



THE STORY BEHIND BORSSELE'S FORM AND ORIENTATION

ORIGINS AND MEANING OF AN EARLY SEVENTEENTH-CENTURY ZEELAND VILLAGE PLAN

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Many people in the Netherlands know the name Borssele from the nuclear power plant that is situated close to the village of Borssele, on the former island of

Zuid-Beveland in the province of Zeeland. Few know, however, that the village itself is very special. It was laid out in 1616 according to a very pronounced, symmetrical plan: a rectangular square in the middle of a rectilinear street plan. Borssele is the only village in Zeeland with this kind of layout and it is not only its form that is remarkable, but its orientation as well: the village is rotated in relation to the surrounding roads and agricultural fields, something which in first

- ▲ 1. Map of the Zeeland deltas and the surrounding regions by Christiaan Sgrooten, 1573, showing the areas that were lost during the storm floods of 1530 and 1532 (left). The island of Zuid-Beveland (upper right). The location of the drowned village of Monster, where the new village of Borssele was later built (lower right) (Wikimedia Commons)

instance seems quite strange and impractical.

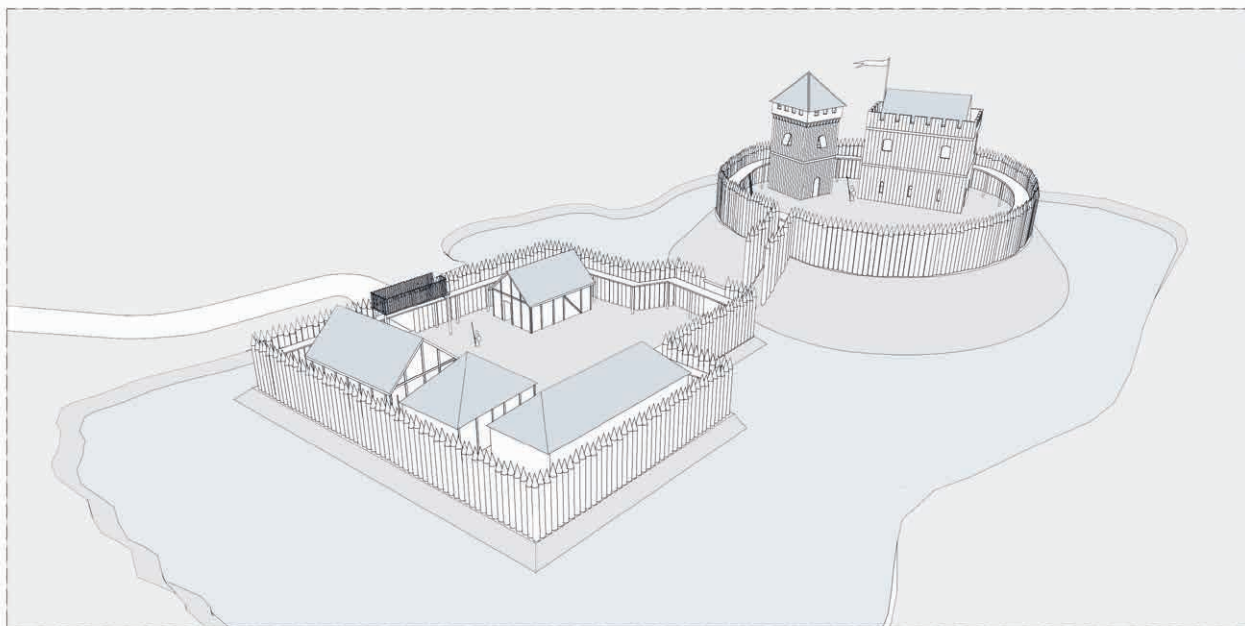
The unique form and remarkable orientation of Borssele have been discussed in several publications.¹ But questions regarding the *why* of these features are rarely asked, let alone answered. In this article we attempt to explain this atypical form and orientation. We begin with a brief account of Borssele's early history. This is followed by an analysis of the morphology culminating in an explanation of its origins and meaning by viewing Borssele in the context of a centuries-old village planning tradition in the southwestern delta area of the Netherlands.

HISTORY AND ORIGINS

The history of Borssele falls into two phases: before and after the Saint-Felix Flood of 1530 and the All-Saints' Flood of 1532. Before these devastating storm surges, Borssele was an island ruled by the lords of Borssele, an old and powerful Zeeland noble family. On the site of today's village of Borssele stood a village called Monster. This name probably derived from the

word 'monasterium', indicating the presence of a monastery or a church in the area.² Monster was located near the ancestral castle of the lords of Borssele, on an artificial hill called the Berg van Troje or 'Mountain of Troy' (fig. 2). In 1301, the castle was severely damaged during conflicts between the lords of Borssele and the count of Holland.³ After that, it fell into ruin, but the remains of the castle hill can be seen to this day. Monster was wiped out during the two storm surges and the subsequent nearly one-hundred-year period during which the waters had free rein in the area (fig. 1).

On May 11, 1616, the city council of Goes received the following jubilant message: 'yesterday, the 10th of this month, the land of Borssele was made fresh from the salt, for which God the Almighty should be praised and thanked'.⁴ The embankment of the land which had been drowned since 1530-1532 had been completed. More than 1400 hectares of fertile clay soil could now be leased to farmers and would return profits to the initiators and the city of Goes who had invested in



2. Reconstruction of the Berg van Troje castle before its destruction in 1301 (top). Plan of the castle in its current state according to archaeological data from the foundation 'Het Zeeuwse Landschap'; the fortifications and buildings from before 1301 are depicted in white (bottom) (drawings by Pieter van der Weele)



