reasonable to high levels of service (LOS B/C).</p>

Encroachment into Public Open Spaces

Approximately thirty five Public Open Spaces (OS2) would be encroached upon by proposed road widening and associated activities. These areas have a split zoning of OS2 and Transport 2 as they have long been earmarked for this road upgrade. The affected properties will be encroached upon by > 4m, as shown in Error! Reference source not found. below.

Note that an envelope/development footprint is being applied for with variations of the cross-sections to be designed during the detail design phase. It is believed that considering a development envelope is appropriate for this proposed development (essentially expansion of a road) as the land use (i.e., a road) remains consistent throughout the extent of the footprint

LEGISLATION

With respect to the **National Environmental Management Act** (No. 107 of 1998), as amended (NEMA) and associated Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) and associated **Listed Activities**, the following aspects of the proposed development are important:

Listing Notice 3 - Activity 4

The proposed road upgrade activities described above will also result in encroachment into properties zoned as Public Open Space (POS). The South Road extension ("New South Road") which would run parallel to Waterbury Road is considered new roadway with a reserve ranging between 32 – 40m in width. This section of new road will encroach into properties with a dual zoning of OS2 and Transport 2.

Listing Notice 3 – Activity 18

The affected roads will be widened by more than 4 m, into some properties which have a split zoning for transport as well as Public Open Space.

In terms of the **National Water Act, 1998 (Act No. 36 of 1998)**, no watercourses are located within 100m of the proposed development. Additionally, no natural wetlands are impacted within 500m of the development. With respect to the **National Environmental Management: Waste Act, 2004 (Act No. 59 of 2008)**, the proposed development is not anticipated to trigger any waste management activities. Similarly in terms of the **National**

Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), the proposed development is not anticipated to generate any emissions triggers.

ALTERNATIVES

In terms of the assessment of site and activity alternatives, the proposed development forms part of a much wider IRT system that the City of Cape Town is rolling out throughout the City. This particular portion of the route triggers the need for Environmental Authorisation, however most of the entire network does not.

From a strategic road network perspective, the proposed development is essential for establishing a critical east-west connection in the southern Wynberg area and across the railway line, ensuring continuity with the proclaimed South/Constantia Road link west of Main Road. This road link is required independently of the IRT trunk alignment.

Given that preceding studies have thoroughly considered route alternatives, and already determined the most appropriate route, no further route alternatives were assessed as part of this Basic Assessment process.

This assessment considered two design alternatives. The preferred design alternative (Alternative 1) includes the construction and development of a rail overpass (bridge) that links South Road to Waterbury Road. The proposed vertical alignment ascends, shortly after the Main Road intersection at roughly 4.7% to form a crossing over the existing railway line. Thereafter it descends at roughly 6.4%. The vertical design at this section was limited to a design speed of 60km/h to reduce the span of the bridge as well as to tie back to ground levels at a suitable location.

Preferred Alternative (Overpass)

The motivation for selecting the overpass design over the underpass design is based on several key environmental, technical, and safety considerations that align with the objectives of minimizing impacts on the surrounding environment and ensuring the long-term viability of the infrastructure.

The preferred alternative maximises on design potential. Provision of the largest cross-section possible enables the delivery of the best possible product and service to the community in the form of a useful and valuable network for public transport. The road needs to accommodate normal vehicular traffic as well as the IRT buses such that traffic flow remains smooth and that those buses, ideally, have their own lanes. This can be achieved with Alternative 1. From a biophysical perspective, there are no sensitive areas along the surface of the route which would have to be avoided which further supports the preferred layout alternative.

It is acknowledged that, for those in the vicinity of the railway crossing, Alternative 2 (underpass) may be more visually acceptable if compared to the preferred Alternative 1. However, the overpass structure offers substantial benefits in terms of minimizing continual groundwater and soil disruption. During geotechnical investigations, it was determined that the location has a relatively shallow water table, which would require a robust and costly subsoil system for managing groundwater if an underpass were to be considered. Continuous groundwater pumping would be required to keep the underpass dry, which would be both operationally demanding and expensive to maintain over time. In contrast, the overpass avoids this groundwater management issues, offering a more sustainable, cost-effective and viable solution in the long term.

Furthermore, the continuous operation of a pump generator to manage groundwater presents significant environmental and security challenges. Continuous operation of a pump generator would lead to ongoing emissions, primarily carbon dioxide (CO₂), if powered by fossil fuels. This contributes to climate change by increasing the carbon footprint of the project. The constant running of generators also places a strain on energy resources. As efforts are being made worldwide to reduce emissions and shift towards more sustainable practices, the reliance on such energy-intensive methods becomes increasingly counterproductive in terms of environmental goals.

Homeless individuals may seek shelter in an underpass, particularly in areas where the environment is more sheltered and protected from the elements. While this may offer temporary relief to the individuals, it creates

security concerns for the surrounding community. The presence of vagrants in the area could lead to risks such as theft, vandalism, or even accidents, especially if the underpass is not properly monitored.

Addressing these challenges requires a balance between social and environmental responsibility, energy efficiency, and ensuring the security of infrastructure in a way that is both sustainable and safe for all parties involved.

Overall, the overpass option provides a more practical, cost-effective, environmentally friendly and safer solution, aligning with sustainable development principles and minimizing the need for extensive maintenance and management measures.

Alternative 2 (Underpass)

As an alternative, the other design (Alternative 2) proposes the construction of an underpass beneath the Southern Railway line, linking South Road on the east of the existing railway with Waterbury Road on the west. The underpass will entail a jacked structure beneath the railway line with extensive retaining walls (lateral support) to facilitate the underpass within the available road reserve corridor on either side.

The preliminary geotechnical investigation found that the shallow, perched groundwater table at the site presented significant constraints to the proposed development (HHO Consulting Engineers, 2024). These included:

- Continuous ingress of perched groundwater and associated slumping of the saturated sands for excavation exceeding about 1.5m depth, undermining any battered sidewalls above and requiring groundwater lowering or temporary lateral support including groundwater control/drainage through dewatering;
- The need for piled foundations for heavier structures and/or structures with limited tolerance for settlement;
- De-watering of large volumes of groundwater for laterally supported excavations, particularly on the western side of the railway line, which could also impact neighbouring properties; and
- Potential for chemical attack and/or corrosion of concrete due to the moderately to highly aggressive groundwater conditions. Managing the groundwater would necessitate a robust subsoil system with continuous pumping, making it highly complex and costly to maintain (HHO Consulting Engineers, 2024).

As a result, the design and continuous maintenance requirements for Alternative 2 (underpass) rendered it technically and financially unfeasible, and hence, not preferred.

No-Go Alternative

The no-go alternative entails maintaining the current state of relevant sections of the route (Ottery Road, South Road, Waterbury Road, and Main Road), without implementing the IRT network or constructing an overpass bridge. This means these areas would remain unchanged from their existing condition.

This alternative is deemed not preferred as the proposed development plays a pivotal role within the larger planned IRT Phase 2A system, which is integral to spatial planning of the greater area and enhancing public transport connections across the metropole, linking the eastern and western parts of the City. Without the proposed development, this strategic plan would be severely compromised, affecting accessibility, socio-economic opportunities for local communities, and the City of Cape Town's strategic objectives for connectivity as outlined in the MSDF.

BASELINE ENVIRONMENT

Geology

A geotechnical investigation conducted by HHO Consulting Engineers assessed the site's geological conditions, confirming that it is predominantly covered by Quaternary-age sandy soils. The engineering

geological mapping classifies the site as having medium suburban development potential, with considerations for consolidation, wind erosion, and soil permeability. The anticipated cost implications for development are low.

Borehole drilling revealed a typical soil profile consisting of topsoil (0.5m–1.2m thick), underlain by transported colluvial soils (3.0m–12.5m deep), followed by residual granite. Transported soils generally extend to 3.0m–6.0m in depth, but in the western section, near the railway line, they extend significantly deeper (9.3m–12.5m). The residual granite soils beneath these layers are composed of silty clay with quartz gravels. The findings provide critical insights for foundation design, highlighting the need for appropriate geotechnical considerations in the development process.

Groundwater

The proposed site is situated within the Cape Peninsula and Cape Flats Strategic Water Source Area (SWSA), a critical groundwater resource. According to the Department of Water and Sanitation (DWS) and Cape Farm Mapper, the underlying aquifer consists of a Major Intergranular Aquifer to the east of the railway line and a Fractured and Intergranular Aquifer to the west, with groundwater yields ranging from 0.1–0.5 l/s in the east to 0.0–0.1 l/s in the west. The aquifer is highly vulnerable and exhibits a significant susceptibility to fluctuations in groundwater quality and levels.

