EXECUTIVE SUMMARY

The study *Dakparkschool en Binnengebied*, which was carried out by OOZE between January and March 2020 in the context of *IABR-Atelier Rotterdam: Energy Transition as Leverage for Socially Inclusive City Making*, is a case within, and as such a crucial contribution to the research towards a Local Energy Action Plan (LEAP) for the Rotterdam district Bospolder-Tussendijken (BoTu).

A truly resilient neighbourhood is impossible without resilient schools. The planned (re)development of the Dakparkschool and its 'binnen gebied', the block's inner courtyard presents an excellent opportunity to enrich the district with a new green heart.

The aim of this research by design is to imagine ways in which the energy transition can be used as leverage to achieve added social and societal value for the Bospolder-Tussendijken neighbourhood. As a result of its integrated approach the study addresses spatial, social, educational, financial, and technical elements, while also establishing a framework for a public call for a new architectural design for the Dakparkschool and the inner courtyard which eventually would contribute to the LEAP for BoTu.

This report highlights existing (spatial) problems and addresses the shared wishes and ambitions of all direct stakeholders. Its findings prompt a series of recommendations that relate directly to the subsequent public call for a new architectural design.
The most important of these are the following:

- Buildings, specifically the Dakparkschool itself, but also the courtyard, must have **visible and attractive entrances**.
- **Fences and boundaries** deserve special attention **and should actively be part of the overall design**; for example, by giving them a **dual function** as playing equipment (or participative art), or by completely rethinking them as soft boundaries, where privacy for both residents and users is guaranteed by vegetation and topography.
- **The landscape should be the outcome of a shared, overall vision**, allowing for cohesive programming and preventing fragmentation and disjointed green spaces. Sustainable rainwater drainage systems (SuDS) composed of elements such as an edible garden or specially selected plants could be introduced, becoming a design feature and solving future flooding problems, as well as an integrated element of the **school's future-oriented curriculum.**
- In concurrence with generating energy locally and sustainably a strong focus on optimal **reduction of current energy consumption** is as important. Spatially, this involves the thermal performance of the building, which can be addressed in the following ways:
    - Install more **energy efficient windows** or sash-work.
    - Provide the building with an **additional layer of insulation**.

- Consider adding a **second façade** to the building to create an in-between space that, depending on its size, can be programmed with activities for which heating is not required, while simultaneously acting as a thermal buffer. In order to accommodate more pupils, the school can consider expanding within its existing dimensions, or (preferably) increasing the building height by adding an **extra floor**.
- Note that, prior to the call for designs, the addition of an extra floor requires a special municipal permit to increase the maximum building envelope from 9m to 12m. The planning application will also call for an archaeological survey.
- The design, including the programming, opening hours and management plans of the courtyard should be made **in consultation** with all stakeholders. The more extensive the opening hours, the more inclusive the school can be.
- To counteract **disregard and disrepair**, the design proposals should cover issues of **use** and **ownership**, and consider necessary **coalitions**.

We propose three scenarios at different scales that, depending on budget and ambition, can be used to answer the call for designs. The larger the intervention, the more extensive and better integrated the added social value for the district becomes. The least ambitious scenario straightforwardly uses sustainable techniques and *nature-based solutions* to bring the existing possibilities into play, and considers how these may be implemented as teaching materials. The most ambitious intervention, the third scenario, reconstructs and adapts the buildings to fully integrate these techniques to ensure that the school and the courtyard become best-practice examples on a national level.

Our recommendation to the clients is to opt for the **third scenario**. This thorough and integrated approach has by far the greatest impact on both the education and curriculum offered and the role of the block in the neighbourhood and wider district. The completely renovated school building and adapted inner courtyard will provide ample opportunity to directly connect the built environment to the curriculum. The school will become an example of future-oriented education in which pupils acquire the knowledge necessary to actively promote sustainable development. The entire district will have access to its educational resources to gain wider knowledge about sustainability and climate change. As the new heart of the neighbourhood, the school and the pupils as well as the Dakparkschool block as a whole will act as a lever to create a resilient community.

With this third scenario, *Dakparkschool en Binnengebied* contributes optimally to the realization of the Sustainable Development Goals at the neighbourhood level**.**