



BUILD VERDIS · COMPETITION ENTRY

VERDIS

ARCHITECTURE OF THE REGENERATIVE CITY

"Buildings do not resist nature. They work with it."

Architecture Statement | Stage 2 — Building Design, Language & Analysis

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An architecture & analysis statement for the winning Verdis master plan

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This statement accompanies the Build Verdis competition entry. Where the master plan set the destination — the land use, the population target and the movement network — this document defines how Verdis will feel underfoot and to the hand, and analyses the numbers behind that vision: land allocation, density, housing mix, occupancy, mobility, energy, embodied carbon, sourcing and phasing. Quantitative figures are drawn from the companion master-plan report and are presented as indicative design targets for a scheme that will be delivered over decades.

SECTION 01

Foreword

In May 2026 the Government of Verdis invited the profession to imagine the master plan for a new, progressive city-state on the Danube. That first stage answered where the city should sit and what it should contain. This statement answers the question that follows and ultimately decides whether a plan becomes a place: what should it be made of, and how should it be built?

The proposal set out here is not a catalogue of individual buildings. It is a single architectural grammar — a small, disciplined set of rules for volume, roof, ground floor, facade, material and detail — that can be repeated across every use in the city, from a townhouse to a parliament, without ever becoming monotonous. The ambition is deliberately modest in gesture and radical in consequence: a city that reads as one calm, continuous landscape rather than a collection of competing objects.

Alongside the design, this document sets out the analysis that supports it. Every claim the architecture makes — that the city is walkable, low-carbon, flood-resilient, self-sufficient and humane — is tested here against numbers: how the 472,510 m² of land is divided, how many people live where and in what, how they move without cars, how much energy and carbon the buildings save, and how the whole is built over twenty to seventy years. Design and evidence are presented together because, in a project of this scale, neither is credible without the other.

The guiding conviction is stated on the first page of the concept and repeated on the last: buildings do not resist nature; they work with it. Sun, wind, rain, flood and vegetation are treated here not as loads to be defended against but as the instruments of the design. Every rule that follows, and every target that quantifies it, is a way of letting one of those five forces do useful work.

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Core Concept — Working With Nature

five climate forces flow into every building



**Buildings do not resist nature.
They work with it.**

Fig. 1 Core concept — five climate forces (sun, wind, rain, flood and trees) are channelled into every building as design drivers rather than resisted as loads.

SECTION 02

Introduction — Author & Remit

This architecture statement is authored by Gnusareva Arina. It takes as its brief the Stage 1 winning master plan for Verdis and develops the layer the master plan intentionally left open: the architectural language of the buildings themselves, the public realm they define, and the quantitative logic that binds them to the plan's goals.

From a winning master plan to one shared architectural language

The master plan fixes the essentials that architecture must serve. The city occupies an elongated plot of approximately 472,510 m² along the Danube between Croatia and Serbia; roughly two-fifths of that land is held permanently as natural reserve, floodplain and carbon-sequestration park; and the built fabric is organised around a car-free, human-scale settlement of some five to six thousand residents within a strict walking threshold to daily needs. These are the fixed points. The role of this statement is to give them a body — and to show, with data, that the body fits the plan.

Rather than assign a different signature building to each function — the usual reflex of the master plan competition — the proposal does the opposite. It derives one architectural language from the site and applies it consistently, so that the identity of Verdis is carried not by a single landmark but by the coherence of the whole. The city itself becomes the brand, and the analysis that follows shows how a single grammar can absorb the full programmatic range of a nation without strain.

BUILD VERDIS

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Genesis of the Idea

from a winning master plan to one shared architectural language

472,510 m²

of Danube floodplain — the Stage 1 winning master plan this architecture grows from



the master plan set the destination — the architecture is how Verdis will feel underfoot and to the hand

Fig. 2 Genesis of the idea — the master plan sets the destination (site won, land read, climate as partner); the architecture is the single grammar that follows.

472,510 m²

Danube floodplain
site

~40%

held as
natural reserve

≈1.5 km

end to end, on foot

1

shared design
language

SECTION 03

Design Method

The architectural language was developed through a linear, evidence-led method that moves from landscape reading to a repeatable rule-set, tested at every step against the master plan's programme and performance targets.

1	Read the land	Survey orography, hydrology, habitats and vernacular of both Danube banks; identify the five climate forces the architecture must work with.
2	Set the grammar	Distil a minimal rule-set for volume, roof, ground floor, facade, material and detail — each rule justified by climate, use or craft.
3	Fix the palette	Restrict materials to what lies within a day's barge ride on the Danube, to cut embodied carbon and root the city in its region.
4	Apply across types	Test the grammar on every programme — housing, waterfront, research, government, school, hotel, gateway — adjusting only what the use demands.
5	Quantify & verify	Check density, occupancy, mobility, energy and carbon against benchmark data; iterate the design until targets are met.
6	Codify as identity	Turn the recurring grammar into a formal brand and wayfinding system so the language survives phased delivery over decades.

The method is intentionally reproducible. Because the design is a rule-set rather than a set of finished objects, it can absorb change — new investment, revised phasing, evolving technology — without losing its identity, which is precisely what a city built over twenty to seventy years requires. Steps 1–4 produce the architecture set out in Sections 7–9; step 5 produces the analysis in Sections 6 and 10–16; step 6 produces the identity system in Section 17.

SECTION 04

Purpose of this Statement

This statement presents the architectural vision for Verdis as a buildable, coherent and future-focused city, and the analysis that demonstrates it is achievable. It is intended to sit alongside the master-plan report and to be read as its architectural counterpart.

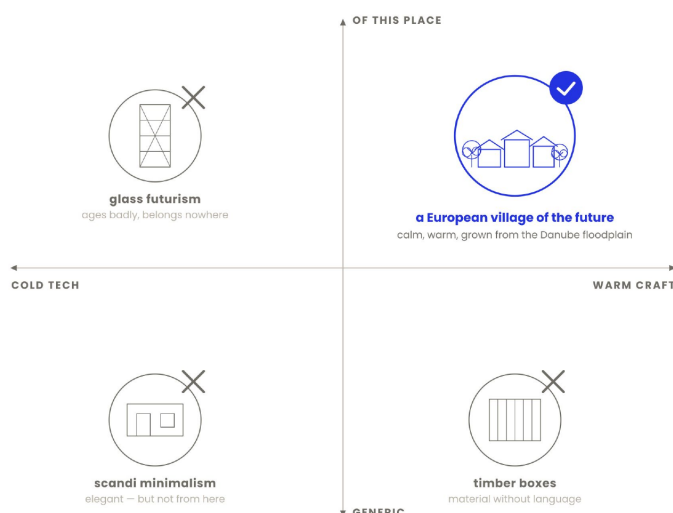
Its aims are threefold. First, to define a human-scale, low-carbon architecture that is genuinely of its place — drawn from the vernacular of the Danube and built, as far as possible, from that region's own timber, stone and earth. Second, to demonstrate that a single, disciplined language can serve the full programme of a nation, from the smallest dwelling to the seat of government, while raising rather than flattening quality. Third, to show — through land-use, density, mobility, energy and carbon analysis — that this architecture actively delivers the wider goals of the plan: self-sufficiency, biodiversity, flood resilience and a high, durable quality of life.

Throughout, the design is measured against a simple test that also governs its aesthetics: Verdis should be designed to look better in fifty years than on day one. Patina, planting and weathering are treated as part of the design, not as its failure. The analysis extends the same logic in time: the scheme is assessed not at completion but across its full fifty-to-seventy-year maturation.

BUILD VERDIS

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The Image — A European City of the Future



50

**designed to look better
in fifty years
than on day one**

patina, planting and weathering are
part of the design — not its failure

Fig. 3 Design positioning — Verdis is set deliberately between vernacular warmth and modern craft, avoiding both the glass museum-city and the timber pastiche.

SECTION 05

The Context — A City on the Danube Floodplain

Verdis occupies an undeveloped, ecologically intact stretch of the Danube: open meadow, woodland, marshland and riparian edge on a soft orography, with long river views and a single land border shared with Croatia. The site is at once the city's greatest asset and its principal constraint. Its wilderness is precisely what makes a regenerative, self-sustaining settlement possible; its remoteness and its seasonal flooding are what the architecture must answer.