Geotechnical investigations (Appendix G8) confirm the presence of a perched groundwater table at depths ranging between 1.5m and 3.0m, varying seasonally. This perched aquifer forms due to the infiltration and lateral migration of surface and near-surface water within the permeable sandy transported soils, which are underlain by impermeable residual granite clay. Consequently, the subsurface sand between approximately 1.5m and 2.5m is saturated, leading to continuous groundwater ingress into excavations deeper than 1.5m.

Surface Water

The site is located within the Table Mountain Strategic Water Source Area (SWSA) for surface water and falls within the Berg-Olifants Water Management Area (WMA), specifically in quaternary catchment G22D. There are no natural surface water resources within or traversing the site footprint (NCC, 2023b). Additionally, no fish support areas, fish sanctuaries, translocation areas, migration corridors, rehabilitation zones, wetland clusters, high water yield areas, or free-flowing rivers are present on-site.

The nearest aquatic feature, the Diep River, is located over 900m to the west and southwest of the site's western boundary. While several artificial and natural NFEPA and NWM5 wetlands exist in the broader area, none fall within the NEMA-regulated buffer for wetlands or watercourses. One NFEPA wetland, situated on the Royal Cape Golf Club, is located just within 500m of the site boundary; however, its distance from the development precludes any significant impact on the watercourse (NCC, 2023b).

The site has undergone extensive transformation and is highly modified, resulting in limited ecological connectivity between surface water resources (NCC, 2023b). As a result, the overall aquatic biodiversity sensitivity of the site has been assessed as Low (NCC, 2023b).

Terrestrial Biodiversity

The National Web-based Environmental Screening Tool identifies the site as having a "Very High" terrestrial biodiversity sensitivity. Consequently, a site sensitivity inspection was conducted by NCC Environmental Services in August 2023 to verify this classification (refer to Appendix G6 for the full compliance statement). Analysis of aerial satellite imagery indicates that the site and its surrounding urban landscape have remained largely unchanged since 2002, with minimal vegetation or natural features present. This suggests a prolonged period of ecological degradation, rendering the area unsuitable for sustaining natural fauna and flora (NCC, 2023a).

The site is not located within any Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA), or other conservation-priority areas under biodiversity planning frameworks. Additionally, it is not within any Protected Areas as defined by NEMA, CapeNature, or SANBI. While historically part of the Cape Flats Sand Fynbos

biome, a critically endangered vegetation type, the ground-truthing assessment confirmed that the site has been extensively transformed, lacking any indigenous plant communities (NCC, 2023a).

The habitat has been significantly degraded due to anthropogenic factors such as fragmentation, trampling, invasive plant proliferation, municipal service management, and the suppression of natural ecological processes like fire. Existing vegetation consists predominantly of planted grass species and both indigenous and exotic landscaping species (e.g., *Ficus rubiginosa*, *Kiggelaria africana*, *Syagrus romanzoffiana*, *Melia azedarach*, and *Searsia pendulina*), which inhibit the regeneration of native flora. Due to the degraded habitat quality, no plant species of conservation concern were found or are expected to persist under current conditions (NCC, 2023a).

Similarly, no faunal species of conservation concern were observed, nor does the site provide suitable habitat to support such species. The absence of essential ecological drivers such as wildlife corridors, forage, and shelter, combined with habitat fragmentation and exotic species dominance, further reinforces the site's classification as having 'Low' terrestrial biodiversity sensitivity (NCC, 2023a).

Geographical Aspects

There were no significant geographical aspects to take into account. The selection of the proposed route's location has been guided by the systems planning team of the City of Cape Town, specifically identified as conducive for supporting the east west movement across the metropole through the implementation of the Integrated Rapid Transit (IRT) network, as detailed in the Cape Town Metropolitan Spatial Development Framework (CTMSDF). This strategic choice aims to enhance accessibility for local communities and businesses to various employment centres and development nodes.

Visual Aspects

Upon an investigation of the visual impact of the proposed development, Gibbs (2024) determined that it will have both direct and indirect effects on the site and the local area, significantly altering the urban fabric and character of South Road. The demolition of existing buildings will further erode the urban fabric, and the introduction of the rail overpass bridge will intrude visually and overshadow adjacent properties. Additionally, the closure of several neighbourhood streets will disrupt the north-south continuity of the neighbourhoods and divide Wynberg / Wittebome from Plumstead.

The site is located in an area of moderate to high scenic, cultural, and historical significance, featuring valued characteristics such as mountain views, community facilities like churches and schools, and numerous heritage buildings (Gibbs, 2024). The surrounding environment is recognized for its urban residential character and strong sense of place, with moderate to high visual amenity. However, parts of the site have low visual and landscape amenity due to the demolition of buildings.

While the urban design report suggests mitigation measures through various urban landscape interventions, these will fundamentally transform South Road. The street will shift from a relatively quiet residential area with an intact streetscape on the northern edge and informal open space on the southern edge into a high-capacity "complete street" with increased cross-sectional area, additional lanes, and higher traffic volumes and speeds.

The landscape character of the local context is considered highly sensitive, due to its proximity to the proposed development. The properties immediately adjacent will be most severely impacted by the visual intrusion of large-scale traffic infrastructure, particularly the rail-overpass bridge, as well as the disruption to the continuity of neighbouring areas (Wynberg / Wittebome and Plumstead).

Although the proposed development aims to improve metropolitan-scale connectivity between the metro-south and Wynberg, it comes at the cost of local-scale disconnection and displacement. Beyond the visual and spatial disruptions, additional negative impacts include increased noise and air pollution due to higher traffic flows. Given the scale and significance of these impacts, a meaningful exploration of alternative routes will be necessary, as mitigation alone is unlikely to reduce the adverse effects to an acceptable level.

Impacts upon the Regional Context:

- Where perceived from the site and immediate adjacencies, the proposal is likely to impact upon background views of the geographic landmark features by intruding into the foreground and obscuring the mountain background.

Impacts upon the Local Context:

- Visual disruption to the urban fabric and visual intrusion of large-scale traffic infrastructure (most notably the rail-overpass bridge), with disruption to the continuity of adjacent neighbourhoods (Wynberg / Wittebome and Plumstead) by limiting north-south connectivity.

Impacts upon the Site Attributes:

- Demolition of existing buildings (including some Grade 3 heritage resources) as well as local landmarks (such as 'Mallow' at the western / Main Road interface, and Abdullah's Food centre at the eastern portion; the removal of some mature trees, the visual intrusion of the rail overpass bridge, with columns, ramps, stairs overshadowing adjacent properties; the impact of noise and air pollution as a result of additional traffic reducing the environmental and spatial quality of the adjacent properties.

In the case of the proposed development, these cumulative effects could significantly alter the character and functionality of the local area. One major concern is the increase in traffic speed and volume, which will likely compromise pedestrian safety, particularly for school children walking to and from the numerous schools in the vicinity. The intensified traffic flow may also introduce higher levels of noise and air pollution, further degrading the residential environment. Beyond the immediate traffic-related concerns, the scale of the proposed infrastructure is more aligned with commercial or even light industrial land uses. This could catalyze further shifts in the area's land use, leading to the gradual displacement of the residential fabric. Over time, this process of intensification may erode the neighbourhood's existing sense of place, transforming it from a relatively quiet, residential environment into a more commercialized and high-traffic corridor.

Gibbs (2024) further notes that the negative impacts of the proposed development include the imposition of massive infrastructure upon a quiet residential street, the disruption of the urban fabric, and the loss of urban green spaces. Even though the specialist noted that the implementation of the proposed landscape response and urban design interventions as mitigation, may produce positive impacts in terms of urban placemaking, the proposed project is not supported.

Recommended implementable mitigation and remedial measures are provided in **Section 12** and detailed in the Environmental Management Programme (EMPr) in **Appendix H**.

Social Aspects

A review of the Western Cape Provincial Spatial Development Framework, the City of Cape Town Spatial Development Framework and Integrated Development Plan, as well as the Southern District Plan, confirms that the proposed development aligns with and is supported by the relevant policy and land use planning frameworks applicable to the study area (Barbour, 2024). The CCT SDF and IDP emphasize the critical role of transit-oriented development and the establishment of an efficient, integrated public transport system in fostering a more inclusive and cohesive urban environment (Barbour, 2024). These frameworks seek to redress historical spatial inequalities, rectify imbalances in residential distribution, and prevent the emergence of new structural disparities in service provision (Barbour, 2024). Accordingly, the development of proposed project is supported from a policy and planning perspective (Barbour, 2024). Regardless, as outlined in Barbour (2024), the current proposals are not supported due to their significant social impacts.

