Ajuntament de Barcelona

Municipal Institute of Urban Landscape and Quality of Life

Technical Directorate

PARTY-WALL REMODELLING PLAN

View to 2030

Municipal Institute of Urban Landscape and Quality of Life
Technical Directorate

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INTRODUCTION

Party walls are anonymous walls that divide properties. Although they don't play a prominent role in the building's external appearance, they can end up being exposed in a permanent temporary state as a result of urban planning changes. When this happens, it creates a discontinuity in the landscape, a rupture in the urban fabric, which can cause serious structural and habitability problems for neighbouring properties and have a marked visual impact on public spaces.

Party walls are often seen as the result of changes in the city's urban-planning regulations. This has led to impacts or overbuilt plots which are hard to fit into current land uses. Likewise, urban-planning transformation processes in specific areas or the implementation of infrastructure are other government initiatives which are the reason for many of these walls.

The presence of exposed party walls not only creates the image of an unfinished city but also leads to thermal and constructional deficiencies in the housing units, as they are not designed to be external façades.
Twenty-five years ago, with the aim of eliminating these urban discontinuities and creating new façades that are integrated into the urban landscape, the Plan for the Remodelling of Party Walls in the City of Barcelona was launched.

BACKGROUND

Management tools

Over the years, the Plan has been implemented through three lines of work to take on the remodelling of the city's party walls.

1. The Municipal Institute of Urban Landscape and Quality of Life's (IMPUQV) own projects (funded with exceptional advertising on construction-site scaffolding tarps): ***In-house programme***
2. Support for private initiatives with guidance and financial aid (Housing Consortium subsidies, IMPUQV subsidies via the call for grant applications to foster the protection and improvement of the urban landscape): ***Grant programme***
3. Landscape fees from exceptional advertising on the party wall limited to four years, as well as actions stemming from the conditions required of the advertising tarps of exceptional landscape authorisations (Business investment): ***Advertising programme***

Changes in the types of projects

The Plan started with architectural pictorial proposals that sought to integrate the party wall into the landscape using the language of the building's main façade. The proposals themselves gradually started adding construction solutions to improve the features and finishes, often with new openings.

The inclusion of solutions incorporating artwork by known designers (calligrams, visual poems, etc.) or created in participatory processes were an opportunity to bring literature and art to the street, as well as to create spaces for sociocultural projects.

As the regulations gradually adapted to the new sustainability needs, the construction solutions for party walls also adapted with the introduction of thermal insulation to improve the building's habitability.

Subsequently, with the goal of complying with the Greenery and Biodiversity Plan, vegetation and spaces for protected bird habitats started to be included. Greening has gradually been introduced into different types of projects with the goal of yielding a wide range of results. The feasibility of these incorporations can then be assessed in order to define the best strategic approach to this matter.

Architectural proposals which produce photovoltaic energy have been developed in conjunction with the Barcelona Energy Agency within the context of different energy plans. Some of them even seek self-sufficiency with solar energy capture and the use of rainwater to water the vegetation.




The working method

The IMPUQV has focused on permanent party walls (defined as "consolidated" by the OUPU and not affected by urban planning) which reach the ground in squares and parks, given their greater impact on the landscape and therefore on city residents.

In the past, the annual project programmes have been established based on the districts' requests for public space redevelopment projects, or on the basis of their own research, both for public and privately owned party walls. The aim has been to ensure an equitable distribution of the projects in the city and to adapt the solutions to the conditions of each site.

What's been done and what's left?

Over the past 25 years, a total of 848 party walls have been remodelled under the guidance or supervision of the IMPUQV:

- 102 projects in the *In-house programme* (average of 4 per year)
- 607 projects in the *Grant programme* (24 per year)
- 139 restorations in the *Advertising programme* (5-6 projects per year)

The city of Barcelona is known to have more than 40,000 party walls, although this figure reveals nothing about their position, size or impact on public space. By more carefully analysing this figure, in accordance with the surveying work undertaken by the IMPU, we can estimate that around 6,000 have a prominent presence in public spaces.

