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To whom it may concern

LETTER FOR HIA EXEMPTION REQUEST: TUBATSE COAL FIRED BOILERS, LIMPOPO PROVINCE

The above-mentioned project refers. WSP is currently undertaking a Basic Assessment for the development. The proposed project is located close to Steelpoort in the Limpopo Province (Figure 1-4).

Figure 1: Location of Steelpoort in the Limpopo Province.

Figure 2: Location of the site in relation to Steelpoort.

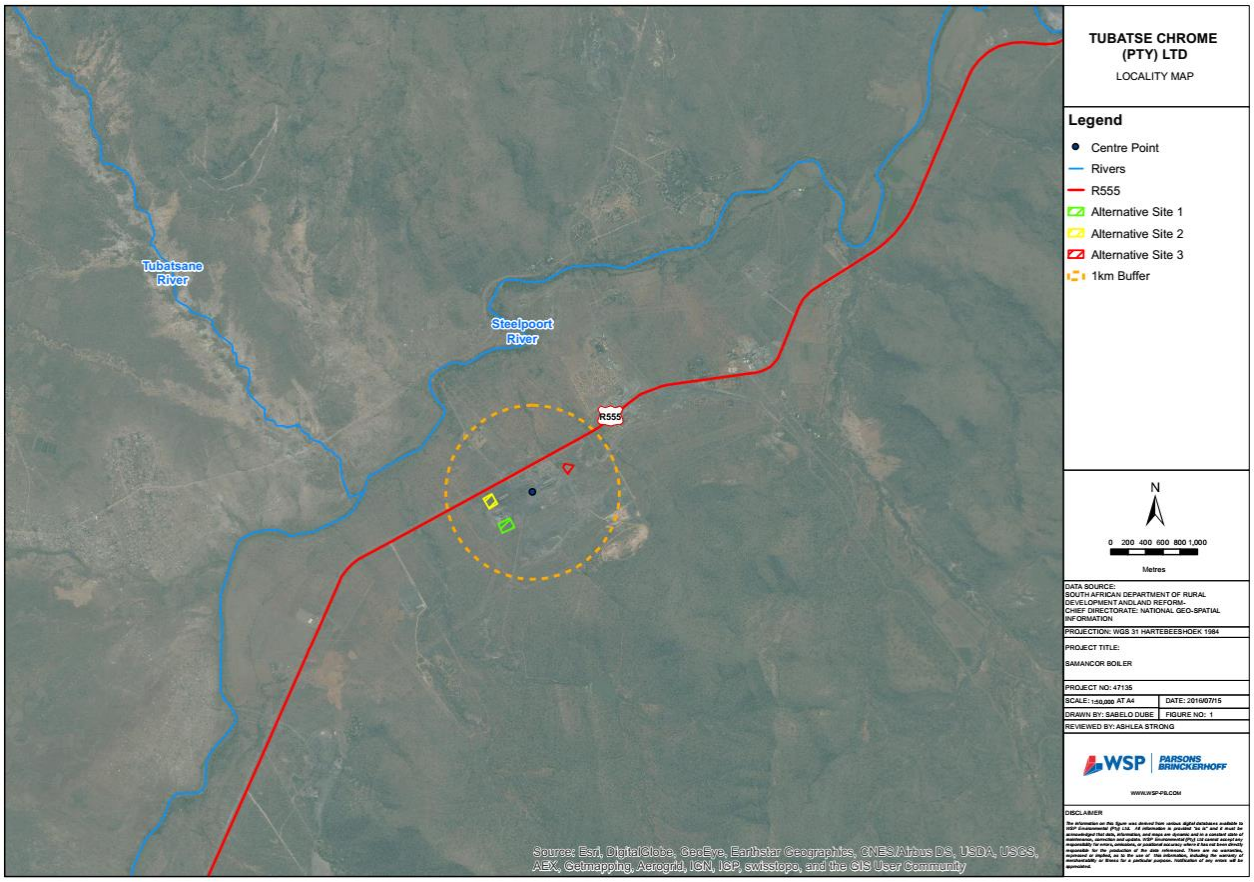

Figure 3: Site location (WSP).

Figure 4: Detail of proposed area considered for the development.

