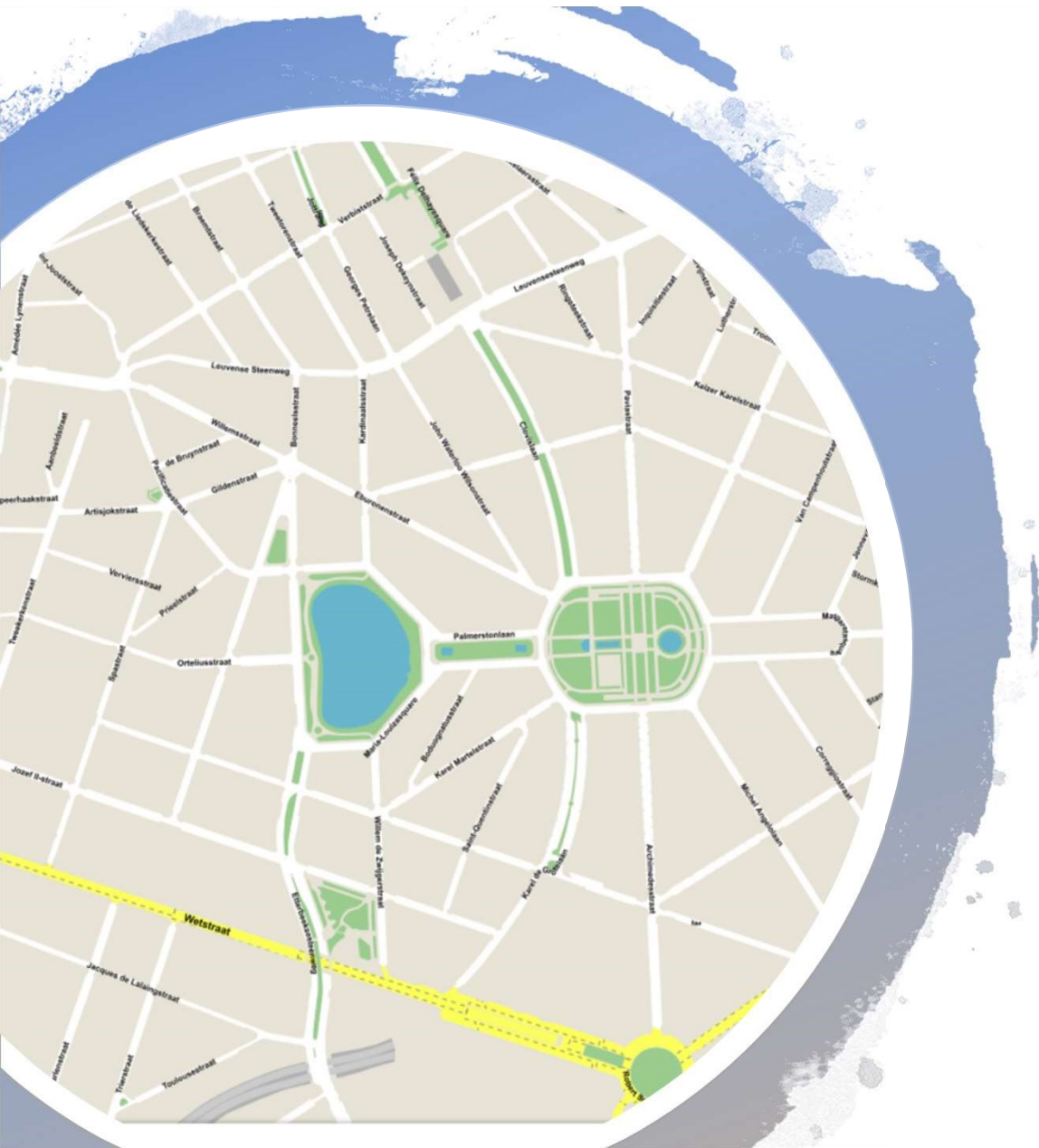
