PUBLIC BUILDING · REDANGE / ATTERT

Äerdschëff

Building technical dossier

Design, systems, operation and available knowledge

View of the building and its surroundings. Photograph from the EuroSolar 2025 dossier, p. 3.

Version 1.1 · 14 September 2026 · English edition

Expanded with the technical archives in Drive. Primary summary reference: Solar Prize 2025 application.

Äerdschëff asbl · A resource for research, education and monitoring the building.

Translation of the French V1.1. Source identifiers and page correspondence are retained. Historical drawings retain their original annotations; translated reading keys accompany the atlas.

Status, sources and scope

This version draws on dossier V1.0 and the latest Word document supplied by Äerdschëff. It incorporates a recursive review of the Drive folder designated by the association, including subfolders containing window and door records, drawings, safety archives, signage and monitoring spreadsheets.

Material examined	Scope
20 folders, including the root	19 subfolders reviewed; no folder omitted from the returned tree.
74 file entries	73 items opened, extracted or visually examined; one Thumbs.db cache excluded.
4 exact duplicate pairs	Three evacuation drawings and one latch sheet; file hashes compared.
3 initial sources	EuroSolar [E], collective manuscript [O] and Benjamin Klein's dissertation [K].

Documentary hierarchy

EuroSolar remains the primary source for summary characteristics: according to Äerdschëff, it was prepared from the dissertation with corrections to its errors. The Drive records clarify components and their history. A product value, a drawing annotation, a calculation and an operational measurement remain distinct kinds of evidence.

Differences in scope or value are retained explicitly, without averaging or silent replacement. Fabrication records are not presented as a building acceptance inspection. Product-range sheets do not prove that every available option was installed.

Limits of this edition

The review covers this Drive folder and the attached sources, not every archive of the association. No new measurement, simulation, technical visit or regulatory verification was carried out. This document is neither a complete as-built record, a performance certificate nor an intervention manual.

Sources: [E, p. 4]; exhaustive entry inventory in the documentary appendix and the associated CSV cited by the French source edition.

Contents

Section	Page
Status, sources and scope	2
The building at a glance	4
A public building that makes connections visible	5
Site and spatial organisation	6
Structure, walls and materials	8
Envelope and thermal properties	10
Greenhouse and natural ventilation	14
Generating electricity on site	15
Heating and domestic hot water	18
Rainwater: storage and treatment	19
Use, maintenance and care for the building	22
Instrumentation: found and not found	24
Preparing a study under future climates	26
Reference parameters: systems	27
Discrepancies and priority checks	29
Scope of the archive review	30
Documentary window and door register	39
Drawing atlas	42
Sources, credits and distribution	47

References in square brackets point to documents identified in the appendices. Source page numbers include the cover. Reduced drawings are documentary reproductions and must not be measured at the printed scale.

The building at a glance

Äerdschëff is a public building and educational community space on the Atert Lycée Redange site. Inspired by Earthships, it combines passive solar design, reused materials, local energy production and water management. EuroSolar dates its construction to 2016-2023 and its inauguration to 2023. [E, p. 3]

System	Summary characteristics retained
Electricity	Off-grid installation; 64 modules of 325 Wp, totalling 20.8 kWp; 6 kW BW6000 wind turbine.
Batteries	16 Pylontech US3000 LiFePO4 modules; stated total capacity 56.8 kWh.
Heating / hot water	8 solar thermal collectors, approximately 20 m² and 10 kWth in total; 900 L tank; WRSol control; 10 kW wood-fired boiler stove; underfloor heating.
Envelope	U approximately 0.15 W/(m²·K) for the roof; 0.18 for the floor; 1.0 for walls; 1.6 for “glazing”, without an Ug/Uw distinction in EuroSolar.
Greenhouse	South facade; thermal buffer, circulation and growing space; 18 × 0.8 m planting bed.
Water	Approximately 30 m³ rainwater storage; ultrafiltration, pH correction, remineralisation, UV; greywater reused in the greenhouse, then toilets.
Published result	Approximately 3,100 kWh/year measured photovoltaic production reported by EuroSolar, using 2024-2025 data.

What V1.1 adds

The complete 2019 drawings, 2021 window and door records, 2022 glazing calculations and water-circuit identification have now been located. The inventory also records what was not found, notably timestamped operational data, a heating balance and a building airtightness test.

Sources: [E, p. 4-10]; [P01-P03]; [A01-A04]; [R06].

A public building that makes connections visible

The building makes usually dispersed relationships visible: capturing sunlight, retaining heat, ventilating, storing electricity, treating water, growing plants and maintaining systems. Its purpose extends beyond demonstrating a technical configuration: it hosts visits, workshops, training and collective activities. [E, p. 2-3, 11]

Activity room: windows and doors, materials and interior layout. Photographic archive from the MENJE dossier, filed in the 2022 monitoring collection [M14].

Adapted to the Luxembourg context

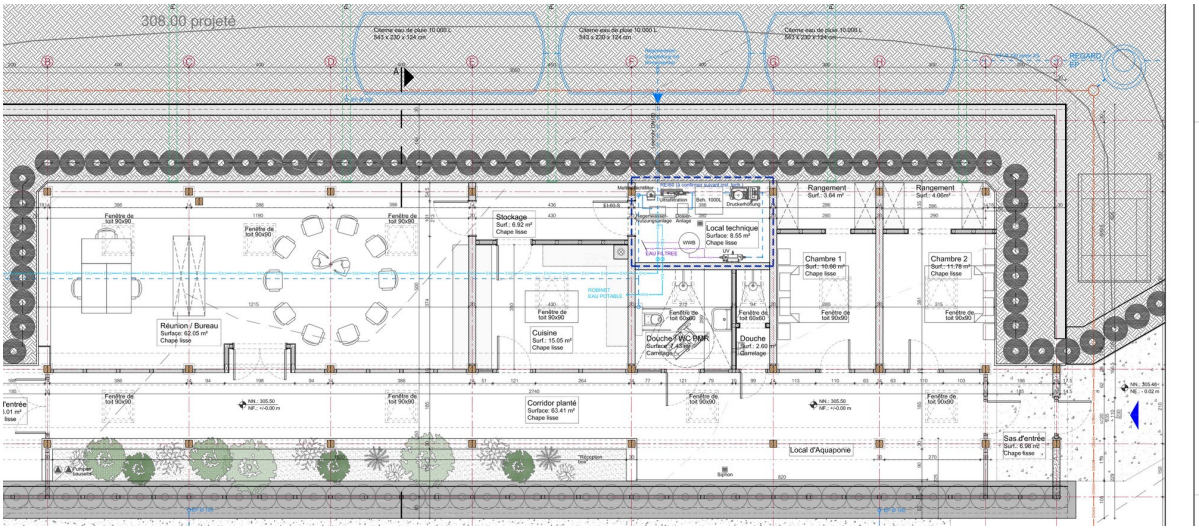
The sources describe a load-bearing timber frame distinct from the tyre wall, a composite envelope, glazing between the greenhouse and occupied spaces, and adaptations associated with public-building status. It is documented as a particular assembly, not an identical reproduction of an Earthship. [O, p. 13-20]

A living place, not a promise of maintenance-free autonomy

Occupancy, opening windows, wood heating, water-treatment operations and care for crops are part of how it works. A useful study must account for these practices alongside the equipment, without assuming energy results or an absence of dependencies. [O, p. 21, 32-35, 44]

Site and spatial organisation

Äerdschëff is at 1, rue du Lycée, Redange/Attert. The design occupies a sloping site with an earth berm to the north and a greenhouse to the south. The BENG drawings carry project reference 163132 and plot 813/5528. [E, p. 3, 7, 12; P01-P03]



Extract from the 2019 BENG EXE02 floor plan [P02]. Room names and equipment represent the design, not a survey of use in 2026.

Spatial group	Reading of the sources
Rear rooms	Meeting room / office, kitchen, storage, technical room, sanitary facilities and two bedrooms with storage on P02.
Planted corridor / greenhouse	Long glazed interface to the south; two side entrance lobbies, planting bed and openings to the rear rooms.
Western annex	Batteries, visitor toilets and utility room shown on P02; separate scope from the main building.
Surroundings	Access, terraces, garden and natural cellar described by EuroSolar. The cellar is not represented in the drawings cited here.

The aquaponics room shown on the 2019 plan remains a design intention. The manuscript explains that the experiment took place at the school and was not genuinely commissioned at Äerdschëff. [O, p. 33-34]

Sources: [P01-P03]; [E, p. 10]; [O, p. 13-20, 33-34].

Areas: what the drawings state

These areas are transcribed from BENG EXE02 (2019). They are neither an on-site survey nor a certified energy reference area. The main building, greenhouse and annex remain separate. [P02]

Zone / drawing label	Stated area
Meeting room / office	62.05 m²
Kitchen	15.05 m²
Storage	6.92 m²
Technical room	8.55 m²
Accessible shower / toilet	4.43 m²
Shower	2.60 m²
Bedroom 1 / associated storage	10.66 m² / 3.64 m²
Bedroom 2 / associated storage	11.78 m² / 4.06 m²
Planted corridor	63.41 m²
Western / eastern entrance lobby	6.01 m² / 6.98 m²
Annex: batteries	11.25 m²
Annex: visitor toilets / utility room	5.82 m² / 5.54 m²

A discrepancy within the drawings

Section EXE03 [P03] states 64.32 m² for “Réunion / Bureau” and 64.68 m² for “Corridor planté”, whereas EXE02 gives 62.05 and 63.41 m² respectively. Both readings are reported; no total is presented as a final floor area.