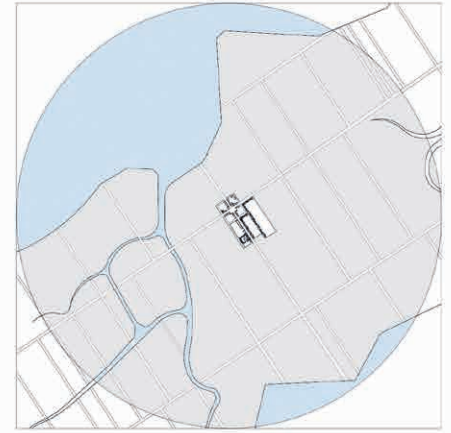
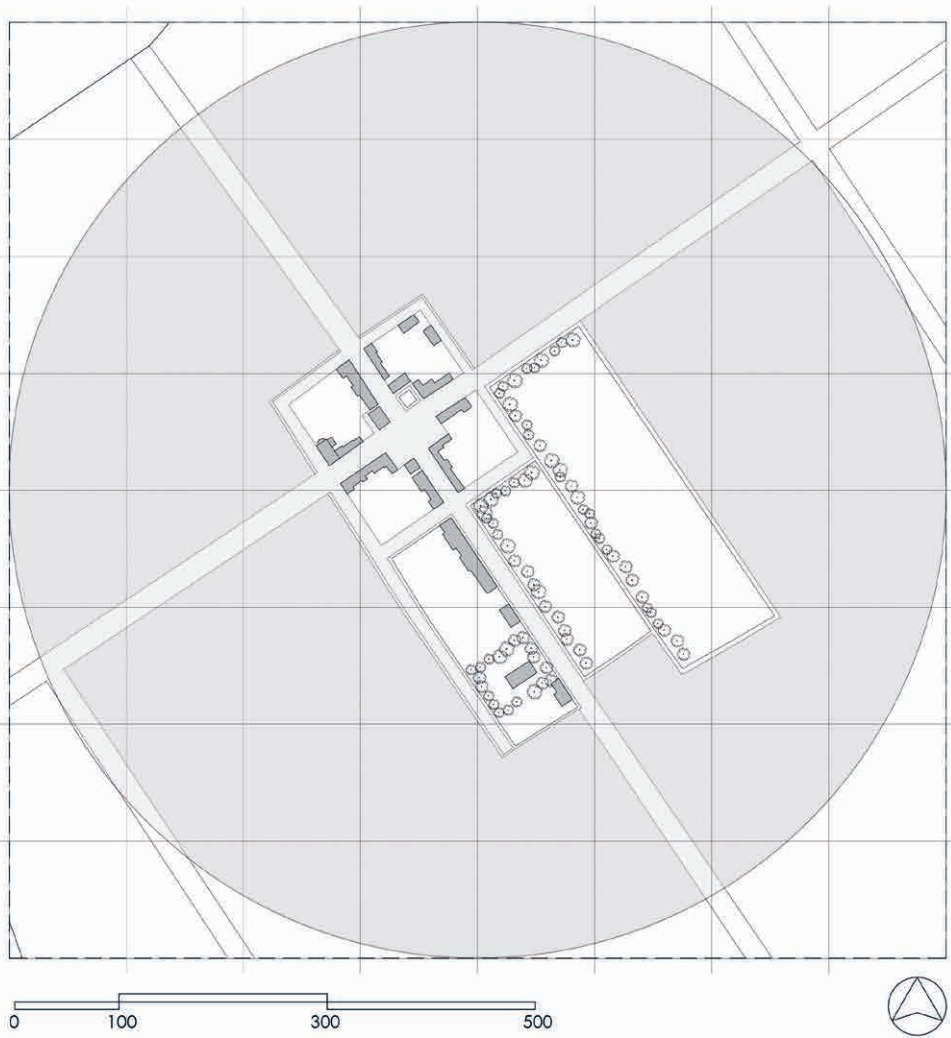


3. The embankment of Borssele drawn by D.W.C. Hattinga, around 1750, based on a map by Wilhem Tromp, 1722 (Zeeuws Archief Middelburg)

the project. The dike around the new land of Borssele was connected in the northeast to an earlier dike and in the southeast to the so-called old land.⁵ Once the dike was complete, the enclosed land was drained through three discharge basins which also served as harbours, namely the Weele, Assenburgh and Thevic. The new land was divided into arable plots of about 800 by 800 metres, separated by a grid of roads (fig. 3). A guiding principle for the orientation of that grid was the shape of the polder as determined by the dike alignment, which in turn depended on the natural substratum and situation at the time of the diking: salt marshes, mud flats, shoals, creeks, channels and the associated ebb and flood currents. On the site of the old village of Monster, beside the remains of the old Berg van Troje castle, the new village of Borssele was planned.⁶

The embankment project, which commenced in

1614, was supported by two mayors of Goes, Cornelis Soetwater and David van der Nisse, with a helping hand from the lawyer Boudweijn de Witte.⁷ Soetwater, who also held the office of dike-reeve of the Brede Watering Bewesten Yerseke polders, and his two collaborators were aided by a few other Zeeland dike-reeves and present and former mayors from the surrounding area. One of those involved in the embankment was Pieter van der Nisse, the bailiff of Nisse, who also acted as surveyor for the project, as well as for the construction of the new village.⁸ A contemporary source, an official document that has been preserved in the municipal archive of Goes, shows that Soetwater was responsible for the village plan: 'It has been discussed where the village in the territory of Borssele will be placed [...] and there to mark out on the location of the village Monster and its surroundings, in such a form as they will mutually agree upon,



4. Plan of the village of Schoondijke in the eighteenth century; the square is situated at the intersection of two important polder roads (left). The orientation of Schoondijke follows the lines of the polder grid (right) (drawings by Pieter van der Weele)

approximately in accordance with a certain concept devised by the dike-reeve Soetwater, and this has been communicated to the consortium (meaning to Soetwater et al.).⁹ This source makes no mention of the specific form of the village plan or the orientation chosen by Soetwater.

