

**AFRICA'S LEADING
PREFABRICATED STEEL
BRIDGE SUPPLIER**

BRIDGE BROCHURE



Content

1.	Introduction	3
2.	Company background	3
3.	Our process	3
4.	Why Steel Bridges?	3
5.	About rural bridges	4
6.	The benefits of bridges in rural areas	5
	6.1 Access to basic education	5
	6.2 Health services access	5
6.3	Economic benefits	6
	6.3.1 Agriculture	6
	6.3.2 Commercial	6
	6.3.3 Labour markets	6
	6.3.4 Social interaction	6
7.	Bridge Types	6
	7.1 Modular Panel Bridge System (MPBS)	6
	7.2 Prefabricated Vehicle or Pedestrian Truss Bridges	8
	7.3 Suspension foot bridges	8
8.	Why should you choose us?	9
10.	Confidentiality	9
12.	Contact us	10

1. Introduction

This proposal sets out the response to the KwaZulu Natal Department of Transport need for bridging solutions. Our confidence to carry this work out stems from our past experience and insights of our subject matter experts, as well as the other professional staff to be assigned to this projects.

The following section sets out the details of company background, our services, and why you should choose our team for this important work.

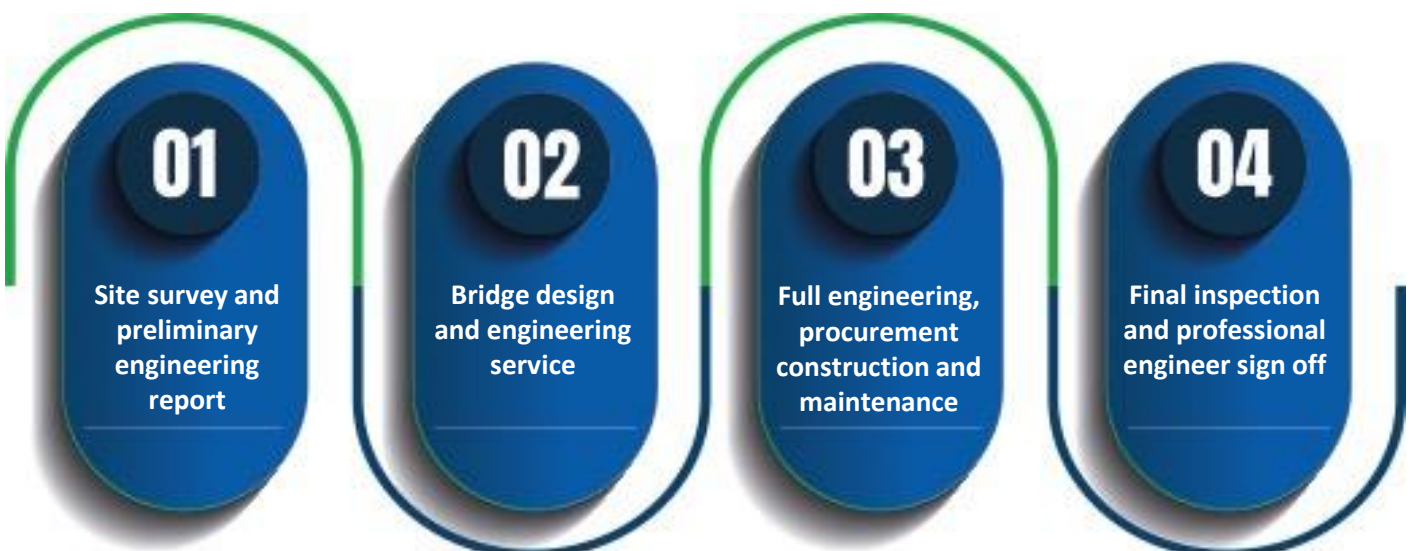
2. Company background

UMP was founded in 1974 as a South African based urethane moulding company. Since then the company has developed into a diversified urethanes and engineering business shipping our products globally. Located on 8,500sqm property in Edenvale, just outside Johannesburg, and with a subsidiary company on 10,000sqm in Carletonville 50 kilometres west of Johannesburg, we have ample manufacturing space and capacity for all kinds of projects.