Construction Phase

The specialist found that social benefits of the construction phase, including business and employment opportunities, are not exclusive to the proposed development and would apply to any alternative route. While these benefits contribute to local economic growth and skills development, they must be carefully considered alongside the potential social and environmental impacts of the selected alignment.

Positive Impacts

The project, with an estimated capital expenditure of approximately R550 million (2023 values), presents a significant economic opportunity for the local construction and building sector. The majority of construction work will be undertaken by local contractors, and building materials will be sourced from local suppliers, injecting substantial capital into the local economy.

The construction phase of the project is expected to span two years, generating approximately 300 employment opportunities. Of these, 45% (135) will be allocated to low-skilled workers, 40% (120) to semi-skilled workers, and 15% (45) to high-skilled workers. The total wage bill over this period is estimated at R88 million (2023 values), with the majority of earnings circulating within the local City of Cape Town economy, thereby benefiting local businesses.

A significant portion of these employment opportunities is likely to benefit Historically Disadvantaged (HD) members of the community, providing a substantial boost to the local workforce and construction sector. Given the current economic climate in South Africa and the lingering effects of the COVID-19 pandemic, the project represents an important economic stimulus for both the construction industry and the broader community.

Negative Impacts

The potential negative impacts during the construction phase of the W8 project include the following:

- Impacts related to the presence of construction workers on-site, which may affect local communities and residents.
- Security and safety risks associated with the influx of workers and construction activities.
- Noise, dust, and safety concerns resulting from construction-related activities, as well as the movement of heavy vehicles within the area.

These negative impacts are not unique to the proposed alignment but are expected to be more pronounced due to the project's location in an established, quiet residential area. The impact in this setting is likely to be greater compared to an alternative alignment, making mitigation measures more critical.

Operational Phase

The key social issues associated with the operational phase of the W8 project are as follows:

Potential Positive Impacts:

The project will contribute to the provision of safe, efficient, and affordable public transport, linking the Cape Flats to the Wynberg CBD and surrounding areas. However, the potential benefits need to be evaluated in the context of the negative social impacts associated with the proposed alignment along South and Waterbury Roads, particularly in a quiet, integrated residential area. As such, the proposed alignment for proposed development is not supported by Barbour (2024).

Potential Negative Impacts:

- **Social Fabric Impact:** The establishment of W8 along South and Waterbury Roads will disrupt the social cohesion of the area, particularly in communities situated along South Road.
- **Environmental Justice Issues:** The project raises concerns regarding the fair distribution of the negative effects on vulnerable communities.
- **Involuntary Resettlement:** The development could result in the displacement of residents due to the required changes to the built environment.
- **Impacts of the Proposed Bridge:** The bridge over the railway line will contribute to significant visual, noise, and privacy disruptions.
- **Road Closures:** The proposed closures along South Road will further exacerbate accessibility issues.

All these negative impacts are interconnected, resulting from the establishment of a major transportation route through an established, quiet, integrated residential area. The designation of South Road as a road reserve does not mitigate these potential consequences (Barbour, 2024). Barbour (2024) notes the current proposals for the proposed development, particularly the over-rail bridge and proposed road closures, are not supported.

Socio-Economic Aspects

A social-economic impact assessment was conducted by Urban-Econ (2024) to determine and assess the potential socio-economic impacts of the proposed development activities. Urban-Econ (2024) states that the proposed development of the Phase 2 IRT (W8) network is supported by several national, provincial, and local policy documents. The development has the potential to impact the community by increasing access to economic opportunities. The proposed route upgrades will have significant positive and negative impacts during the construction and operational phases.

During the construction phase, the largest negative impacts will be on traffic flows as large trucks and machinery move to and from the site (Urban-Econ, 2024). The positive impacts will lead to an increase in GDP for the local economy of the City of Cape Town through heightened business output and production (Urban-Econ, 2024).

Residents of the Mitchell's Plain and Khayelitsha areas will have access to efficient public transportation, which will enhance mobility and job prospects in the bustling commercial centres of the southern region. Furthermore, there will be enhanced accessibility to recreational facilities situated in and around the Southern region, alongside the revitalisation of the Wynberg area through proposed infrastructure development.

The positive impacts during operations are therefore likely to include increased accessibility to public transport, leading to enhanced mobility for community members. Urban-Econ (2024) states that a reduction in the number of vehicles on the roads is expected, which will potentially reduce traffic congestion. Moreover, it was discovered that take-home wages and salaries are projected to increase due to the affordability of the MyCiTi bus system compared to other modes of private and public transportation. This would increase the disposable income of households living in those far-out communities such as the Khayelitsha and Mitchell's Plain areas (Urban-Econ, 2024).

The specialist concluded that the net positive economic impacts associated with the development and operation of the proposed development are expected to outweigh the net negative effects (Urban-Econ, 2024). The Project is also envisaged to have a positive stimulus on the local economy and employment creation. The benefits to the wider community because of the project in terms of increased public transport choices, decreased travel time, reduced congestion, and opportunities for infrastructure development around identified area is expected to outweigh the directly impacted households that will have to relocate from their current communities (Urban-Econ, 2024). As such, the specialist supports the project.

Heritage Resources

O'Donoghue (2024) identified several heritage resources within the project site, including Wynberg East, individual buildings, mature trees, and the space between Wynberg East and Plumstead, which was historically designed as a buffer zone. The road infrastructure proposals, particularly the expansion of South Road, are likely to have significant negative impacts on the townscape, buildings, and the sense of place in the area.

Key vulnerabilities identified include the fine-grain urban environment in Wynberg East, with its proximity to South Road, lack of vegetation, and the risk of the road's expansion negatively affecting the area's aesthetic and historic value. The proposed elevated road infrastructure and overpass are expected to impact the surrounding buildings and visual qualities, with the potential for disrupting the historic townscape and urban fabric, as observed in other Cape Town areas. Non-motorized transport (NMT) routes and landscaping, including mature trees, are essential for preserving the area's aesthetics and heritage value.

The HIA recommends revising the proposed road and landscape designs to mitigate their negative impacts on the heritage resources and townscape. Enhancing spatial integration between Wynberg East and Plumstead, improving NMT routes, and ensuring better integration with historic buildings are key steps for mitigating the impacts. The introduction of prominent gateways and the development of remaining land along the route should be considered to support local character and urban renewal. Additionally, the HIA suggests exploring alternatives to the proposed overpass bridge, which could reduce visual and spatial disruptions. Public art and interpretive signage should be implemented in collaboration with the relevant City of Cape Town departments.

The HIA recommends the following to HWC for approval:

- The HIA accepted by HWC as it meets the requirements of NHRA Section 38(3);
- The recommendations contained in Section 16.2 of the HIA are approved by HWC and the proposed road infrastructure is recommended for revision to address the Urban Design, Visual and Social recommendations;
- Approve the demolitions of the partial or full structures on the site as contained in the HIA;
- HWC provides a negative comment to DEA&DP for the application due to the assessed high negative impacts on the townscape, visual and social environments, unless the application is revised and resubmitted to HWC for an assessment;
- The CCT commits to inform the relevant CCT Directorates of the potential to develop the identified remaining land;
- The CCT Arts and Culture and/or Environment and Heritage Management Branch work on the implementation of public art and interpretive signage within the project area.
- The DEA&DP ROD to include the archaeological requirements.

Recommended implementable mitigation and remedial measures are provided in Section I2 and detailed in the Environmental Management Programme (EMPr) in Appendix H.

Noise Aspects

Soundscape (2025) recorded the key findings for the construction and operational phases as follows:

Construction phase:

- Noise levels of between 52 and 95 dBA can be expected at 10 m from construction/demolition activities (with an average and median of 83 and 8 dBA respectively). It is dependent on the specific activity, equipment involved, and duration.
- There are several instances of receptors being as close as 10 m from either existing structures that will be demolished, or the proposed alignment.
- It is likely that instances of disturbing noise may be experienced by most of the abutting receptors during the construction phase of the project.
- Construction and demolition noise, characterised by its intermittent, unpredictable patterns and higher frequency content, significantly differs from the constant drone of traffic noise, leading to increased annoyance and disruption for nearby receptors.