The manuscript mentions approximately 300 m² net [O, p. 13]. This must not be confused with the sum of drawn rooms or a heated floor area. Model zones and volumes must be established from a validated drawing version and the study scope.

Structure, walls and materials

The manuscript describes a primary timber structure on reinforced supports and foundations. The earth-filled tyre wall is not presented as the roof's sole load-bearing structure. The section shows separate columns, beams and supports. [O, p. 14, 17; P03]

Component	Description and knowledge status
Tyre wall	Approximately 1,500 reused tyres filled with compacted earth; mortar in gaps, concrete reinforcement and perforated bricks described in the construction account. [O, p. 14]
Thermal mass	Clay, earth, stone and lime in walls and floor according to EuroSolar. Their presence does not establish a quantified heat capacity for modelling. [E, p. 7]
Inner face	Clay plaster on mesh backing described for the tyre wall. [O, p. 14]
Ground contact	Dernoton described in assemblies between ground, berm and tyres; the section is a source for the design build-up. [O, p. 14, 17; P03]
Outer greenhouse	Tyre base and reused windows; reused extruded polystyrene mentioned in the manuscript. [O, p. 14, 17]
Partitions and finishes	Reused wood, hemp and lime, straw, cork, wood fibre, sheep's wool, bottles and clay plaster described in different zones. [O, p. 14-18]

Reuse and contemporary products

Installation archives also contain sheets for adhesive tapes, EPDM, PU foam and fixings. Their presence alone does not establish use or quantities. Conversely, descriptions of reuse are not a complete inventory excluding these products. [A22-A26]

An environmental assessment still needs a final quantity survey. Expenditure logs can identify suppliers or invoices, but do not by themselves provide the masses actually installed. [F01-F02]

Roof and floor: design layers

EXE03 provides build-ups missing from V1.0. They are transcribed as drawn specifications, not as observations of the finished building. Summary U-values remain those of EuroSolar. [P03; E, p. 4]

Roof, outside to inside	Thickness / drawing note
DERBIGUM DERBIPURE waterproofing	Membrane described as plant-based
OSB	22 mm
Wood-fibre insulation board	60 mm; λ = 0.040 W/(m·K)
ESB “STANDART P5” board	15 mm; wording from drawing
Cellulose insulation	24 cm; λ = 0.040 W/(m·K), or equivalent
Timber frame / vapour barrier / battens	10-28 cm / “Alu SD 150” / 40 mm
Floor, top to bottom	Thickness / drawing note
Floor finish: rammed earth, heating, covering	16 cm assembly
ISOHEMP hemp blocks	20 cm
Dernoton clay	20 cm
Geotextile	GRK 200 g; unit as shown on drawing
Sealing layer	Crushed slag or rock sand 0/4 mm
Crushed aggregate / geotextile / excavation base	Quarry aggregate 0/45, 20 cm; GRK 200 g; compacted base

The manuscript gives construction descriptions including Misapor and different floor coverings by room. V1.1 retains these two documentary levels without combining them into a fabricated single “as-built” section. [O, p. 14-15, 18]

Envelope and thermal properties

Element	EuroSolar summary U-value	Scope to clarify
Roof	Approximately 0.15 W/(m²·K)	Final build-up and junctions
Floor	Approximately 0.18 W/(m²·K)	Zones and ground contact
Walls	Approximately 1.0 W/(m²·K)	Wall types and orientations
“Glazing”	Approximately 1.6 W/(m²·K)	Ug, Uw or opening assembly not specified in E

These values are stated in EuroSolar; they are not test results obtained for this edition. Values calculated in the dissertation and superseded by EuroSolar are not reinstated as alternatives of equal standing. [E, p. 4; K, p. 19, 35-37]

Opening families can now be identified

Fabrication records distinguish IV88 assemblies in fields 1-7 from IV68 entrance-lobby assemblies. ISOLAR calculations give centre-of-glass properties. Product-level detail enriches the dossier but does not automatically turn EuroSolar's summary U-value into an Ug or Uw. [A01-A04]

Three kinds of information to keep separate

Information	Use in a study
General summary value	Documented starting point; explicitly scoped in the model.
Glass Ug-value	Assign to the correct build-up and corresponding openings.
Complete window / junctions	Frames, edges, glazed fractions, thermal bridges and installation must be documented separately.

No airtightness-test report for the completed building was found in the reviewed material. The 2012 ift test concerns a timber-aluminium window sample, not Äerdschëff. [A10]

Windows and doors: a clearly identified package

The folder entitled “AS BUILT Aerdscheff 20062014” centres on windows, doors and accessories. Its title must not be understood as a complete as-built record for every building trade. [A01-A31]

Record / assembly	Extracted information
General drawing A01	Fields 1-7, opening identifiers, doors, dimensions and profile details.
45 sheets A02	Issued 30 April 2021; order 21043099, fabrication 2104387, project VG-20062014; stated installation date 31 May 2021.
Fields 1-7, IV88	37 sheets, including one timber addition without glass; larch (“Lärche”), oiled (“geölt”).
Four entrance-lobby assemblies, IV68	8 sheets: four doors and four fixed parts; oiled larch; oiled inside / flame-treated outside for identifiers 44 and 512.
Documentary register totals	26 fixed glazed units, 8 tilting units, 10 doors and 1 timber addition. Counts of sheets, not glass panes alone.

Spatial assignment

The drawing assigns fields 1-3 to living / meeting space, field 4 to the kitchen, field 5 to sanitary spaces and fields 6-7 to bedrooms 1-2. Entrance-lobby labels “rechts / links” are retained without converting them into unverified geographical orientations. [A01]

The sheets state “without drainage / without drip rails” and LINIREC preassembly flush with the timber structure. These notes concern the described package and must not be generalised to all windows, especially the greenhouse's reused windows. [A02]

Sources: [A01]; [A02, p. 1-45]. The French source edition is accompanied by the full 45-sheet table and a CSV extraction.

Glazing: build-ups and discrepancies

Document	Build-up / family	Documented values
A03 · ISOLAR · 13 Dec 2022	Triple; laminated outer panes, 4 mm centre pane; two 14 mm cavities, 90% argon; NEUTRALUX advance.	Ug 0.6 W/(m²·K); g = 49%; light transmission 72%.
A04 · ISOLAR · 13 Dec 2022	Double; two laminated panes; 12 mm cavity, 90% argon; NEUTRALUX advance.	Ug 1.3 W/(m²·K); g = 58%; light transmission 79%.
A02 · fabrication · 30 Apr 2021	Fields 1-7: “44.2-14-4-14-44.2/UG0.6”; stated thickness 50 mm.	Ug 0.6 stated; no g-value on sheets.
A02 · fabrication · 30 Apr 2021	Entrance lobbies: “44.2-12-44.2/UG1.1”; stated thickness 30 mm.	Ug 1.1 stated; discrepancy with A04.

ISOLAR Ug-values are calculated at the centre of the glazing, excluding frames and edge effects, as their qualification pages explain. They are neither on-site measurements nor whole-window Uw-values. [A03-A04, p. 2]

Entrance-lobby discrepancy to resolve

The fabrication Ug 1.1 and double-glazing calculation Ug 1.3 are not arbitrarily harmonised. The build-up finally delivered and the assignment of the 2022 calculation must be confirmed. The 58% g-value must not be assigned unconditionally to every opening.

Separate fire-resistant glazing

A certificate links one 15 mm Pyranova EI30-S2.0 pane, 840 × 610 mm, to the project. It provides order traceability, not fire-resistance certification for the entire building. Its exact location remains to be confirmed. [A05, p. 1-2; A06]

Doors, hardware and junctions

Family	What the archives establish
Tilting fanlights	50 mm catches cited in fabrication sheets; 304741U_P sheet and “Oberlicht Schnäpper” are exact duplicates. [A02, p. 1; A12, A21]
Entrance-lobby doors	Sheet 41 mentions BAKA Protect 3D, DORMA ITS 96, FUHR Autosafe 833P and HOPPE. These references are more specific than an isolated range catalogue. [A02, p. 38]
Additional documentation	Catalogues and sheets for handles, cylinders, closers, electric strike and DC127 contact; no master-key chart or opening history is inferred. [A13-A20]
Junctions and fixings	SIGA Fentrim 2 and 20, Würth AMO, Cladseal EPDM / Protan adhesive and installation PU foam sheets; locations and quantities not established by these sheets alone. [A22-A26]

Described finishes and catalogue products

Fabrication sheets specify oiled larch and a flame-treated exterior for two entrance-lobby identifiers. The generic “Endbehandlung” document cannot replace these notes with a uniform coating system for all windows and doors. [A02, p. 1-45; A09]

Product tests: do not extend their scope

ift report 12-001920-PR03 of 24 October 2012 describes a 1,600 × 2,200 mm timber-aluminium System 15 / IV68 + Alu sample. It reports air permeability class 4, watertightness E1200 and wind resistance C4/B4 for that sample. It does not automatically qualify the IV88 package or the building. [A10, p. 1-2]

ift publication conditions and manufacturer qualifications remain in the inventory. Reports and catalogues are not reproduced in full in this public summary dossier. [A11]

Greenhouse and natural ventilation

The greenhouse runs along the south facade and contains an 18 × 0.8 m planting bed. EuroSolar describes it as a thermal buffer, growing space and driver of ventilation. Its geometry aims to admit low winter sun and shade living spaces in summer. [E, p. 7]

Roof opening, EuroSolar photograph [E, p. 8].