Tubatse was initially built as a three-furnace operation in 1975. The plant was expanded to five furnaces between 1989 and 1990, with the sixth furnace being built in 1996. The core business of the operation is the production of charge chrome using six Submerged Arc Furnaces (Figure 5-6), one metal recovery plant, and a Pelletising and Sintering Plant. Tubatse Chrome undergoes various operations including; Pelletizing and Sintering of chromite fines, Smelting and Reduction for the production of charge chrome, chrome recovery from slag, 30 MW Power Plants and Services to support the production process. Ferrochrome is produced as high carbon charge chrome, which is an alloy of chromium (50-52 %) and iron (34-38 %).

In order to reduce their electricity demand from the National Grid, Tubatse installed a power generation facility that was authorised to generate up to a design capacity of 30MW. Heat exchangers (boilers) (Figure 7) recover heat energy from hot furnace off-gas at the 6 furnaces (or heat recovery steam generator (HRSGs)). The HRSGs are arranged in the east and west plants, with HRSG 1, 2, 3 and 4 arranged in the east plant and HRSG 5 and 6 arranged in the west plant. Although the total design output of the six HRSGs is 148.74t/h, the total average steam output is 60t/h. The boilers generate steam from de-ionised water which is in turn piped to the power generation facilities to turn two 15MW turbines (Figure 8). The turbines are connected to

generators which generate electricity for reuse at the plant (Figure 9). Cooled steam exits the turbines and is transferred to air-cooled condensers (Figure 10), where it returns to a liquid state and is re-circulated into the process. The power generation facility currently only generates approximately 10MW of electricity. The average generating capacity of system is currently around 7MW; only one 15MW steam turbine generator set is running and the other one is in idle state.

Figure 5: Tubatse West Plant.

Figure 6: Chrome Slag being removed from the smelting process.

Figure 7: Heat Exchanger.

Figure 8: Turbine (15MW).

Figure 9: Tubatse's on-site Sub-station.

Figure 10: Air Cooled Condenser.

At present, the amount of steam produced is not sufficient to generate 30MW. The addition of the four coal-fired boilers (CFBs) will increase the amount of steam available to the Power Generation Plant. Tubatse have therefore proposed to establish four 25t/h CFBs which will generate sufficient steam to enable the existing power generation facility to operate at its full capacity (i.e. 30MW). The main components of a CFB include:

- Fuel input;
- CFB;
- Cyclone collector;
- Particulate control system; and
- Steam pipelines.

The following infrastructure will be applicable for each of the four proposed CFBs:

- Boiler Area:
    - Main boiler plant house for one CFB unit;
    - Auxiliary plant buildings; and

    - Operational support buildings.
- Associated Infrastructure:
    - In-plant coal stock yard and storage;
    - Lime storage area;
    - Flue gas stack;
    - Coal conveyors; and
    - Water supply pipelines (temporary and permanent).

Three alternative sites were identified within the boundary of the Tubatse Plant. Site 1 and Site 2 are considered feasible with no fatal flaws. Site 3 is not indicated to be a viable option. At this stage Alternative Site 2 is considered the preferred site as it is in close proximity to the existing Tubatse power generation facility and is easily accessible. However, depending on the final design layout, Tubatse may need to utilise Alternative 1.

All three of these sites are within the Tubatse Plant boundary and can be considered brownfield sites as they have either previously been or are currently being impacted:

- Alternative 1 is utilised for stockpiling and is located behind the West Plant heat Exchangers. The site is surrounded by some vegetation which has been heavily impacted by the existing activities in the area (Figure 11-13). A proposed layout is attached (Figure 14) should this be the alternative used eventually.

Figure 11: General view of Alternative site 1.

Figure 12: Another view at site 1.

Figure 13: View at site 1.

Figure 14: Layout site alternative 1 (WSP).

- Alternative 2 is a large flat area located close to the R555. The area is sparsely vegetated and has a high density of alien vegetation. This site is the closest to the power generation facility and is the most preferred site from a technical point of view (Figure 15-16). A proposed layout is attached (Figure 17) should this be the alternative used eventually.

Figure 15: Alternative site 2.

Figure 16: Another view at site 2.