Following the current development lines, methodology, pace of investment and human capacity, it would take around 80 years to address all these party walls. This has prompted a reconsideration and reinforcement of the project's strategies.

GENERAL ANALYSIS

Below, the Plan is analysed using the SWOT methodology in order to pinpoint the key factors and the strategies to be implemented in order to improve.

Weaknesses

- The pace of the IMPUQV's in-house projects is slow, given that it has a small team, significant paperwork is involved, project costs are high and resources are limited.
- The in-house programme finances almost the entire amount of each project, so its funding capacity is limited.
- The financial feasibility of the projects in the advertising programme comes from very specific party wall locations that can earn the income required for the operation.
- Even though generous funding is provided via the grant programme, only a limited number of properties actually take advantage of it.

Threats

- Property owners' lack of knowledge about the improvement opportunities available to them.
- Property owners tend to deal with the walls when there is a building need, but seldom for reasons such as the landscape, sustainability or improvements in habitability.
- The economic impact per square metre of investment is quite high.
- Projects with other elements in addition to the architecture (greenery, solar or water collection, unique elements, etc.) lead to permanent conservation and maintenance burdens for the municipal government.
- Maintaining greenery has become difficult for the parties tasked with this responsibility, both because of the technical specificities and the high cost of maintaining horizontal greenery.
- Projects that include vegetation, and which therefore must occupy public space, can only be developed by the municipal government.

Strengths

- We are improving the interior habitability of homes by opening up new windows and balconies.
- We are helping to improve the energy performance of the buildings involved by adding thermal insulation.
- Ground floors are being given a second life with the opening of new establishments and entrances for residents, thus resolving the issue of spaces and corners that are likely to be used inappropriately.
- We are meeting the requirements of city plans:

  - Nature Plan. By increasing vertical greenery and fostering biodiversity.
  - Climate Plan. By improving buildings' energy performance and producing clean energy.
  - Gender-based urban planning. By trying to focus on problematic spaces.
  - Neighbourhood Plan. By introducing projects aimed at highlighting sociocultural features.
- We have gained experience in managing local resident communities.
- The typological and compositional diversity tested over these 25 years has yielded particular solutions for each location and enables us to assess the feasibility of each technical solution.
- We have become an international leader in taking advantage of the opportunities party walls offer and have shared this experience with cities including Valencia, Madrid, Valparaíso, Medellín, Bogotá and Havana.

Opportunities

- The lockdown highlighted the need for homes to be connected to the outdoors. Consolidated party walls enable these connections to be made by creating new openings and even balconies.
- Understanding the current situation in the city would enable the problem to be scaled and quantified in terms of time and economic investment.
- In order to share the opportunities that can transform façades in these particular locations, a specific, direct communication campaign is needed.

RELAUNCH OF THE PARTY-WALL PLAN

Objective

The purpose of this proposal is, firstly, to situate ourselves and gain an overview of the current state of the city's party walls in terms of main types, their current state and the general classification. Secondly, it enables us to identify possible approaches, determine their scope and draw up a tentative budget.

Inventory

The need to understand the actual scope and specific cases of the city's party walls has led us to draw up a new inventory that diagnoses the overall situation and enables us to classify and categorise them based on a series of parameters. The overarching goal is to come up with a new strategy based on an objective prioritisation of the projects.