The principle combines high greenhouse openings, connections to the rear rooms and buried ducts. Removing warm air encourages air intake through the ducts. These descriptions explain intended operation, not measured flow rates. [E, p. 7]

Element	Documentary status
Buried ducts	Dissertation: 15 m length, 0.26 m diameter, 2% slope. Design indications; number and distribution not consolidated by a survey. [K, p. 23]
Openings	Drawings identify roof windows; fabrication records specify tilting fanlights. No opening log or current control rule is supplied. [P02-P03; A02]
Performance	No measured flow, observed air-change rate or inlet/outlet duct temperature series found in the archive.

The model must distinguish greenhouse, occupied rooms and ground exchanges, without treating the dissertation's conventional air-change assumption as a real measurement.

Generating electricity on site

Parameter	Reference retained
Grid	Island installation, not connected to the electricity grid.
Photovoltaics	64 modules of 325 Wp; total power 20.8 kWp.
Published inclination	24° relative to the ground; EuroSolar also states 30° relative to the roof.
Wind turbine	BW6000, rated power 6 kW; Kostal PIKO MP inverter cited.
Stated geometry and speed	Height 18 m, four blades; EuroSolar associates 22 m/s with rated power.

Sources: [E, p. 4-5]. Divergent dissertation specifications do not replace these data.

Wind turbine illustrated in EuroSolar [E, p. 5].

The Drive dossier supplies no manufacturer wind-turbine power curve, separate wind-production series, wind measurement at the rotor or final single-line diagram. Drawings show installations and indicative routes, not these operational data.

An electrical study must clarify solar obstructions, array geometry, converters, charging constraints and weather data. No theoretical yield replaces observed production in this edition.

Electricity storage and management

The reference configuration is EuroSolar's numerical sheet: 16 Pylontech US3000 LiFePO4 modules, with a stated total capacity of 56.8 kWh. Other battery accounts are not used to redefine this installation. [E, p. 4]

Battery bank, EuroSolar photograph [E, p. 5]. The technical sheet remains the reference for the count.

Conversion and supervision

EuroSolar describes MPPT controllers, bidirectional inverter-chargers and a central controller for charging priorities and possible load shedding. Kostal and Victron references are cited without providing a detailed electrical inventory. [E, p. 6]

Total capacity, usable capacity and autonomy

EuroSolar p. 5 also calls approximately 60 kWh “usable capacity”. This edition retains 56.8 kWh as total capacity from p. 4, without fixing a separate usable capacity in the absence of charging and discharging thresholds.

The statement of several days' autonomy is a EuroSolar description, not a test accompanied by a load profile, initial state and weather conditions. Financial spreadsheets identify photovoltaic and battery operations but do not replace manuals or technical acceptance. [E, p. 5; F01]

Published production and measured data

EuroSolar reports approximately 3,100 kWh/year of measured photovoltaic production, labelled “2024-2025 data, off-grid site”. The value is retained without correction using an external estimate. [E, p. 4]

Aspect	What the source establishes
Nature	Annual measured photovoltaic production as reported by EuroSolar.
Period	2024-2025 is mentioned; start, end and exact aggregation duration are not given.
Metering	Measurement point and any aggregation are unspecified.
Raw data	Monitoring screenshots in EuroSolar; no timestamped export found in the reviewed Drive.
Interpretation	Not equated with total building consumption, heating demand or the array's potential yield.

A display is not a measurement archive

EuroSolar describes a screen showing solar production, wind input, state of charge and consumption. Its presence does not establish archive duration, recording frequency or export availability. [E, p. 6]

What the archive review verified

The six Drive workbooks contain identification, works, planting, budget or accounting tables. They contain no timestamped temperature, consumption or production series usable for energy monitoring. Technical table R06 lists components and networks, not measurements.

To reuse the annual result, an export must specify units, meter, dates, time step, gaps and separation of solar / wind / battery / consumption flows. This remains necessary after the review.

Heating and domestic hot water

Equipment	EuroSolar characteristic
Solar thermal field	8 collectors of 2.5 m²; approximately 20 m² total.
Field power	Approximately 10 kWth for the whole field, according to the numerical sheet.
Storage / control	900 L tank; WRSol.
Wood backup	Boiler/cooking stove rated at 10 kW.
Distribution	Underfloor heating; solar contribution to hot water and heating.

Cooking stove documented in EuroSolar [E, p. 8].

The recovered identification table separately names solar, stove and underfloor-heating supply and return lines, hot water and the stove's cold-water supply. These labels help identify circuits during a visit. [R06, Sheet1, rows 7-15]

It is not a final hydraulic schematic: R06 does not show all valves, pumps, heat exchangers, protection devices and settings. No stove efficiency, water/room heat split, flow, setpoint or annual wood balance is added without corresponding evidence.

Sources: [E, p. 4, 8]; [R06]. The solar power on p. 4 is not assigned to each of the eight collectors.

Rainwater: storage and treatment

Roof water is collected and stored in an approximately 30 m³ system. The 2019 plan shows three 10,000 L cisterns; the manuscript also describes three tanks behind the building. This agreement clarifies EuroSolar's total storage figure. [E, p. 4, 9; P02; O, p. 19]

Treatment installation, EuroSolar photograph [E, p. 9].

Function	Description retained
Collection and reserve	Rainwater collection and tanks; indicative network routes on drawings.
Filtration	EuroSolar's numerical sheet specifies ultrafiltration.
Conditioning	pH correction and remineralisation.
Disinfection	Ultraviolet treatment.
Use and reuse	Interior uses followed by the greywater circuit to greenhouse and toilets.

EuroSolar's narrative page says “microfiltration”; the reference term retained here is “ultrafiltration” from its technical sheet. R06 adds labels for the sand/activated-carbon filter, dosing, remineralisation, membrane unit and UV. [E, p. 4, 9; R06]

EuroSolar describes the treated water as potable. No dated laboratory report was found within this scope, so this dossier does not certify the quality of a current sample.

Identifying circuits and components

“Technical Systems Translation.xlsx” gathers labels for the technical room, container and treatment installation. The groups below follow the sheet; they do not reconstruct a connection diagram. [R06]

Sheet group	Components identified by the labels
Technical room, rows 2-16	Rainwater inlet; treatment / supply; rainwater to toilets; cold mains water; solar supply and return; stove supply and return; stove cold water; underfloor-heating supply and return; hot water; cold water; washroom.
Container, rows 19-26	Basin cold water; container-toilet rainwater; rainwater inlet; outside rainwater tap; building cold supply; cold-water inlet; prefilter.
Treatment, rows 29-45	Cistern; inlet; pump; prefilter; sampling points; sand / activated-carbon filter; dosing; deacidification / remineralisation; membrane unit; flushing discharge; treated-water tank; booster pump; UV; buffer tank.

Identifiable sampling points

The sheet names several sampling taps. This helps prepare an inventory or protocol with technicians, but does not prove that an analysis campaign occurred. Results, dates and methods still need to be assembled.

What cannot be inferred

The label “container-toilet rainwater” alone does not establish the connection currently used, exclusive reliance on one resource or effective network separation. The design plan also shows a municipal connection and rainwater toilet supply. These sources must be compared with the final schematic and observed uses. [P02; R06]

Old equipment models cited in the dissertation remain archive leads when no final reference confirms them; they are not reinstated as a current inventory. [K, p. 21-23]

Water reuse and living systems

Circuit described by EuroSolar	Function
Treated rainwater	Use in the building, notably the washroom.
Greywater to greenhouse	Conveyance to the bottom of the planting bed; stones form a reserve, with uptake by plants.
Reuse for toilets	Pumping stored water to toilets.
Wastewater treatment	Conveyance to a small treatment plant in front of the building.

The table describes functions, not every overflow, bypass, valve and protective device. EuroSolar presents design water autonomy; the manuscript also mentions a kitchen tap connected to the public network and connections for the container's sanitary facilities. Without a volume balance, no annual autonomy rate is established. [E, p. 9; O, p. 14, 19-20]

Cultivated greenhouse, garden and cellar

The greenhouse, garden / food forest and natural cellar to the east support the food project. EuroSolar describes the cellar as storage without electric refrigeration. Temperature, humidity and usable storage capacity were not found in the examined records. [E, p. 10]

The manuscript recounts difficulties with growing, substrate, irrigation, maintenance and soil compaction. Drive planting tables record historical needs or forecasts, not measured yields. [O, p. 32-35; R08]

Aquaponics: distinguish design from equipment

A location on the 2019 plan and consumption assumptions in the dissertation do not mean that the installation operates in the building. The manuscript states that the school experiment was later dismantled without genuine commissioning at Äerdschëff. [P02; K, p. 12-15; O, p. 33-34]

Use, maintenance and care for the building

Sources describe visits, training, workshops and on-site work. Monitoring must distinguish occasional activities, regular occupation, greenhouse, rear rooms and annexes. No consolidated hourly attendance profile was found. [E, p. 2, 11; R01-R02]

Domain	Documentary finding and useful monitoring
Openings and hardware	TITAN instructions specify cleaning, inspection and lubrication at least annually, and every six months in schools/hotels. Verify applicability to the installed package. [A30, p. 10-12]
Timber and finishes	Maintenance must account for oiled larch and flame-treated exceptions; do not default to a generic paint system. [A02; A09; A29]
Glazing	Instructions draw attention to partial shading, applied films, heat sources and heat accumulation near glass. [A28, p. 4-5]
Condensation	A27 concerns condensation on the outer glass face; it does not diagnose moisture in rooms or walls.
Energy, water and crops	Logging heating periods, wood use, opening states, maintenance, incidents and cultivation would link measurements to operation.

Instructions, not completed inspections

The presence of maintenance advice does not show it was implemented on site. Defects, replacements and inspections need dates and responsible people. Technical interventions must follow the identified equipment and relevant professionals' instructions.

