

Zonnestudie ABC Westland

De volgende bezonningsdiagrammen maken inzichtelijk of de bezonning van de nieuwbouw op de gevel en/of tuin voldoende blijft. Ook geven ze inzicht in toename van schaduw op de omgeving door de nieuwbouw.

Met een 3D-model is de bestaande situatie vergeleken met de toekomstige situatie. Hiervoor zijn de volgende maatgevende dagen van de 4 seizoenen gebruikt:

- 21 maart (lentepunt, equinox)
- 21 juni (zonnnewende; zon staat het hoogst)
- 23 september (herftstpunt, equinox)
- 21 december (zonnnewende; zon staat het laagst)

Volgens de TNO-normering zijn de volgende twee data onderzocht:

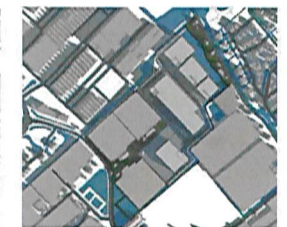
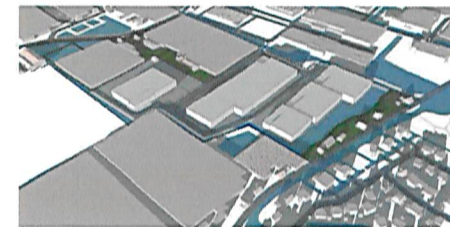
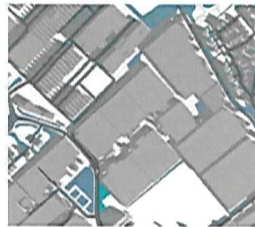
- 19 februari
- 21 oktober

19 februari (TNO)

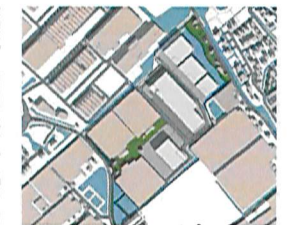
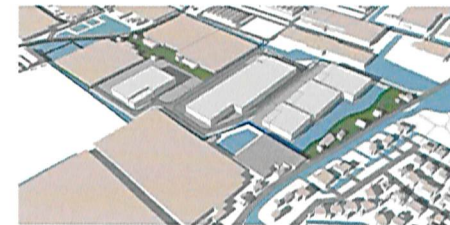
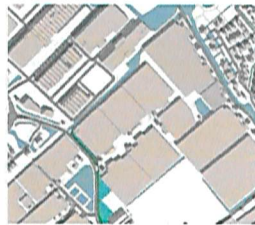
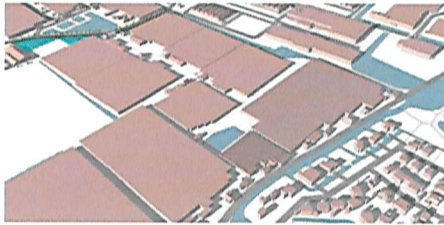
bestaande situatie

nieuwe situatie

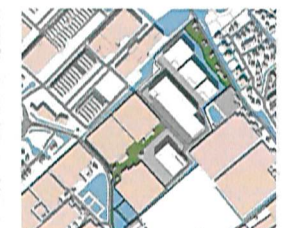
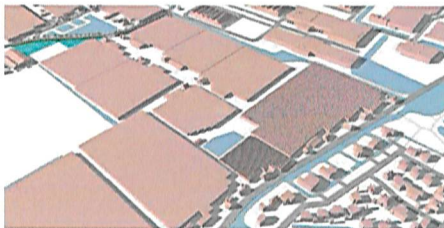
09:00



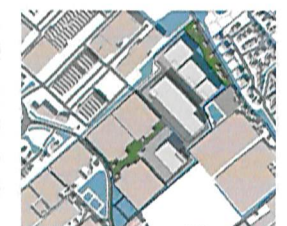
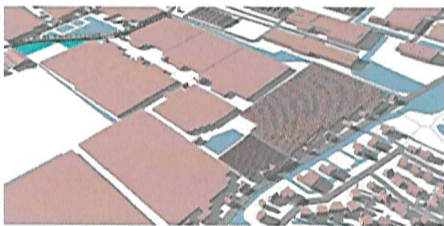
11:00