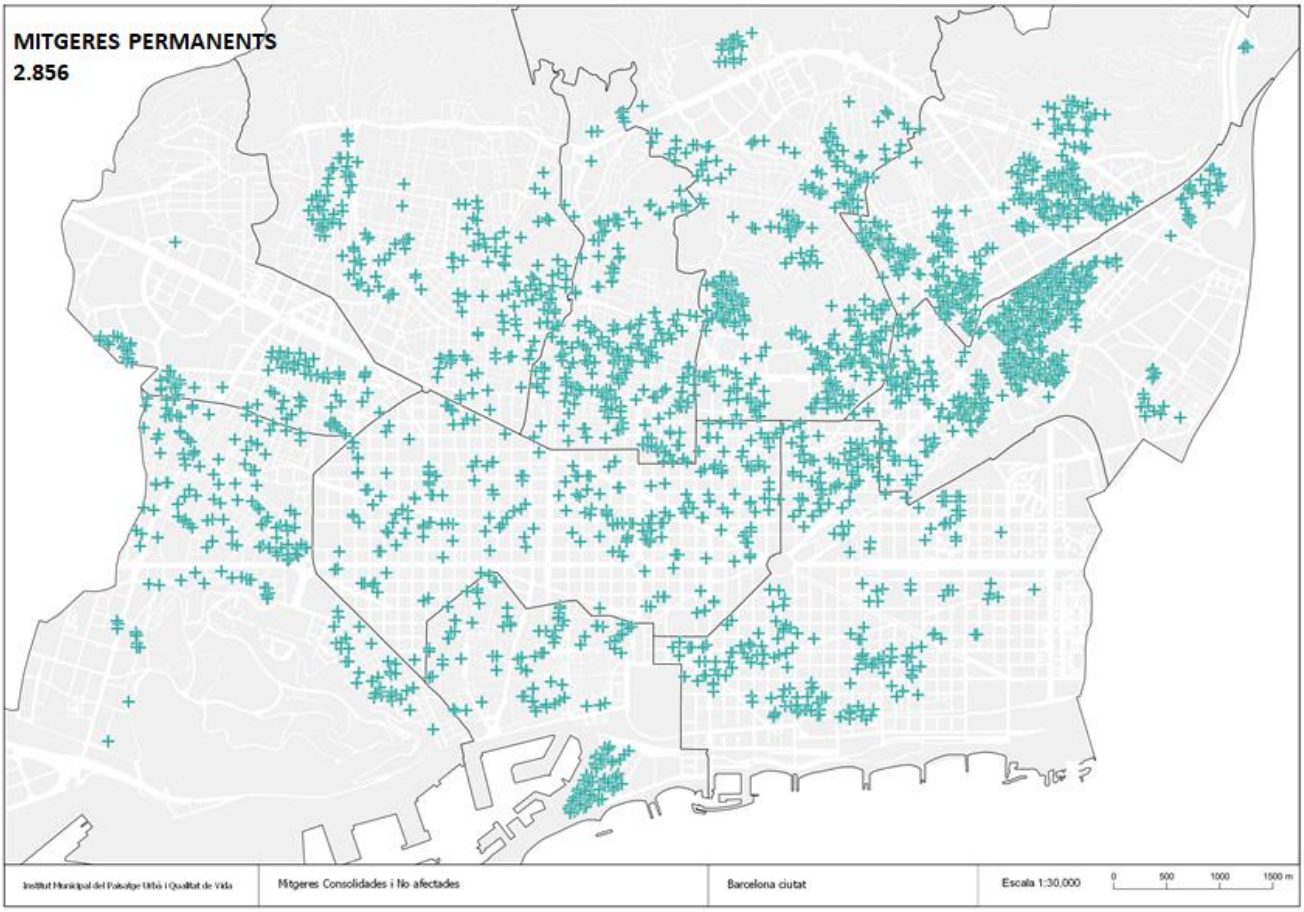
This work has been complemented by exhaustive fieldwork and georeferenced metadata.

The minimum identifiable unit is a party wall that is visible from the street and at least two storeys tall. A total of 5,923 party walls have been identified.

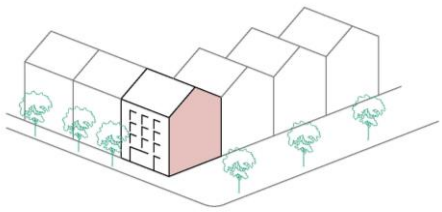
Almost 50% of them could undergo a permanent transformation, given that they will never disappear for one of two reasons:

- They cannot be covered by neighbouring buildings and defined as consolidated by the Urban Landscape Uses Byelaw.
- They are not affected by urban planning and therefore projects can be carried out to improve them.