Table 1 — Site parameters and their architectural consequences

Site parameter	Condition / value	Design consequence
Total area	472,510 m ²	Fixes the density and population maths for the whole scheme
Setting	Elongated plot, Croatia–Serbia, on the Danube	A linear, ~1.5 km spine city rather than a radial one
Orography	Soft, valley-like central strip (NE–SW)	A sinuous main spine and a raised waterfront bank
Habitats	Meadow, woodland, marshland, riparian	~40% held as reserve; buildings woven between habitats
Hydrology	Danube frontage; seasonal flood risk	Recessed, raised ground floors; SuDS; canal & locks
Access	Remote; nearest pier ~1 km (Serbian bank)	A single multi-modal gateway; river + land supply

Five forces, read as design instruments

The concept begins by reading the land as five climate forces and assigning each a job in the building. Sun is admitted in winter and shaded in summer through deep facades and terraces, and harvested on the roof. Wind drives cross-ventilation and is tempered at the ground by built form and planting. Rain is caught, stored and slowed by green roofs and rain gardens rather than piped away. Flood is designed for, not defended against: the most vulnerable ground is kept open and the built fabric steps up to safe levels. Trees and vegetation are carried up the building at four levels, so that green is structural to the architecture and not applied to it.

“The master plan set the destination — the architecture is how Verdis will feel underfoot and to the hand.”

SECTION 06

Land Use & Density Analysis

The spatial strategy balances a large protected landscape against a compact, efficient built fabric. To keep its ecological identity while housing a working nation, the 472,510 m² site is divided into seven programmatic domains. The single largest zone is not built at all: roughly two-fifths of the land is held as natural reserve and floodplain.

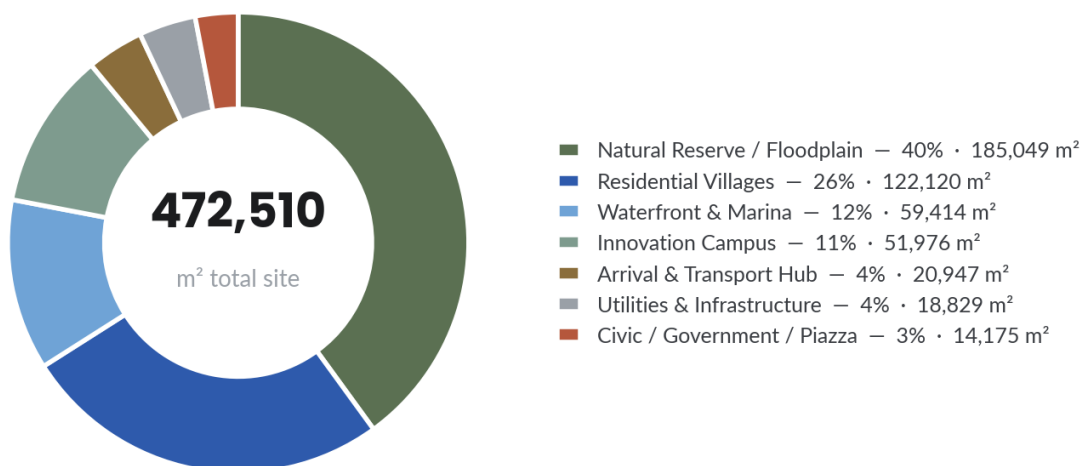


Chart 1 Land-use allocation across seven programmatic domains; the protected natural landscape (40%) is the single largest zone.

Table 2 — Macro land-use allocation (indicative master-plan figures)

Zone	% of land	Area (m ²)	Strategic role
Natural Reserve / Floodplain	40%	185,049	Ecological identity, wildlife, natural flood mitigation
Residential Villages	26%	122,120	Medium-density clusters, neighbourhood public realm
Waterfront & Marina	12%	59,414	Economic driver, hospitality, active river edge
Innovation Campus	11%	51,976	University, research, incubators, employment
Arrival & Transport Hub	4%	20,947	Multi-modal gateway, border control, reception
Utilities & Infrastructure	4%	18,829	Circular waste, energy, water treatment
Civic / Government / Piazza	3%	14,175	Administrative and cultural heart
Total	100%	472,510	Complete masterplan spatial matrix

Read together, the built and programmed districts occupy roughly half to three-fifths of the gross domain, yet the dominant single zone remains the protected landscape. This is the arithmetic behind the city's claim to be regenerative: density is concentrated so that nature can be extensive.



■ Protected natural landscape ■ Green public realm & corridors ■ Built & programmed footprint

Chart 2 Green-to-built balance — protected landscape and green public realm together outweigh the built and programmed footprint.

SECTION 07

Core Concept — Working With Nature

The organising idea of the architecture is a single sentence: buildings do not resist nature; they work with it. In practice this means that the five forces are not treated as separate engineering problems solved by separate systems, but as related opportunities that a well-shaped building can absorb passively, before any active technology is added.

The result is an architecture that is low-tech on the skin and high-tech in the bone: quiet, tactile and green to the touch, with its intelligence — structural, environmental and digital — carried invisibly within. This inverts the conventional smart-city image. Technology in Verdis is everywhere and nowhere, in service of comfort and transparency rather than on display.

Green is not decoration but a measurable system, distributed across four levels of the building. The chart below shows the indicative share of the city's green surface carried at each level — from car-free courtyards at the ground to the roof meadow at the top — so that vegetation climbs the building continuously and the boundary between architecture and landscape is blurred by design.

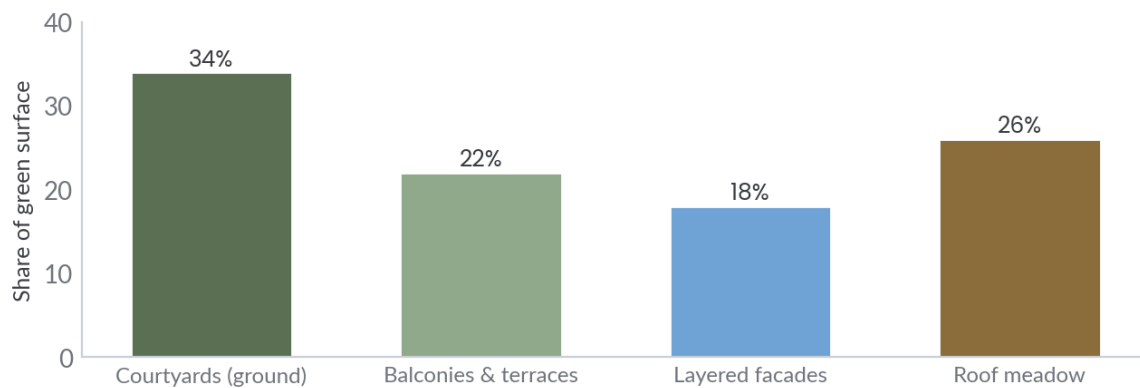


Chart 3 Green at four levels — indicative distribution of green surface from ground-level courtyards to roof meadow.

5

climate forces,
one grammar

50

years — designed
to age well

4

levels of green
per building

75%

ground floors open
to the public

SECTION 08

The Architectural Language

The language of Verdis is a compact grammar of eight rules. Each is described below with its technical intent. Together they are sufficient to design any building in the city and strict enough that the result is unmistakably one place.

8.1 Form Language — simple volumes with shifts

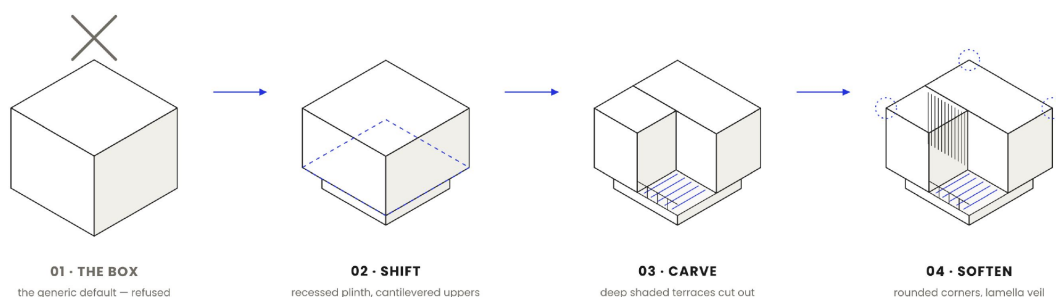
The starting volume is always a simple, familiar mass — never a plain box. Four moves are permitted: shift (upper floors slide to cantilever and shade), carve (recessed ground floors and loggias), soften (rounded corners that ease wind and wear) and deepen (shaded terraces cut into the volume). These moves are structural and environmental before they are aesthetic. The vocabulary is small on purpose, so that a townhouse and a research building are visibly of the same family.