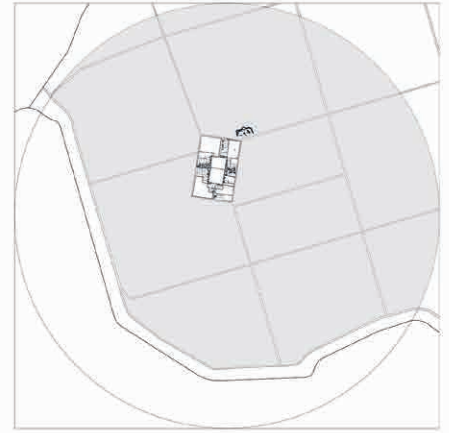
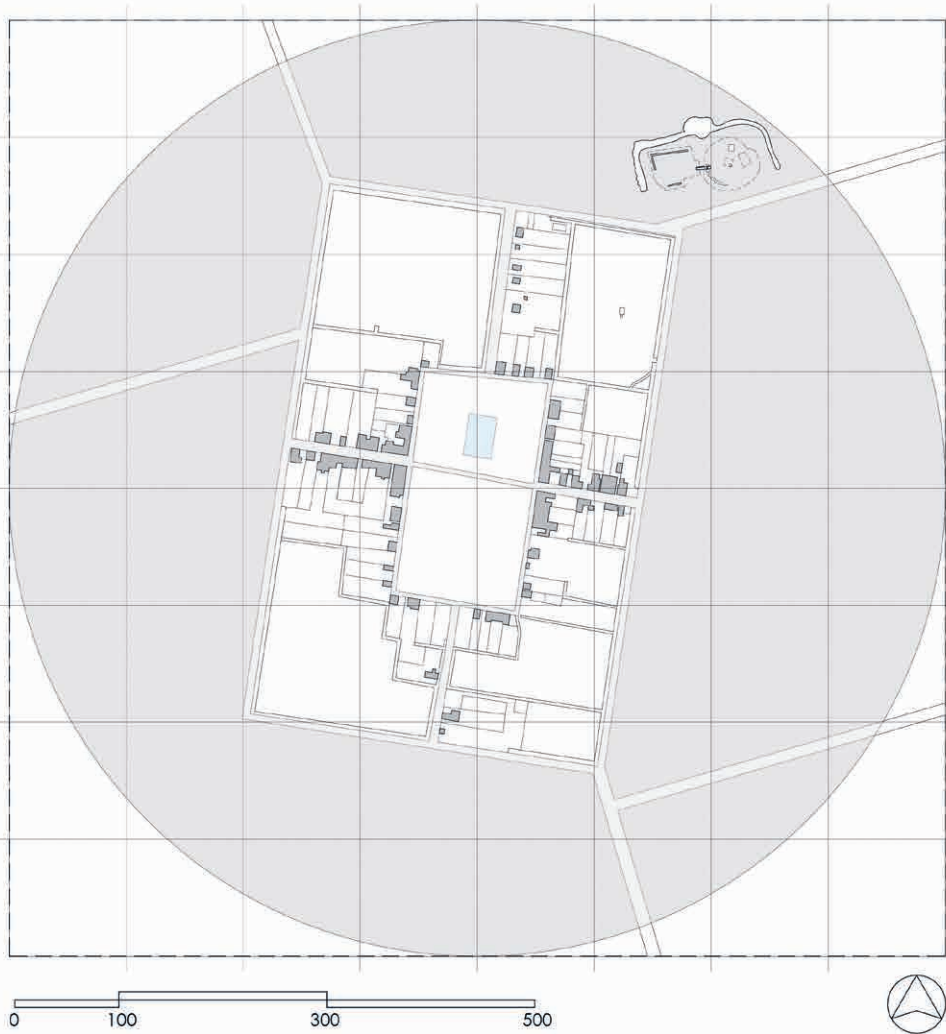
MORPHOLOGY

The historical geographer Aad de Klerk distinguishes various types of villages in Zeeland on the basis of their urban plan: church-ring villages (*kerkringdorpen*), main-street villages (*voorstraatdorpen*), ring-street villages (*ringstraatdorpen*, a combination of church-ring and main-street village), road villages (*wegdorpen*), dike villages (*dijkdorpen*) and fortified villages (*vestingdorpen*).¹⁰ Borssele could be categorized as a road village, which he said were more likely to be found in the large polders that had been diked from the seventeenth century onwards. Such villages arose from the desire to create settlements in the middle of a polder instead of at its edge. Sometimes planners opted for an intersection of two or more polder roads, which was why they were also known as ‘cross-

road villages’ (*kruiswegdorpen*). In several cases a certain degree of planning could not be excluded as evidenced by, among other things, the fact that space was reserved for the village in advance.¹¹ As a good example of such a village De Klerk mentions Schoondijke in the south of the province of Zeeland, where the polder roads intersect in the centre of the village (fig. 4).

Borssele, too, is situated on the intersection of two polder roads and has a rectangular shape, which is oriented towards the north, but the village is rotated with respect to the polder grid (fig. 5). Four streets connect the outer rectangle, which defines the boundary of the village, with the inner rectangle: the central square that forms the heart of the village. A street cuts this square in two parts. The northern part contains the ‘vate’, a water well for the cattle, while the southern part was reserved for the church and the graveyard.¹² Around this square arose private houses, the townhall and an inn.

Borssele does not lie on the edge of the polder, which is noteworthy. In the large polders in the southwestern deltas of the Netherlands, it had been the custom for centuries to establish new villages on their edge, in a



5. Plan of Borssele, founded in 1616, with the remains of the Berg van Troje castle to the northeast of the village (left). The orientation of the village of Borssele, rotated with respect to the polder grid (right) (drawings by Pieter van der Weele)