Operational phase:

- The CCT classified the area in terms of SANS 10103 as an “*urban district with one or more of the following: main roads, business premises, and workshops*” with desired day and night-time rating levels of 60 dBA and 50 dBA respectively.
- A significant portion of receptors directly adjacent the current alignment (daytime 63%, night-time 56%) already experiences outdoor noise levels above the desired rating levels.
- SANS 10103 recommends acoustic treatment for residential buildings in areas where outdoor noise levels exceed 55 dBA. This underscores the extent of noise impacts given that current noise levels around South Road are already at or above this threshold.
- With the proposed re-alignment and projected traffic for 2040, 65% and 60% of receptors will be exposed to day- and night-time levels above 65 dBA and 55 dBA respectively, which are typically found in central business districts. The highest noise levels occur along the easternmost extent of

South Road where the road widens, and receptors are within 10 m from the edge of outer traffic lanes.

- Outdoor daytime rating levels at Wynberg Crèche and Douglas Road Primary are currently between 60 and 65 dBA. These levels can be expected to increase to 71.4 and 67 dBA respectively in 2040.
- The contribution of MyCiti Bus traffic to total day and night-time rating levels is small (less than 1.7 dBA).
- The effectiveness of the noise control barriers on the overpass is evident.
- A substantial proportion of receptors adjacent to the current alignment as well as the proposed alignment (specifically the eastern portion after the overpass) will be exposed to noise levels considered disturbing.
- According to SANS 10103, a 7 dBA increase may elicit little to medium community response, potentially resulting in sporadic to widespread complaints from affected residents.
- When assessed against current noise levels rather than desired levels, the impact is less severe but still significant.
- It's important to note that this increase in noise levels will occur gradually over time, corresponding to the yearly growth in traffic volumes.

The 1.5-meter-high concrete parapet, which is both highly reflective and somewhat absorptive, effectively reduces road traffic noise along the overpass. The addition of an acoustic barrier atop the parapet does not provide a substantial improvement in noise reduction. On balance, the noise specialist supports the proposed development.

Traffic Aspects

The main findings from the traffic study are summarised as follows:

- The slip lane at the eastern approach of the Ottery Road / South Road / Rosmead Avenue / Prince George Drive intersection was replaced with an exclusive left-turn lane.
- The Pluto Road (southern) leg of the South Road / Kent Road / Pluto Road intersection was closed.
- Access opportunities proposed for the southern region include a left-in left-out access at the South Road intersection with Chudleigh Road and a left-in access at the South Road intersection with Milford Road.
- The flows previously redistributed to Pluto Road have been redistributed to the available access opportunities.
- Several lane configurations and median island widths were amended.
- The proposed sidewalks and pedestrian crossings were amended as per CCT NMT standards.
- Continuous Class 2 cycle lanes are proposed along South Road between Main Road and Rosmead Avenue / Prince George Drive.

Capacity Analysis Results

- The future (2040), South Road / Main Road intersection will operate at a low level of service (LOSE), indicating low delays, in the weekday AM and PM peak hours.
- In the future (2040), the dedicated bus lane approaches at South Road / Main Road intersection will operate at an acceptable level of service (LOS D) in the AM and PM peak hours.
- The future (2040), South Road / Kent Road intersection will operate at an acceptable level of service (LOS D) during the AM peak hour and at reasonable level of service (LOS C) in the PM peak hour.
- In the future (2040), the dedicated trunk service bus lane approaches at the South Road / Kent Road intersection will operate at a high level of service (LOS A/ B), indicating very low delays, in the AM and PM peak hours.
- The future (2040) Rosmead Avenue / Ottery Road intersection will operate at a high level of service (LOS B), indicating low delays, in the AM and PM peak hours.

- In the future (2040), Ottery Road / South Road / Rosmead Avenue / Prince George Drive intersection will operate at a low level of service (LOS E) in the AM peak hour and at an acceptable level of service (LOS C) in the PM peak hour.
- In the future (2040), the dedicated BRT lane approaches at the Ottery Road / South Road / Rosmead Avenue / Prince George Drive intersection will operate at a reasonable level of service (LOS C) in the AM and PM peak hours.
- In the future (2040), the short queue jump southbound left turn bus lane will operate at a reasonable level of service (LOS C) in the AM peak hour and at an acceptable level of service LOS D in the PM peak hour.
- The queue lengths between the two closely spaced intersections i.e., north approach of the South Road / Romead Avenue / Prince George Drive intersection and south approach of the Rosmead Avenue / Ottery Road intersection, will not exceed the 60m storage length in the (2040) AM and PM peak hours.

Access Management

The proposed South Road / Chudleigh Road LIL0 access meets the minimum access spacing requirements.

Parking

There is currently no formal parking provided along South Road. However additional parking areas is proposed as part of the Work Package W8 design.

SUMMARY OF IMPACTS

The Basic Assessment was aimed at identifying and assessing all significant impacts associated with the proposal. The study revealed that:

- **Aquatic and terrestrial biodiversity:** no constraints to the development with the specialist supporting the proposal..
- **Noise:** In addition to the short-term construction noise, the operational phase of the development will increase the percentage of land users in the area that will be exposed to noise levels exceeding the recommended levels for urban areas. Regardless, the specialist supports the proposal, with the implementation of a combination of possible mitigation measures.
- **Visual and Social:** The respective specialists found that the proposal presents unacceptably high impacts on the affected communities, and hence, they do not support the proposed development.
- **Heritage:** Given that the Heritage Impact Assessment is focussed on the visual and social assessment, the Heritage Practitioner is also not supportive of the development as proposed.
- **Socio-economic:** The study recognises the negative impacts, however, it is concluded that the positive impacts will outweigh the negative and as such, the specialist supports the proposal.
- **Traffic:** The traffic study highlights several key impacts, including the replacement of a slip lane with a dedicated left-turn lane at the Ottery Road/South Road/Rosmead Avenue/Prince George Drive intersection, the closure of the Pluto Road southern leg, and the introduction of new left-in, left-out accesses. Traffic previously using Pluto Road will be redistributed to these new access points. Future (2040) projections show varying levels of service across key intersections, with some operating efficiently (LOS A–D), while others, like the Ottery Road/South Road intersection, may face higher congestion (LOS E in AM peak). Additional formal parking is planned as part of Work Package W8, along with continuous Class 2 cycle lanes, amended sidewalks, and pedestrian crossings. Queue lengths between closely spaced intersections are expected to remain within acceptable limits, and dedicated bus lanes will operate at a reasonable level of service. Overall, the proposed changes aim to improve traffic flow, accommodate future growth, and enhance non-motorized transport infrastructure.

For the No-Go Alternative, the status quo would largely remain resulting in no impact. Under this scenario, the positive impacts listed above would be foregone.

It is not the intention of the Applicant to decommission the proposed development as it would provide permanent connectivity within the greater IRT system.

The impacts are summarised in the tables overleaf, which are duplications of the impact summary tables included in the Basic Assessment Report.

Table 3. Summary of impacts for Planning, Design and Development Phase

Phase: Planning, Design and Development	Impact	Preferred Alternative (Overpass)		Design Alternative (Underpass)		No-Go Alternative	
		Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation
	General: Resource Use - Depletion of natural Resources	Medium (-)	Low (-)	Medium (-)	Low (-)	Zero	Not Applicable
	General: Subsidence	Not applicable as impact was only identified for the design alternative (underpass)		High (-)	Medium/High (-)	Not applicable	
	General: Traffic Impacts	Medium (-)	Low (-) to Medium (-)	Medium (-)	Low (-) to Medium (-)	Not applicable	
	Social: Creation of employment and business opportunities during the construction phase	Medium (40)	Medium (55)	Not assessed		No impact as it maintains the current status quo.	
	Social: Potential impacts on family structures and social networks associated with the presence of construction workers.	Low (18)	Low (15)	Not assessed		No impact as it maintains the current status quo.	
	Social: Potential safety and security risk posed by presence of construction workers on a site.	Medium (40)	Low (24)	Not assessed		No impact as it maintains the current status quo.	
	Social: Potential noise dust and safety impacts associated with movement of construction related traffic to and from the site.	Medium (33)	Low (24)	Not assessed		No impact as it maintains the current status quo.	