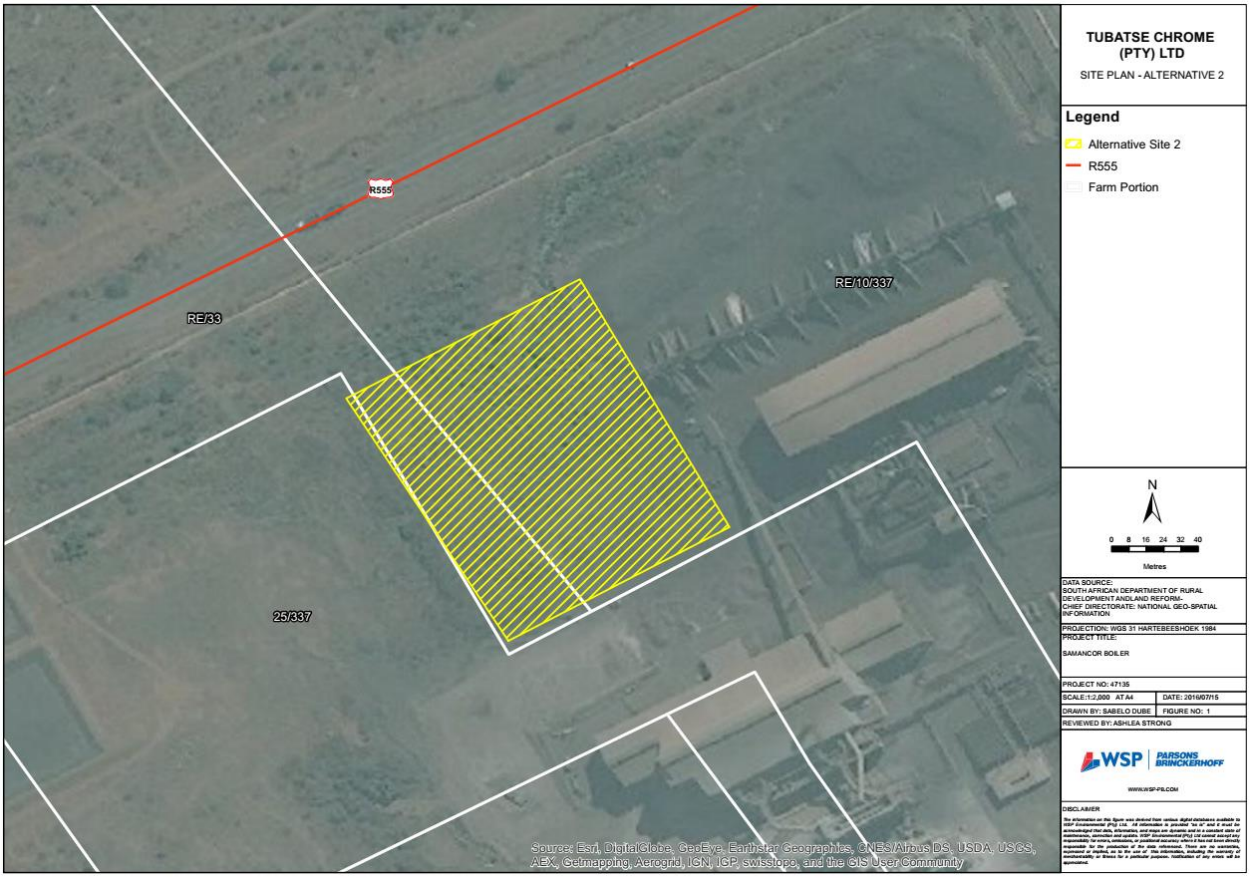

Figure 17: Proposed layout at site alternative 2 (WSP).

- Alternative 3 can be found on the far east of the plant. The area is vegetated with mostly indigenous species. This area has not been heavily impacted by existing activities (Figure 18).

Figure 18: Alternative site 3.

It is my opinion that the project may be exempted from doing a Heritage Impact Assessment

(HIA). The following is applicable:

- Site 3 is not considered a viable option and therefore is not considered any more.
- Both sites 1 and 2 are entirely disturbed (see above figures). It mainly consists of existing infrastructure and stock pile areas.
- There are no natural vegetation at the latter two sites.

Due to the mentioned factors, the chances therefore of finding any heritage related features are indeed extremely slim. It is therefore believed that an additional Heritage Impact Assessment (HIA) is not needed for this project. This letter serves as an exemption request to the relevant heritage authority.

The developer should however note that due to the nature of archaeological material, such sites, objects or features, as well as graves and burials may be uncovered during construction activities on site. In such a case work should cease immediately and an archaeologist should be contacted as a matter of urgency to assess such occurrences.

Recommendation:

That the development be exempted from doing an HIA.

I trust that you will find this in order.

Yours faithfully

Prof AC van Vollenhoven: Director