	Properties not affected by urban planning	Properties affected by urban planning	**Total**
Party walls that cannot be covered by neighbouring buildings	**2,856**	575	**3,431**
Party walls that can be covered by neighbouring buildings	2,296	196	**2,492**
Total	5,152	771	**5,923**



These 2,856 permanent party walls cover a total area of approximately 635,000 m².



As the starting point of the strategy to relaunch the programme, consolidated party walls not affected by urban planning have been taken into consideration, given that they are unlikely to disappear.
The remaining party walls are not classified as high priority given that they are likely to be covered or to disappear. They can be addressed with the specific grant programme offered by the IMPUQV.

The city is exposed to constant urban-planning changes which lead to the appearance and disappearance of party walls. In order to have a valid database, the inventory must be kept up to date. This is why we should consider the possibility of automating the data, either by updating the elevations in the land registry or by cross-referencing data on urban-planning changes.

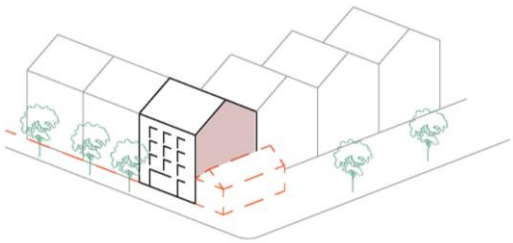
Project strategy

With the goal of prioritising party walls according to their impact on public spaces, especially those that may receive an overall treatment, they are classified according to the following list:

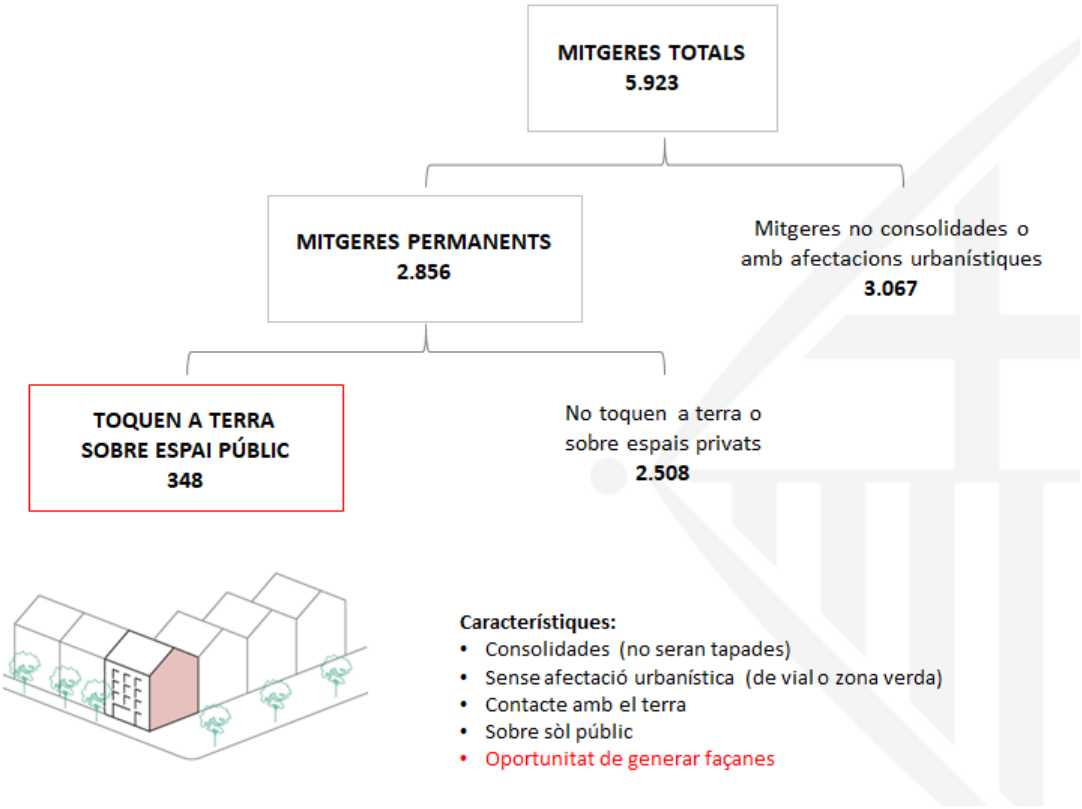
Neighbouring building	**Reaches the ground**	**Does not reach the ground**	Total
Parks and Gardens	**128**	*21*	**149**
Roads and squares	**220**	*53*	**273**
Facility	96	73	**169**
On a building lot	813	1,452	**2,265**
Total	**1,257**	**1,599**	**2,856**

