Young Professionals Sustainability Imbizo 2025

Client-pleasing behaviour – the death of Engineering Professionalism?

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- 1. Definition of Client-pleasing behaviour
- 2. Two project examples
- 3. Ethical obligations of the Engineer
- 4. How to handle Client-pressure ethically



















✓ Pressures from a client



















- ✓ Pressures from a client
- ✓ resulting in the Engineer reluctantly changing his/her Professional advice























- ✓ Pressures from a client
- ✓ resulting in the Engineer reluctantly changing his/her Professional advice
- ✓ while knowing that this change may have a detrimental impact















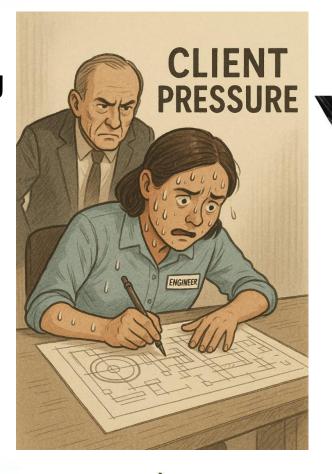






- ✓ Pressures from a client
- ✓ resulting in the Engineer reluctantly changing his/her Professional advice
- ✓ while knowing that this change may have a detrimental impact on the
 - ✓ the health, safety or interest of the public; or
 - √the environment









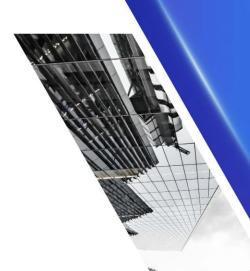






Design of a new hospital complex to replace a nearby dilapidated public hospital































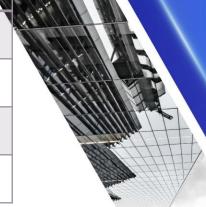








| | AADD (litres / bed / day) |
|----------------|---------------------------|
| Company design | 500 |
| | |
| | |
| | |

















| | AADD (litres / bed / day) |
|-----------------------------|----------------------------|
| Company design | 500 |
| Dilapidated public hospital | 650 (current / actual use) |
| | |
| | |



















| | AADD (litres / bed / day) |
|-----------------------------|------------------------------|
| Company design | 500 |
| Dilapidated public hospital | 650 (current / actual use) |
| Nearby private hospital | > 500 (current / actual use) |
| | |

















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|----|---------------------------------------------------|
| | MBIZO 2055 20 – 21 AUGUST PREMER HOTEL, MIDRAND |
| | |

| | AADD (litres / bed / day) |
|-----------------------------|------------------------------|
| Company design | 500 |
| Dilapidated public hospital | 650 (current / actual use) |
| Nearby private hospital | > 500 (current / actual use) |
| Client requirement | 300 |

































My advice:















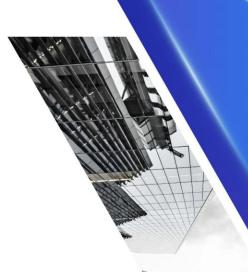




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My advice:

The Engineer's duty to the public is of utmost importance. It is more important than the Engineer's responsibility towards the client.

















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My advice:

The Engineer's duty to the public is of utmost importance. It is more important than the Engineer's responsibility towards the client.

It does not matter what your contract says... you are liable to the public!

















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My advice:

The Engineer's duty to the public is of utmost importance. It is more important than the Engineer's responsibility towards the client.

It does not matter what your contract says... you are liable to the public!

The Engineer has a duty to the poor old lady seeking treatment at the hospital.





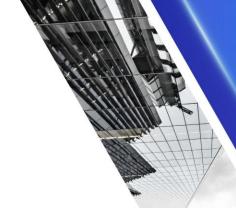












Collapse at the Kolonnade shopping centre on 20 December 2001















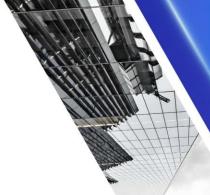


Additions were made to the Kolonnade shopping centre.

The additional portion of the mall opened-up in time for the Christmas shopping rush.





















1. Design included a lattice girder beam holding the roof structure over the ice rink



















- 1. Design included a lattice girder beam holding the roof structure over the ice rink
- 2. Design-spec required full penetration welds at joints



















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- 2. Design-spec required full penetration welds at joints
- 3. Design Engineer only appointed to do construction monitoring for 4 hours every 2 weeks.



















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- 2. Design-spec required full penetration welds at joints
- 3. Design Engineer only appointed to do construction monitoring for 4 hours every 2 weeks.
- 4. The Design Engineer needed to rely on the roofing subcontractor's structural engineer's evidence regarding the weldjoints

















- Design included a lattice girder beam holding the roof structure over the ice rink
- 2. Design-spec required full penetration welds at joints
- 3. Design Engineer only appointed to do construction monitoring for 4 hours every 2 weeks.
- 4. The Design Engineer needed to rely on the roofing subcontractor's structural engineer's evidence regarding the weldjoints
- 5. Both the sub-contractor's engineer and the Design Engineer had concerns regarding the weld joints.







































The subcontractor's engineer:

✓ Inspected the welding when done, for visual defects.





















- ✓ Inspected the welding when done, for visual defects.
- √ Was unable to verify the number of weld runs.



















- ✓ Inspected the welding when done, for visual defects.
- √ Was unable to verify the number of weld runs.
- ✓ Had concerns about the lattice beam welding.





















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- ✓ Was unable to verify the number of weld runs.
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- ✓ Suggested at site meetings, the addition of gusset plates at the joints.



