BUILD VERDIS

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Form Language

simple volumes with shifts — never a plain box



recessed ground floors · cantilevered upper floors · deep shaded terraces · softly rounded corners

Fig. 4 Form language — from the base volume through shift, carve and soften: recessed ground floors, cantilevered upper floors, deep shaded terraces and softly rounded corners.

8.2 The Fifth Facade — roofs put to work

Roofs draw on Balkan roof memory — low gable, hip and asymmetric pitches around 15–22° — redrawn as working surfaces. The roof is treated as a fifth facade: south slopes carry integrated solar; the remaining area is given to roof meadow and rain gardens that store water, insulate and extend habitat to the top of the building.

BUILD VERDIS

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Roofs — The Fifth Facade

Balkan roof memory, drawn modern — and put to work

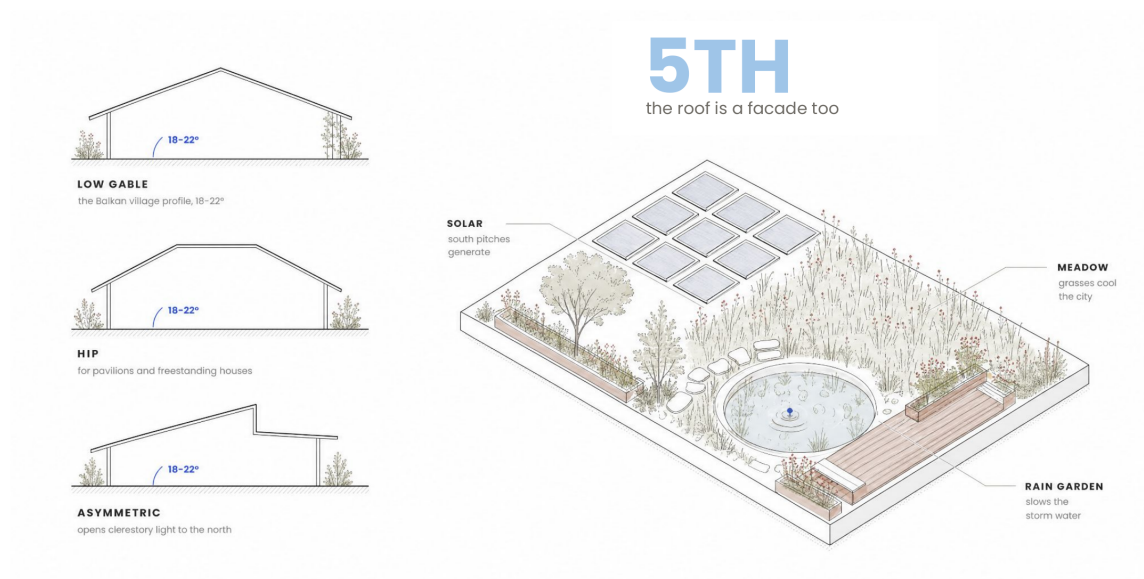


Fig. 5 The fifth facade — low gable, hip and asymmetric roof profiles carry solar to the south and roof meadow, rain gardens and stored water across the rest.

8.3 The Active Ground Floor — the street continues inside

There are no blank plinths in Verdis. A target of 75% of all ground-floor frontage is open to the public — cafés, galleries, workshops, shops and shared rooms — so that the street continues into the building. The ground floor is set back and slightly raised, which both animates the public realm and lifts habitable space clear of occasional floodwater.

BUILD VERDIS

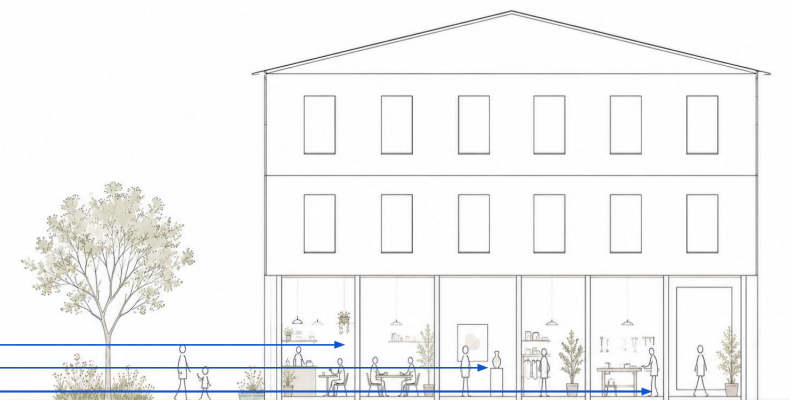
The Ground Floor

no closed plinths — the street continues into the building

75%

of ground floors open to the public

CAFE
GALLERY
WORKSHOP



cafés · co-working · galleries · shops · workshops · lobbies — life at eye level

Fig. 6 The active ground floor — recessed, glazed and public: a target of 75% of ground floors open to café, gallery and workshop uses.

8.4 The Layered Facade — four layers of depth

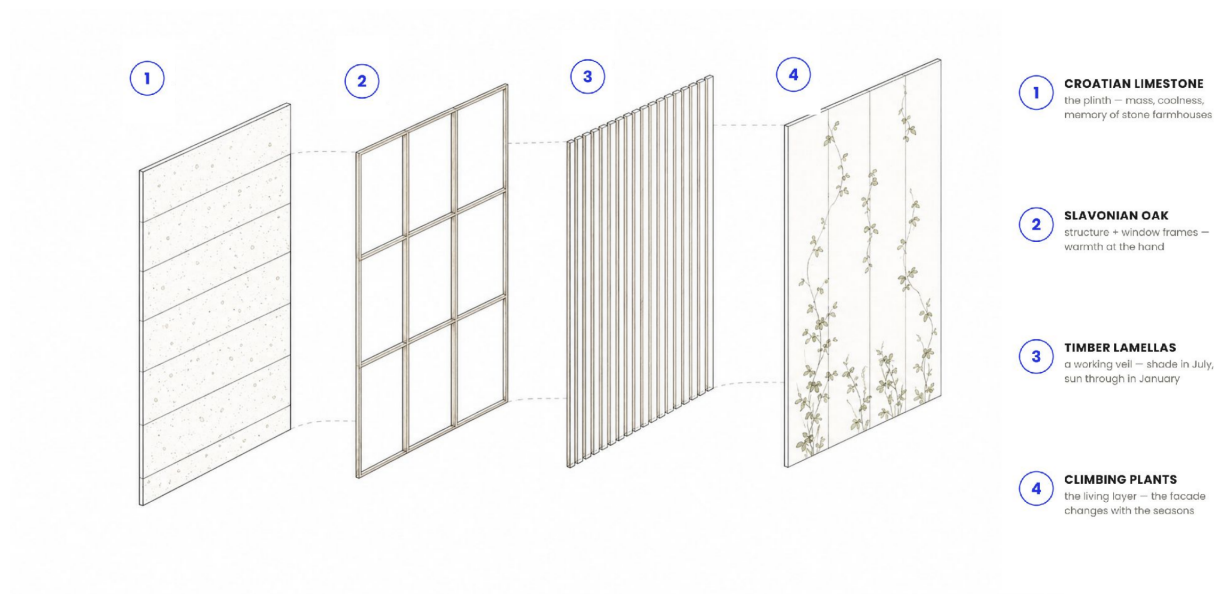
No facade in Verdis is flat. Each is built from four layers that give depth, shade and life: an inner structural and thermal line (Croatian limestone or timber-hybrid wall), a primary cladding of Slavonian oak, a screen of timber lamellas, and an outer layer of climbing plants. The depth is a performance device — it controls solar gain, manages glare and shelters openings — and it is what gives the buildings their tactile, shadowed character.

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The Layered Facade

four layers of depth — light, shade and life



a deep facade, never flat.

Fig. 7 The layered facade — four layers of depth: Croatian limestone, Slavonian oak, timber lamellas and climbing plants. 'A deep facade, never flat.'

8.5 Balconies, Terraces, Windows — outdoor rooms

Outdoor space is designed as usable room, not decoration. Balconies are set at a minimum depth of 2.0 metres — the threshold at which a balcony stops being a shelf and becomes a garden. Terraces are cut deep into the volume as summer rooms; windows are tall rather than wide, bringing low light deep into plan while keeping the facade's vertical rhythm.