This classification shows that there are 348 (128 + 220) party walls that border on public spaces, reach the ground and have an area of at least 100 m^2, and that therefore could benefit from a project under this programme.
That is, not only could their energy performance be improved but a new façade could be created by opening up windows and ground floors. **These are the party walls classified as top priority and therefore the ones to join the in-house programme to restore party walls.**

The 74 (21 + 53) consolidated party walls not affected by urban planning on public spaces that do not reach the ground may seem jarring. Those are the party walls whose base touches a built lot encumbered by a future public space (future urban planning classification of 5 or 6). In these cases, when the public space is developed, the party wall will have to be reconditioned.



In this initial selection, the 169 party walls whose base is in a space meant for a facility were not taken into consideration, given that they have to be studied on a case-by-case basis in order to ascertain who their owners are, whether they have reached their building restrictions and whether any space is set aside for future expansions. Nor were the party walls that rest on a building or a lot suitable for building taken into consideration.



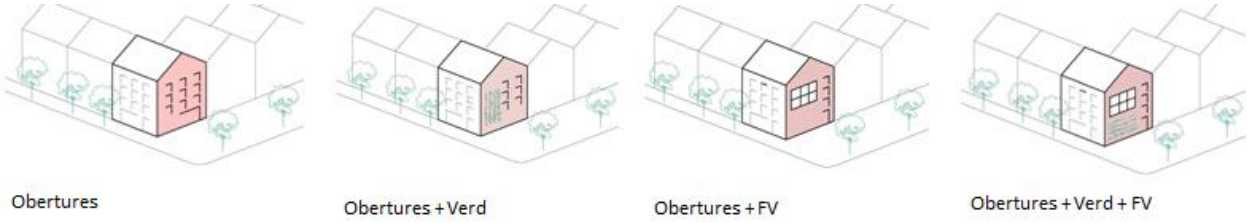
Objective prioritisation

Once the party walls to be addressed in the programme have been chosen, the prioritisation proposal will involve weighing the possible projects in order to bring added value, cross-referencing them with the area's degree of urban vulnerability and choosing the ones that would have the highest impact on the landscape.

Thus, with the goal of prioritising the party walls in the most vulnerable settings which could bring added value to the architecture, the possibilities are:

- Generation of photovoltaic electricity, if they have a degree of solar radiation/m^2 higher than 800 KWh/m^2 per year
- Vertical vegetation, because they are associated with a green corridor, are located in areas which lack natural spaces or access to such spaces or lie directly in city parks and squares which have already been greened.

In all cases, the core project involves a thermal improvement of the party wall with a treatment of the façade that integrates it into the surroundings and, when the internal layout allows it and there is interest on the part of the owners, incorporates new openings.



Project \ Vulnerability	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Openings + PV + Greenery	High	High	Very high	Very high	Very high	Very high
Openings + Greenery	High	High	Very high	Very high	Very high	Very high
Openings + PV	High	High	Very high	Very high	Very high	Very high
Openings	Low	Low	Average	Average	Average	Average