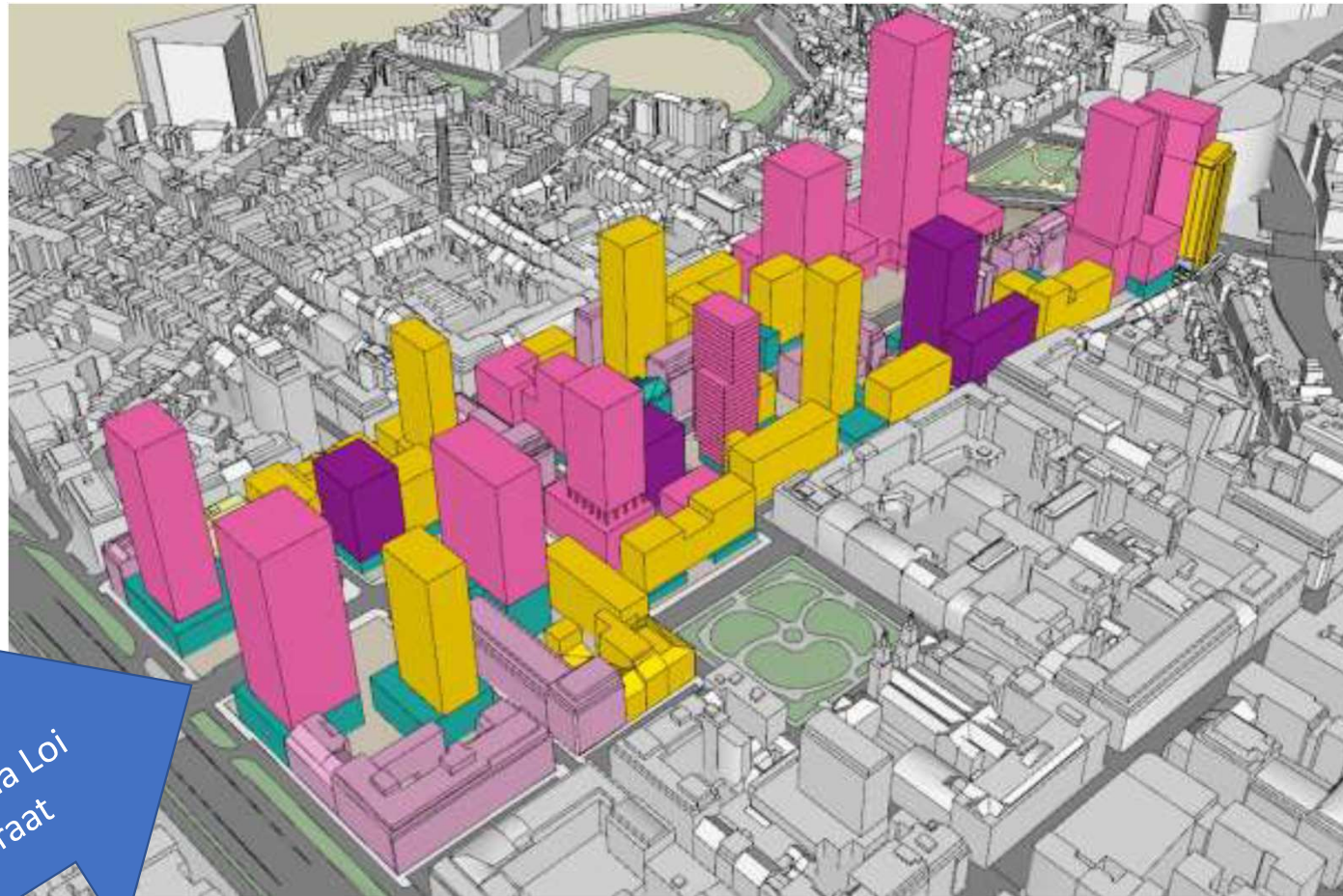