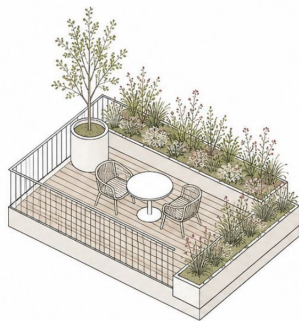
BUILD VERDIS

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Balconies, Terraces, Windows

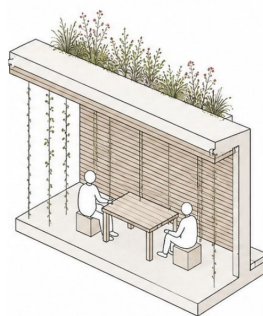
outdoor rooms, not decoration

THE BALCONY — A SMALL GARDEN
fit test, drawn to scale



deep enough for a tree, a table and two chairs —
every home gets a piece of garden in the air

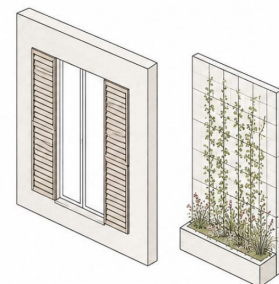
THE TERRACE — A SUMMER ROOM
section — shade you can live in



1:2 vertical proportions, deep reveals, shutters that work —
daylight without the greenhouse



THE WINDOW — TALL, NOT TOTAL



floor-to-ceiling glass
everywhere — refused

2.0 m

the minimum depth at which a balcony stops being a shelf and becomes a garden

Fig. 8 Outdoor rooms — the 2.0 m minimum balcony depth, the deep-cut terrace as summer room, and tall windows that carry light into plan.

8.6 Material Palette — within a day's barge ride

The palette is deliberately regional and low-carbon: everything within a day's barge ride on the Danube. Structure is CLT and glulam from regionally managed forests; the primary face is Croatian limestone and Slavonian oak; natural insulation uses hemp-crete, sheep's wool, reed and lime; accents are weathering steel and brass. Section 14 quantifies the sourcing distances and their carbon consequence.

BUILD VERDIS

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Material Palette

everything within a day's barge ride on the Danube

STRUCTURAL

CLT + glulam — regional managed forests; carbon stays in the frame

PRIMARY

the face of the city — Spačva-basin oak, Croatian limestone, Pannonian clay

NATURAL

insulation grown, not manufactured — Vojvodina hemp, Ilka wool, river reed

ACCENT

small doses of metal + fired earth that age with dignity

LIVING

the layer that grows — the floodplain climbs back onto the buildings



Fig. 9 Material palette organised as structural, primary, natural, accent and living families — each drawn from the Danube region.

8.7 Craft & Ornament — tradition, translated

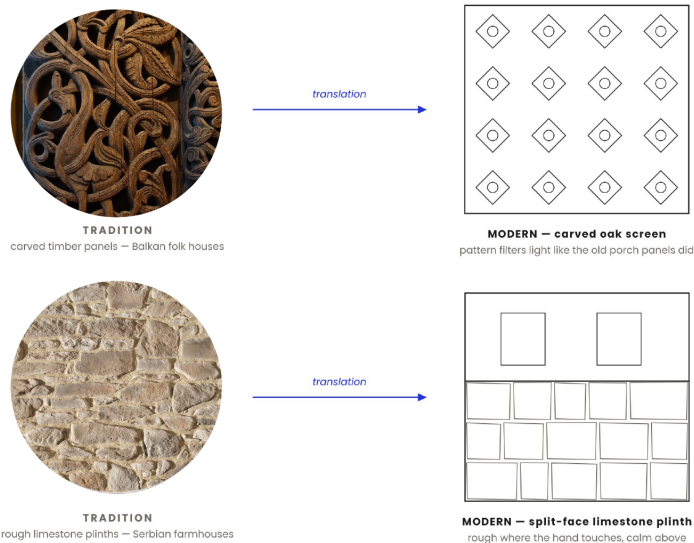
Ornament returns to Verdis, but it works. Carved screens shade; stone plinths take the flood; woven patterns carry meaning about the river and its people. Each detail is translated from vernacular precedent rather than imitated, and commissioned from local carpenters and masons on both banks rather than ordered from a catalogue. Ornament here is worked material with a job to do.

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Craft Details

tradition, translated — not imitated



CRAFT

Ornament returns — but it works: carved screens shade, stone plinths take the flood, patterns tell whose river this is.

Local workshops, not catalogues: each detail is a commission for carpenters and masons from both banks of the Danube.

ornament = worked material, not only a decoration

Fig. 10 Craft details — vernacular motifs translated into working elements: carved shading screens and stone plinths, each a commission for regional makers.

8.8 Colour, Calm & One Brand — the city is the canvas

The buildings stay quiet so that the landscape can supply the colour. The constructed palette is restrained — light limestone, warm oak, bronze, terracotta, deep green and grey concrete — with almost no bright pigment; seasons, water and sky repaint the city daily. The final rule is repetition: the grammar is repeated with discipline until the city itself becomes the identity, with no signature building competing for attention.

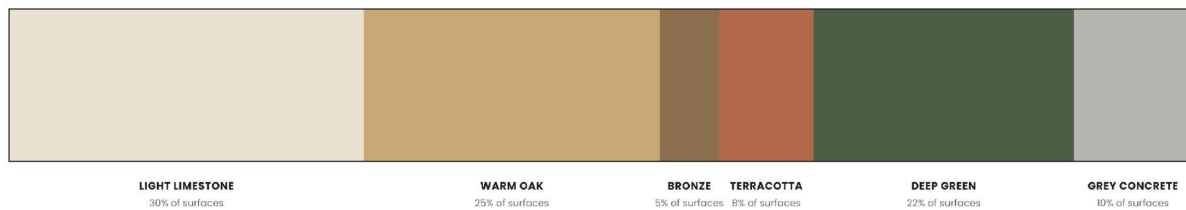
BUILD VERDIS

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Color & Calm

the buildings stay quiet — the landscape provides the color

MATERIALS = THE PALETTE



almost no bright color — the landscape provides it.

seasons, water and sky repaint Verdis daily; the buildings are the canvas

Fig. 11 Colour & calm — a restrained material palette; the landscape provides the colour.

BUILD VERDIS

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One Language, One Brand

repeat the grammar until the city itself is the identity

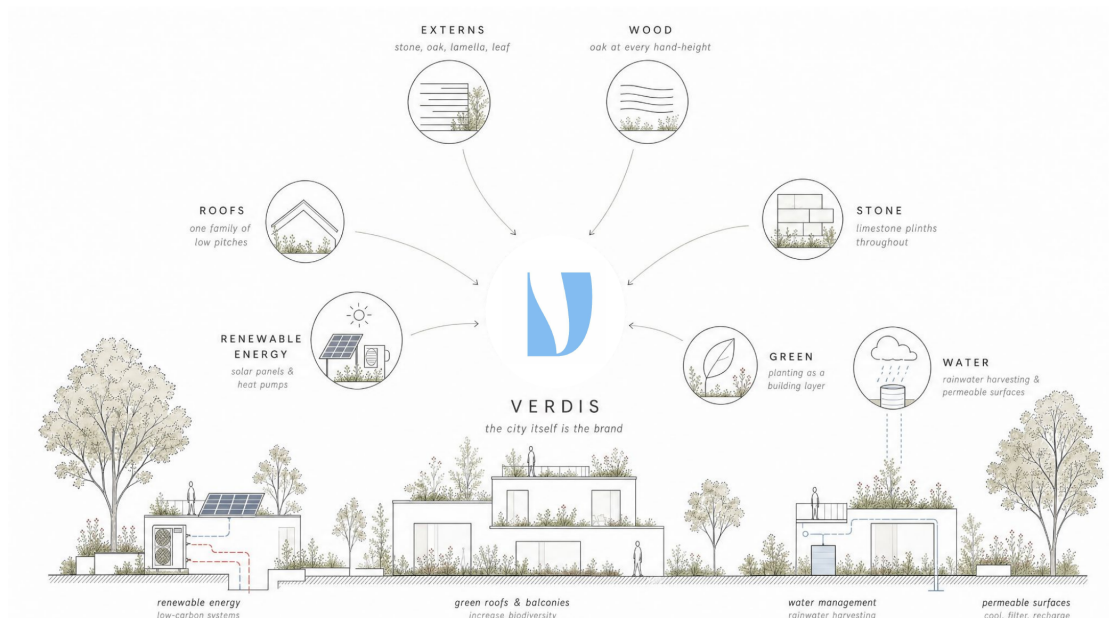


Fig. 12 One language, one brand — the recurring grammar resolves into a single identity: the city is the brand.