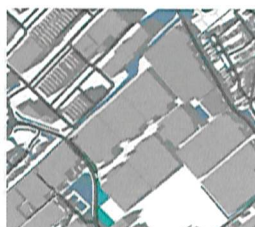
13:00



15:00



17:00

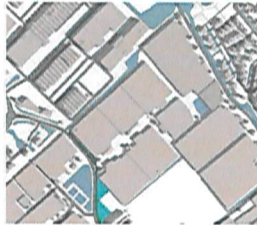
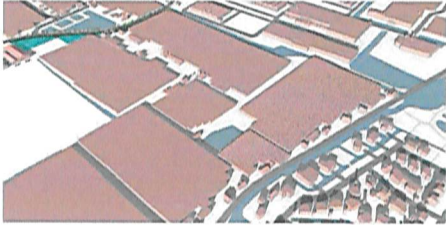


21 maart

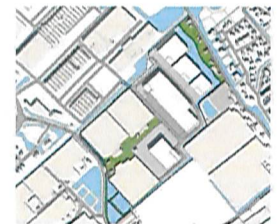
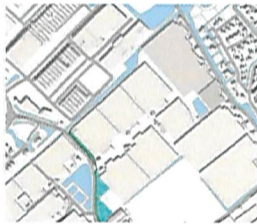
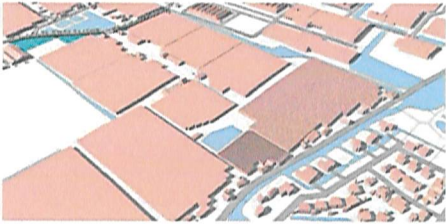
bestaande situatie

nieuwe situatie

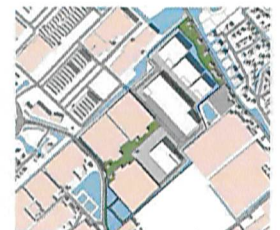
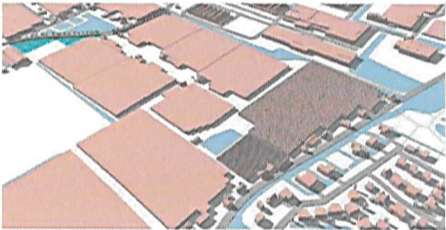
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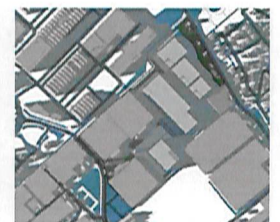
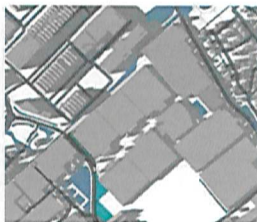
12:00



15:00



18:00



21 juni

bestaande situatie

nieuwe situatie

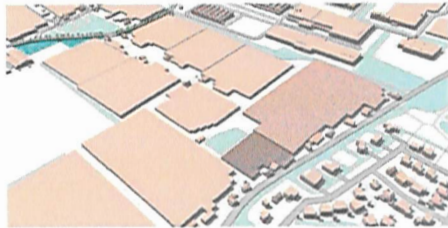
09:00



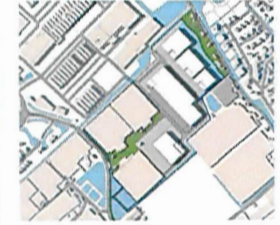
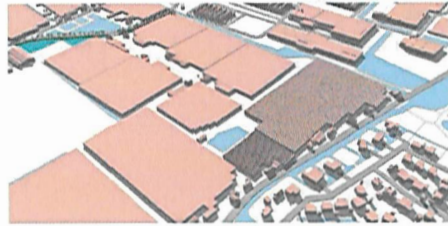
12:00



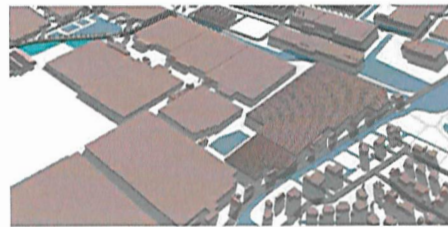
15:00



18:00



20:00

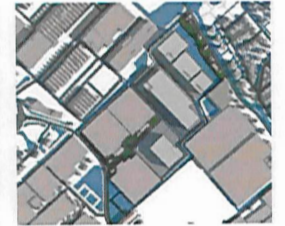
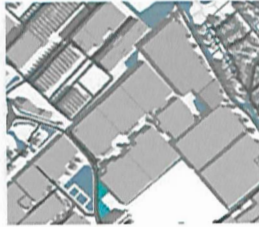
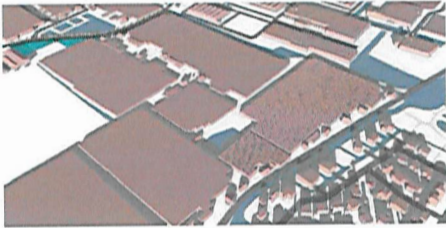


