

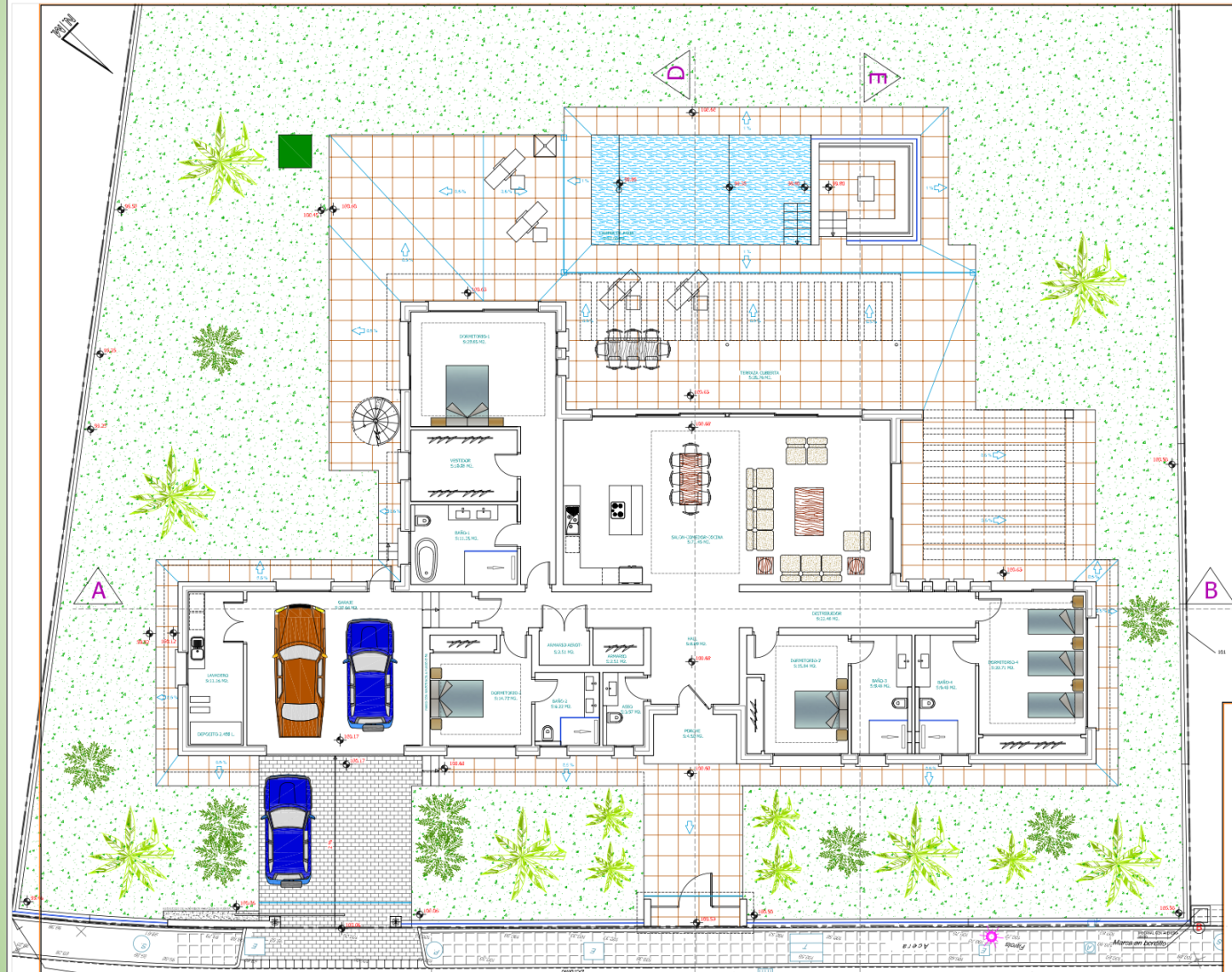
BUILDING PROCESS VILLA15 LA CALA GOLF



ECOBUILDING

we make your world GREEN again

FLOOR PLAN



TOPOGRAPHY



Determining construction lines and altimeters.

EXCAVATIONS VILLA AND POOL



Excavation to solid ground

FILL IN TO REQUIRED HEIGHT AND COMPACTING FOR SOIL TEST



Fill in watering and damming

SOIL TEST

LCCI INGENIERÍA
Laboratorio y Consultoría de Calidad e Ingeniería

C/ La Gitanilla, nº 17, nave 12
Políg. Ind. Santa Cruz
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laboratorio@lccingenieria.es www.lccingenieria.es

Referencia:	22773	Fecha de toma:	27/03/2023	Tipo de material:	Zahorra artificial
Procedencia:	Acopio obra				
Localización:					

ENSAYO DE APISONADO PROCTOR MODIFICADO

(NORMA DE ENSAYO UNE 103501:1994)

Tipo:	MODIFICADO	Altura de caída:	45,7 cm	Material no utilizado:	
Molde:	2320 cm ³	Nº de capas:	5	Densidad gruesos:	gr/cm ³
Maza:	4.535 Kg	Nº de golpes por capa:	60	Absorción gruesos:	%