SECTION 09

Building Typologies

The following typologies show one grammar applied to the full programme of the nation. In each case only what the use demands is changed; the family resemblance is deliberate and constant. Indicative areas and quantities are carried from the master plan and summarised in the schedule below; the residential fabric is analysed in detail in Section 10.

Table 3 – Building typologies at a glance

Typology	Indicative quantity / area	Storeys	Character
Residential blocks	1,716 dwellings · ~122,120 m ² district	2–7	Everyday fabric; four dwelling types
Waterfront & marina	8,600 m ² public promenade	1–3	Porous, hospitality-led, fully public edge
Research & university	13,100 m ² labs + floating pods	2–4	Same grammar, more glass; connected pavilions
Government / agora	Ø 110 m civic piazza + tower	1–6	Open house for the republic; one landmark
School & community	~5,300 m ² GFA	2	Education that breathes; family centre
Hotels	2 riverfront eco-lodges	4	The only 4-storey buildings; terraced back
Gateway	270 cars (underground) · 1 great roof	1–2	Customs, interchange, welcome hall

The schedule makes the discipline visible: seven very different uses, but a narrow band of heights (mostly two to four storeys, one landmark excepted) and a single material and detailing language throughout. The following pages take each typology in turn.

9.1 Residential Blocks — the everyday fabric

Housing is the everyday fabric of Verdis and the fullest expression of the grammar. Around 1,716 dwellings house an estimated five thousand residents across four sustainable typologies. Shifted volumes, garden balconies at 2.0 m and open, shopfront ground floors recur throughout, so that density is achieved without losing the intimacy of a village. Blocks are set at the highest, most flood-secure ground.



Fig. 13 Residential blocks — shifted timber volumes, deep garden balconies and open ground floors arranged around a car-free planted courtyard.

9.2 Waterfront — architecture dissolving into the river

At the river the architecture steps down and dissolves into the water. Timber decks, floating terraces and boat stations extend the public realm onto the Danube, and 8,600 m² of continuous public promenade guarantees that the waterfront is never privatised — there is no private river frontage anywhere in Verdis.



Fig. 14 Waterfront — a continuous public promenade of 8,600 m², timber decks and floating terraces; buildings step down and open fully to the river.

9.3 Research & University — the same language, wearing glass

The knowledge campus proves the discipline of the language: the same architecture, simply wearing more glass. Around 13,100 m² of laboratories, university and floating research pods use the exposed timber frame and layered facade of the housing, but with larger openings. Buildings are connected rather than stacked — low, linked pavilions woven into the landscape.



Fig. 15 Research & university — exposed timber frame with a glazed, layered facade; low connected pavilions rather than stacked towers.

9.4 Government — an open house for the republic

Government in Verdis is an agora, not a palace. Parliament, library and a single landmark tower are arranged around a circular civic piazza roughly 110 metres in diameter — a covered public square open to all, with a limestone base and timber above. The one permitted vertical landmark works simultaneously as viewpoint, water tower and broadcast mast.



Fig. 16 Government — parliament, library and landmark tower around a Ø110 m circular civic piazza; an open agora rather than a monumental palace.

9.5 School, Hotels & Gateway

The school applies the language to childhood: low, resort-like volumes with deep terraces open classrooms onto nature, and the building doubles as a family and community centre within the daily walking threshold of every home. Hospitality is kept understated — just two riverfront eco-lodges, the only four-storey buildings, terraced into the slope. The gateway choreographs arrival under one great timber roof, holding up to 270 cars underground so the country is entered on foot.



Fig. 17 School — low volumes with deep terraces opening classrooms onto the landscape; a building for learning that doubles as a community centre.



Fig. 18 The gateway — a single great timber roof over customs, interchange and welcome hall; up to 270 cars held underground so arrival is completed on foot.

SECTION 10

Residential Analysis

Housing is where density, occupancy and quality of life are decided, so it is analysed here in detail. The residential district covers roughly 122,120 m² – about 26% of the city – of which 70% is net housing land, 20% public realm and 10% local facilities. Four typologies share the land at different floor-area ratios (FAR), producing a deliberately mixed, multi-generational fabric.

Table 4 – Housing typologies, land share, floor-area ratio and GFA (indicative)

Housing typology	% land	Land (m ²)	FAR	GFA (m ²)
Courtyard blocks • 4 st	45%	30,000	2.0	60,000
Compact towers • 7 st	25%	21,467	3.5	75,135
Townhouses • 3 st	20%	17,173	1.0	17,173
Floating eco-clusters • 2 st	10%	8,587	0.5	4,294
Total (net housing land)	100%	77,227	—	156,602

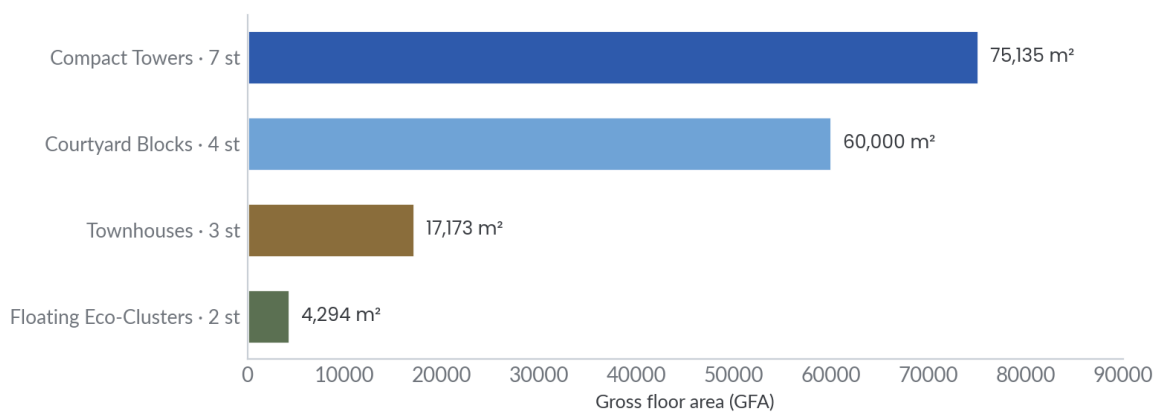


Chart 4 Gross floor area by housing typology – compact towers and courtyard blocks carry the bulk of the built area on a modest land take.

The mix is deliberate. Mid-rise courtyard blocks and seven-storey towers concentrate density and floor area on a small footprint, freeing land for the public realm and the reserve; townhouses and floating clusters add ground-related and river-edge living for variety. The result is an average that stays low and walkable while still housing a nation-scale population.

10.1 Unit mix & yield

The typologies generate a total of 1,716 dwellings. Courtyard blocks and compact towers supply the majority through repeatable unit plans; townhouses and floating clusters add the remainder.

Table 5 – Dwelling yield by typology

Source	Units / homes	Composition
Courtyard blocks (8 blocks)	816	102 per block · 400×1-bed, 264×2-bed, 152×3-bed
Compact towers (10 towers)	750	75 per tower · 400×1-bed, 250×2-bed, 100×3-bed
Townhouses	114	150 m ² GFA each
Floating eco-clusters (2)	36	18×2-bed + 18×3-bed; each cluster with shops
Total dwellings	1,716	Across four typologies

10.2 Occupancy & population

Applying regional micro-density occupancy rates to the unit mix yields an estimated resident population of about 5,055, within the master plan's 5,000–6,000 target.

Table 6 – Occupancy projection

Unit type	Units	Avg. occupancy	Residents
1-bed	800	1.8	1,440
2-bed	539	3.2	1,725
3-bed	263	4.8	1,263
Townhouses	114	5.5	627
Total	1,716	≈ 2.95	5,055

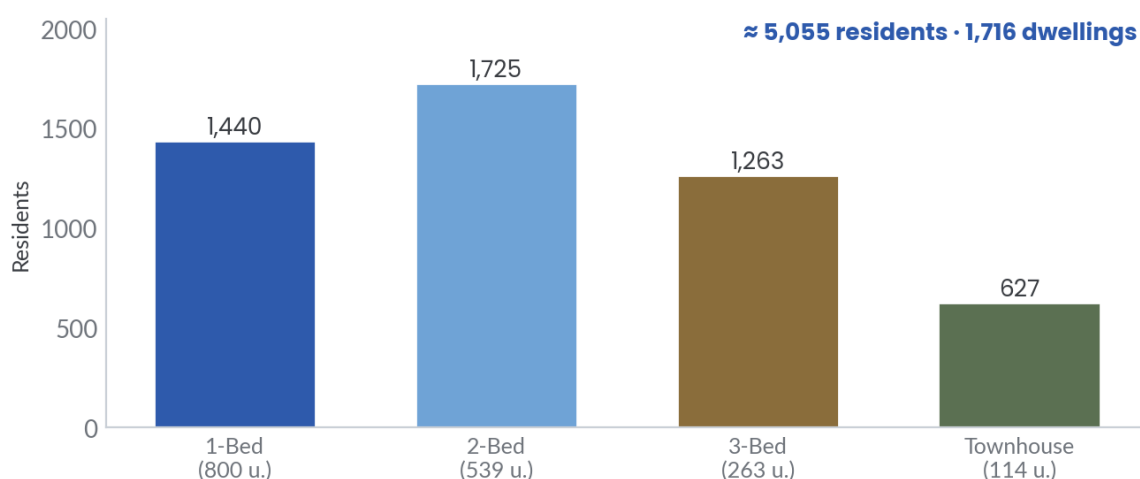


Chart 5 Resident population by unit type — a balanced mix delivering ≈5,055 residents across 1,716 dwellings.