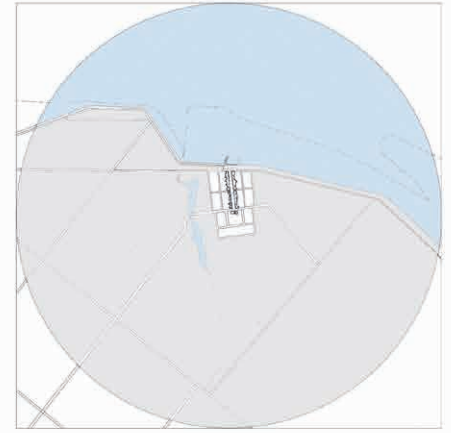
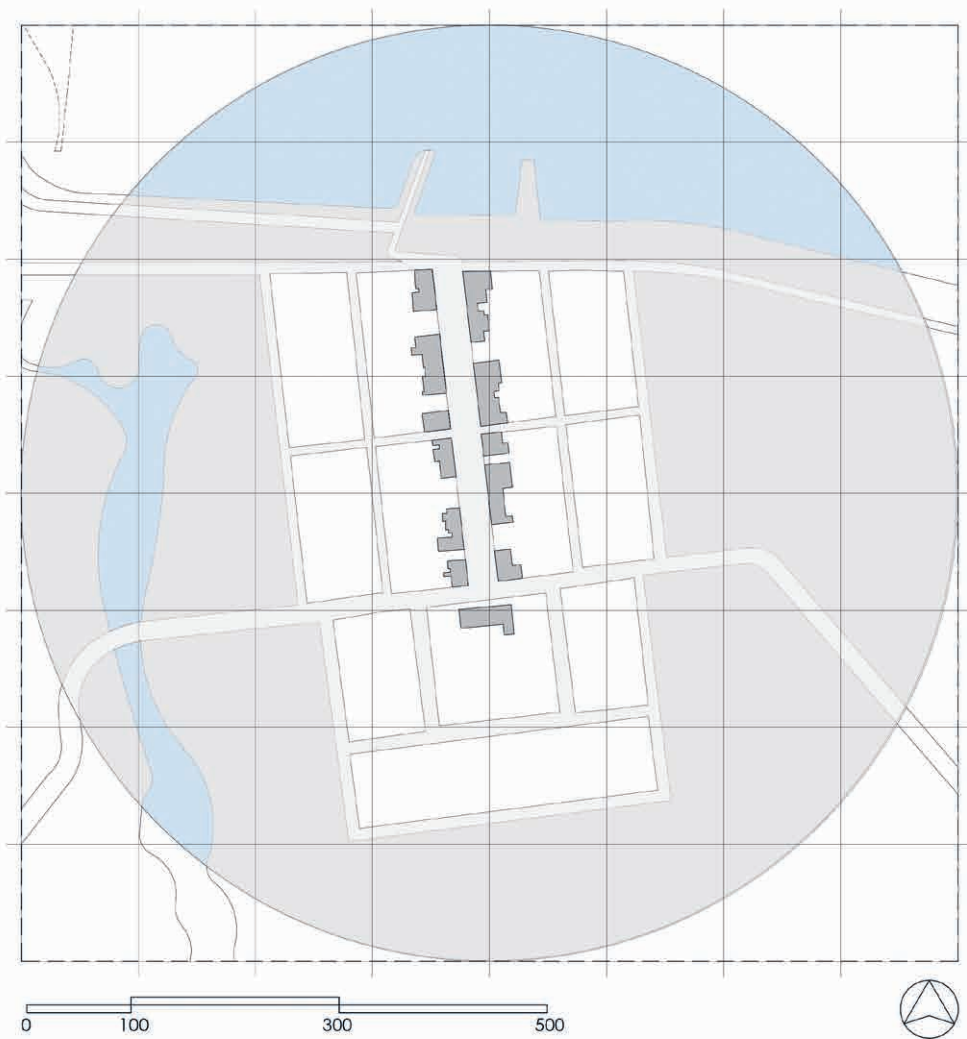
place where there was a harbour and the prospects of benefiting from trade.¹³ Clearly Cornelis Soetwater and his collaborators had good reasons for locating Borssele inside the polder.

The fact is that it would have been impossible to implement the chosen plan on the edge of the polder since there a harbour and a ring dike would have been defining elements at the expense of the rectangular square with its axial cross of north-south and east-west oriented streets, which made the layout doubly symmetrical. One advantage of the central position in the polder versus a more eccentric position on the edge, was that it equalized the distances farmers had to travel in order to bring their agricultural products to the village. This central position was also strategic from an administrative point of view in that it made it easier to facilitate and oversee the farmers and the surrounding arable land.

In the case of Borssele, there were also more specific reasons for the choice of location. As mentioned, the new village was deliberately founded on the site of the vanished village of Monster and next to the still visible remains of Berg van Troje. In case of need, during

floods, the population could seek shelter on this castle hill. This location also had a strong symbolic value: it invoked memories of the old village of Monster beside the castle of the mighty lords of Borssele. Soetwater and his collaborators overcame the wild nature: from the threatening waters they created new, rationally laid-out land. Order took the place of chaos. This may sound a bit overblown, but it is supported by Borssele's distinctive double symmetrical plan and further on we will argue that the political situation at the time of the founding of Borssele points in the same direction.

In his famous 1944 book about villages in Zeeland, the engineer P.J. 't Hooft not only extols the symmetry of the layout, but also claims that Borssele was designed according to the golden ratio, a claim that was later repeated by others.¹⁴ According to 't Hooft, the village square measures 89 by 140 metres, due to the application of the golden ratio. In reality, the square is 103.5 metres wide and 177.5 metres long on its western side compared with 183.75 metres on its eastern side. If the dimensions had indeed been determined by the 5:8 golden ratio proportion, a width of 103.5 metres would have been paired with a length of



6. Plan of Colijnsplaat, founded in 1598 (left). The orientation of Colijnsplaat, rotated with respect to the polder grid (right) (drawings by Pieter van der Weele)

165.6 metres. This is clearly not the case. Nor was the golden ratio used in planning the village as a whole. The total width is 281.25 metres. According to the 5:8 ratio, this would give a length of 450 metres, but in reality it is about 430 metres.

Could it be that the village was not constructed precisely in accordance with the original plan? Although no design for Borssele by Soetwater has ever been found, we do have documents dating from 1622 from which the dimensions of the square can be deduced: 104.35 by 193.8 metres (the seventeenth-century measures have been converted into contemporary metres).¹⁵ The square would have had two precisely equal parts north and south of the east-west oriented street. However, the actual dimensions deviate from this because pieces of the northern side of the original square were sold as building plots.¹⁶ A closer study of the plan reveals that the part of the village that lies to the east of the north-south oriented streets is slightly narrower than the part to the west. It appears that this is the consequence of a pragmatic decision. Upon completion of the polder, it turned out

that the area of arable land surrounding the village was smaller than planned, whereupon it was presumably decided to sacrifice a portion of the village on the east side in compensation.¹⁷

The most remarkable feature is the rotation of the village with respect to the polder grid. The direction of the north-south streets and the square deviate slightly from the current north but were most likely accurately oriented to the magnetic north in 1616. At that time, the magnetic north deviated approximately 9 to 12 degrees eastwards from the real north.¹⁸ Meticulous examination of the plan shows that the north-south axis and the square are not precisely perpendicular to the street that forms the east-west axis or to the rectangle that defines the village's boundaries. This can also be traced back to a pragmatic solution. The intention was to connect three of the polder grid roads precisely to three corners of the village plan.¹⁹ This was the guiding principle for the orientation of the rectangular street plan, and when this turned out to deviate slightly from the longitudinal axis of the square and the connecting streets, which was set to the magnetic

north, some cheating was necessary: the rectangle to which the three polder roads connect is slightly rotated with respect to the square and the north-south axis. These small deviations – or imperfections, if you like – in the construction of Borssele, do not detract from Soetwater's design. On the contrary, they emphasize his pronounced design choices, some of which were far from obvious and even impractical. How can these choices be explained?