- ✓ Inspected the welding when done, for visual defects.
- ✓ Was unable to verify the number of weld runs.
- ✓ Had concerns about the lattice beam welding.
- ✓ Suggested at site meetings, the addition of gusset plates at the joints.
- ✓ Gusset plate request was not acted upon.





































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The Design Engineer:

✓ Urged the Client to approve that a load test be carried out on this part of the structure.

















- ✓ Urged the Client to approve that a load test be carried out on this part of the structure.
- √ The Client refused the load test, because of extra time and costs involved.

















- ✓ Urged the Client to approve that a load test be carried out on this part of the structure
- ✓ The Client refused the load test, because of extra time and costs involved.
- ✓ The Client put pressure on the Engineer to sign-off the construction works as complete.





































The Design Engineer:

✓ Eventually buckled under the pressure and signed the local Municipality's structural integrity certificate.



















CLIENT-PLEASING BEHAVIOUR EXAMPLE 2

The Design Engineer:

- ✓ Eventually buckled under the pressure and signed the local Municipality's structural integrity certificate.
- √ That portion of the mall was allowed to open.



















CLIENT-PLEASING BEHAVIOUR EXAMPLE 2



















CLIENT-PLEASING BEHAVIOUR EXAMPLE 2

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20-21 AUGUST
PREMIER HOTEL, MIDRAND

In the case study, published on ECSA's website, they wrote:

"It is conceivable that a load test could have indicated the deficiencies in the construction of the lattice beam and <u>a collapse</u> could have been averted."

















The Engineering Profession Act (46 of 2000)

| Vol. 426 | CAPE TOWN, 1 DECEMBER 2000 KAAPSTAD. 1 DESEMBER 2000 | | No. | 1821 |
|----------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------|------------------------|
| THE PRESIDENCY | | DIE PRESIDENSIE | | |
| No. 1304. It is hereby notified that the Profollowing Act which is here information:— | | No. 1304. Hierby word bekend gemaak dat die keuring geheg het aan die onderstaande algemene inligting gepubliseer word: | | sy goed- nierhy ter |
| No.46 of 2000: Engineering Profession Act, 2000 | | No. 46 van 2000: Wet op die Ingenieursw | eseprofe | e, 2000. |

To provide for the **establishment** of a juristic person to be known as the Engineering Council of South Africa; to provide for the registration of professionals, candidates and specified categories in the engineering profession; to provide for the regulation of the relationship between the Engineering Council of South Africa and the Council for the Built Environment; and to provide for matters connected therewith.

















The Engineering Profession Act (46 of 2000)

Section 27 (3):

"All registered persons

must comply with the code of conduct

and the code of practice and

failure to do so constitutes improper conduct"















In other words:

As a result of Section 27 (3) of the Act, a Professionally Registered Person (Engineer, Technologist, Technician) is required by law, to comply with the ECSA Code of Conduct.

















ECSA Code of Conduct

142 No. 40691

GOVERNMENT GAZETTE, 17 MARCH 2017

BOARD NOTICE 41 OF 2017

ENGINEERING COUNCIL OF SOUTH AFRICA



Code of Conduct for Registered Persons: Engineering Profession Act, 2000 (Act No. 46 of 2000)

















ECSA Code of Conduct

Public Interest 3.3

Registered Persons: -

must at all times have due regard for and give priority to the health, safety (a) and interest of the public.















ECSA Code of Conduct

3.3 **Public Interest**

Registered Persons: -

(a) must at all times have due regard for and give priority to the health, safety and interest of the public.

This is a requirement all around the world.















HOW TO HANDLE CLIENT-PRESSURE ETHICALLY

What should you do when a Client rejects your Professional advice?

















HOW TO HANDLE CLIENT-PRESSURE ETHICALLY

ECSA Code of Conduct

3.3 **Public Interest**

Registered Persons: -

- (a) must at all times have due regard for and give priority to the health, safety and interest of the public.
- must when providing professional advice to a client or employer, and such (b) advice is not accepted, inform such client or employer of any consequences which may be detrimental to the health, safety or interests of the public and at the same time inform the Council of their action.





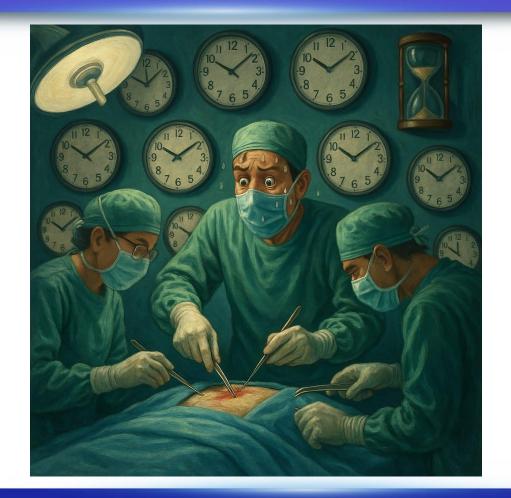
































As is the case for Doctors, isn't it just as important for Engineers to take an oath?





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Think of the <u>public</u> as your <u>end client</u>.





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The infrastructure that you are designing now...





As is the case for Doctors, isn't it just as important for Engineers to take an oath?

Think of the <u>public</u> as your <u>end client</u>.

The infrastructure that you are designing now...

- that road,
- that bridge
- the water reticulation system





As is the case for Doctors, isn't it just as important for Engineers to take an oath?

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The infrastructure that you are designing now...

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will be used by the public...





As is the case for Doctors, isn't it just as important for Engineers to take an oath?

Think of the <u>public</u> as your <u>end client</u>.

The infrastructure that you are designing now...

- that road,
- that bridge
- the water reticulation system

will be used by the public...

including your friends and family.