Ignis Bridge Systems (IBS) a division of UMP is a prefabricated steel bridge manufacturing company that started out refurbishing and manufacturing the old Bailey type 100 bridge sections for rural bridge applications, since then we have developed a new modern generation Modular Panel Bridge System (MPBS) which uses higher strength steels and is compliant to South African TMH7 and SANS 10162-1:2011 standards. We have also added other prefabricated bridges to our range including vehicular truss and girder bridges, pedestrian bridges, and golf course bridges.

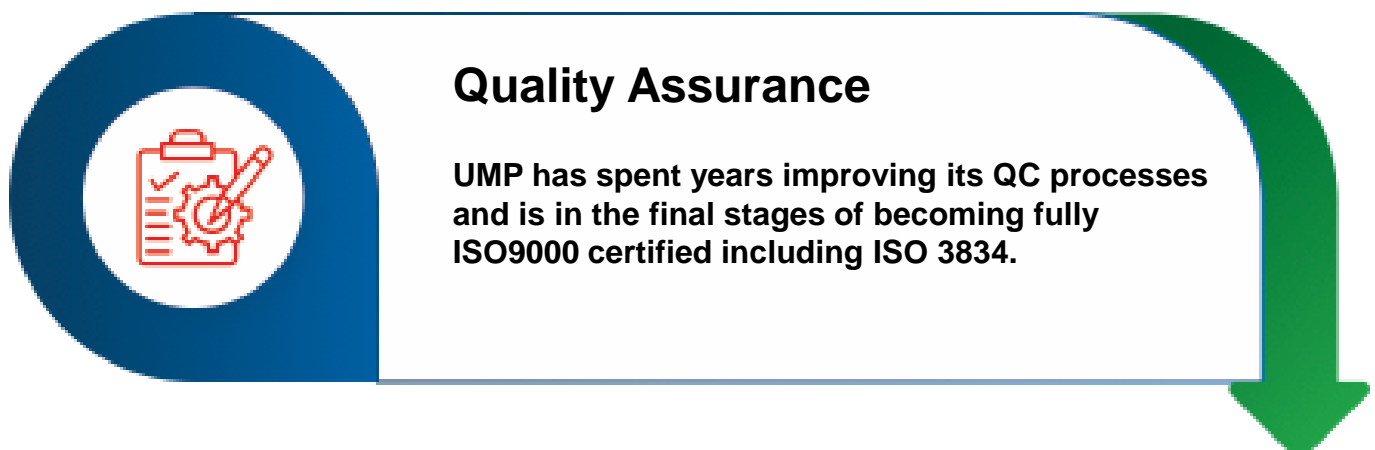
In additional to its manufacturing capabilities, the UMP team has decades of experience in managing and funding large projects, our team has advised numerous government entities (including the International Finance Corporation and other Multilaterals) and private consortia on projects ranging from power stations, toll roads, hospitals, dams, prisons and airports These skills ensure UMP becomes a core member of any project in which it participates.

3. Our process



4. Why steel bridges?

- Steel bridges are a modern construction method commonly used in the rest of the world
- Approximately half the weight or less than concrete bridges
- Can be manufactured and installed in a fraction of the time it would take for a concrete bridge
- Steel bridges are more economical to build