**GAQ (inhabitants committee)  
presents:**

**Sunshadow  
PAD Loi/Wet &  
CE Towers Loi/Wet 130**

# PAD – the future ...? What about the sun?







10:40

PAD Loi/Wet & EC towers of 165m & 114m high

Sunshadow on  
21 December:

|       |       |      |
|-------|-------|------|
| Time  | 165m  | 114m |
| 10:00 | 1211m | 837m |
| 10:40 | 838m  | 579m |

@GAQ inhabitants committee



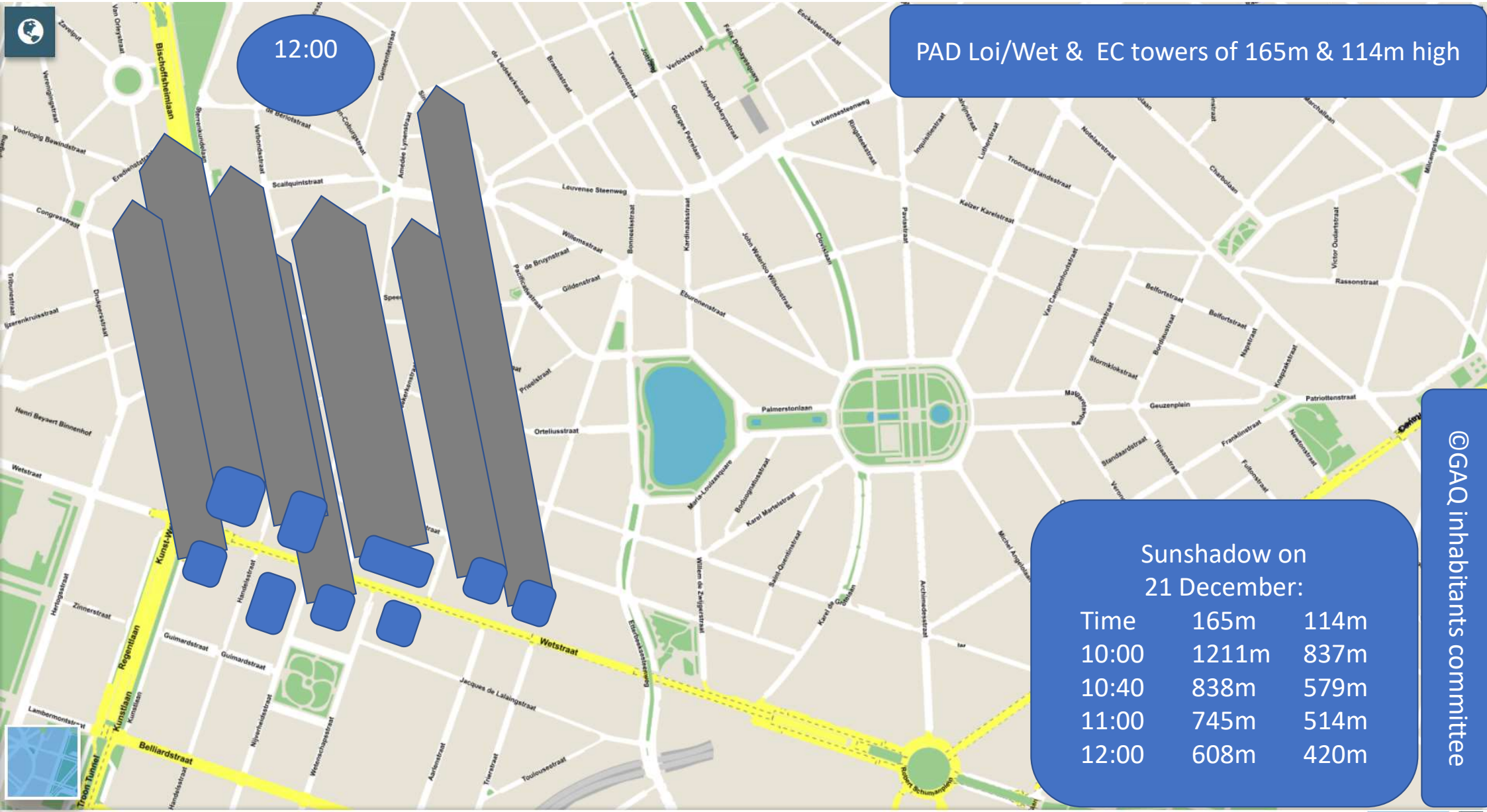


PAD Loi/Wet & EC towers of 165m & 114m high

Sunshadow on  
21 December:

| Time  | 165m  | 114m |
|-------|-------|------|
| 10:00 | 1211m | 837m |
| 10:40 | 838m  | 579m |
| 11:00 | 745m  | 514m |