PRECURSORS

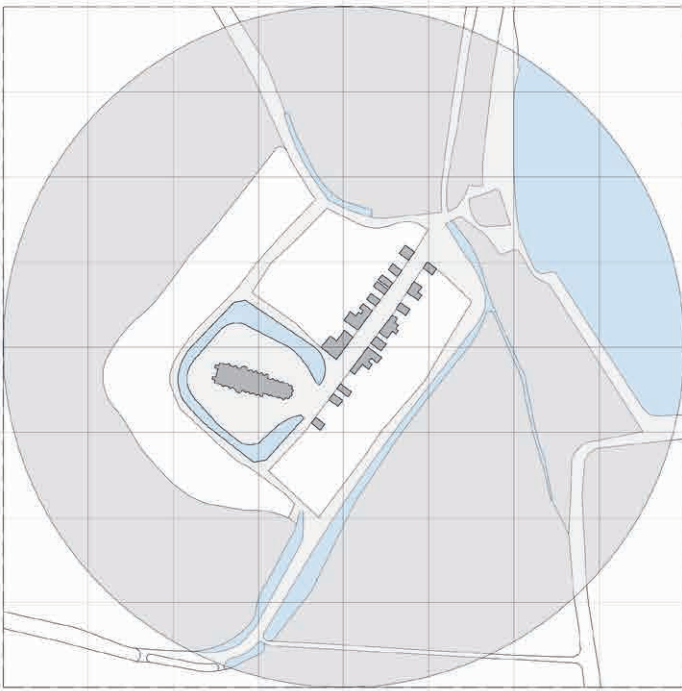
Before Soetwater turned his attention to Borssele, he had been involved in the construction of the dikes around the island of Nieuw-Noord Beveland. De Klerk writes that the driving force behind that embankment project was initially the daughter of Prince William of Orange, Maria van Nassau, acting on behalf of her brother Philips Willem. Later, after her marriage to Philips van Hohenlohe, it was her husband who looked after the matters relating to the embankment. Among the participants in that embankment project were

several well-known individuals, such as Johan van Oldenbarnevelt and Cornelis Soetwater.²⁰

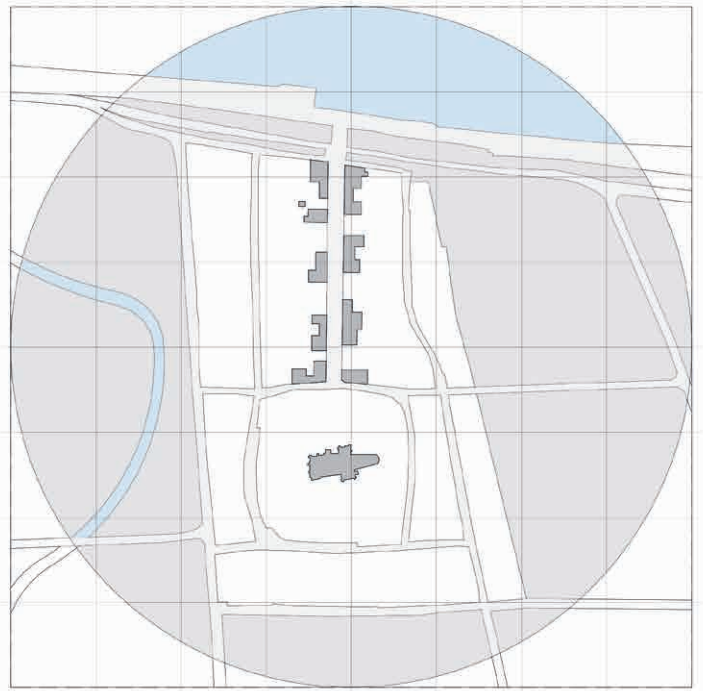
The embankment of Nieuw-Noord-Beveland was completed in 1598. In the same year, the village of Colijnsplaat was founded on the northern edge of the polder, near a harbour along the dike. Just as in Borssele, its plan is rotated with respect to the polder grid (fig. 6). In the case of Colijnsplaat, the reason for this is that the village follows the course of an old creek ridge, which provided a solid foundation through natural inversion.²¹ Similarities between the plans of Colijnsplaat and Borssele are the rectangular layout and the symmetry. One difference is that in Colijnsplaat the symmetry is determined by a single main axis, namely the main street that leads from the harbour by the dike to a rectangular church ring, whereas in Borssele the centrally located rectangular square provides a double symmetry: a mirroring to the north and south of the east-west axis and a mirroring to the east and west of the north-south axis. Considering that Soetwater participated in the embankment of

7. Map of the southwestern delta area of the Netherlands, indicating the location of the villages mentioned in the text (drawings by Pieter van der Weele)

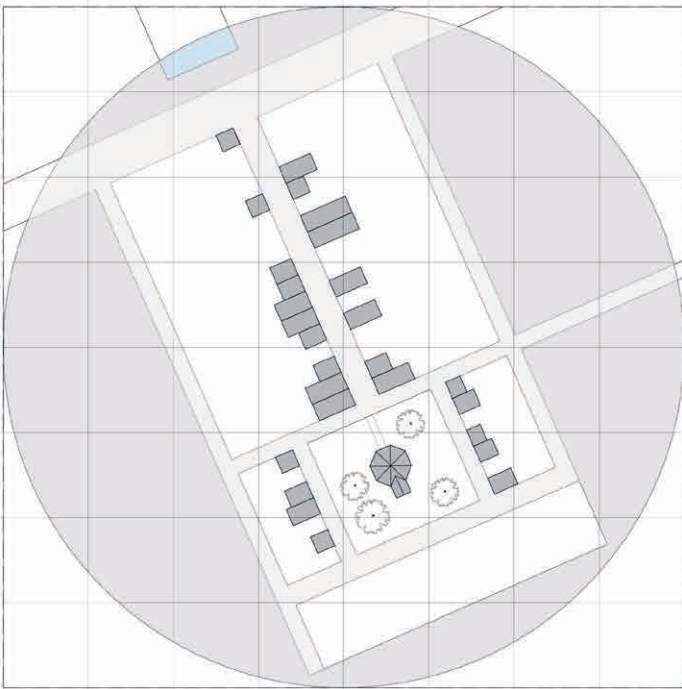




Dirksland 1415



Sommeldijk 1465



Ruigenhil (Willemstad) 1565



Colijnsplaat 1598

0 100 300 500



8. Evolution of the ring-street village in the southwestern deltas. Next to the name of each village is its year of foundation (drawing by Pieter van der Weele)

Nieuw-Noord-Beveland and that only sixteen years separated the completion of that embankment project and the start of the embankment of Borssele in 1614, it is quite probable that he used Colijnsplaat as a source of inspiration for the new village.