Socio-Economic: Legal eviction of affected households	Medium (-)	Low (-)	Medium (-)	Low(-)	None
Socio-Economic: Temporary impact on local economy (GDP)	Medium/High (+)	High (+)	Medium/High (+)	High (+)	None
Socio-Economic: Temporary impact on employment	Medium (+)	Medium/High (+)	Medium (+)	Medium/High (+)	None
Socio-Economic: Temporary impact on household income	Medium/High (+)	High (+)	Medium/High (+)	High (+)	None
Socio-Economic: Temporary impact on sense of place	Medium (-)	Medium (-)	Medium (-)	Medium (-)	None
Socio-Economic: Temporary impact on traffic congestion	Medium/High (-)	Low(-)	Medium/High (-)	Low(-)	None
Visual: Visual Impacts	High (-)	Moderate (-)	Moderate (-)	Moderate (-)	Neutral
Heritage: Townscape, road closures, built environment, natural environment, public realm including streetscape and NMT, left over land, rail crossing.	High Negative (80)	High Positive (70)	Not assessed		Not Applicable
Noise: Noise Impacts	Medium/High	Medium (-)	Medium/High	Medium (-)	No construction therefore no noise impact

Table 4. Summary of impacts for Operational Phase

	Impact	Preferred Alternative (Overpass)		Design Alternative (Underpass)		No-Go ALTERNATIVE	
		Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation
Phase: Operational	General: Traffic impacts	Very High (+)	High (+)	Very High (+)	High (+)	Not Applicable	
	General: Climate change impacts – reduction in Greenhouse Gas emissions	High (+)	High (+)	High (+)	High (+)	Zero but positive impacts would be foregone	
	Social: Provision of safe, affordable, accessible and efficient public transport	Medium (56)	High (75)	Not assessed		No impact as it maintains the current status quo.	
	Social: <ul style="list-style-type: none"> • Impact on the social fabric of the area, specifically the areas located along South Road. • Environmental justice issues. • Impacts associated with involuntary resettlement. • Impacts associated with the proposed bridge over the railway line. • Impacts associated with proposed road closures along South Road. 	High (80)	Medium (44)	Not assessed		No impact as it maintains the current status quo.	
	Social: The no-development option (no-go alternative) would represent a lost opportunity to implement the CCTs Transit-Oriented Development	Not Applicable				High (80)	High (70)

	(TOD) approach to spatial planning and would be contrary to the stated objectives and principles contained in the CCT SDF and IDP.					
	Socio-Economic: Impact on production and GDP during operational phase	Medium (+)	Medium/High (+)	Medium (+)	Medium/High (+)	None
	Socio-Economic: Sustainable impact on employment	Low(+)	Low(+)	Low(+)	Low(+)	None
	Socio-Economic: Sustainable impact of transport affordability on household income	Medium (+)	Medium (+)	Medium (+)	Medium (+)	None
	Socio-Economic: Sustainable impact on increased mobility and access to public transport	Medium (+)	Medium/High (+)	Medium (+)	Medium/High (+)	None
	Socio-Economic: Sustainable impact on travel time	Medium (+)	Medium/High (+)	Medium (+)	Medium/High (+)	None
	Socio-Economic: Impact on access to work opportunities	Medium/High (+)	Medium/High (+)	Medium/High (+)	Medium/High (+)	None
	Socio-Economic: Sustainable impact on traffic congestion	Medium (+)	Medium (+)	Medium (+)	Medium (+)	None
	Socio-Economic: Sustainable impact on access to education, recreational and health facilities	Medium/High (+)	High (+)	Medium/High (+)	High (+)	None
	Socio-Economic: Impact on enhancement of Wynberg as a commercial node	Medium (+)	Medium/High (+)	Medium (+)	Medium/High (+)	None
	Visual: Visual impacts	Very High (-)	High (-)	High (-)	Moderate (-)	Neutral (0)

	Noise: Noise impacts	Medium/High	Medium/High (-)	Medium/High	Medium/High (-)	<p>Residents along sections of current South Road alignment are already exposed to noise levels above the CCT determined rating level for such districts.</p> <p>The noise impact will remain unchanged.</p>
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MITIGATION AND RESPONSE

The proposed development and its associated activities have been investigated and assessed in relation to with the sensitivities identified in the baseline environment. Subsequently, the alignment of current and future development and management plans for the area (e.g., the existing road infrastructure) were considered. The assessment also considers the direct, indirect and cumulative impact on local communities as well as the greater Metropolitan area.

Mitigation measures have been proposed to minimize any adverse impacts, while measures to enhance the potential positive effects of the development have also been identified. Ultimately, the proposed development is driven by the pressing social need for improved connectivity and accessibility, ensuring greater inclusivity and integration within the community. Furthermore, the report informs authorities of uncertainties and assumptions to ensure that a cautious approach is adopted in decision-making.

Aquatic Biodiversity

No specific mitigation measures have been proposed for managing the loss of aquatic biodiversity; however, general impact management actions have been outlined. During the construction phase, invasive alien plants must be removed and controlled in disturbed or spoil areas. Effective stormwater management should be implemented by installing appropriate infrastructure to dissipate flow and prevent erosion, while also ensuring that drip trays and impervious surfaces prevent contamination from chemicals and waste. Spill control measures include the use of containment systems, spill kits, and proper remediation of any fuel, oil, or chemical spills, with all incidents reported and waste disposed of at licensed facilities. Additionally, waste management protocols prohibit the disposal of rubble, spoil, litter, or waste into stormwater drains, and all waste must be appropriately removed offsite. Chemical ablutions should be serviced regularly, with a maintenance register kept on-site. During the operational phase, stormwater management remains a priority, requiring ongoing removal of invasive alien plants and routine inspections of the stormwater system, particularly after the rainy season, to assess maintenance and repair needs. Regular maintenance of stormwater infrastructure should be conducted as necessary to ensure long-term functionality and environmental sustainability. These measures collectively aim to mitigate indirect impacts on aquatic biodiversity and maintain ecological integrity.

Terrestrial Biodiversity

No specific mitigation measures have been proposed for managing terrestrial biodiversity species loss; however, general impact management actions have been identified. The site must be kept free of invasive alien plant species listed under the National Environmental Management: Biodiversity Act (Act 10 of 2004) and its associated Alien and Invasive Species Regulations (2014). Additionally, standard SHERQ (Safety, Health, Environment, Risk, and Quality) housekeeping practices must be maintained, including prohibiting the disposal of waste runoff into gutters, ensuring that all litter is removed from the site, and regularly servicing chemical ablutions with a disposal and maintenance register kept on-site. Furthermore, chemical toilets should be properly secured to the ground to prevent displacement. These measures aim to minimize environmental impacts and support biodiversity conservation within the project area.

Archaeology

From an archaeological perspective, no significant concerns have been identified based on current knowledge. However, certain precautionary recommendations should be incorporated into the project approval. Project staff must be made aware of the potential for uncovering buried archaeological material. In the event that any archaeological material or human burials are discovered during development, all work in the immediate area must cease immediately. The find must be reported to the relevant heritage authorities, and an inspection by a qualified archaeologist may be required. As heritage resources are considered the property of the state, any significant discoveries may necessitate excavation and curation at an approved institution. These measures ensure compliance with heritage regulations and the preservation of any significant archaeological findings.

Heritage Resources

The Heritage Impact Assessment has identified several heritage design indicators to guide the development of the project in a manner that enhances the townscape, protects heritage resources, and promotes urban connectivity. The design should contribute positively to the character of the area by enhancing the experience of the route for users, prioritizing pedestrian-friendly streetscapes, and minimizing road widths where possible. It is recommended that the demolition of culturally significant buildings be kept to a

minimum, and pedestrian connectivity across the route should be improved through crossings, spatial connections at intersections, and traffic calming measures. The route's infrastructure should incorporate landscaping, non-motorized transport (NMT) accommodations, and urban furniture to create a distinct sense of place while maintaining access to local businesses and civic institutions. Historic elements such as existing granite and sandstone kerbs should be retained or repurposed.

The road infrastructure should be designed to cater to all users, not just vehicles and buses. Key considerations include accessibility, effective separation between pedestrians and vehicles, safety features such as crosswalks and parking spaces with visible signage, and provisions for pedestrian-friendly spaces with seating and greenery. Landscaping should integrate trees, low-scale plants, and aesthetic elements to preserve and enhance the area's visual appeal. Additionally, culturally significant buildings and structures should be carefully considered to ensure their character and streetscape context benefit from the project. Landmarks, mature trees, and local nodes should be preserved, and historic kerbs must be protected during construction.

Non-motorized transport (NMT) should be accommodated through dedicated routes for pedestrians and cyclists, ensuring clear differentiation from vehicular lanes using varied surface materials or levels. Wider NMT routes should be considered near retail areas, social amenities, and intersections, with urban furniture, cycle parking, and landscaping enhancing pedestrian comfort. Where wide NMT routes are not feasible along the entire stretch, strategically placed rest areas with seating, waste bins, and greenery should be introduced. Bus stops must be universally accessible, incorporating landscaping, sufficient sidewalk space, and urban amenities such as lighting, benches, and shading structures.