23 september

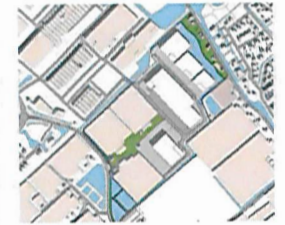
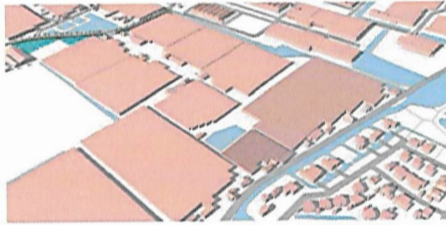
bestaande situatie

nieuwe situatie

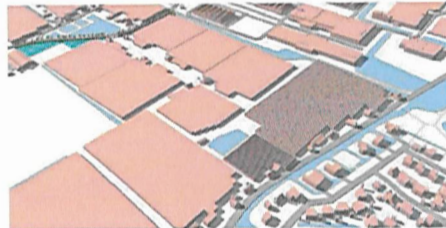
09:00



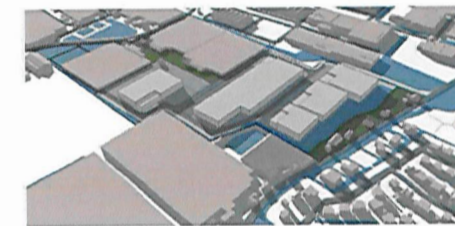
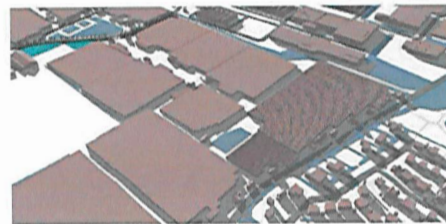
12:00



15:00



18:00

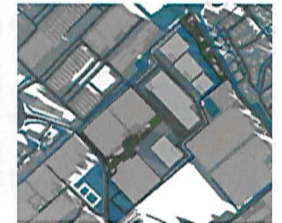
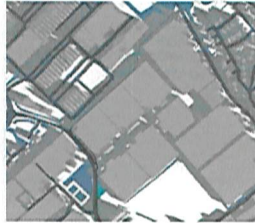


21 oktober (TNO)

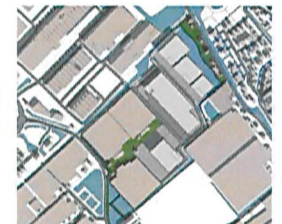
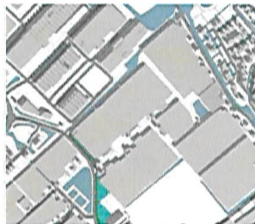
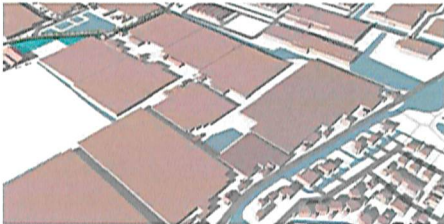
bestaande situatie

nieuwe situatie

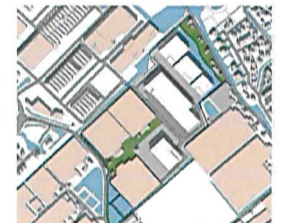
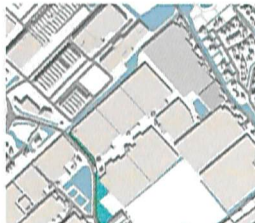
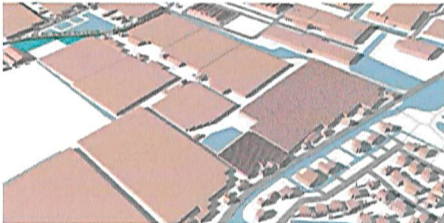
09:00