This raises the question as to the origins of the design and rectilinear character of Colijnsplaat. The combination of main street and church ring, essentially a fusion of two medieval Zeeland village types, the main-street village and the church-ring village, can be traced back to Dirksland, located on the island of Flakkee (fig. 7).²² This village originated in 1415 on the edge of the polder. Dirksland is the first ring-street village, or main-street-church-ring village, characterized by an outer dike harbour and a main street (*voorstraat*). This street connects the dike harbour to the church, which is encircled by a ring-shaped street known as the church-ring (*kerkring*) (fig. 8). After this new village type was introduced in 1415, it was frequently imitated in large new embankment projects, for example Middelharnis and Sommelsdijk from 1465.²³ These villages formed the economic and administrative centre of a new society on land reclaimed from water.

Figure 8 shows that the fifteenth-century ring-street villages, like Dirksland and Sommelsdijk, did not have a rectilinear layout: there the church-ring is more or less round, the streets are not entirely straight, and the intersections are not perpendicular. In the course of the sixteenth century, the street plans became more linear, something that is clearly visible in Ruigenhil from 1565, later renamed Willemstad, after William of Orange.²⁴ It is at this time that symmetry enters the picture: on both sides and at equal distances from the main (i.e. front) street, there is a back street and the main street ends exactly in the centre of the rectangular church-ring.²⁵ Colijnsplaat stands at the end of an almost two-hundred-year development in the construction of ring-street villages in the large polders of the southwestern delta. This development can be largely traced back to a small number of influential noble families who took the initiative for the embankment projects and the construction of these villages: Adriaan van Borssele and his wife Anna of Burgundy during the second half of the fifteenth century, the marquises of Bergen op Zoom and the House of Orange during the sixteenth century.²⁶

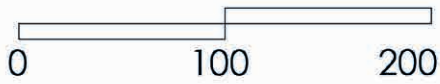
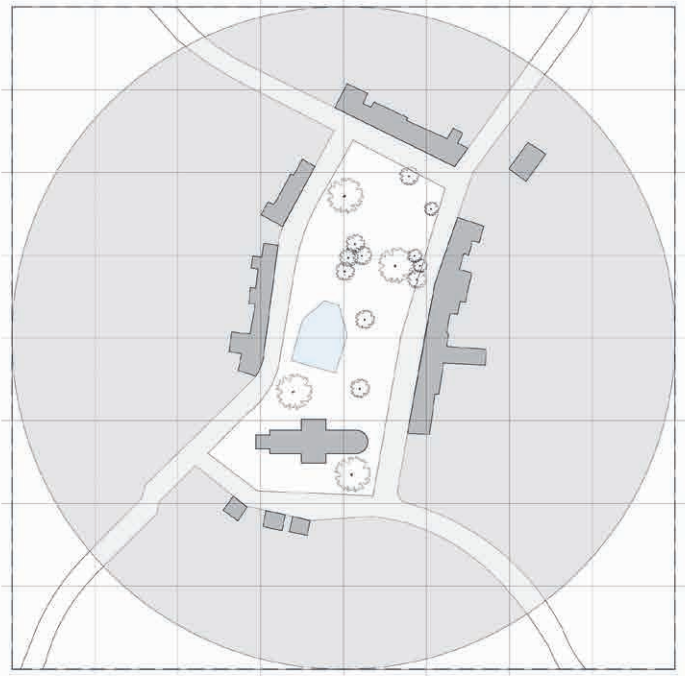
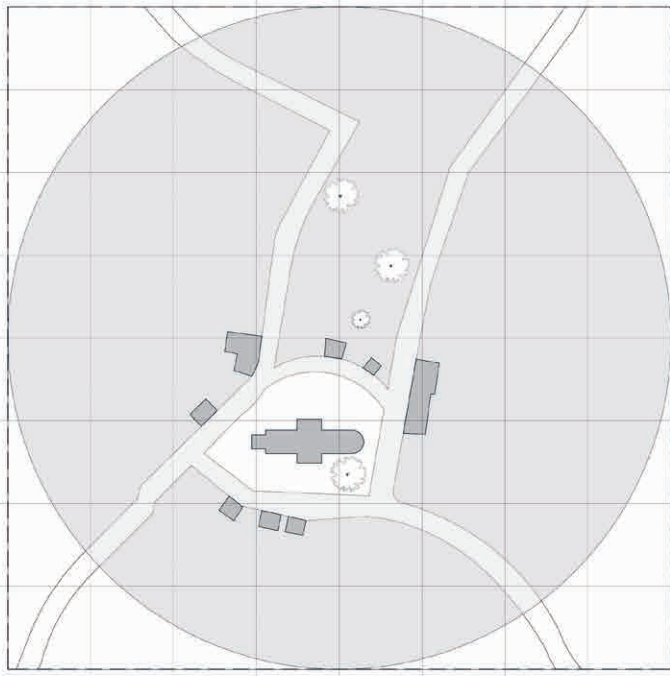
There were various reasons for the orderly layout of these villages. De Klerk writes that most of the main-street villages are clearly the result of planning. This is definitely the case for the variants of the church-ring. Their position, and sometimes their plans as well, were often already indicated in the plans for the embankment and the subdivision of the polders in question. The villages mostly date from the year in

which the embankment was finished, or from a point in time shortly thereafter.²⁷ If the new land inside the polder was subdivided according to a regular system, then it would obviously make sense to apply that to the new settlement as well. With regards to the construction of new towns in the later Middle Ages, architectural historian Wim Boerefijn notes that when a piece of land was parcelled out in a regular manner, the town plan that was to be laid out within this landscape usually followed a correspondingly regular design.²⁸ He also mentions various practical reasons for the rectilinear layout. It was easy to conceive, to explain to surveyors and to measure out on the ground. Uniformly sized rectangular lots made it easy to calculate taxes and rents based on surface area. Moreover, a rectilinear street plan was simple to oversee, allowing public order to be more easily maintained.