@GAQ inhabitants committee

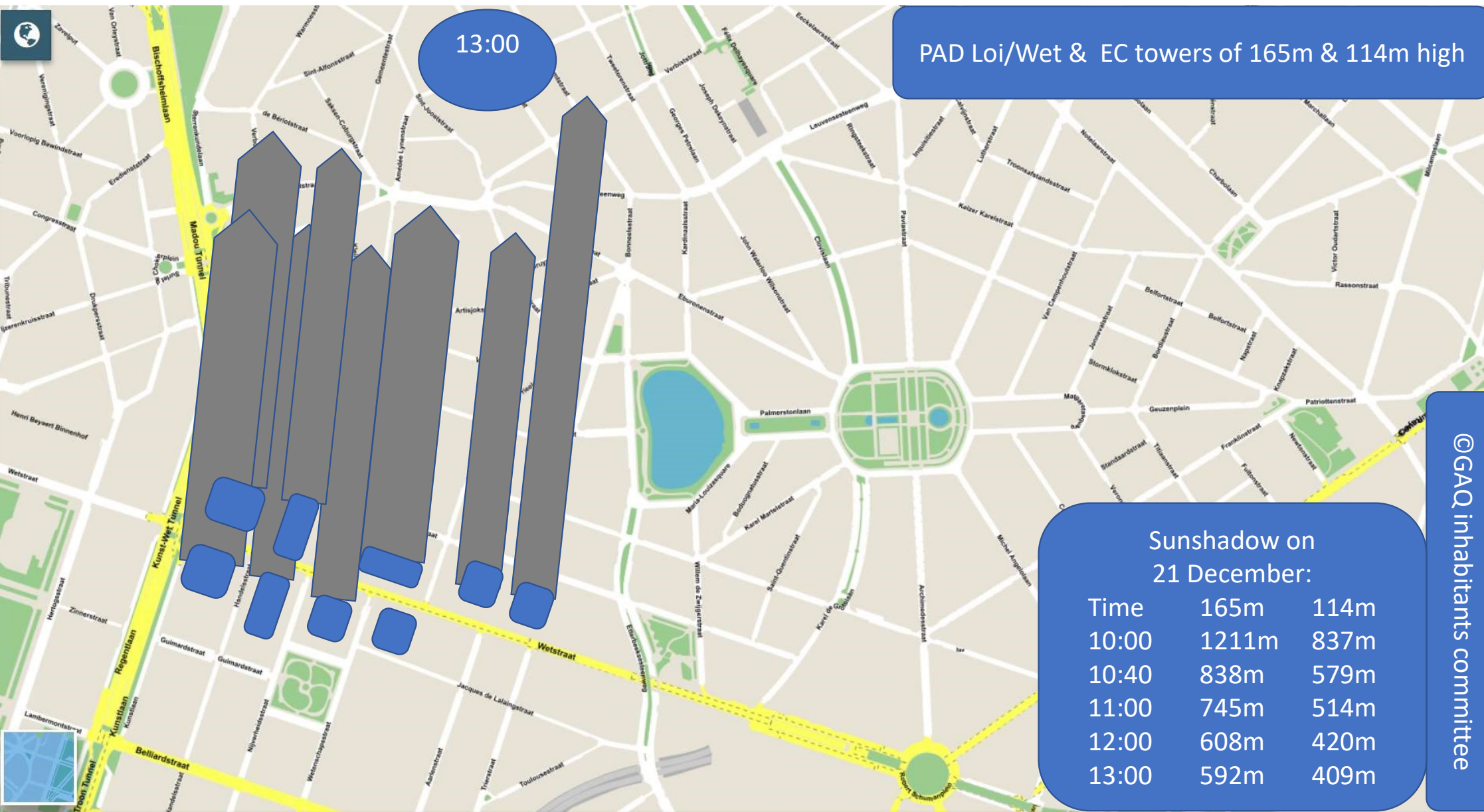






13:00

PAD Loi/Wet & EC towers of 165m & 114m high



@GAQ inhabitants committee

Indicative kaart - Gerealiseerd door BruGISTeam

100 m Schaal: 1 : 5000



14:00

PAD Loi/Wet & EC towers of 165m & 114m high

Sunshadow on  
21 December:

| Time  | 165m  | 114m |
|-------|-------|------|
| 10:00 | 1211m | 837m |
| 10:40 | 838m  | 579m |
| 11:00 | 745m  | 514m |
| 12:00 | 608m  | 420m |
| 13:00 | 592m  | 409m |
| 14:00 | 680m  | 469m |