The 2022 works lists mention finishes, detail sealing, pipe identification and monitoring connections, among other items. They help trace close-out records and are not described here as defects persisting in 2026. [R08-R10]

Safety and public access

Drive contains more precise safety documentation than the initial corpus: three evacuation plans dated 26 September 2022, a signed CGDIS letter and eleven photographs in the MENJE folder. [V01-V03; M01, M05-M15]

Record	What it attests or represents
CGDIS letter, 9 November 2022	Reference LET/Z-NORD/PRV/20220037. The service confirms construction monitoring and completion of fire-prevention elements according to its recommendations. [M01]
Evacuation plans, 26 September 2022	Routes, locations and instructions from different viewing positions. One is reproduced in the documentary atlas. [V01-V03]
Photographs	Room, handrails, access, extinguishers, fire blankets and assembly points. [M05-M15]
Pyranova glazing	Specific product / order certificate; not proof of compliance of the whole building. [A05-A06]

Exact scope of the letter and drawings

The 2022 letter is not presented as a current periodic inspection, general compliance certificate for all systems or MENJE approval. The subfolder name “Agrément MENJE Documents” alone does not establish that its files contain an approval decision.

Appended plans are historical documents. For visitors, current on-site instructions and plans remain authoritative. V1.1 sets neither an authorised maximum occupancy nor new evacuation instructions.

Records needed for a study or intervention

Current safety plans, periodic inspections, intervention register and access conditions for technical rooms. Personal contact details and key-management information are not reproduced in this dossier intended for distribution.

Instrumentation: found and not found

Domain	Found within the scope	Not found
Photovoltaics	Annual value reported in E; monitoring screenshots.	Exports, meter, timestamps, continuity.
Wind	Equipment and monitoring variable described in E.	Separate series, wind at rotor, power curve.
Batteries / consumption	Capacity and display described.	Charge history, thresholds, consumption by use.
Temperature / humidity	Monitoring ambition in O; works notes in R09.	Sensor inventory and interior / greenhouse / exterior series.
Heating / hot water	Equipment and circuit labels.	Heat metering, flows, setpoints and wood consumption.
Water / wastewater	Concept, tanks, component labels and sampling points.	Volumes, dated analyses, discharges and treatment results.
Occupancy / openings	General uses, plans and opening records.	Detailed calendar, opening log and interventions.
Airtightness	Generic ift window test, 2012.	Completed-building airtightness test with test conditions.

“Not found” refers exclusively to the 74 Drive entries and initial sources. It does not rule out data in equipment, with designers or installers, or in other association archives.

What is immediately possible

Prepare zoning, identify windows and doors, draw up an input list and identify parameters to confirm. The reviewed corpus alone does not yet enable model calibration against operational measurements.

Sources: [E, p. 4, 6]; [O, p. 42, 44]; [R06, R09]; full document inventory in the appendix.

Earlier studies and management archives

Benjamin Klein's dissertation

Completed in 2019-2020 within programmes at the University of Liège and the University of Luxembourg, supervised by Frank Scholzen, it describes the design and explores photovoltaic simulations, LuxEeB and LENOZ. It remains a historical source written during construction. [K, p. 1, 4-5, 13-20, 35-51]

Retained limitations include standard material values, omission of the greenhouse from the described thermal calculation, forecast profiles and aquaponics. Earlier classes, calculated needs and autonomy estimates are not equated with measured performance of the completed building. [K, p. 13-20, 35-41]

Agreements and draft agreements

The 2017 agreement and phase-2 amendment document the institutional context. The two occupancy / cohabitation Word files are working versions: one marked “DRAFT”, the other containing comments. They do not establish current contractual responsibilities here. [R01-R04]

“Convention mise à dispo.pdf” concerns the City of Le Mans and an art school. It is inventoried as an external template, not an Äerdschëff agreement. R04's filename says “18.04.2022”, while the visible signature indicates August 2022; chronological classification needs checking. [C01; R04, p. 2]

Accounts, budgets and works lists

Logs identify transactions with design offices, construction firms and installers. They can help recover invoices and acceptance records, but are not a final technical inventory. No definitive overall building cost is reconstructed from them. [F01-F02; R08-R10]

Detailed personal and financial data and signatures are not reproduced. Commemorative-plaque and signage archives are described in the inventory without being treated as performance evidence. [G01-G03; S01-S04]

Preparing a study under future climates

V1.1 provides a better-documented basis for an internship or dissertation: design geometry, opening schedule, described materials and summary parameters. It contains no already-completed future-climate simulation.

Proposed step	Expected output
1. Define scope	Separate occupied rooms, greenhouse and annexes; validated reference plan, areas and volumes.
2. Qualify inputs	Distinguish EuroSolar parameters and component data; resolve glazing and area discrepancies explicitly with the team.
3. Describe operation	Occupancy, openings, heating, availability constraints and maintenance.
4. Compare with measurements	Inventory exports, then targeted monitoring if needed; describe the model as uncalibrated if measurements are insufficient.
5. Explore scenarios	Select climate files, horizons, assumptions and indicators with the scientific team; compare summer/winter comfort and needs.
6. Transfer knowledge	Reusable model, input files, assumptions, limits, results and accessible educational summary.

Priority questions

What role does the greenhouse play in heat gains and comfort? How do thermal mass and opening operation affect behaviour? Which periods cause difficulties? Which operational or design adaptations deserve comparison?

This framework is a work proposal, not an archive-derived conclusion. It can be adjusted to internship duration, recoverable data and team resources. Electricity or water balances can be additional modules rather than mandatory parts of the first thermal model.

Reference parameters: systems

ID	Parameter	Value / status	Source
ELE01	Photovoltaics	20.8 kWp; 64 × 325 Wp	E, p. 4-5
ELE02	Inclination	24° / ground; 30° / roof, E wording	E, p. 5
ELE03	Wind turbine	BW6000; 6 kW; 18 m; 4 blades	E, p. 4-5
ELE04	Stated wind	22 m/s associated with rated power	E, p. 5
STO01	Batteries	16 × Pylontech US3000, LiFePO4	E, p. 4
STO02	Capacity	56.8 kWh total; usable not fixed here	E, p. 4-5
MES01	PV production	Approximately 3,100 kWh/year, reported measurement 2024-2025	E, p. 4
TH01	Solar thermal	8 × 2.5 m²; approximately 20 m²; approximately 10 kWth total	E, p. 4, 8
TH02	Storage / control	900 L; WRSol	E, p. 4
TH03	Wood / emission	10 kW boiler/cooking stove; underfloor heating	E, p. 4, 8
EAU01	Rain storage	Approximately 30 m³; 3 × 10,000 L on P02	E, p. 4; P02
EAU02	Treatment	Ultrafiltration, pH, remineralisation, UV	E, p. 4
EAU03	Reuse	Greywater → greenhouse → toilets → treatment plant	E, p. 9
EAU04	Circuit labels	Room, container and treatment labels	R06

Stated powers, capacities and coefficients are not converted into measurements. Circuit labels are not a final connection diagram. Cite: Äerdschëff technical dossier V1.1, 14 September 2026.

Reference parameters: envelope

ID	Parameter	Value / status	Source
ENV01	Roof U	Approximately 0.15 W/(m²·K), summary	E, p. 4
ENV02	Floor U	Approximately 0.18 W/(m²·K), summary	E, p. 4
ENV03	Wall U	Approximately 1.0 W/(m²·K), summary	E, p. 4
ENV04	“Glazing” U	Approximately 1.6 W/(m²·K), U type unspecified	E, p. 4
VIT01	ISOLAR triple	Ug 0.6; g 49%; light 72%, calculation	A03, p. 1
VIT02	ISOLAR double	Ug 1.3; g 58%; light 79%, calculation	A04, p. 1
VIT03	Lobby fabrication	Ug 1.1 stated; discrepancy with VIT02	A02, p. 38-45
VIT04	Pyranova	15 mm; 840 × 610 mm; one pane, certificate	A05, p. 1
MEN01	IV88 openings	36 glazed units + timber addition, sheets	A02, p. 1-37
MEN02	IV68 openings	8 lobby units, sheets	A02, p. 38-45
MEN03	Timber / finish	Oiled larch; two flame-treated exceptions	A02
SER01	Planting bed	18 × 0.8 m, E reference	E, p. 7
AIR01	Buried ducts	15 m; Ø 0.26 m; 2% slope, design	K, p. 23
GEO01	Room areas	P02 transcription; P03 discrepancies retained	P02-P03

Roof/floor λ-values and thicknesses are in “design layers” and P03. No Uw, linear thermal-bridge coefficient or actual airflow is calculated here from unspecified assumptions.

Discrepancies and priority checks

Topic	Source status	Approach retained
Areas	P02: 62.05 / 63.41 m²; P03: 64.32 / 64.68 m² for meeting room / corridor.	Retain both; validate drawing and zoning before summing.
Glazing	E: U approximately 1.6; ISOLAR: Ug 0.6 and 1.3.	Different scopes; no blanket substitution.
Lobby double glazing	Fabrication Ug 1.1; ISOLAR calculation Ug 1.3.	Check delivered build-up and relevant opening.
Wall layers	Detailed design section; construction account with variants.	Do not merge into an unattested final section.
Battery capacity	56.8 kWh total on E p. 4; approximately 60 kWh “usable” on p. 5.	Retain technical-sheet total; establish usable capacity from settings.
Container water	Rain and mains labels; public-connection account.	Compare sources with final schematic and observed uses.
Occupancy / works	Design plans and 2022 lists.	Do not turn them into 2026 uses or defects.
Measurements	No raw series or thermal balance found.	Recover exports and design targeted monitoring.
As-built / compliance	Window/door package and dated CGDIS letter.	Do not present a complete as-built record, energy certificate or general compliance.