Undeveloped land along the route should be rezoned and developed where necessary, while vegetation preservation is crucial, with an emphasis on retaining mature trees and planting additional greenery in available spaces. Partnerships between local authorities and civic groups should be encouraged to maintain tree planting initiatives. Social indicators emphasize the importance of retaining the local social fabric, minimizing negative impacts on property values and aesthetics, and ensuring fair compensation for any involuntary relocations. The project should also present opportunities for community upgrades, such as installing recreational equipment.

A dedicated cycle lane should be integrated along the southern side of the street, creating a dual pedestrian and cyclist path while preserving sufficient sidewalk space on the northern side. Regular pedestrian crossings should align with the street grid and key destinations to promote spatial integration and mitigate the barrier effect of the new IRT route. Special landscape treatments should be incorporated at these crossings to reinforce their role in connecting different parts of the urban fabric.

The HIA recommends that the proposed road infrastructure and demolitions be revised and resubmitted to Heritage Western Cape (HWC) for approval, incorporating cultural and environmental considerations such as public art and heritage signage.

Several mitigation measures identified by the specialist will not be implemented, as detailed within the Basic Assessment Report (BAR). The reasons for this exclusion are comprehensively outlined and justified in the BAR, providing a thorough explanation for why these particular measures are deemed either infeasible or not applicable within the specific context of the project.

Social Aspects

The CCT should follow the required legal processes for evicting tenants from properties they own, while ensuring that affected households are provided with a reasonable timeframe to move into alternative accommodation. The land acquisition process should be transparent, with full and fair compensation for affected property owners based on market-related prices. This process should include the option of an independent valuation at no cost to the property owners and aim to help them secure a suitable replacement property within the same or similar residential area. Compensation should also account for potential lost rental income, legal costs, and removal costs.

To foster local economic growth, the CCT should engage with local community leaders and organizations, informing them of job opportunities for local builders and contractors. A database of local construction companies, particularly those owned by historically disadvantaged individuals (HDIs), should be created before the tender process begins. These companies should be notified about the project and invited to bid. The CCT should also ensure that a percentage of the construction workforce is sourced from the local community, in consultation with contractors.

Additionally, the CCT should establish a Monitoring Committee (MC) to oversee the construction phase, including representatives from the CCT, contractors, the local councillor, and community members. A Grievance Mechanism (GM) should also be put in place to allow the community to report concerns and ensure confidentiality for complainants. Both the MC and GM should be operational before construction begins.

The CCT should prioritize appointing local contractors, implement an HIV/AIDS awareness program for construction workers, and carefully manage the movement of construction workers on and off-site. Construction activities should comply with building regulations, and work hours should be restricted to weekdays (07:00–18:00) and Saturdays (08:00–13:00), with any after-hours work requiring discussion with the MC. A Communication Plan (CP) should be prepared to inform the public about construction timelines, road closures, and delays, utilizing social media platforms to keep local residents, schools, and businesses updated. Measures should be taken to minimize disruptions during peak traffic hours, ensuring that access to schools is not impacted during morning peak times. Abnormal loads should also be scheduled to avoid peak traffic. Lastly, the CCT should ensure that MyCiTi operations meet the stated objectives of providing safe, affordable, accessible, and efficient public transport.

Several mitigation measures identified by the specialist will not be implemented, as detailed within the Basic Assessment Report (BAR). The reasons for this exclusion are comprehensively outlined and justified in the BAR, providing a thorough explanation for why these particular measures are deemed either infeasible or not applicable within the specific context of the project.

Visual Aspects

The design should prioritize the retention of mature existing trees while adding new street tree planting to support urban street tree succession. Sufficient urban precinct lighting and street furniture should be provided, but care should be taken to minimize light pollution, with lighting carefully controlled and well-integrated into the urban design, coordinated with signage. Shielded down-lights should be used for security purposes, especially in open areas. During the planning, design, and development phases, urban design and landscape proposals should focus on enhancing the streetscape areas, prioritizing local pedestrian movement.

In the construction phase, established tree clusters should be designated as 'no-go areas' for site camp establishment, material storage, stockpiling, and dumping to prevent damage. Construction activity should be limited to hoarded areas and disturbed spaces to minimize the impact on visual amenity resources. Post-construction, rehabilitation of disturbed areas is essential. The implementation of a Construction Environmental Management Plan (CEMP) will manage environmental issues, including noise, dust, and erosion control, helping mitigate construction-related visual impacts. For the operational phase, noise and air quality control measures, proper signage, and lighting to ensure safety and surveillance should be in place. The form, scale, massing, materials, and textures of the development should be suitable for the context, with landscape measures helping to integrate the project into the site. An Operational Environmental Management Plan (OEMP) should also be implemented, including detailed landscape plans by qualified landscape architects to minimize visual impacts and ensure compatibility with the surrounding environment.

A detailed landscape plan should be compiled, created by a registered Landscape Architect, to be submitted for approval by the City of Cape Town's Environmental Management Division. This plan should outline existing vegetation to be retained or removed, specify newly planted vegetation (including species and planting specifications), provide details on tree staking and tree sizes, and include the density of plant species and sizes. It should also show existing and finished ground levels at the base of trees, landscaping features such as fences, walls, paving, and street furniture.

Several mitigation measures identified by the specialist will not be implemented, as detailed within the Basic Assessment Report (BAR). The reasons for this exclusion are comprehensively outlined and justified in the BAR, providing a thorough explanation for why these particular measures are deemed either infeasible or not applicable within the specific context of the project.

Socio-Economic Aspects

The pre-construction phase should focus on assisting affected households in finding suitable alternative housing options, preferably within the same neighbourhood or nearby, to minimize social disruption.

During the construction phase, project developers should prioritize using locally sourced materials, goods, and products, while also subcontracting local construction firms, particularly SMMEs and BBBEE-compliant enterprises, to maximize community benefits. Community Information Events should be held to inform local residents about upcoming projects and available employment opportunities. Efforts should be made to employ local workers, providing economic benefits to the community. Local suppliers should be engaged to provide services such as transport and catering for the construction crews. Additionally, prioritizing the hiring of local residents for construction jobs will increase household incomes. Alternative routes for commuters should be established to bypass construction areas, reducing congestion on affected roads. Traffic flow should be managed with temporary control measures, including signage and signals, to minimize delays, and construction activities should be scheduled during off-peak times to reduce traffic impact.

In the operational phase, the IRT network operator should be encouraged to source materials, goods, and services from local suppliers to support the local economy. Jobs should be created for local community members to enhance the economic well-being of the surrounding areas. Increased access to economic hubs such as Wynberg should be prioritized, especially for low-income individuals and families facing mobility barriers, with sufficient MyCiti bus services along this route. The IRT network should operate efficiently and at an affordable cost, with regular monitoring of traffic patterns and congestion levels to address emerging issues. Additionally, pedestrian infrastructure in the Wynberg area should be improved by enhancing sidewalks, crosswalks, signals, and lighting, promoting safe walking and reducing reliance on cars.

Noise Aspects

The following noise management measures should be implemented across various phases of the project. During the pre-construction phase, the road envelope should be increased, and school-specific measures should be put in place, particularly for Wynberg Creche and Douglas Road Primary, to ensure indoor noise levels are kept below 40 dBA. Potential measures include perimeter barriers and building acoustic treatments.

In the construction phase, construction activities should be limited to daytime working hours (07:00 to 17:00). If deviation from these hours is necessary, affected receptors should be informed of the type of activity, expected noise levels, and duration. Construction should not take place over weekends, and local communities along the road section should be informed about the type and duration of activities. Service agreements should be established with contractors to minimize noise, and mobile diesel generators must be fitted with exhaust silencers and contained within suitable acoustic enclosures. Regular inspection and maintenance plans should be implemented to withdraw and fix noisy equipment. Acoustic measures such as mobile enclosure screens or acoustic sheds should be used when needed, for example, with jackhammers and compactors.

To reduce noise at the source, several general measures should be adopted, such as avoiding unnecessary engine revving, maintaining haul roads, using rubber linings in trucks, minimizing drop heights of materials, and starting up plant and vehicles sequentially. Audible reversing warning systems on vehicles should have a minimal noise impact, and speed limits should be enforced on temporary roads. Contractors and operatives should be trained to use appropriate techniques to minimize noise, with effective supervision to ensure best practices. A complaint register should be maintained, and complaints must be resolved promptly. Noise measurements should be conducted in response to complaints, with specific mitigation measures implemented as needed.