@GAQ inhabitants committee





@GAQ inhabitants committee



@GAQ inhabitants committee





Loi/Wet 130 - EC towers of 165m & 114m high

21 December  
Shadow clock of EC tower  
23 September

Sunshadow on  
23 September:

| Time  | H:165m |
|-------|--------|
| 8:35  | 2338m  |
| 9:00  | 934m   |
| 10:00 | 387m   |
| 11:00 | 275m   |
| 12:00 | 219m   |
| 13:00 | 194m   |
| 14:00 | 192m   |
| 15:00 | 212m   |
| 16:00 | 261m   |
| 17:00 | 358m   |
| 18:00 | 583m   |
| 19:00 | 1599m  |

@GAQ inhabitants committee

114m high  
on Arts/Loi

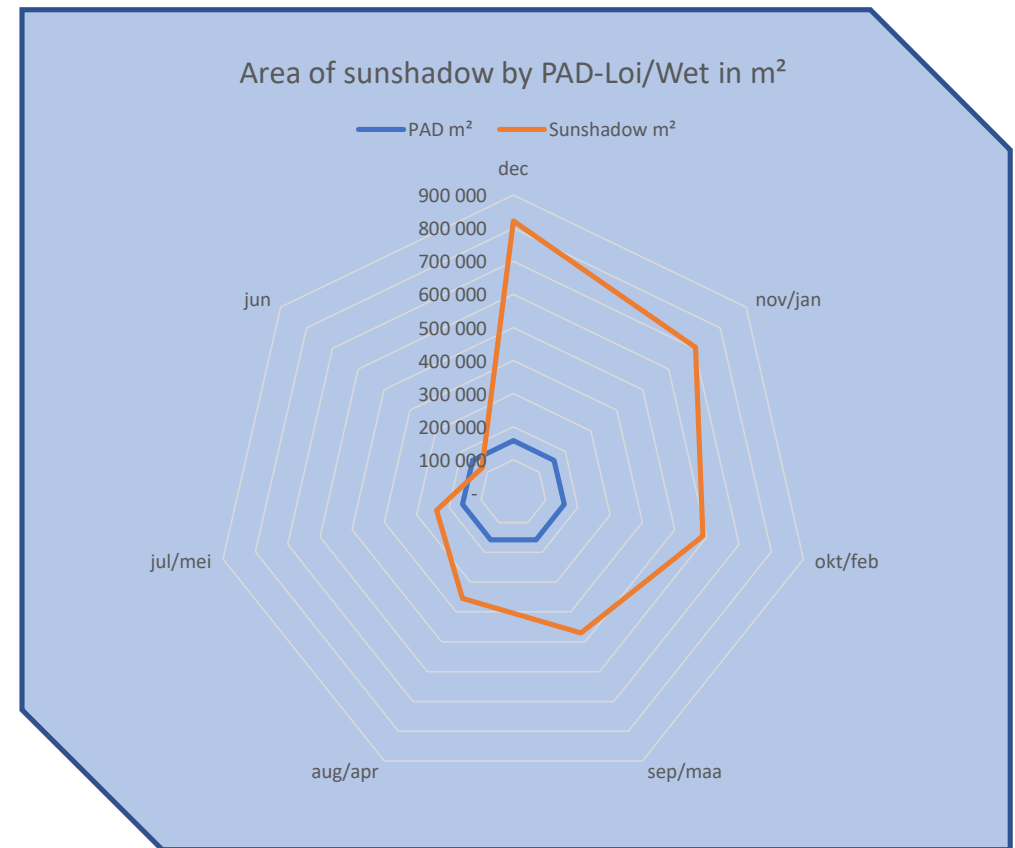
165m high on  
LOI/Wet 130

Shadow clock 21 June



# How big is the area under threat of sun shadow from the 14 skyscrapers?

- In June, sunshadow covers about 12 hectares (ha) = 120 000 m<sup>2</sup>
- Shade is north of Loi/Wet
- In July 24ha & August 36ha
- Sun shadow: 47 hectares in Sept
- Shades in Oct 58ha & Nov 70ha
- Darkens 82 hectares in December
- In Brussels NE and St Josse
- ***PAD Loi/Wet could deprive 15 000 to 25 000 inhabitants of their winter sun!***
- PAD ignores this external effect or says its impact is minor – only in one spot!
- Forget about placing sun-panels!