In an article in the journal *Urban Morphology*, Boerefijn elaborates on the meaning that was attached to rectilinear plans: 'Spatial order has always been a tool in forcing culture and control upon a "wild" nature and otherwise hostile territory, thus strengthening societal (and cosmological) order. The orthogonal plan is a very practical way to bring regular order to urban form. We human beings need to make everything we experience or conceive fit into an easily comprehensible system. We look for regularity in the world as we experience it, and subsequently we impose the rules that we abstracted on the world as it is, to make it fit even better our understanding of it. (...) Moral perfection could be symbolized by the geometrical form of the square.'²⁹ Something similar also holds true for ring-street villages. From the moment that Adriaan van Borssele and his wife Anna of Burgundy commissioned the construction of these villages, they became not only the financial and administrative centres of the embankments, but also status symbols. Adriaan and Anna must have thought: new land, a new society, that obviously also calls for a well-designed new type of settlement, more than just a village; this will increase our prestige, influence and revenues.³⁰ This undoubtedly appealed to Soetwater. The question that remains is what inspired him in his design choices for the rectangular square of Borssele and its northern orientation?

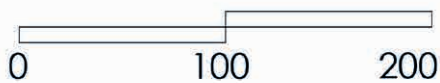
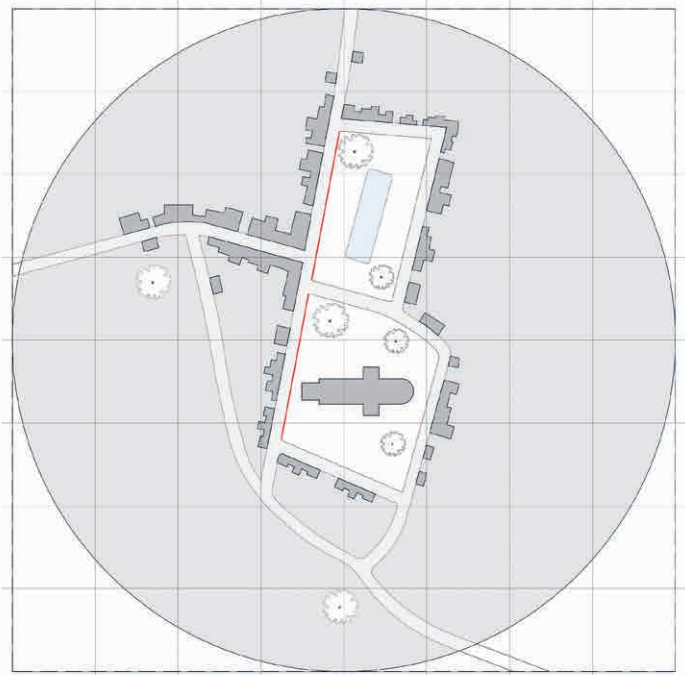
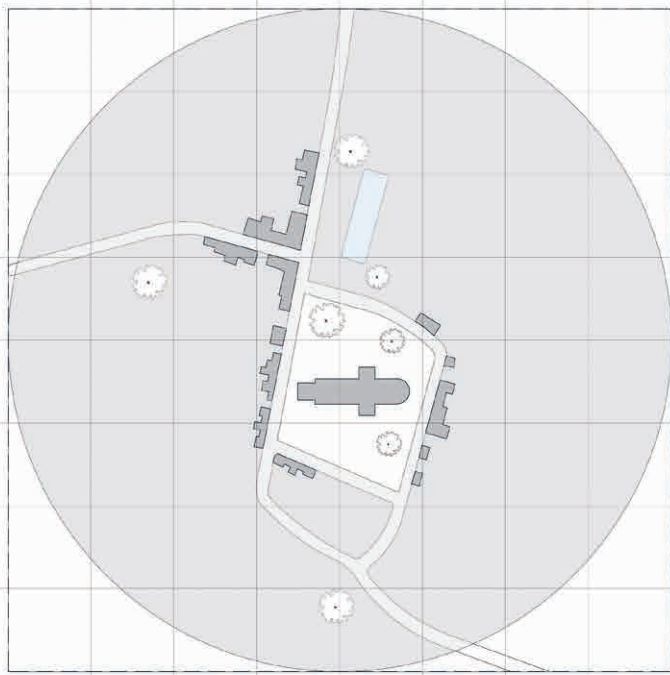
ORIENTATION

As mentioned, Pieter van der Nisse, the bailiff of the village Nisse, was a collaborator in the embankment of Borssele as well as surveyor of the new land and the village. Nisse, where Van der Nisse fulfilled his important administrative function and where another of the embankment project collaborators, the mayor David van der Nisse had his roots, is centrally situated in the southern part of Zuid-Beveland, northeast of



9. Reconstruction of the plan of Nisse in its early phase when it was still a typical church-ring village (left). Plan of Nisse after the street to the north of the church had been moved, creating the rectangular square with the water well (right) (drawings by Pieter van der Weele)