Punto nº	1	2	3	4
% agua añadida				
Densidad (gr/cm ³)	2.17	2.43	2.36	2.14
Humedad (%)	2.2	4.0	6.2	8.5

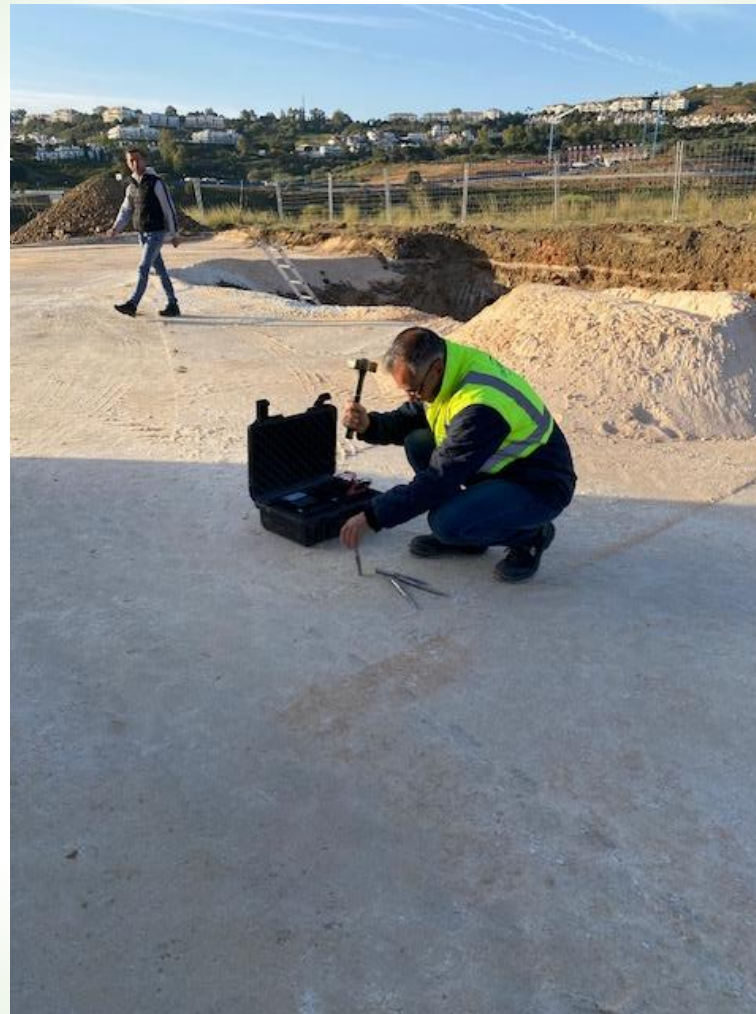
DENSIDAD MÁXIMA: 2.43 gr/cm³ **HUMEDAD ÓPTIMA: 4.0 %**
DENSIDAD CORR.: gr/cm³ **HUMEDAD CORR.: %**

Observaciones:

Laboratorio y Consultoría de Calidad e Ingeniería, S.L. - C.I.F. B-03242402 - Inscripción en el Registro Mercantil de Málaga. Tomo 1500, Folio 148, Inscrito nº 1. Page 044/17764.

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INFORME DE IDENTIFICACIÓN

Sulfatos solubles en ácido (%):

Yeso (%):

Mat. Orgánica (%MO):

Equivalente de arena:

Desgaste Los Ángeles (%):

PLASTICIDAD (Límites de Atterberg)

Límite líquido:
Límite plástico:

Índice de plasticidad: **NO PLÁSTICO**

ANÁLISIS GRANULOMÉTRICO (MATERIAL)

Tamiz UNE	80	63	32	20	12,5	8	4	2	1	0,50	0,25	0,125	0,063
% pasa	100,0	100,0	100,0	95,5	84,3	70,9	52,4	38,67	30,6	23,2	17,5	12,3	8,4

tel:80%2063%2032%2020%2012.5%208

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FOUNDATION INSULATION JACKODUR ATLAS



Extruded polystyrene rigid foam (XPS) - is a sophisticated, efficient thermal insulation and formwork system for floor slabs. The innovation lies in the new, cost-effective connection technology, which enables cold-bridge-free floor slab insulation for all building types. Thanks to the innovative tongue and groove connection, Atlas shows even more stability against concrete pressure and protects even better against moisture.

Advantages:

Simultaneous shuttering and insulation saves time and therefore costs.

The stable, pressure-resistant material meets all requirements.

Error-free installation thanks to the simple joining technique AND NUMBERED ELEMENTS.

The system eliminates cold bridges.

Fulfils the energy requirements for building insulation up to the passive house standard.

STEEL REINFORCEMENT FOUNDATION ON CONCRETE WORKING SURFACE



Net and beam steel diam 12



SEWAGE PREPARATION



All drains and rain drain pipes (will be hidden later on in the wall elements) are fitted to the first net and then secured with the second net. This keeps them in the right place and level height when pouring concrete.