MUNICIPAL IN-HOUSE PROGRAMME

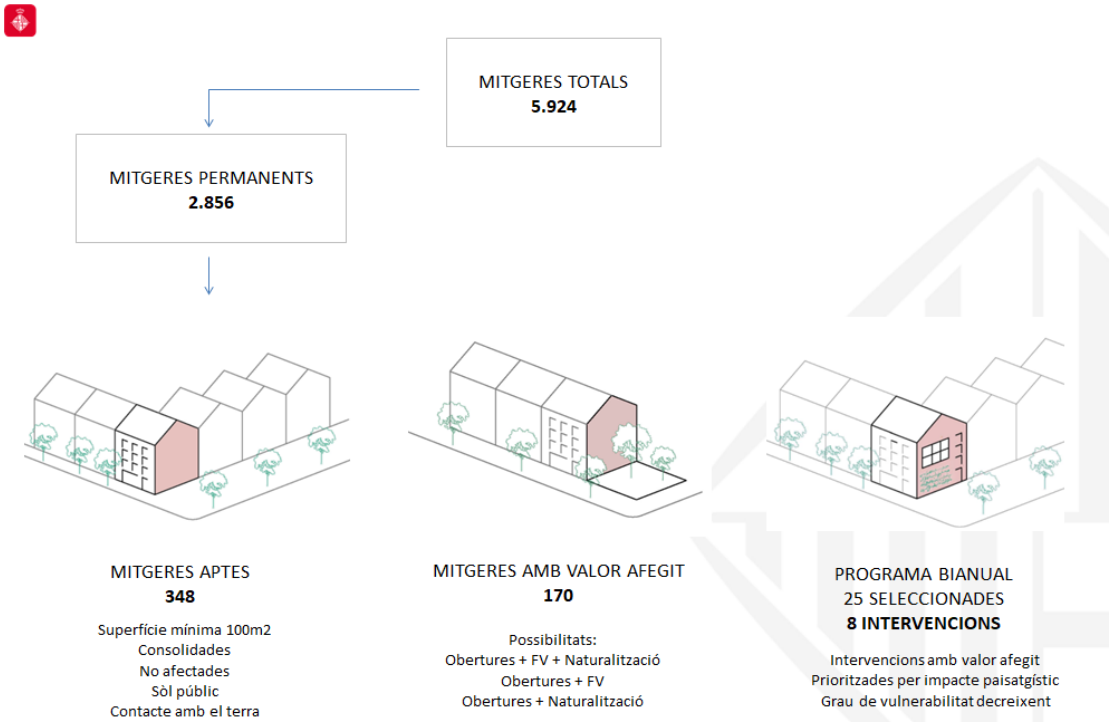
The application of the criteria described in the section above results in the following tally:

Project \ Vulnerability	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	TOTALS
Openings + PV + Greenery	8	15	14	5	2	---	**44**
Openings + Greenery	25	32	25	19	9	1	**110**
Openings + PV	5	2	7	2	---	---	**16**
Openings	40	60	47	23	6	1	**177**
TOTALS	**78**	**109**	**93**	**49**	**17**	**2**	**348**

Therefore, there are 170 party walls which not only reach the ground and face public areas but can also have the added values of incorporating greenery and capturing photovoltaic energy.

Once the priorities are defined, and given the large number of party walls detected where added value could be implemented (170), **biannual in-house project programmes are planned for 8–10 sites, beginning with the most vulnerable parts of the city and working in descending order from 6 to 1.** At the levels where the number of party walls exceeds the annual programme's capacity, a detailed study will be conducted of all of them and an expert committee will choose the ones to prioritise based on their greater impact on the landscape.

For the remaining party walls, where only a renovation with openings is possible (177), the proposal is to reinforce the specific IMPU grant programme in order to encourage proposals based on private initiative.



Programme eligibility notifications

Express notifications will be sent to the housing units informing them that their party wall is one of the 25 chosen by the biannual programme and that they are eligible to join this programme so that they can contact the administrator if they are interested.

If more residents' associations are interested than the programme can accept, they will be chosen on a first come, first served basis, leaving those not chosen for the following year.

Funding

The economic allocation needed to achieve the set goal (170 party walls) is approximately €24 M.
Based on prior experience, it is calculated that 30-35% of the projects will not be carried out, meaning that the final budget will drop to approximately €15 M.
Within a 10-year time frame, there will be annual programmes of 8-10 projects with a budget of **€1,500,000/year.**

Project	No.	Area (m²)	Budget
Openings + PV + Greenery	**44**	**14,500**	**€7,700,000**
Openings + Greenery	**110**	**35,200**	**€12,485,000**
Openings + PV	**16**	**4,000**	**€1,700,000**
TOTALS	**171**	**53,700**	**€23,685,000**

The total cost of the private initiative proposals to open windows is estimated at €10 M. The public investment cost would be **€500,000/year** given 60% public grants and a ten-year time frame, assuming 15-20 projects per year.