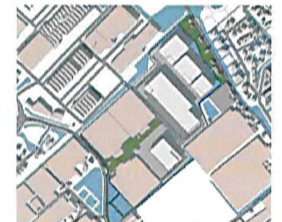
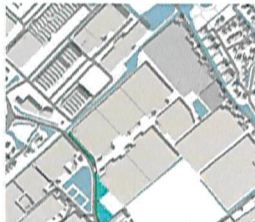
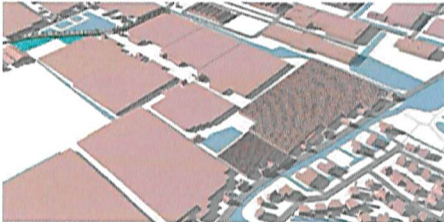
11:00



13:00



15:00

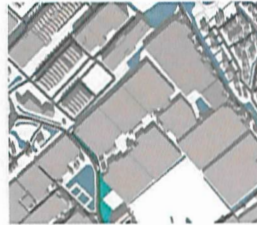
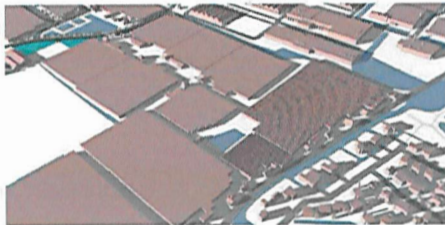


17:00

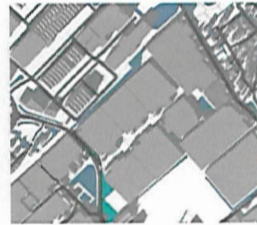
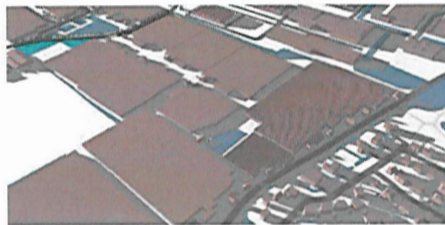


21 december

bestaande situatie

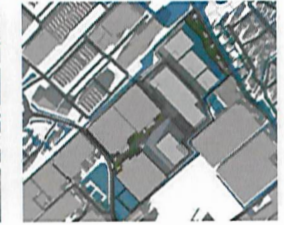
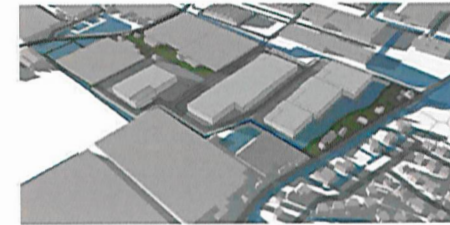


12:00

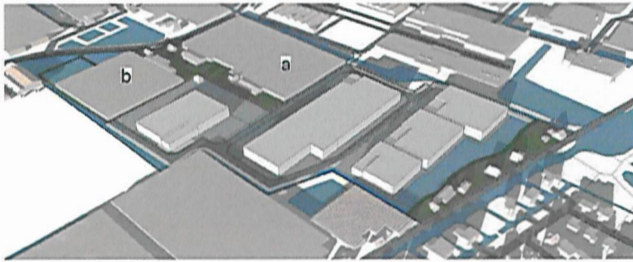


15:00

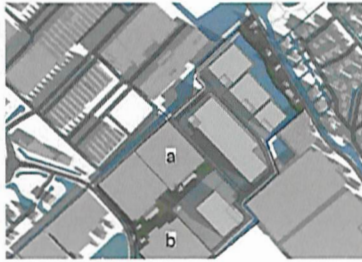
nieuwe situatie



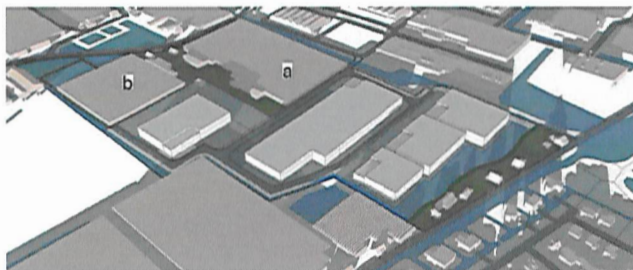
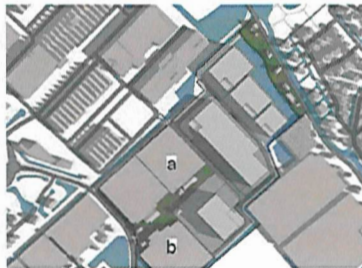
Schaduwwerking op kassen A en B