These open points do not prevent sharing the dossier. They define checks needed for traceable modelling and to avoid using archives beyond what they attest.

Scope of the archive review

Drive branch	Folders including branch	File entries
Root only	1	10
Convention de mise à disposition	1	1
AS BUILT, eight subfolders	9	31, including Thumbs.db
Frais Äerdschëff synthèse	1	2
Plaquette C Gira	1	3
Panneaux Äerdschëff	1	4
Plans Äerdschëff	1	5
Agrément MENJE Documents, three subfolders	4	15
Plans d'évacuation Äerdschëff	1	3
Total	20	74

Examination method

Every folder and subfolder returned by the connector was reviewed. Text documents were extracted; scans, drawings and photographs were examined visually. Every sheet of the six workbooks was opened, including empty sheets. The 45 fabrication sheets underwent structured extraction.

Duplicates were compared using SHA-256 hashes, not just titles: V01/M02, V02/M03, V03/M04 and A12/A21 are identical. Thumbs.db was identified as a cache and excluded. In total, 73 files were examined, representing 69 distinct binary contents.

Two complementary traceability records

The inventory below covers all entries, including those without useful model data. The associated CSV in the source edition retains paths, Drive identifiers, hashes and notes. The second CSV contains the 45 window/door sheets and source pages. No Drive access was changed.

Misencoded names are retained in the CSV to locate originals. Long titles are spaced in printed tables for readability; the documentary code identifies each item here.

Root and agreements

Code	Examined item (original filename)	Finding / status
R01	20022023 Convention Äerdschëff - kf remarques.docx	Commented occupancy-agreement draft; plot and missions, not a signed agreement.
R02	Convention ALR - Äerdschëff.docx	“DRAFT” cohabitation agreement; proposed roles, not treated here as binding.
R03	MECDD 2017-06-20-Convention.pdf · 4 p.	Historical construction and experimentation agreement; institutional context.
R04	MECDD Avenant a la Convention phase 2 signe le 18.04.2022.pdf · 2 p.	Phase-2 amendment; filename date differs from visible signature; reclassification needed.
R05	ACCES AERDSCHEFF CELL.png	Annotated access plan; historical contact details not reproduced.
R06	Technical Systems Translation.xlsx	Multilingual identification of networks and treatment components; 45 sheet rows examined.
R07	tools Inventory.rtf	Basic tool inventory; does not describe the envelope or performance.
R08	Besoins pour finir construction & aménagements.xlsx	Needs, planting and unfinished works; historical forecasts, not acceptance records.
R09	Äerdschëff Lëscht To Do Quantified.xlsx	2022 works and safety-follow-up lists; leads for locating close-out records.
R10	Secolux followup budget.xlsx	Budget for following up requirements; not a record of cleared reservations.
C01	Convention mise à dispo.pdf · 10 p.	Template concerning Le Mans and an art school; excluded from Äerdschëff-specific facts.

AS BUILT: drawings, glazing and tests

Code	Examined item (original filename)	Finding / status
A01	Batiments Public Aerdscheff VG-20062014 Zeichnung 02.pdf · 1 p.	Window/door drawing, fields 1-7, profiles and doors; reproduced in atlas.
A02	Batiments Public Aerdscheff VG-20062014 Fertigungslisten.pdf · 45 p.	45 sheets extracted: dimensions, identifiers, IV88/IV68, oiled larch, glazing and hardware.
A03	Bericht (2).pdf · 2 p.	ISOLAR triple calculation, 13 Dec 2022: Ug 0.6; g 49%; light transmission 72%.
A04	Bericht (3).pdf · 2 p.	ISOLAR double calculation, 13 Dec 2022: Ug 1.3; g 58%; light transmission 79%.
A05	2260521 Messerich Pyranova EI30-S2.0.pdf · 2 p.	Äerdschëff order certificate: Pyranova 15 mm, one 840 × 610 mm pane.
A06	schott pyranova typ 30 S2.0.pdf · 1 p.	Schott product declaration; alone does not establish whole-building fire resistance.
A07	u profil .pdf · 1 p.	Aluminium U-profile catalogue; range dimensions, quantities and location not established.
A08	zertifikat sa meta.ddb7f80f (1).pdf · 4 p.	TITAN AF / iP / FAVORIT range certificate; not a building test.
A09	Endbehandlung.pdf · 13 p.	Generic finishing-product documentation; does not replace oiled finishes on fabrication sheets.
A10	12-001920-PR03 PB-A01-02-de-01.pdf · 22 p.	2012 ift test, timber-aluminium IV68 + Alu / System 15 sample; not site airtightness testing.
A11	Merkblatt.pdf · 1 p.	Use and publication conditions for ift documents; rights document, not thermal data.

AS BUILT: entrances and accessories

Code	Examined item (original filename)	Finding / status
A12	304741U P.pdf · 1 p.	50 mm fanlight catch; hash-identical to A21.
A13	20221213165600339.pdf · 1 p.	HOPPE Paris 138/353KH fitting sheet; maintenance reference.
A14	Autosafe 833.pdf · 1 p.	Multipoint-lock catalogue; visually read, not a master-key chart.
A15	BKS-Janus-07929140013324541 22.pdf · 2 p.	Cylinder documentation retained as package reference; security details not reproduced.
A16	Baka Protect 3D.pdf · 1 p.	Adjustable BAKA protect 3D hinge sheet; documentary maintenance use.
A17	ouverture électrique-porte entrée.pdf · 1 p.	116E130 electric-strike sheet; no proof of current wiring or settings.
A18	fermetur porte integée-Dorma ITS 96.pdf · 25 p.	DORMA ITS 96 closer catalogue and variants; options not assumed installed.
A19	DC127 Datenblatt.pdf · 2 p.	DC127 magnetic contact; no door-state archive attached.
A20	2012 Standard Zylinder.pdf · 1 p.	General cylinder catalogue, not an inventory of site keys.

AS BUILT: installation and maintenance

Code	Examined item (original filename)	Finding / status
A21	Oberlicht Schnäpper.pdf · 1 p.	Exact duplicate of A12 despite a different filename.
A22	SDB Fentrim 2 de aussen .pdf · 7 p.	SIGA Fentrim 2 external-side safety sheet; no quantities or installation plan.
A23	Amo Würth 3 (1).pdf · 1 p.	Würth AMO fixing documentation; dimensions need assignment to components.
A24	EPDM.pdf · 4 p.	Cladseal EPDM / Protan adhesive documentation; not proof of a building-wide membrane.
A25	Siga Fentrim 20 Innen.pdf · 5 p.	SIGA Fentrim 20 internal-side safety sheet; not an airtightness measurement.
A26	Montageschaum-B1 587.pdf · 2 p.	Installation PU-foam sheet; archive presence does not prove quantity or actual use.
A27	Kondensation-06-2014.pdf · 1 p.	External glass condensation instructions; not an Äerdschëff moisture diagnosis.
A28	M 013 Glasbruch durch thermische Spannungen.pdf · 7 p.	Thermal stress, partial shading, films and heat-accumulation guidance.
A29	Empfehlung fÅr die Pflege und Wartung von Holzfenstern.pdf · 1 p.	Timber-window maintenance advice; check actual finish.
A30	Pflegehinweise-Fensterbeschlag.pdf · 14 p.	TITAN cleaning, inspection and lubrication instructions; six-month interval cited for schools/hotels.
A31	Thumbs.db	System thumbnail cache; identified, not copied or treated as a source.

Management, plaque and signage

Code	Examined item (original filename)	Finding / status
F01	Frais Äerdschëff synthétique.xlsx	Historical financial log; lead for technical invoices; individual data excluded.
F02	Décompte + Bilan MECDD 01.01.2020-03.2021 + 04.2021-10.2021.xlsx	Multi-sheet accounts, providers and purchases; no consolidated final cost retained.
G01	offre 16454 Aerdscheff Projet SIGNEE + INSTRUCTIONS.pdf · 2 p.	Commemorative-plaque order; signage context, not a building specification.
G02	BAT 2023.04.03 AERDSCHEFF 290x420mm.pdf · 1 p.	290 × 420 mm plaque proof; explicit rights reservation, not reproduced.
G03	BAT 2023.04.03 AERDSCHEFF 290x420mm signé.pdf · 1 p.	Signed proof; same documentary subject as G02.
S01	Wäschkichen.docx	Editable room and safety signage source; historical labels.
S02	Wäschkichen.pdf · 13 p.	13 signage pages: kitchen, laundry, rooms and technical spaces; no measurements.
S03	No-Kids-Allowed-768x768.jpg	Generic pictogram; no general building-admission restriction inferred.
S04	Brandschutzzeichen iso7010 F001 feuerloescher.png	Extinguisher pictogram; not an inspection of installed extinguishers.

Architectural and evacuation drawings

Code	Examined item (original filename)	Finding / status
P01	190930 01 AERDSCHEFF-REDANGE ADB Implantation.pdf · 1 p.	BENG EXE01 site plan, 2019; site, annexes and indicative networks.
P02	190930 02 AERDSCHEFF-REDANGE ADB Facades.pdf · 1 p.	BENG EXE02: floor plan and south facade; areas and rooms extracted.
P03	190930 03 AERDSCHEFF-REDANGE ADB Facades et coupes.pdf · 1 p.	BENG EXE03: east/west elevations, section AA, roof/floor build-ups.
P04	plan d'évacuation infos.png	Annotated preparatory evacuation image; September 2022 plans distinguished.
P05	plan d'évacuation.ai · 1 p.	AI/PDF-compatible graphic; read as preparatory plan, not a building CAD model.
V01	01 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Evacuation plan 1, 26 Sep 2022; depicted geometry/equipment, no current inspection.
V02	02 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Evacuation plan 2; same level, different viewing position.
V03	03 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Evacuation plan 3; same level, different viewing position.