During the operational phase, collaboration between government, engineers, and the community is essential. Strategic landscaping should be considered to supplement noise mitigation efforts, and road surfaces should be maintained to reduce noise. Speed limits should be enforced, traffic signaling optimized, and heavy vehicles should be rerouted to minimize noise impact. Continuous community engagement is important to disclose impacts and ensure informed decision-making.

Several mitigation measures identified by the specialist will not be implemented, as detailed within the Basic Assessment Report (BAR). The reasons for this exclusion are comprehensively outlined and justified in the BAR, providing a thorough explanation for why these particular measures are deemed either infeasible or not applicable within the specific context of the project.

Landscaping

The landscaping strategy is included as part of the proposed development in order to uplift the aesthetics of the area. The inclusion of indigenous, water-wise, low maintenance plants would provide for a more

sustainable project. The EMPr includes the landscaping as part of the design considerations, and measures such as the waterwise and indigenous plants are included in the design specifications of the EMPr.

Implementable management measures for design, planning, construction, and operation phase of the proposed development have also been integrated into the specifications contained in the EMPr, which would also be conditions of Environmental Authorisation (if granted).

Several mitigation measures identified by the specialists will not be implemented, as detailed within the Basic Assessment Report (BAR). The reasons for this exclusion are comprehensively outlined and justified in the BAR, providing a thorough explanation for why these particular measures are deemed either infeasible or not applicable within the specific context of the project.

NEED AND DESIRABILITY

The City of Cape Town's transport network is under increasing pressure, particularly in the Cape Flats area, where public transport efficiency is critical for economic participation, social mobility, and urban sustainability. The expansion of road infrastructure, the introduction of dedicated bus lanes, and the enhancement of non-motorised transport (NMT) facilities are urgent interventions required to improve connectivity, reduce congestion, and enhance commuter safety. The project is therefore critical at this point in time.

From a spatial perspective, the site is ideal for the proposed development, as it forms part of an existing transport corridor identified for public transport expansion in the City's Integrated Transport Plan (ITP), Spatial Development Framework (SDF), and Integrated Development Plan (IDP). Therefore, delaying the project could result in increased congestion, longer travel times, and hindered economic activity in key commercial and residential nodes. Furthermore, investment in public transport infrastructure now will ensure that future urban growth and densification in the area are supported by a well-integrated, accessible transport system.

The proposed route's location has been determined by the City of Cape Town's systems planning team. As outlined in the City's Transport Management Strategy and Development Framework (CTMSDF), this route will enhance accessibility for local communities and businesses, providing improved connections to other work centres and development nodes.

The widening of South Road, intersection upgrades, and the new railway bridge will provide immediate and long-term mobility benefits, facilitating more efficient public transport operations and improved traffic flow for private vehicles. The project also supports sustainability objectives by reducing vehicle emissions through improved traffic efficiency and prioritizing public and non-motorised transport users.

Several factors support the proposed project on this site, including the lack of biophysical sensitivities, the existing designation of most of the site for transport use, the alignment with municipal and regional planning frameworks, and the fact that it was determined as the most appropriate route for this critical link to those residing in the East to the opportunities in the West (economic, recreational and health).

Community Need

The proposed project is a critical intervention for the community and the broader Cape Town metropolitan region, particularly the Cape Flats, Wynberg, and surrounding areas, where public transport dependency is high. Currently, commuters face significant challenges due to traffic congestion, unreliable public transport services, and safety concerns. The implementation of dedicated bus lanes, intersection upgrades, and improved non-motorised transport (NMT) infrastructure aims to enhance accessibility, efficiency, and commuter safety, thereby fostering a more reliable and inclusive public transport system.

From a transport and mobility perspective, the project directly contributes to the development of an integrated, high-capacity public transport network designed to reduce travel times, alleviate congestion, and promote equitable access to economic opportunities. The planned road infrastructure upgrades will improve bus operations along the Metropolitan South-East Corridor (MSEC), strengthening connectivity between residential areas and key commercial hubs. This is particularly significant for lower-income

commuters, who rely on affordable, safe, and efficient transport options to access employment, education, healthcare, and essential services.

The project aligns with the City's Integrated Development Plan and Spatial Development Framework, both of which are strategic planning instruments grounded in community needs. By supporting sustainable urban development, the initiative contributes to long-term spatial and economic restructuring efforts.

Beyond transport-related benefits, the project carries broader socio-economic implications. Enhanced mobility and connectivity within the Wynberg-Plumstead area and the greater MSEC are expected to stimulate local economic activity, generate employment opportunities during construction and operation, and contribute to social upliftment in affected communities. Furthermore, the proposed road improvements, including the construction of a new bridge over the railway line, will help address historical spatial inequalities between the eastern and western areas by improving access to economic and social opportunities for residents and commuters in the region.

The proposed development also provides the City of Cape Town with an opportunity to re-structure and intensify the regional area and transport route, previously neglected and subject to apartheid era planning. These opportunities are as follows:

- Develop vibrant areas by removing barriers to access;
- Improve connectivity throughout the Metropolitan areas;
- Increase efficiency of people's movement and as an aid to the movement of commuters and development activities;
- Improve access and transportation routes to encourage future development and intensification of use;
- Decrease walking distances from residential and places of work to public transport facilities;
- Reinforce convergence on core routes and access points; and
- Reinforce the use of the existing rail stations.

Impact on Sensitive Natural and Cultural Areas

Given that the proposed route is located within an urban setting, its impact on the natural environment will be negligible. A freshwater and botanical compliance assessment has confirmed that the route is ecologically transformed, with no areas of natural sensitivity requiring consideration.

The heritage, social and visual practitioners have reported that the road upgrades will have an impact on the socio-cultural environment for the surrounding communities. This is as a result of road closures and the magnitude of the infrastructure being introduced. This is detailed in full in the baseline and impact assessment sections of the BAR.

Sustainability

Overall, all development must, in terms of Section 24 of the Constitution, be ecologically sustainable, and economic and social development must be justifiable.

The proposed development has applied sustainable development to the following factors:

- **Disturbance of ecosystems and loss of biodiversity:** The proposed development ensures that ecosystems are not disturbed, and biological diversity is not compromised. There are no sensitive areas along the route that will be encroached upon or significantly impacted.
- **Pollution and environmental degradation:** The development prioritizes the avoidance of pollution and environmental degradation. Where complete avoidance is not possible, pollution will be minimized and remedied through the reduction of private transport, thus decreasing emissions and traffic congestion.
- **Waste management:** Waste generation will be avoided wherever possible. In cases where waste is produced, it will be minimized, reused, or recycled. Construction phase waste will be managed according to the guidelines set out in the Environmental Management Programme, and the operational phase is not expected to generate significant waste.

- Non-renewable resource use: The development will promote responsible and equitable use of non-renewable resources by providing a sustainable public transport service to previously disadvantaged communities. Additionally, the proposal aims to reduce private vehicle use and decrease reliance on fossil fuels.
- Risk-averse approach: A cautious and risk-averse approach will be applied, considering the limits of current knowledge regarding potential consequences. The design of the development will account for climate change and future urban development in the area to ensure long-term sustainability.
- Minimizing negative impacts: Anticipating and preventing negative impacts on both the environment and people's environmental rights is a priority. Where impacts cannot be avoided, efforts will be made to minimize and remedy effects.

Cumulative Impacts

The cumulative impact of the implementation of this project will have a significant positive outcome for the citizens of the greater Metropolitan area. This particular work package will have cumulative negative consequences on certain businesses and residences. This is detailed in the impact assessment.

The proposed development and its associated activities have been investigated and assessed in relation to with the sensitivities identified in the baseline environment. Subsequently, the alignment of current and future development and management plans for the area (e.g., the existing road infrastructure) were considered. The assessment also considers the direct, indirect and cumulative impact on local communities as well as the greater Metropolitan area.

Mitigation measures have been proposed to minimize any adverse impacts, while measures to enhance the potential positive effects of the development have also been identified. Ultimately, the proposed development is driven by the pressing social need for improved connectivity and accessibility, ensuring greater inclusivity and integration within the community.

PUBLIC PARTICIPATION

The public participation process (PPP) proposed and currently underway align with the minimum legislative requirements prescribed in regulation 41 of the EIA Regulations, 2014 (as amended).