10.3 Local facilities — the 300-metre city

To meet the master plan's active-mobility mandate, every home sits within roughly 300 metres of daily needs. A dedicated facilities allocation at the heart of the residential district stacks multiple functions into a few generous, shared buildings — the city's principle of blended, multi-use structures applied at neighbourhood scale.

Table 7 — Local facilities within the 300 m daily-needs threshold

Facility	Indicative GFA	Blended functions
School & community building	5,300 m ²	Classrooms, shared library, sports hall, multi-purpose & meeting rooms
Health hub	3,000 m ²	Walk-in clinic, pharmacy, dental, physiotherapy, maternal & emergency care
Supermarket & local retail	4,000 m ²	Supermarket, bakery, cafés, food court, restaurants, retail units
Play & recreation	7,210 m ²	Game areas and playgrounds distributed through the public realm

Because each building blends functions — the school is also a family centre, the health hub stacks seven clinical uses — the neighbourhood delivers a full range of services on a small land take, keeping everything within a short, safe walk and reinforcing the car-free logic of the plan.

SECTION 11

Mobility & Access Analysis

Verdis is designed to remove vehicular traffic and strengthen the relationship with the river.

Movement is organised as a hierarchy: a single multi-modal gateway; a central electric-tram spine linking the far ends with intermediate stops; a car-free cycle ring; and a fine transverse network of walking paths. The result is a modal split with zero private-car trips at street level.

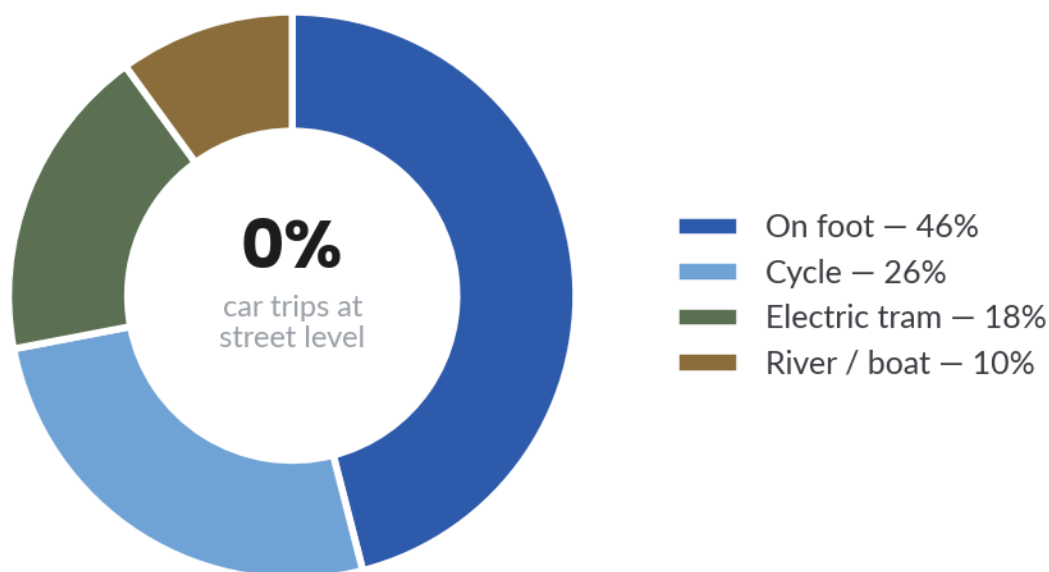


Chart 6 Indicative modal split – walking, cycling, electric tram and river transport carry all movement; private cars are held at the gateway.

11.1 Regional connectivity

The gateway connects Verdis to its neighbours by river and by land. A harbour handles passengers and service transport with capacity for private boats, barges and a water taxi; a bridge links the entry point to the nearest roadway on the Serbian bank. Key travel distances from Verdis Harbour are set out below.

Table 8 – Regional travel distances from Verdis Harbour

Connection	Mode	Distance
“Lavač kod Apatina” (RS) fishing pier	River	1 km
Apatin (RS) harbour	River	12.4 km
Osijek (HR) riverside piers	River	23.8 km
Apatin (RS) via bridge & road	Road	16 km
Novi Sad (RS)	Road	110 km

Within the city, the primary route is a central boulevard served by an electric shuttle that also gives emergency services fast access end to end. The secondary route is a car-free ring with a cycle backbone that changes character with its context – woodland park, institutions district, residential shoreline – before returning to the gateway, removing street-level tailpipe emissions across the whole ≈1.5 km city.

SECTION 12

The Urban Silhouette

Assembled, the typologies compose a single silhouette rather than a group of separate buildings. Calm, repeated roofs; shared proportions; trees veiling the facades; and one vertical landmark punctuating the skyline — these produce the coherent image the language was designed to deliver. The whole city measures roughly 1.5 kilometres end to end, a twenty-minute riverside walk.

BUILD VERDIS

The Silhouette

one landscape, not separate buildings

calm repeated roofs · shared proportions · trees veiling buildings · a single vertical landmark



≈ 1.5 km end to end — the whole city is a 20-minute riverside walk

Fig. 19 The urban silhouette — calm repeated roofs, shared proportions and a single vertical landmark; ≈1.5 km end to end, a twenty-minute riverside walk.

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Verdis, Visualised

full master-plan render — placed at final artwork stage



VERDIS — ARCHITECTURE OF THE REGENERATIVE CITY

Gnusareva Arina

Fig. 20 Verdis visualised — the master plan realised in the shared architectural language, reading as one settlement woven into the floodplain.

SECTION 13

Sustainability & Building Performance

Sustainability in Verdis is pursued first through form and only then through systems. Because each building is shaped to work with the five climate forces, much of its performance is passive and free, achieved before any active technology is added. The chart below traces the indicative energy strategy from a conventional baseline to a near-zero net balance.

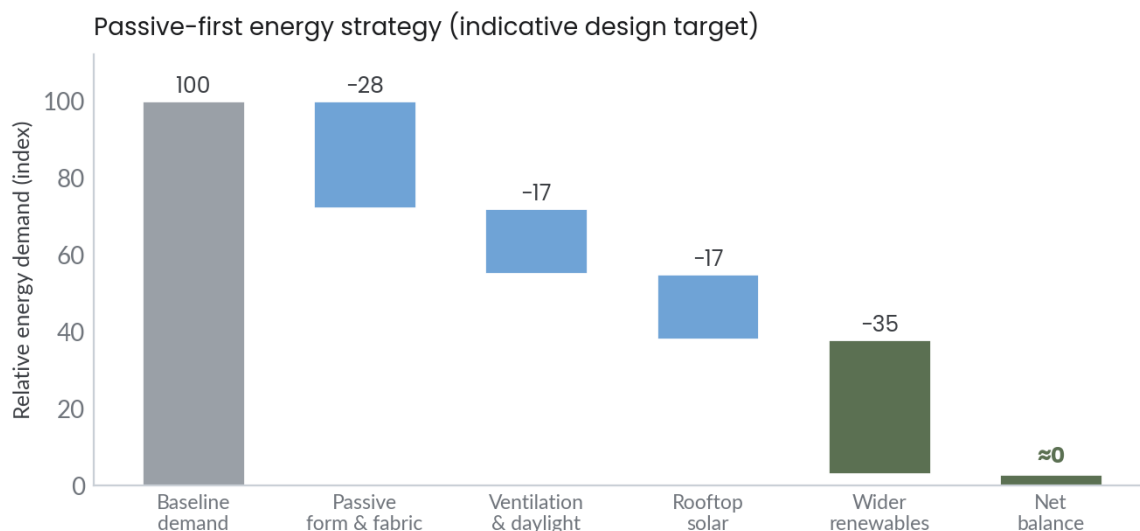


Chart 7 Passive-first energy strategy — form and fabric, then ventilation and daylight, then rooftop solar and wider renewables drive demand toward a net balance.