The IMPU's total budget to relaunch this plan would be **€2 M/year**.

Potential

The relaunch strategy with the investment required over ten years opens up the following opportunities:

- Millorar el paisatge urbà de la ciutat generant **348 NOVES FAÇANES**

- Millores tèrmiques en 5.923 mitgeres, afectant directament aprox. **24.000 habitatges**

- Possibilitat de posar verd en **155 mitgeres,** suposant un **increment de 15.000 m2**
  (en els anteriors 10 anys hem incrementat en 5.000 m2)

- Possibilitat de generar fins a 1.925 mitgeres productives, incrementant en **17.600 MWh/any d'energia neta**
  (+ de 200% de la producció AEB actual de la ciutat, uns 8.000 MWh/any)

ANNEXES

Parameters analysed in the inventory

The inventory was conducted via extensive fieldwork coupled with a spatial analysis and georeferenced data.
In order to analyse the result, different parameters were established according to the possible projects. After combining these parameters, we were able to classify the party walls and create the lines of work used to prioritise the projects.

Description of the location

- Postal address of the building where the party wall is located
- Land registry reference of the lot where the party wall is located
- Primary use of the lot where the party wall is located according to the land registry (residential, commercial, industrial, office, etc.).
- Whether or not the lot where the party wall is located is owned by the city
- Year the building was constructed

Geometric data on the party wall

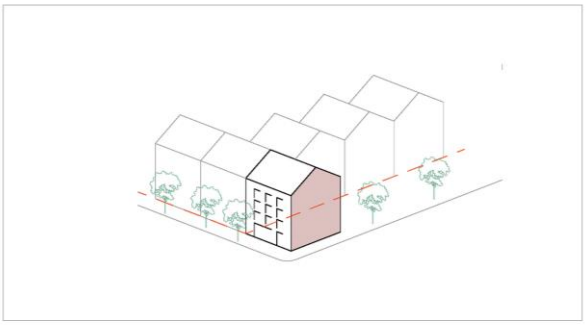
- Total area of the party wall in m^2
- Maximum height any of the points in the party wall
- Base height(minimum height) of any of the points in the party wall
- Contact with the ground. Automatic parameter, no distinctions made based on size. The ones chosen should be reviewed.
- Orientation of the party wall (may be more than one direction)

Urban-planning factors

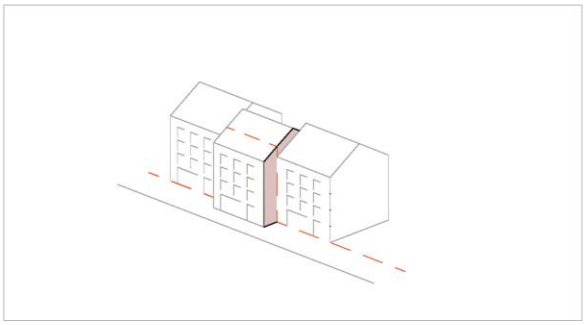
- Type of land on which it is located, according to the urban-planning classification (building lot, facility, road or green zone).
- Whether the building where the party wall is located is catalogued as a heritage building
- Urban-planning status of the building, which determines the ability to work with the building; if it is affected by an urban plan, the building could disappear when that plan is implemented. The urban-planning impact may be total or partial due to one of the following situations:
    - Green zone or road
    - Change in road alignment
    - Urban-planning management area

It should be noted that over-building (volume does not comply with the General Metropolitan Plan, or PGM) and the contstruction potential of the building itself or the neighbouring buildings were not assessed.