MENJE: records and photographs

Code	Examined item (original filename)	Finding / status
M01	LET20220037 Aerdschëff Redange signée.pdf · 1 p.	Signed CGDIS letter, 9 Nov 2022: construction monitoring and measures completed according to recommendations.
M02	01 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Hash-identical to V01; original has the same name without a local suffix.
M03	02 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Hash-identical to V02; local suffix added during copying.
M04	03 220926 AERDSCHEFF-REDANGE EVACUATION.pdf · 1 p.	Hash-identical to V03; local suffix added during copying.
M05	Point de rassemblement Osten.jpg	Eastern-sector assembly-point photo; 2022 archive.
M06	Point de rassemblement Westen.jpg	Western-sector assembly-point photo; 2022 archive.
M07	Aktivitéitsraum 2.jpg	Interior view of activity room and windows/doors.
M08	Läschdecken 2.jpg	Fire-blanket / signage photo; not a periodic inspection.

MENJE: additional photographs

Code	Examined item (original filename)	Finding / status
M09	Handlaf 2.jpg	Handrail and outside-access photograph.
M10	Feierläscher 2.jpg	Extinguisher photograph; documentary state from 2022.
M11	Läschdecken 1.jpg	Additional fire-blanket / location photograph.
M12	Handlaf 1.jpg	Additional handrail photograph.
M13	Feierläscher 1.jpg	Additional extinguisher photograph.
M14	Aktivitéitsraum.jpg	Interior: materials, windows/doors and spatial layout.
M15	Accès Pompiers 1.jpg	Emergency-access photograph; no measured clearance inferred.

All eleven images were examined visually. Their location in the 2022 monitoring folder is neither a dimensional survey nor a current inspection. Visible personal contacts are not reproduced.

Documentary window and door register

Transcribed from A02, issued 30 April 2021. Overall dimensions in mm as stated; no on-site survey. F means a field in A01; lobby R/L translates rechts/links, not a geographical orientation.

P.	ID	Field	System	W × H (mm)	Type	Stated Ug
1	479	F1	IV88	1880 × 810	tilting	0.6
2	480	F1	IV88	1880 × 810	fixed	0.6
3	481	F1	IV88	1880 × 2300	fixed	0.6
4	482	F1	IV88	1880 × 2300	fixed	0.6
5	483	F2	IV88	1880 × 810	tilting	0.6
6	484	F2	IV88	1880 × 810	fixed	0.6
7	35	F2	IV88	1880 × 2300	door	0.6
8	485	F2	IV88	1880 × 2300	fixed	0.6
9	486	F3	IV88	1880 × 810	tilting	0.6
10	487	F3	IV88	1880 × 810	fixed	0.6
11	488	F3	IV88	1880 × 2300	fixed	0.6
12	489	F3	IV88	1880 × 2300	fixed	0.6
13	490	F4	IV88	740 × 810	fixed	0.6
14	491	F4	IV88	1160 × 810	tilting	0.6
15	492	F4	IV88	2360 × 810	fixed	0.6

IV88: triple “44.2-14-4-14-44.2/UG0.6”, stated thickness 50 mm. IV68: double “44.2-12-44.2/UG1.1”, 30 mm. Lobby Ug 1.1 remains distinct from ISOLAR Ug 1.3.

Oiled larch on the sheets; identifiers 44 and 512: oiled inside / flame-treated outside. One unit may contain several panes: sheet counts are not glass-pane counts.

Documentary window and door register · 2

Transcribed from A02, issued 30 April 2021. Overall dimensions in mm as stated; no on-site survey. F means a field in A01; lobby R/L translates rechts/links, not a geographical orientation.

P.	ID	Field	System	W × H (mm)	Type	Stated Ug
16	493	F4	IV88	740 × 2300	fixed	0.6
17	36	F4	IV88	1160 × 2300	door	0.6
18	494	F4	IV88	2360 × 2300	fixed	0.6
19	495	F5	IV88	778 × 810	fixed	0.6
20	496	F5	IV88	1160 × 810	tilting	0.6
21	497	F5	IV88	778 × 810	fixed	0.6
22	498	F5	IV88	944 × 810	tilting	0.6
23	499	F5	IV88	778 × 2300	fixed	0.6
24	37	F5	IV88	1160 × 2300	door	0.6
25	500	F5	IV88	778 × 2300	fixed	0.6
26	38	F5	IV88	944 × 2300	door	0.6
27	Zusatz	F5	IV88	100 × 3110	timber, no glass	-
28	501	F6	IV88	1900 × 810	fixed	0.6
29	502	F6	IV88	860 × 810	tilting	0.6
30	503	F6	IV88	740 × 2300	fixed	0.6

Ug-values are those on fabrication sheets, not Uw-values or on-site measurements. Build-ups and limitations: see Glazing and the first page of this appendix.

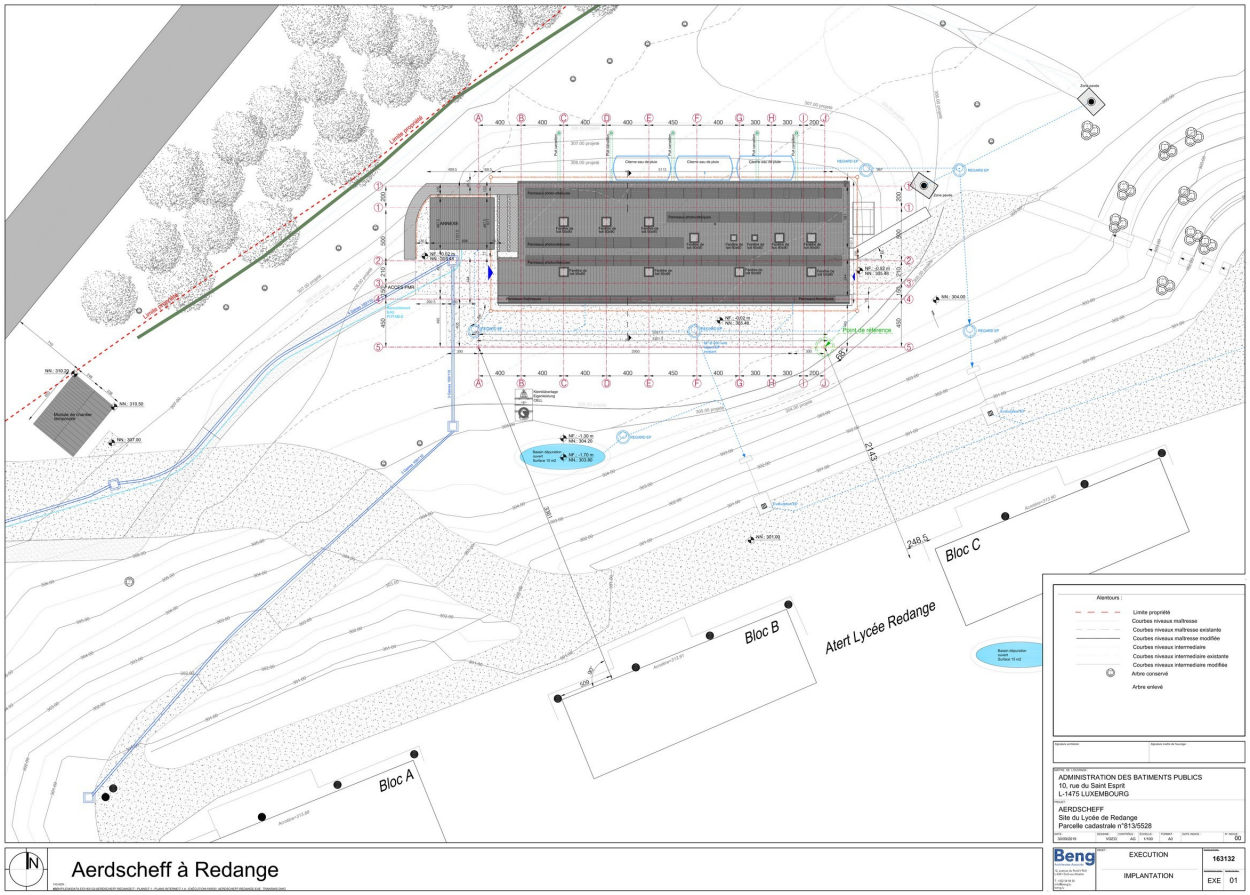
Documentary window and door register · 3

Transcribed from A02, issued 30 April 2021. Overall dimensions in mm as stated; no on-site survey. F means a field in A01; lobby R/L translates rechts/links, not a geographical orientation.

P.	ID	Field	System	W × H (mm)	Type	Stated Ug
31	39	F6	IV88	1160 × 2300	door	0.6
32	504	F6	IV88	860 × 2300	fixed	0.6
33	505	F7	IV88	1900 × 810	fixed	0.6
34	506	F7	IV88	860 × 810	tilting	0.6
35	507	F7	IV88	740 × 2300	fixed	0.6
36	40	F7	IV88	1160 × 2300	door	0.6
37	508	F7	IV88	860 × 2300	fixed	0.6
38	41	lobby R1	IV68	1160 × 2290	door	1.1
39	509	lobby R1	IV68	720 × 2290	fixed	1.1
40	42	lobby R2	IV68	1160 × 2290	door	1.1
41	510	lobby R2	IV68	720 × 2290	fixed	1.1
42	43	lobby L1	IV68	1160 × 2290	door	1.1
43	511	lobby L1	IV68	720 × 2290	fixed	1.1
44	44	lobby L2	IV68	1160 × 2290	door	1.1
45	512	lobby L2	IV68	720 × 2290	fixed	1.1

Ug-values are those on fabrication sheets, not Uw-values or on-site measurements. Build-ups and limitations: see Glazing and the first page of this appendix.