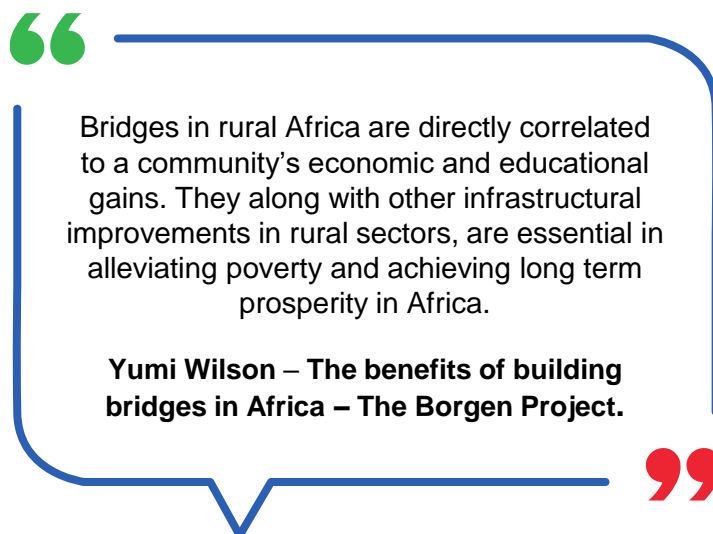
A graphic for Quality Assurance featuring a blue circular icon with a red checklist and gear, and a large green arrow pointing downwards.

Quality Assurance

UMP has spent years improving its QC processes and is in the final stages of becoming fully ISO9000 certified including ISO 3834.

5. About rural bridges

Most of us in a modern city or town would not notice how many bridges we drive over on the way to work, schools or shops, take a minute to think about it what the impact would be to you if the bridge you drove across this morning was out of service. What would the deviation or disruption have been to your trip? Now think about a rural area where just having a 20m wide washaway or gully can mean a detour of 1 to 3 hours and potentially in the rainy season being totally cut off from civilisation.

A quote graphic with a blue border and green and red quotation marks.

“ Bridges in rural Africa are directly correlated to a community's economic and educational gains. They along with other infrastructural improvements in rural sectors, are essential in alleviating poverty and achieving long term prosperity in Africa.

Yumi Wilson – The benefits of building bridges in Africa – The Borgen Project. **”**

This means many people are living in communities without bridge access and as a result are isolated from basic education, healthcare, fresh produce markets and work opportunities thus disadvantaging rural communities while exacerbating and contributing to inequality between rural and urban communities.

6. The benefits of bridges in rural areas

Apart from the many specific benefits as detailed below we also need to be cognisant of climate change and the fact where many communities have low level river crossings or culverts which become flooded and hence cut the communities off from civilisation. Due to climate change the situation is only going to get worse.



6.1. Access to basic education

- Bridges enable safe crossing of rivers by teachers and school children especially during the wet season and times of flooding.
- In a report by the Borgen Project they reported as follows: Angelique, a thirteen-year-old resident in the Shagasha community of Rwanda, states that having a safely installed bridge nearby has transformed her commute to school, and thereby her learning performance. “I used to be 30th in my class. I had repeated bad performance because I missed school. Now I’m 6th in my class – my marks have improved.” Being able to attend school regularly, thanks to the bridge built in the community, has allowed many children to improve in their studies since they have been able to safely get to their classes.¹
- Enables more regular attendance at school especially during the wet season when streams and rivers become impassable. The increased attendance at the schools should lead to better grades.
- Allows children to get to school without having to endanger their lives wading through rivers or trying to cross over by balancing on pipes and logs. ‘Beware of hippo’s and crocodiles’ in some rural areas these are a real threat.
- In some instances children need to wade through rivers leaving them in wet clothes at school, which cannot be conducive to learning.

6.2 Health services access

- Here women are most likely to be crossing bridges to get to clinics for their own treatment or that of their children and babies, the safe access by means of a bridge increases the percentage chance of a woman seeking healthcare and support from clinics for maternal and neonatal care.
- The world bank estimates that 75% of maternal deaths could be prevented by timely access to essential childbirth-related care.
- Provides access for mobile clinics to get to the elderly and disabled who cannot travel.

6.3. Economic benefits

6.3.1. Agriculture

Bridges have been proven to improve the economic situation of rural farmers in the environment around bridges [Nicaragua bridges] this is both on the supply side and market side. The reasons being they can now easily get fertiliser and seed to the to their farms at a lower cost, the fertiliser also increases the agricultural yields and then they gain on the market side as transport to the market is at a lower cost and because the route is shorter damage to the product is minimised. They are also not impacted by heavy rains or seasonal flooding which means they have a more regular income stream year-round.