Landscape factors

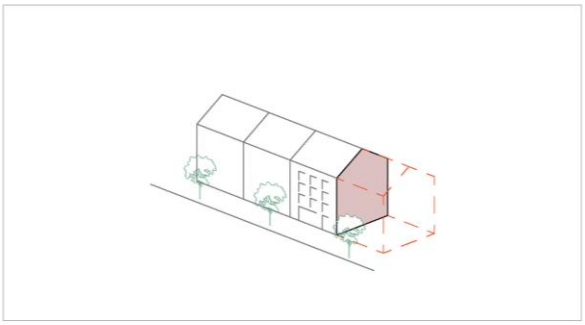


Mitgera consolidada | Afectació total per canvi d'ús

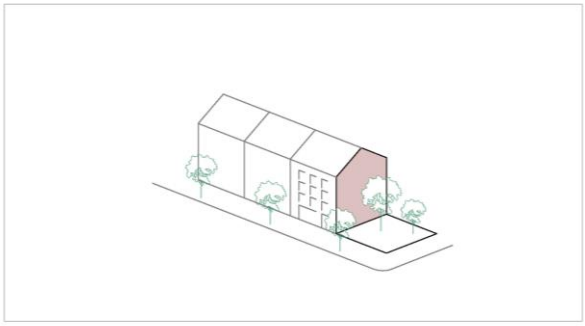


Mitgera consolidada | Afectació parcial per alineació de vorera

- Consolidation of the party wall. Determines whether it could be covered by a neighbouring building. The Urban Landscape Uses Byelaw (OUPU) defines consolidated party walls as those that meet one of the following conditions:
  - It borders on, belongs to or is near a listed building or garden.
  - It falls totally or partially on the street or inside a city block.
  - It is on a lot or part of a lot meant for a facility or green zone.
  - It has not been found to be above the maximum regulatory height of the building next to it or if it has a view easement.



Mitgera no consolidada



Mitgera consolidada

- The visual impact of the party wall. Levels are estimated based on a multi-criteria analysis according to the width of the road, whether or not it is located on a corner and the size of the party wall. Right now, this is a parameter used under subjective criteria while a method to automate it is being developed.

Urban setting

- Level of overall vulnerability according to the Municipal Institute of Urban Planning's Urban Regeneration Programme (PRU) for Barcelona. The map of overall vulnerability includes 6 levels. A setting is considered vulnerable if it falls within levels 3 to 6. This study combined the data from 58 indicators in the following 5 thematic areas:

    - Quality of the urban environment
    - Efficiency of resource use
    - Cohesion and social well-being
    - Functional and social diversity
    - Integration and geographic balance

  The PRU's strategy suggests a list of 65 specific urban regeneration projects organised into 6 areas:

    - Improving building conditions
    - Improving the quality of living space
    - Improving the everyday urban environment
    - Improving community health
    - Strengthening social cohesion and neighbourliness
    - Improving the provision of local activities and services

  The Improving the Quality of Living Space area specifically fosters the values of the Party-Wall Plan regarding the improvement of energy efficiency, energy production, the possibility of opening windows and balconies and the inclusion of greenery and biodiversity.

  The Projects To Conserve and Improve the Building Stock area includes restoring façades and proposes improvements in ventilation and natural lighting.

  The Improving the Perception of The Surroundings area proposes eliminating eyesores and degraded areas.

  Given this connection between the areas and strategies of the Urban Regeneration Programme and the Party-Wall Plan, it is important to link the resulting vulnerability index to the in-house programme.

Potential

- Party wall surface's capacity for solar energy capture :
  Annual solar radiation
    - Of the party wall as a whole (KWh/year)
    - According to its area (KWh/m^2 year)

- Possibility of greening according to the location of the party wall:
    - Green corridor, determining its relationship with vegetation-rich urban areas which criss-cross the city.
    - Areas where vegetation needs to be increased according to the 2030 Nature Plan.
    - Areas with a lack of accessibility to green spaces
    - Civic hubs which prioritise pedestrians

Mapping the inventory and party walls completed

There is a database with both the inventory and the projects completed over the years, which can be checked by different departments.
It is currently posted on the Knowledge Portal, and the goal is to make it open to the public soon.