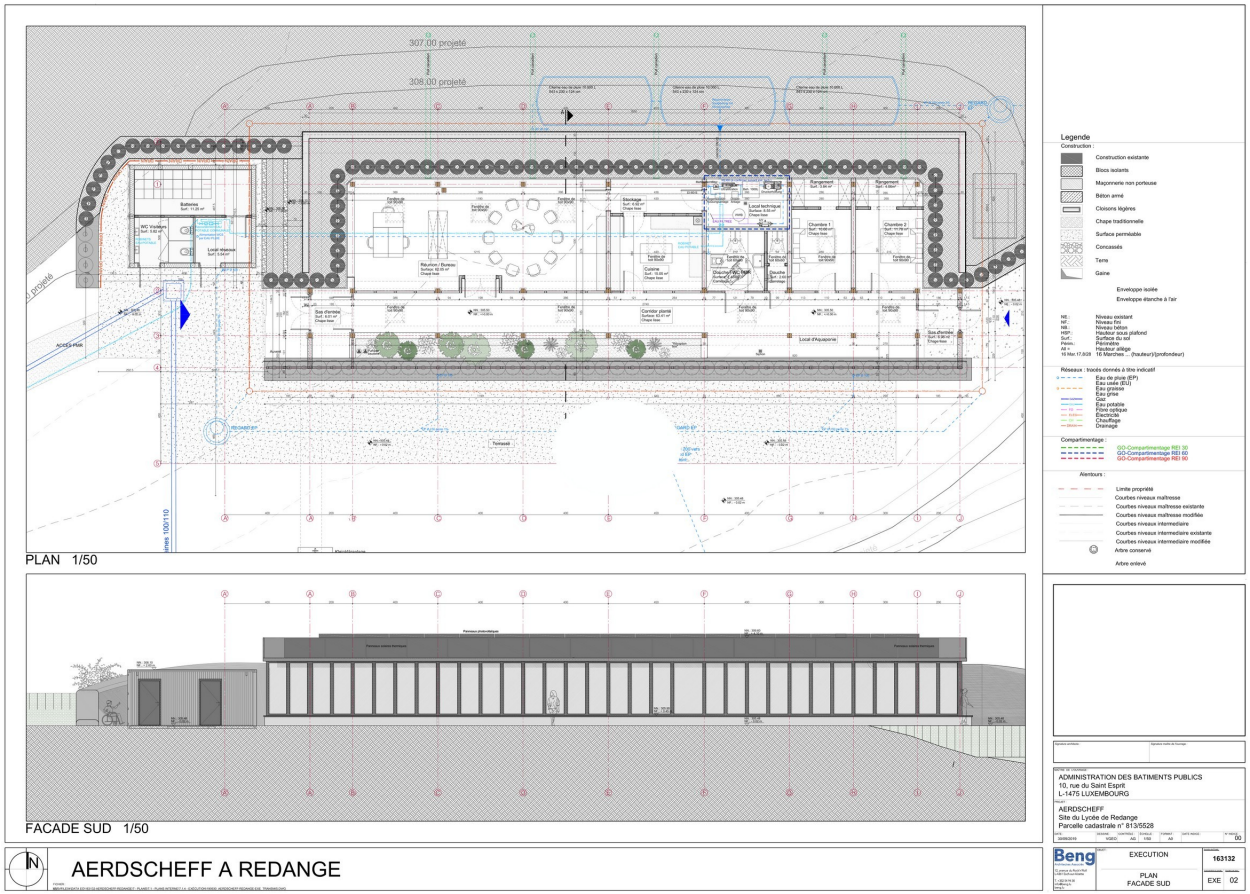
Building site plan



P01 · BENG EXE01, 163132, 2019.

Reduced reproduction; do not measure from this layout. Reading key: implantation = site layout; limite propriété = property boundary; courbes de niveaux = contours; réseaux = services.

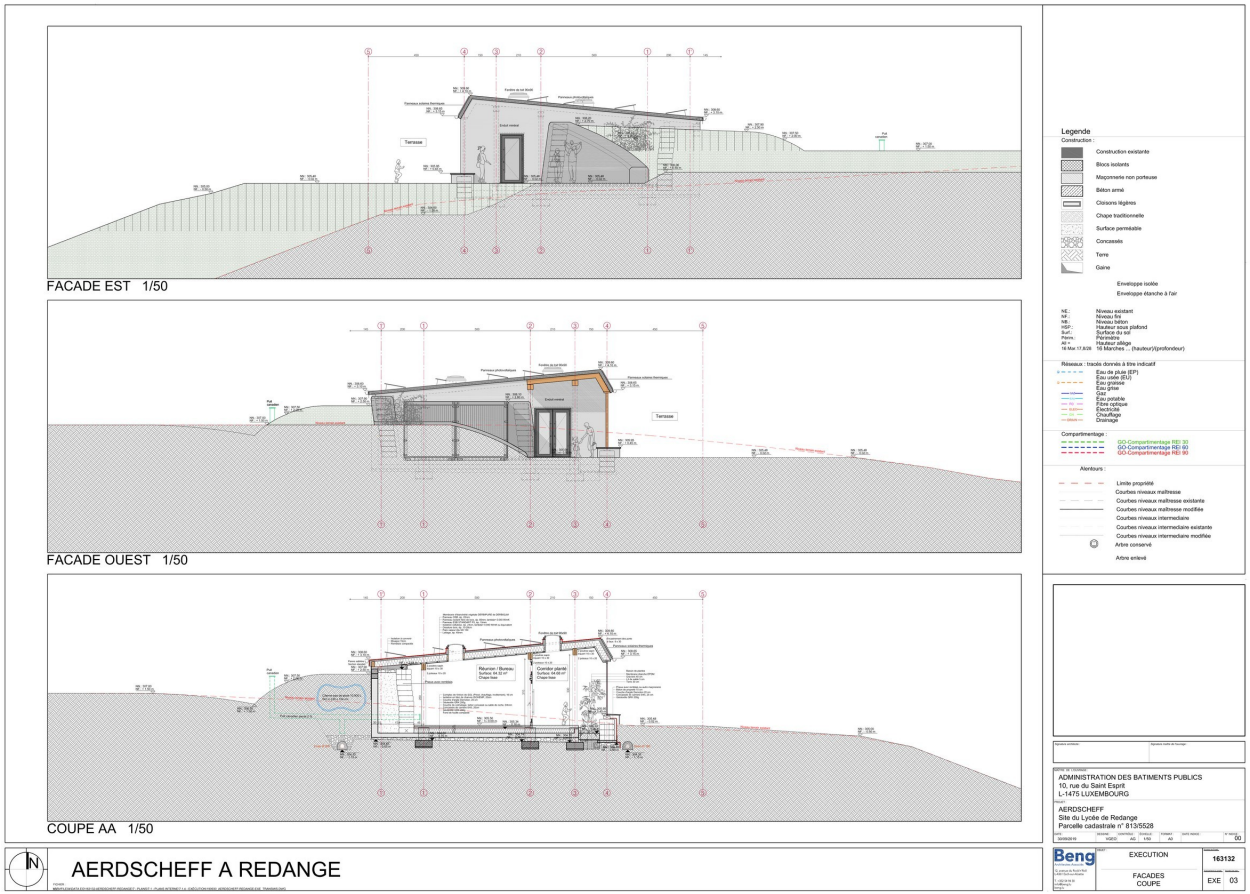
Floor plan and south elevation



P02 · BENG EXE02, 163132, 2019.

Rooms and equipment are those of the design. Reading key: réunion/bureau = meeting room/office; cuisine = kitchen; stockage = storage; local technique = technical room; chambre = bedroom; corridor planté = planted corridor; sas = entrance lobby. Room areas are translated on p. 7.