The sequence is deliberate. Deep, layered facades and cantilevered upper floors provide fixed solar shading tuned to the site's latitude, admitting low winter sun while cutting summer gain. Tall windows and shifted volumes enable cross-ventilation and daylight deep into plan. Timber-hybrid walls with natural insulation deliver a high-performance, low-conductivity envelope, while the thermal mass of limestone bases steadies internal temperatures. Only once demand is minimised are active renewables added.

Table 9 — Building performance strategies and indicative targets

Performance theme	Design strategy	Indicative target
Heating & cooling	Passive form, shading, natural insulation	Comfortable most of the year, minimal MEP
Daylight & air	Tall windows, cross-ventilation, shifted volumes	Reduced lighting & cooling loads
Roofs	Solar to south; roof meadow & rain gardens elsewhere	On-site generation + habitat + attenuation
Water	Rainwater harvest, greywater reuse, SuDS ponds	Reduced demand & flood risk; biological filtration
Energy	Rooftop solar + master-plan renewables	City works toward net self-sufficiency
Mobility	Car-free plan, electric tram, cycle ring	Zero street-level tailpipe emissions

~40%

land as
natural reserve

0

cars at street level

100%

regional /
renewable palette

SECTION 14

Materiality & Sourcing Analysis

The palette is organised into five families, each with a defined structural or environmental role and each sourced from within the Danube corridor. Building light and local is both a carbon strategy and a cultural one: value stays in the regional craft economy, and the way Verdis is built becomes part of what makes it Verdis.

Table 10 — Material families and roles

Family	Materials	Primary role
Structural	CLT, glulam (regional forests)	Frame and floors; carbon store; prefabrication
Primary face	Croatian limestone, Slavonian oak	Cladding, plinths, thermal mass at the base
Natural	Hemp-crete, sheep's wool, reed, lime	Insulation and breathable finishes
Accent	Weathering steel, brass	Details that gain dignity with age
Living	Native grasses, moss, green roofs	Facades and roofs as habitat

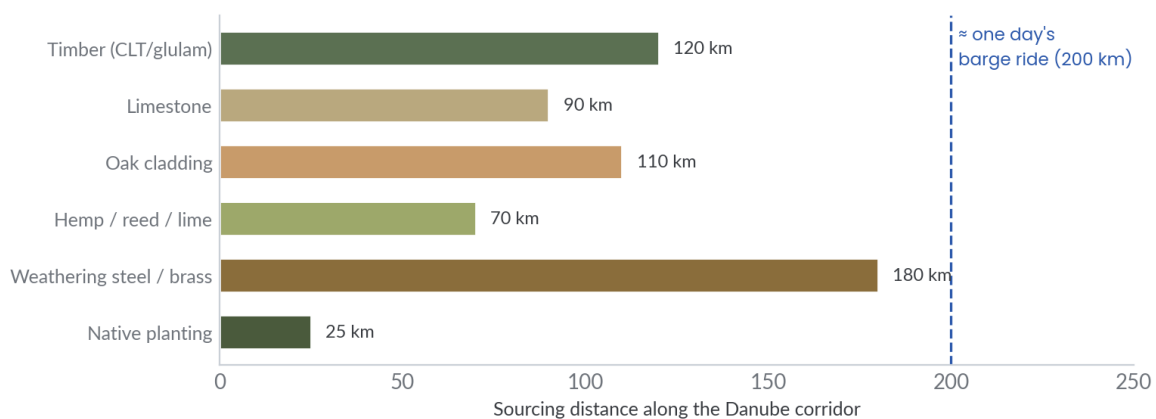


Chart 8 Indicative sourcing distances along the Danube — every material family sits within roughly one day's barge ride (≈200 km).

Keeping every family inside the ~200 km barge threshold minimises transport emissions and supports a light, timber-hybrid structure that itself stores carbon. The combined effect is a substantial reduction in embodied carbon relative to a conventional concrete-and-steel building of the same size.

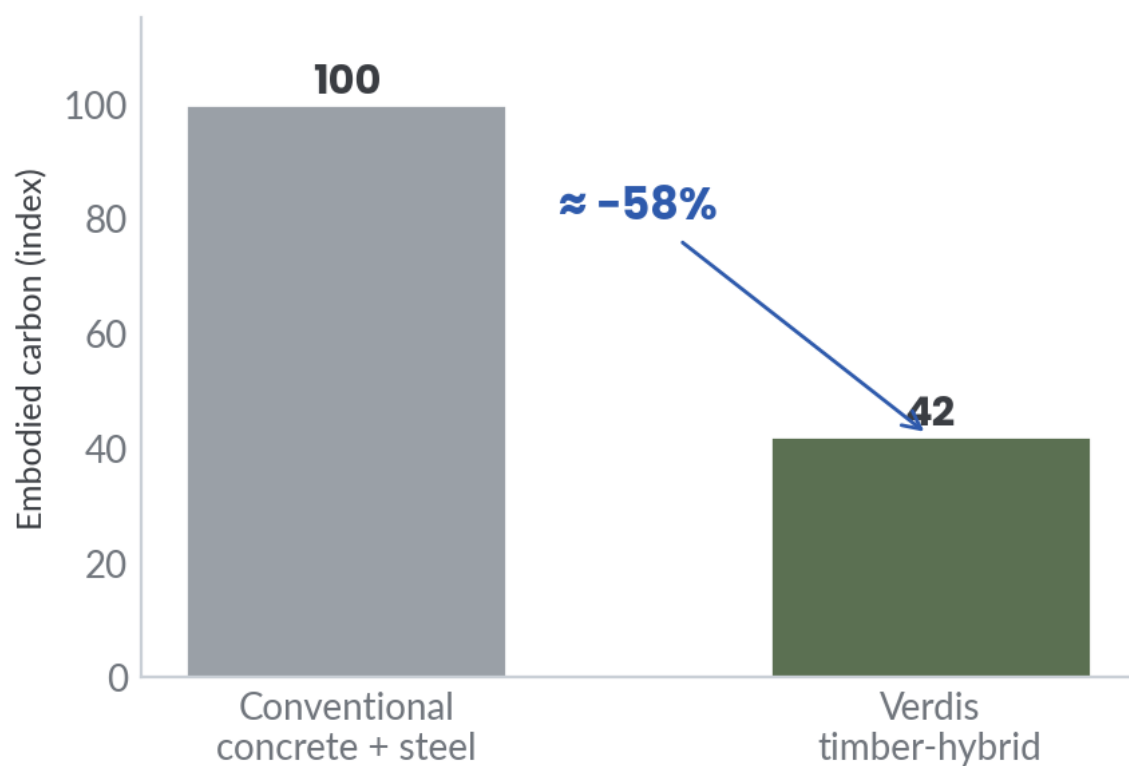


Chart 9 Indicative embodied-carbon comparison — a regional timber-hybrid structure targets roughly 58% less embodied carbon than conventional concrete and steel.

14.1 The layered facade as a performance system

The four-layer facade is not only an image; each layer does measurable work. Read from inside to out, the layers combine structure, thermal mass, cladding, solar control and habitat into a single deep assembly.

Table 11 — The four facade layers and their performance roles

Layer	Material	Performance role
1 • Inner line	Croatian limestone / timber-hybrid wall	Structure, thermal mass, airtightness
2 • Primary face	Slavonian oak cladding	Weather skin, warmth, regional character
3 • Screen	Timber lamellas	Solar shading, glare control, privacy
4 • Living layer	Climbing plants	Seasonal shading, cooling, biodiversity

Because shading and cooling are delivered by fixed, low-tech layers rather than mechanical systems, the facade continues to perform for the life of the building with minimal maintenance — and improves as the planting matures, consistent with the ambition to look better in fifty years than on day one.

SECTION 15

Construction Technology

The construction strategy follows directly from the palette: build light, build local, and build to be repaired and adapted. The primary structure is a timber-hybrid system of CLT floors and glulam frames, with limestone or concrete used only where mass, water contact or fire strategy require it. Lightweight timber superstructure suits a floodplain, reduces foundation loads, sequesters carbon and enables a high degree of off-site prefabrication and phased delivery.