6.3.2. Commercial

Due to improved access people can set up shops closer to the rural villages enabling rural trade and commerce to grow.

6.3.3. Labour markets

Bridges enable easy access to work opportunities in rural commercial centres, enabling family members the opportunities to earn higher incomes which would not be possible without a bridge due to time constraints.

6.3.4. Social interaction

Facilitates interaction between families and communities making them stronger.

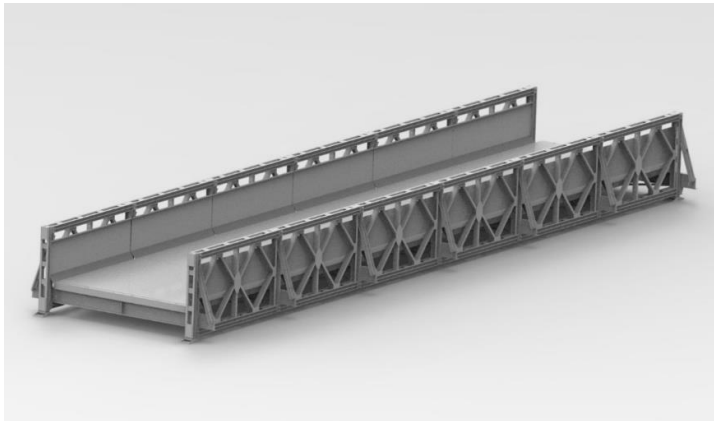
7. Types of bridges

We manufacture at our facilities in Johannesburg the following types of bridges:

7.1. Modular Panel Bridge System (MPBS)

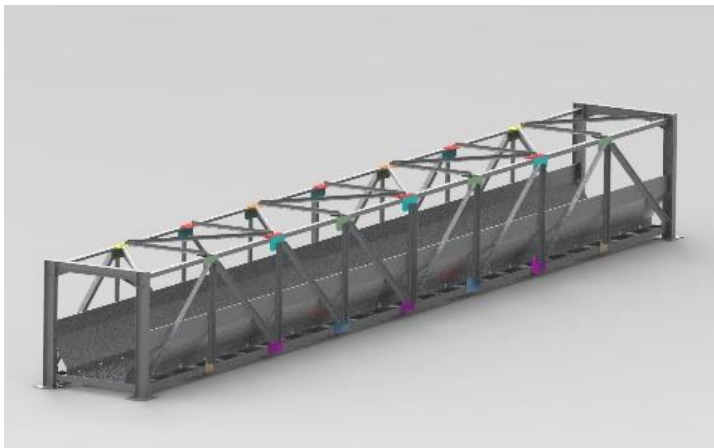
An enhancement of the old Bailey modular bridge design, by using stronger materials and changes to the depth of the panel we can more efficiently put together a bridge for emergency relief, temporary access, or a permanent application in rural areas.

These bridges being modular are easily transported to site and can be assembled easily in a short space of time. They can then cantilever launched into position so no heavy duty crane is required making them excellent for use in rural areas.



7.2. Prefabricated Vehicle or Pedestrian Truss Bridges

More economical than the modular bridge but would need a crane to install.



7.3. Suspension foot bridges

Used to provide last mile access for rural villages where vehicular access is difficult, and cost is important.



8. Why you should choose us?



- 100% Local manufacture
- 100% Local technical support and engineers that understand the regional environments into which the bridges are going.

9. Confidentiality

We will only discuss client confidential matters, documents and any other forms of evidence with members of our staff directly involved in this engagement. We are bound by our policies and professional standards not to disclose any information relating to client's business acquired in the course of our duties to any persons who are not members of the firm.

10. Conclusion

We trust that we addressed your requirements in our proposal and look forward to working with you.



Contact us

Trevor Carolin

CEO

082 452 4380

14 Plantation Road

Edenvale

Ekurhuleni, South Africa

T. +27 (0)11 452 1000

sales@ump.co.za | www.ump.co.za