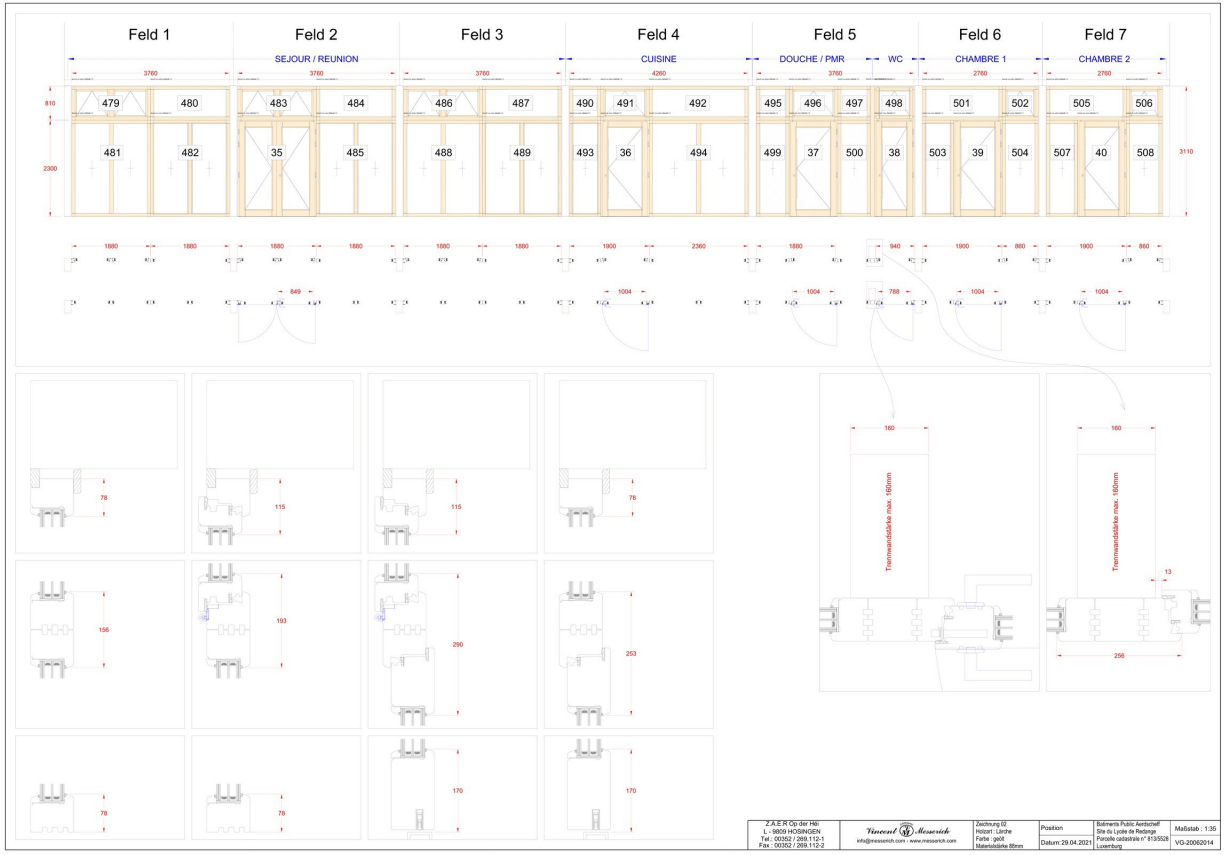
East/west elevations and section AA



P03 · BENG EXE03, 163132, 2019.

See translated roof/floor layers and area discrepancies in the main dossier. Reading key: façade est/ouest = east/west elevation; coupe = section; toiture = roof; plancher = floor; terrain naturel = natural ground; isolation = insulation; pare-vapeur = vapour barrier.

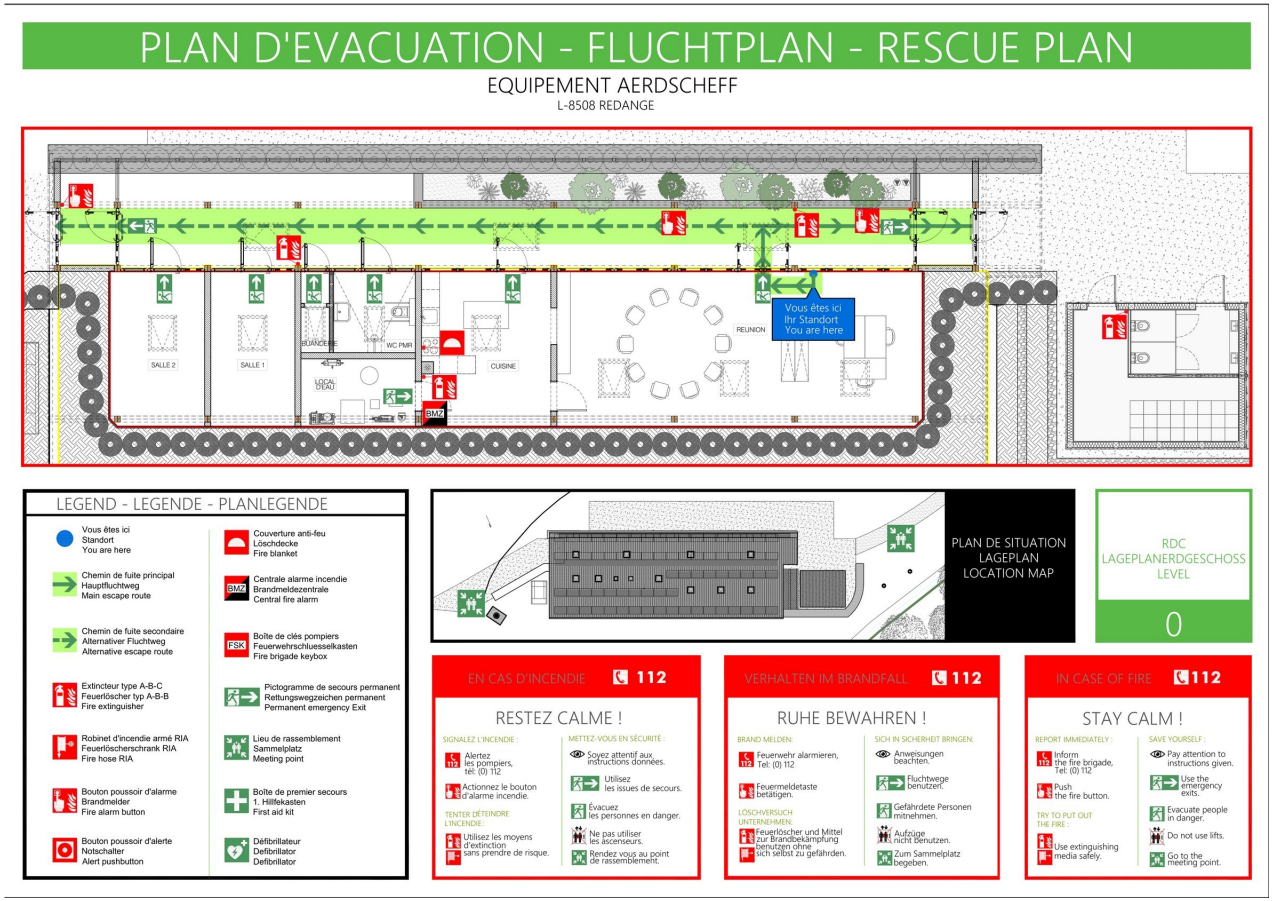
Glazed assemblies and profiles



A01 · Vincent Messerich, VG-20062014, Zeichnung 02.

Read alongside the 45 A02 sheets; documentary reproduction. Reading key: Feld = field; rechts/links = right/left; Lärche = larch; geölt = oiled; flammbehandelt = flame-treated; Breite/Höhe = width/height. Original identifiers are retained in the register.

Evacuation plan: 2022 archive



V01 · BENG, 26 September 2022.

Historical document: current on-site instructions and plans remain authoritative for visitors. Reading key: plan d’évacuation = evacuation plan; point de rassemblement = assembly point; extincteur = extinguisher; sortie de secours = emergency exit. This reproduction does not issue current evacuation instructions.

Sources, credits and distribution

The three initial sources

[E] Äerdschëff asbl. Solar Prize 2025 application. File “Candidature EuroSolar (1).pdf”, 12 pages. Primary summary reference, notably pp. 4-10.

[O] Supplied collective manuscript: “270526 Äerdschëff Edited Clean Version (1)(1).pdf”, 91 pages. Construction, architecture, living systems and pedagogy, notably pp. 13-23, 32-35, 41-44.

[K] Klein, Benjamin. Ecological impact assessment of the “Äerdschëff”-project in Redange/Attert, Luxembourg. 2019-2020, University of Liège / University of Luxembourg, supervised by Frank Scholzen; 53-page PDF. Values corrected by EuroSolar are not reinstated.

Drive archives

Codes R, C, A, F, G, S, P, V and M identify each item in the exhaustive inventory. The date copied to Drive does not replace a document's date. The 2019 drawings, 2021 sheets and 2022 records retain historical status.

Illustrations and distribution conditions

Technical photographs from V1.0 / EuroSolar; interior photograph M14; BENG drawings P01-P03 and V01; Messerich window/door drawing A01. Crops are documentary, with no added dimensions. Photograph authors are not consistently identified in the corpus.

The French source edition required credits and reproduction rights to be confirmed before publication. For this website update, Äerdschëff confirmed authorisation to distribute the new plans and window/door drawings on the provisional site and in downloadable PDFs. Rights reservations for GRAVOLUX proofs and ift remain recorded; their full sheets are not published. The dissertation, test reports and complete financial/administrative records are not reproduced in full.

Version history

V1.0: initial consolidation, 11 September 2026. V1.1: Drive integration, 14 September 2026; plans, 45 window/door sheets, glazing calculations, water identification, maintenance, safety, inventory and validation list. The source edition preceded publication and changed no Drive permissions. This English edition accompanies the authorised provisional-site update.

Accessing and sharing sources

Access to Drive documents depends on existing permissions. These links do not change them. The source edition cites a CSV with links to all 74 entries and hashes of the 73 examined files.

Building Drive folder: complete corpus

P01 · Site plan

P02 · Floor plan and south elevation

P03 · Elevations and section

A01 · Window and door drawing

A02 · 45 fabrication sheets

A03 · ISOLAR triple-glazing calculation

A04 · ISOLAR double-glazing calculation

R06 · Multilingual systems identification

M01 · CGDIS letter, 9 November 2022

V1.1 companion files

Documentary inventory CSV: 74 entries, paths, status, findings, identifiers and hashes.

Window/door register CSV: 45 sheets, dimensions, build-ups, finishes and source pages.

These companion files cited by the French source edition complement the dossier and do not replace originals. They are not embedded in this translated PDF.

Contact

Äerdschëff asbl · 1, rue du Lycée · L-8508 Redange/Attert

team@aerdscheff.lu · +352 671 161 663

Contact details reproduced from EuroSolar [E, p. 12].

Association website