Prefabrication matters at nation scale. Repeatable unit plans — 102 homes per courtyard block, 75 per tower — allow volumetric or panelised timber components to be manufactured off site and assembled quickly, shortening programmes, improving quality control and reducing waste and disturbance on an ecologically sensitive site. The same repetition that gives the city its calm silhouette also makes it efficient to build.

Buildings are detailed for disassembly and repair. Bolted timber connections, demountable cladding and a clear separation of structure, services and skin mean a city expected to grow over twenty to seventy years can be maintained, extended and, where necessary, unmade without waste — a circular-construction logic that complements the circular-waste and energy systems of the wider plan.

Table 12 — Construction systems and rationale

Element	System	Rationale
Superstructure	CLT floors + glulam frame	Carbon store, light on floodplain, prefabrication
Base & wet areas	Limestone / concrete	Thermal mass, flood contact, fire strategy
Envelope	Timber-hybrid + natural insulation	Low conductivity, breathable, regional
Connections	Bolted, demountable	Disassembly, repair and future adaptation
Delivery	Off-site prefabrication	Speed, quality, minimal site disturbance

SECTION 16

Delivery, Phasing & Economics

Like any master plan, Verdis is neither built overnight nor fixed forever. It is designed to arrive in stages, so that early residents inhabit a working fragment while the wider city matures around them. The indicative programme below spans the first settlement through to a mature Verdis of the 2060s.

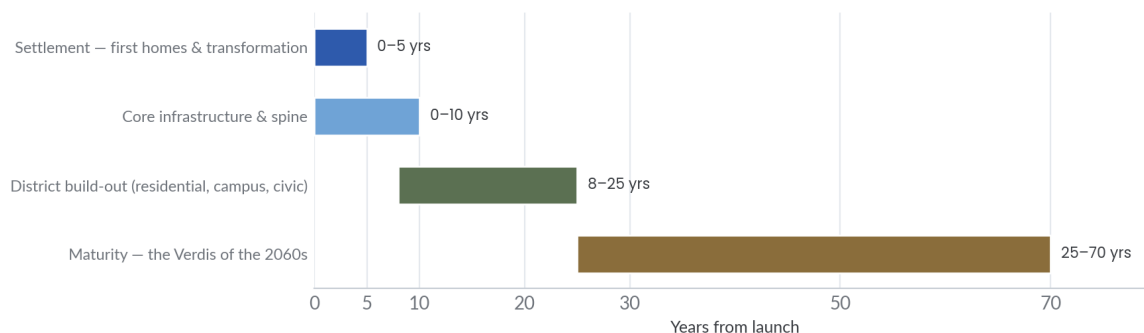


Chart 10 Indicative delivery programme – settlement, core infrastructure, district build-out and maturity, spanning roughly 5 to 70 years.

Table 13 – Indicative delivery phases

Phase	Horizon	Scope
Settlement	0–5 years	First homes and initial transformations; a working pioneer fragment
Core infrastructure	0–10 years	Central spine, gateway, canal & locks, utilities and first facilities
District build-out	8–25 years	Residential villages, innovation campus and civic core delivered in clusters
Maturity	25–70 years	The full vision realised – a Verdis of the 2060s, dependent on economy & investment

The economic logic mirrors the phasing. Regional sourcing keeps construction spend in the local economy; the fully public waterfront and marina act as an early economic driver and tourism interface; and the innovation campus seeds employment and knowledge industries. Because the architecture is a rule-set rather than a fixed object, later phases can respond to changing investment, technology and politics without breaking the coherence of what is already built – the last building of the 2060s still belongs to the same city as the first.

SECTION 17

Brand & Identity System

Because the identity of Verdis is carried by its architecture rather than by any single monument, it can be codified into a formal brand and wayfinding system — the same grammar, pocket-sized. The Verdis mark, drawn from the leaf-and-river form of the concept, and a consistent language of signage, colour and typography extend the city's coherence from the scale of the building down to the street number and the object in the hand.

BUILD VERDIS

Brand — The Verdis Mark

identity system — inserted from the brandbook



Fig. 21 Brand — the Verdis mark, derived from the leaf-and-river form of the architecture; a single identity system spanning building, signage and merchandise.

This matters practically. A city delivered in phases over decades, by many hands, needs a stable identity that survives changes of designer, budget and technology. Encoding the architectural language as a brand ensures continuity of character across the whole delivery programme, and gives residents and visitors a legible, consistent city from their first arrival at the gateway.

SECTION 18

Environmental & Social Impact

The architecture is designed to deliver measurable environmental and social benefit. Environmentally, a light timber-hybrid structure sourced within the river corridor holds carbon and cuts transport emissions; deep passive facades and working roofs reduce operational energy and water demand; and four continuous levels of green, set against roughly two-fifths of the land held as reserve, strengthen biodiversity and knit the built fabric into the floodplain rather than severing it.

Table 14 — Environmental and social impact summary

Impact area	Mechanism	Indicative outcome
Land & ecology	~40% reserve + four levels of green	Habitat protected and extended; floodplain intact
Carbon	Timber-hybrid + regional sourcing	≈58% less embodied carbon than concrete/steel
Energy & water	Passive design, solar, SuDS	Toward net self-sufficiency; reduced flood risk
Mobility	Car-free plan	Zero street-level tailpipe emissions
Community	Public ground floors, fully public waterfront	Inclusive realm; encounter and belonging
Wellbeing	Blended civic buildings, green access	Health, education and nature within a short walk

Socially, the active, public ground floors, the car-free courtyards and the fully public waterfront create an inclusive realm that encourages encounter and a sense of community. Buildings that blend functions — the school that is also a family centre, the parliament that is also a public square — put shared life at the centre of the city. Together, the strategy establishes Verdis as a resilient, connected and future-proof nation — a place that aims not merely to do less harm, but to leave its ground, its river and its people more alive than it found them.

SECTION 19

Closing Statement

Verdis is proposed as an architecture of the regenerative city: low-tech on the skin and high-tech in the bone, quiet and green to the touch and intelligent underneath. It is built from a single, disciplined language that any building in the nation can speak, drawn from the vernacular and the materials of the Danube, and designed to grow more beautiful as it ages.

The analysis in this statement shows that the vision is not only evocative but achievable: the land divides to protect nature while housing a nation; the density and unit mix deliver around five thousand residents in humane, walkable neighbourhoods; the movement network removes the car; the materials and structure cut embodied carbon substantially; and the whole can be delivered, phase by phase, over the coming decades.

It is, above all, a city the size of a human being — roughly one and a half kilometres end to end, on foot, without cars, where everything that matters is within a short walk and every home has its piece of the outside. The architecture does not stand apart from that ambition; it is how the ambition is delivered, brick by timber by stone.

Architecture does not resist nature. It works with it.

SECTION A

Appendix A — Schedule of Areas

Consolidated indicative area schedule, compiled from the master-plan report and the residential analysis in Section 10. Figures are design targets for a scheme delivered over decades and are subject to refinement at detailed design.

Table 15 — Consolidated schedule of areas

Category	Item	Area / quantity
Site	Total masterplan area	472,510 m ²
Land use	Natural reserve / floodplain	185,049 m ² (40%)
Land use	Residential villages	122,120 m ² (26%)
Land use	Waterfront & marina	59,414 m ² (12%)
Land use	Innovation campus	51,976 m ² (11%)
Land use	Arrival & transport hub	20,947 m ² (4%)
Land use	Utilities & infrastructure	18,829 m ² (4%)
Land use	Civic / government / piazza	14,175 m ² (3%)
Residential	Net housing land	77,227 m ²
Residential	Total housing GFA	156,602 m ²
Residential	Dwellings	1,716
Residential	Estimated residents	≈ 5,055
Facilities	School & community	5,300 m ²
Facilities	Health hub	3,000 m ²
Facilities	Supermarket & retail	4,000 m ²
Facilities	Play & recreation	7,210 m ²
Waterfront	Public promenade	8,600 m ²
Research	Labs, university & pods	13,100 m ²
Government	Civic piazza diameter	Ø 110 m
Gateway	Underground parking	270 cars max

SECTION B

Appendix B — Key Metrics Dashboard

A one-page summary of the headline figures that define Verdis and its architecture.

472,510 m² total site	~40% natural reserve	≈1.5 km end to end
1,716 dwellings	≈5,055 residents	4 housing typologies
0% street-level car trips	75% ground floors public	2.0 m min. balcony depth
≈-58% embodied carbon	≈200 km max sourcing radius	4 levels of green
8,600 m² public promenade	13,100 m² research floorspace	Ø 110 m civic piazza
5–70 yrs delivery horizon	2 riverfront eco-lodges	1 shared language

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