L-STEEL FROM FOUNDATION TILL ROOFSLAB



The entire perimeter is fitted with vertical L-steel from foundation to roof plate.

EARTHING CABLE ACROSS THE ENTIRE PERIMETER AND FIXED TO THE STEEL COLUMNS



Earthing cable
according bill of
quantities

CONCRETE POUR FOUNDATION ANNEX TERRACES.



Concrete pour and wathering afterwards to avoid cracking. Red dots protect against the vertical steel going into the wall blocks to roof slab

ALIGNMENT OF CORNERS AND THE FIRST ROW OF BLOCKS



At first we align the corners and load bearing internal walls. rainwater drains are installed in the walls



WALL REINFORCEMENT ACCORDING STUDY



Steel diam 10 is used in all external walls. Vertical every 25cm and horizontal every blockline. U-steel is used in every corner and connected with the vertical steel. At T-junctions L-steel is used on both sides again connected with the vertical steel

CONCRETE POUR EXTERNAL WALLS



CONCRETE POUR FOR THE FIRST 4 BLOCK LINES. TOP IS PROTECTED WITH STRONG PLASTIC FOIL TO AVOID DAMAGE DURING POUR. WE POUR EACH FOUR BLOCK LINES. WALL ELEMENTS ON TOP OF THE WINDOWS INCLUDE STEEL BEAMS. LAST 4 BLOCK LINES ARE POURED TOGETHER WITH THE ROOF SLAB

INTERNAL LOAD BEARING WALLS BEFORE POURING THE ROOF SLAB.



Each corner of the load Bearing walls is reinforced with diam10 vertical steel Going until the roof slab. The holes in the Ytong blocks are filled with concrete.

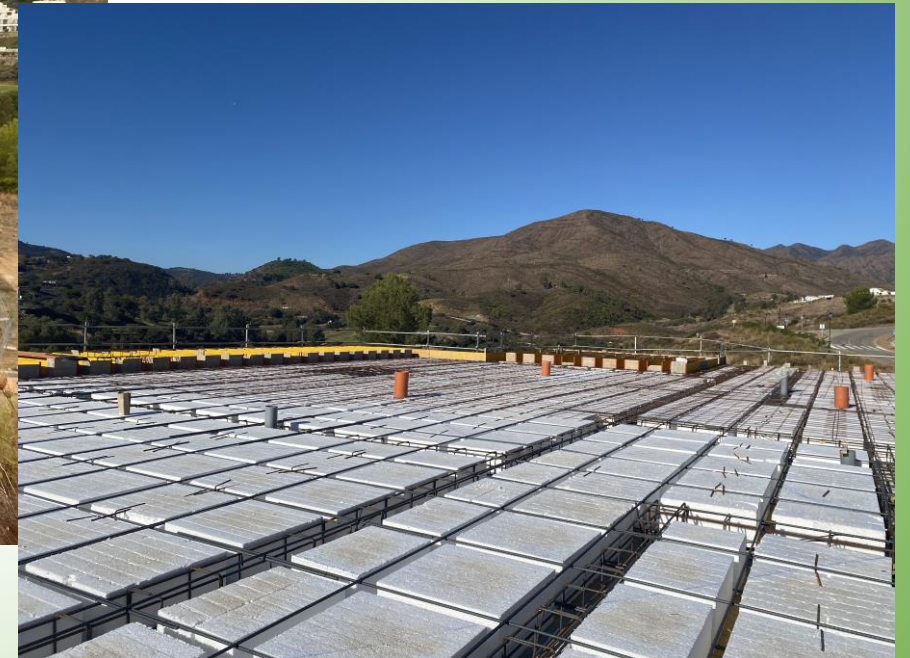
READY FOR ROOF WORKS



Internal height from floor to ceiling will be 2,8m with 2,8m high invisible doors

START ROOF WORKS

Shuttering and EPS
insulation
before reinforcement



ROOF SLAB PROGRESS



ROOF SLAB FINISHED



ROOF PERIMETER AND SOLARUIM WALLS



Roof walls rough construction



ROOF WATERPROOFING

PEC 3000 waterproofing



JACODUR ROOFTOP INSULATION AND LEVEL



POOL



Foundation



Finished pool walls
and reinforcement
surrounding terraces



Rough construction
finished

POOL LEVEL AND PREPARATION SEATS AND STEPS CHILL OUT.



Reinforcement chill out



Special mix for solid underground pool level



Seats and steps rough works chill out before waterproofing



Rough pool level before waterproofing layer

VILLA 15 IN LA CALA WHEN FINISHED
INCLUDING 16 SOLAR PANELS, HOME BATTERY AND CHARGING
POST FOR ELECTRIC CAR



FINISHED ROUGH CONSTRUCTION IN DENIA



600M2 TWO FLOORS WATER AND WINDPROOF



FLAT ROOF WITH SOLAR PANELS

<https://youtu.be/KSAkjG0XWMI>

LINK TO CONCRETE
POUR EXTERNAL
WALLS