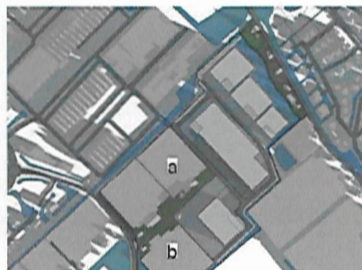
19 februari 's ochtends (< 9 uur)



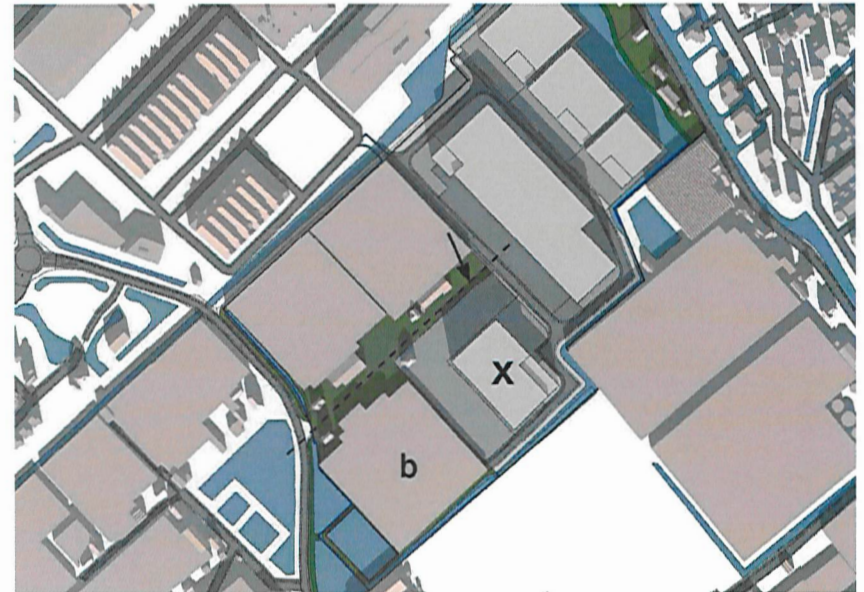
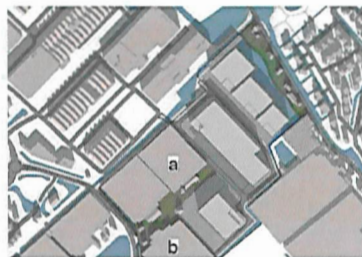
23 september 's ochtends (voor 09:00)



21 oktober 's ochtends (tussen zonsopkomst om 08:17 en 09:30 schaduw effect)



21 december 's ochtends (tussen zonsopkomst om 08:48 en 10:30 schaduw effect)



Bovenstaande illustratie toont aan dat de schaduwlijn van pand X op kritieke momenten niet verder reikt dan de schaduwlijn van de huidige kassen, waaronder kassencomplex B.

Bevindingen

21 maart

09:00 Geen effect
12:00 Geen effect
15:00 Geen effect
18:00 Geen effect

21 juni

09:00 Geen effect
12:00 Geen effect
15:00 Geen effect
18:00 Geen effect
20:00 Geen effect

23 september

09:00 Schaduweffect van zonsopkomst tot 09:00
12:00 Geen effect
15:00 Geen effect
18:00 Geen effect

21 december

09:00 Schaduweffect van zonsopkomst tot 10:30
12:00 Geen effect
15:00 Geen effect

19 februari (TNO)

09:00 Schaduweffect van zonsopkomst tot 09:00
11:00 Geen effect
13:00 Geen effect
15:00 Geen effect
17:00 Geen effect

21 oktober (TNO)

09:00 Schaduweffect van zonsopkomst tot 09:30
11:00 Geen effect
13:00 Geen effect
15:00 Geen effect
17:00 Geen effect

Conclusie

	21 maart	21 juni	23 september	21 december	19 februari	21 oktober
ochtend			schaduw (beperkt)	schaduw	schaduw (beperkt)	schaduw
middag						
avond						

Conclusie:

De uitbreiding van ABC Westland leidt tot vergelijkbare schaduwwerping als in de huidige situatie behalve in de wintermaanden, waar tot maximaal 10:30 (op 21 december) een gedeeltelijke schaduwwerking zal optreden aan de zuidzijde van het noordelijker gelegen kassencomplex A.