The pre-application Public Participation Process (PPP) activities include the following (noting that no alternative sites have been considered in the impact assessment process, as the relevant section of road is a major route linking key neighbourhoods and is deemed appropriate for the proposed development):

- An extensive public participation process was held in 2015 for the Conceptual Design of the I RT Phase 2A, then referred to as the Lansdowne Wetton Corridor (LWC) along trunk routes T11 and T12, with the exclusion of the Wynberg end, which was at the time the subject matter of a High Court application. The PPP held in 2015 initially engaged with Sub-councils, Ward Committees, Ward Councillors, Ward Development Forums, potentially affected Taxi Leadership and Civic based organisations, whereby members were briefed with respect to the scope of the project and advised of forthcoming open days. Following this, 33 open days were held during May/June/July 2015 in compliance with Section 17 of the Local Government: Municipal Systems Act No. 32 of 2000. This PPP allowed the public, other spheres of government, organized service providers and other interested parties the opportunity to submit comments, recommendations and inputs to the City for consideration. Notices were placed in local newspapers advising the public of open days where the draft Conceptual Design was made available. Officials were in attendance to elaborate on the project, provide points of clarity on the Conceptual Design and answer questions. Please refer to Appendix P of the Basic Assessment Report.
- Compilation of a preliminary Interested and Affected Party (I&AP) database, informed by research on relevant officials and stakeholder groups who may have an interest in the area or the project.

The post-application Public Participation Process (PPP) undertaken for the current public review period of this post-application Draft BAR includes the following activities:

- A 30-day public comment period for the Draft BAR.

- Notification of the availability of the Draft BAR was emailed to the preliminary Interested and Affected Party (I&AP) database.
- A knock-and-drop exercise, along with the notification letter, was conducted for residences and formal institutions adjacent to the proposed development.
- The Draft BAR has been made available for download on Chand's website throughout the comment period.
- An executive summary for separate download (for I&APs with limited access to data) is also available on Chand's website during the comment period.
- Site notices have been placed at the start, middle, and end of the route on South Road and Waterbury Road. These notices, in English, contain the information prescribed by the EIA Regulations, 2014, as amended, and PPP guidelines.
- Advertisements have been placed in two local newspapers distributed to all affected areas along the route containing the information as prescribed by the EIA Regulations, 2014, as amended, and PPP guidelines.
- A hardcopy of the Executive Summary has been made available at the Wynberg Library and the local Subcouncil offices, along with a comment box and comment forms, for the duration of the public commenting period.
- A hardcopy of the Executive Summary has been made available at the Wynberg Library and Subcouncil offices, along with a comment box and comment forms, for the duration of the public commenting period.
- Hard copies of the BAR will be made available to I&APs or commenting parties, upon reasonable request.

To provide access to commenting for individuals without access to data, email, or fax, Chand has encouraged I&APs to make telephonic contact and submit their comments, which will be recorded (in writing) as part of the Basic Assessment process.

All registrations and comments received during the 30-day public comment period will be added to the I&AP database and included in the final BAR for submission to the DEA&DP.

Evidence for the activities listed above will be included in the Comments & Responses Report of the Final BAR, which will be submitted to the DEA&DP for decision-making.

Once the DEA&DP has reviewed the final BAR and issued its decision, the decision, along with the date, reasons for decision, means of accessing the decision, an explanation of the appeals process, and any further requirements, will be distributed to the registered I&APs via email for those with email addresses and by post for those without. The decision will also be uploaded to Chand's website for download. The applicable appeal period will be explained in accordance with the decision.

CONCLUSION

Through Chand's investigation, which has entailed inputs from the design team and the specialists - noting that engagement with I&APs is still underway – several impacts have so far been identified and considered.

The preferred alternative proposes transport infrastructure to connect Wynberg Main Road in the west to Ottery Road in the east via South Road. It will include several road and intersection upgrades as well as a new bridge over the railway line to accommodate vehicular, IRT and NMT traffic. This will necessitate acquisition of some private properties, demolition of several structures as well as the moving, upgrading or protecting of service infrastructure.

Route alternatives were thoroughly considered in a preceding route analysis process. Therefore, no alternative route alignments were considered in this Basic Assessment process. The nature of the project precludes consideration of meaningful technology and operational alternatives. As such, this was not explored.

This Basic Assessment was based on two design alternatives for the route at the existing railway line. The preferred option (Alternative 1) proposes an overpass (bridge) while Alternative 2 considered an underpass. For technical reasons, that has serious maintenance and financial implications, as detailed above.

The Applicant is mandated to provide transport networks for the City of Cape Town and would not propose developments beyond this scope. The Applicant wishes to develop IRT networks throughout the City of Cape Town and, therefore, no activity alternatives were (or could have been) considered.

The preferred alternative maximises on design potential. Provision of the largest cross-section possible enables the delivery of the best possible product and service to the community in the form of a useful and valuable network for public transport. The road needs to accommodate normal vehicular traffic as well as the IRT buses such that traffic flow remains smooth and that those buses, ideally, have their own lanes. This can be achieved with Alternative 1. From a biophysical perspective, there are no sensitive areas along the surface of the route which would have to be avoided which further supports the preferred layout alternative.

It is acknowledged that, for those in the vicinity of the railway crossing, Alternative 2 (underpass) may be more visually acceptable if compared to the preferred Alternative 1. However, the overpass structure offers substantial benefits in terms of minimizing continual groundwater and soil disruption. During geotechnical investigations, it was determined that the location has a relatively shallow water table, which would require a robust and costly subsoil system for managing groundwater if an underpass were to be considered. Continuous groundwater pumping would be required to keep the underpass dry, which would be both operationally demanding and expensive to maintain over time. In contrast, the overpass avoids this groundwater management issues, offering a more sustainable, cost-effective and viable solution in the long term.

Furthermore, the continuous operation of a pump generator to manage groundwater presents significant environmental and security challenges. Continuous operation of a pump generator would lead to ongoing emissions, primarily carbon dioxide (CO₂), if powered by fossil fuels. This contributes to climate change by increasing the carbon footprint of the project. The constant running of generators also places a strain on energy resources. As efforts are being made worldwide to reduce emissions and shift towards more sustainable practices, the reliance on such energy-intensive methods becomes increasingly counterproductive in terms of environmental goals. Homeless individuals may seek shelter in an underpass, particularly in areas where the environment is more sheltered and protected from the elements. While this may offer temporary relief to the individuals, it creates security concerns for the surrounding community. The presence of vagrants in the area could lead to risks such as theft, vandalism, or even accidents, especially if the underpass is not properly monitored.

The EAP acknowledges that the visual and social specialist believes that an alternative route should have been considered as part of this Basic Assessment. Additionally, this recommendation/opinion is acknowledged as part of the Heritage Practitioners report. Seeing that the heritage study was focussed on visual and social matters, the heritage specialist supports the conclusions of these specialists and recommended to HWC that a negative comment be given to the DEA&DP. HWC's comment will be included in the Final BAR.

However, as previously mentioned, a thorough route analysis which considered multiple factors, including technical/engineering aspects and property acquisition requirements, informed the most reasonable and feasible route, which was then taken into the environmental investigations.

Addressing these challenges requires a balance between social and environmental responsibility, energy efficiency, and ensuring the security of infrastructure in a way that is both sustainable and safe for all parties involved.

Whilst acknowledging the noise, social, visual and heritage impacts on the community in the immediate vicinity of the project, the proposal is in the interest of the greater good of a much larger community.

Overall, the overpass option provides a more practical, cost-effective, environmentally friendly and safer solution, aligning with sustainable development principles and minimizing the need for extensive maintenance and management measures.

The proposed development meets the need and desirability criteria by addressing critical infrastructure gaps in the City of Cape Town's public transport network, improving accessibility, mobility, and sustainability. The

project is aligned with both the City's spatial, development and transport planning frameworks and municipal goals, contributing to economic development, social equity, and environmental sustainability. The development is designed to meet current and future needs, with clear benefits to the broader communities, including improved access to essential services and better transportation options, ensuring that it is both desirable and necessary for the long-term growth and well-being of the area.

On balance and taking into account the positive impact on the greater Cape Town area, especially numerous previously disadvantaged communities, it is the recommendation of the EAP that the Preferred Alternative 1 be authorised.

As mentioned above, and repeated here, the alternatives analysis explored multiple route options and the preferred route was deemed to be the most reasonable and feasible option that the City could consider for implementation. This decision was based on technical, social and financial factors that were considered in a peer-reviewed, in-depth investigation (see 'note on alternative routes' as included in Section H(1.1) of this report). Given the importance of this link (as exemplified in the Urban-Econ socio-economic report), and the alignment of this project with national, provincial and local policies, it is critical to view this project with a wider lens. The development presents the opportunity for historical redress through improved connectivity and access provided by the proposed road widening for generations to come.