# Sunshadow per hour: part of street affected per hour of day on 21 December

| Hour of day          | 10  | 11  | 12   | 13   | 14  | 15   | Average |
|----------------------|-----|-----|------|------|-----|------|---------|
| Street (North-south) |     |     |      |      |     |      |         |
| Marie-Thérèse        | 0,8 | 1   | 0,8  | 0,9  | 1   | 1    | 0,92    |
| Deux Eglises         | 0,5 | 0,8 | 0,9  | 1    | 1   | 1    | 0,87    |
| Spa                  | 0,3 | 0,5 | 0,8  | 0,8  | 1   | 1    | 0,73    |
| Philippe le Bon      |     | 0,2 | 0,3  | 0,5  | 1   | 1    | 0,60    |
| Street (East-west)   |     |     |      |      |     |      |         |
| Jozeph II *          | 0,6 | 0,7 | 0,75 | 0,75 | 0,7 | 0,9  | 0,73    |
| Stevin *             | 0,5 | 0,6 | 0,65 | 0,7  | 0,7 | 0,95 | 0,68    |
| Marteau/ Ortelius    | 0,3 | 0,5 | 0,6  | 0,7  | 0,9 | 0,95 | 0,66    |

\* Josef II and Stevin from Ave des Arts until Rue Livingstone

- On 21 December, all streets north of Loi/Wet are most of the day in shade from PAD = 82 hectares !
- During October, November, December, January, February, March: dark season will be really dark.
- Sunpanels not viable – winter semester accounts for one quarter of annual production of solar energy.



# Sunshadow per hour: part of street affected per hour of day on 21 September

| Hour of day          | 10  | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | Average |
|----------------------|-----|------|------|------|------|------|------|------|------|---------|
| Street (North-south) |     |      |      |      |      |      |      |      |      |         |
| Marie-Therese        | 0,1 | 0,2  | 0,25 | 0,3  | 0,35 | 0,3  | 0,3  | 0,2  | 0,1  | 0,23    |
| Deux Eglises         | 0,2 | 0,25 | 0,3  | 0,35 | 0,35 | 0,3  | 0,3  | 0,25 | 0,25 | 0,28    |
| Spa                  | 0,2 | 0,25 | 0,3  | 0,35 | 0,35 | 0,3  | 0,3  | 0,3  | 0,3  | 0,29    |
| Philippe le Bon      |     |      |      |      | 0,2  | 0,2  | 0,3  | 0,3  | 0,5  | 0,30    |
| Street (East-west)   |     |      |      |      |      |      |      |      |      |         |
| Jozeph II *          | 0,5 | 0,6  | 0,7  | 0,75 | 0,8  | 0,85 | 0,85 | 0,75 | 0,6  | 0,71    |
| Stevin *             |     |      |      | 0,3  | 0,5  | 0,7  | 0,9  | 1    | 1    | 0,73    |
| Marteau/ Ortelius    |     |      |      | 0,1  | 0,3  | 0,4  | 0,3  | 0,3  | 0,3  | 0,28    |

\* Josef II and Stevin from Ave des Arts until Rue Livingstone

- On 21 September, north-south streets are partly in shade from PAD and this concerns the properties closest to Loi/Wet, which get all the shade.
- East-west streets remain most of day in the shade of the wall of skyscrapers foreseen in PAD Loi/Wet
- Solar panels not viable between Avenue des Arts and Chaussée d'Etterbeek/Livingstone from Rue Joseph II to Rues Marteau & Ortelius – the 7 dark months from September through March account for one **third** of the annual production of solar energy.

# Sunshadow effect on 23 September 18:30

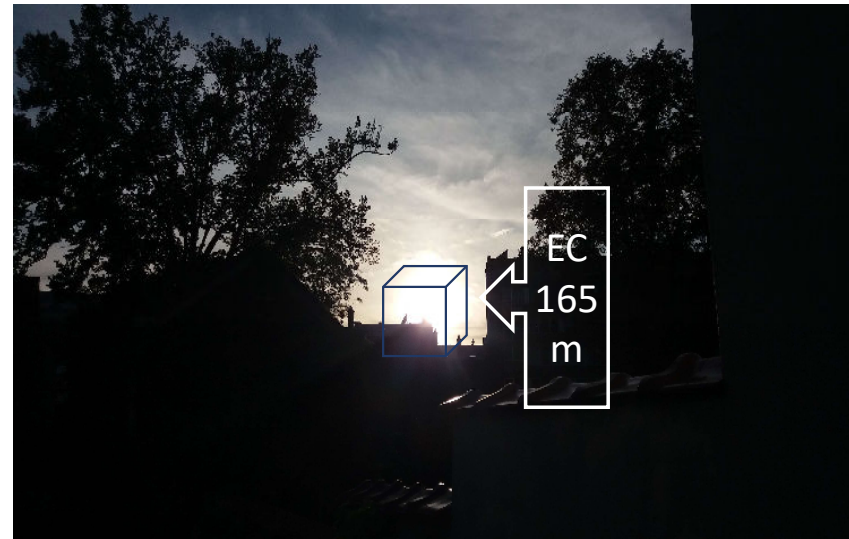
## Currently:

Enjoying the nice South-West sun on Rez-de-Chaussée in Avenue Michel-Ange, 500m away from EC towers



## Future:

EC tower 165m high will block sun = like a neighbour building two floors up - not allowed by PPAS Archimedes!



Check out your distance to the planned EC towers and construct a view of how your home will be affected using the sun clock charts in the slides before – for help, send a mail to:



# Sunshadow effect on 23 September 18:30

**And there is reflected sunshine .....**

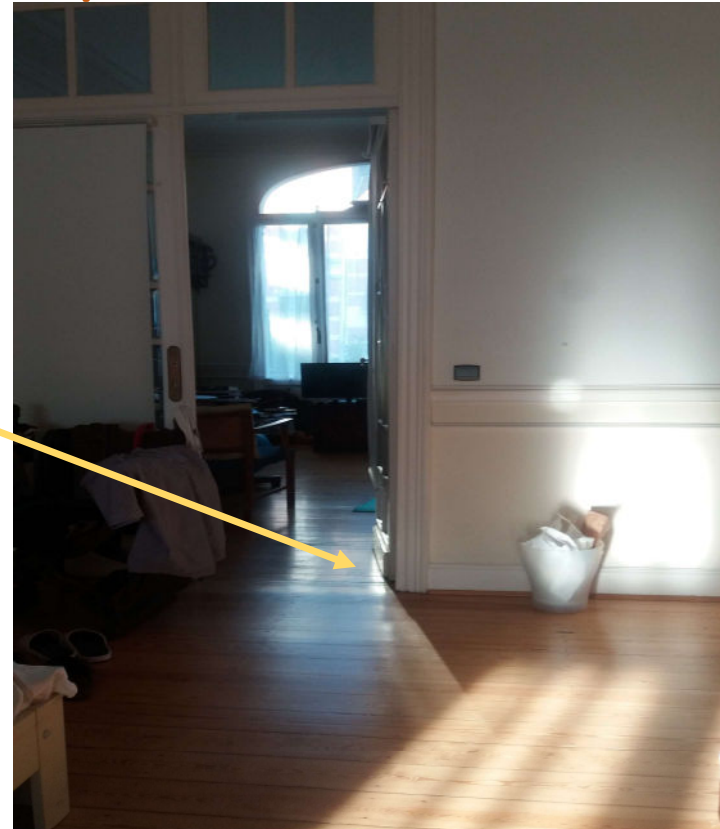
This is looking towards the north-east, the sun reflects from the windows of the house across the road facing south-west.

**Reflected sunshine is important in winter!**

Sunshadow will block both reflected sunshine (here from the north-east) and direct sunshine (here from the south-west)

High rise blocks reflected sun-shine as well!

**No reflected sunshine makes life a lot darker!**



Check out your distance to the planned EC towers and construct a view of how your home will be affected using the sun clock charts in the slides before – for help, send a mail to: [sun@gaq.be](mailto:sun@gaq.be)

# PAD...

# How about a Grand Canyon?

Trois tours de hauteur exceptionnelle de 182 à 218 m avec une surface brute de 220 000 m²

77m-114m pour les bâtiments de grande hauteur

48m-65m pour les bâtiments de hauteur moyenne

33m hauteur moyenne des bâtiments existants

Maximum sun angle at midday

61,5°  
21 June

39°  
23 Sept

14,5°  
21 Dec

future

current

20m  
Rue de la Loi

Please help to form GAQ's view on PAD and EC towers in Loi / Wet:



Send

your view on sunshade:

[urbanisme@gaq.be](mailto:urbanisme@gaq.be)