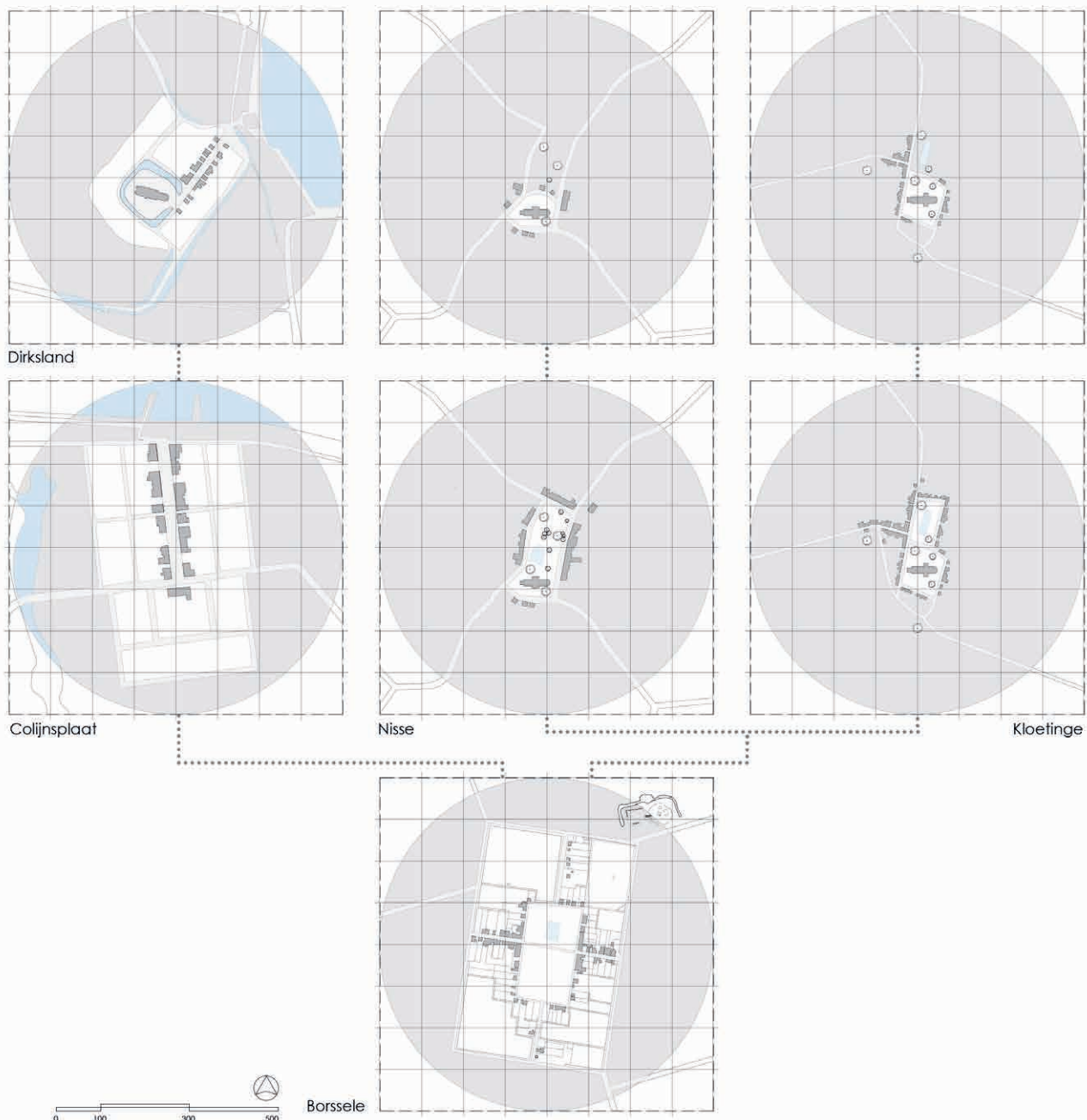
10. Reconstruction of the plan of Kloetinge in its early phase when it was a typical church-ring village, with a water well presumed to stem from an old creek (left). Plan of Kloetinge after the area containing the well to the north of this church had acquired the form of a rectangular square, due to the construction of new streets and houses; the long sides of this square and the church ring (marked in red) have approximately the same length (right) (drawings by Pieter van der Weele)



Borssele. The old village is characterized by a more or less rectangular square, with the church in its southern part and a well in its northern part (fig. 9). Medieval villages with such a plan are rare in Zeeland. Archaeological investigations have shown that Nisse was originally a church-ring village, but the inhabitants constructed houses along the two country roads that ran northwards from the church ring. The ditch surrounding the church was filled in and the two roads lined with houses were connected by a street to the north. This resulted in an elongated square, with buildings on four sides, which has been mentioned in written sources since 1326.³¹

If we compare Borssele with Nisse, the new village displays several striking similarities with the old one: its central location (Nisse in old land, Borssele in newly created land³²), the rectangular square with a church on the south side and a well on the north side and, above all, the northern orientation of this square. The square in Borssele can be seen as a new, rationalized and rectilinear version of the square in Nisse. Nisse was the largest and most significant village in the southern part of Zuid-Beveland. In the northern part, the village of Kloetinge is characterized by a similar unusual design and phased evolution as Nisse (fig. 10). Kloetinge, too, was originally a church-ring village,

11. Origins of the plan of Borssele depicted in the form of a genealogical tree (drawing by Pieter van der Weele)



dating back to at least the eleventh century. The elongated and northern-oriented square with the church on the southern half and the well (presumably the remains of an old creek) on the northern half, acquired its new form at around the same time as the square in Nisse.³³

In 1572, when Cornelis Soetwater was around 12 years of age, Kloetinge burned to the ground during hostilities between the Spanish forces and the 'Beggars' (in Dutch *Geuzen* – a rebel army that opposed Spanish rule in the Netherlands).³⁴ For five years the two warring armies roamed the countryside of the Zeeland islands, leaving behind them a trail of destruction. These gripping events in the first years of the Dutch Revolt would have made a deep and lasting impression on the young Cornelis. Inspired by the climate of peace and optimism that existed during the Twelve Year Truce (1609-1621), Soetwater doubtlessly wished to make a point when, in 1614, as mayor of Goes and as dike-reeve, he was in a position to initiate the embankment of the island of Borssele, all of which culminated in the distinctive form of the new village of Borssele (fig. 11).³⁵

CONCLUSION

Soetwater and his collaborators continued the venerable tradition initiated by Adriaan van Borssele in the course of the fifteenth century with the construction of ring-street villages in the large Flakkee polders, so it was a happy coincidence that the new village of Borssele should have been founded next to the remains of the ancestral home of the Van Borssele family. Apart from the financial and administrative benefits of this layout, Soetwater exploited the symbolic value of the new villages for Van Borssele and his followers, the marquises of Bergen op Zoom and the family of

Orange. By taking the trend towards rectilinearity and symmetry in the construction of the sixteenth century ring-street villages one step further with the double symmetry of the Borssele street plan, he underlined the victory of reason over chaos. Not just in the sense that the wild water had been turned into an orderly cultural landscape, but also in the sense that after many years of war, the Twelve Year Truce had ushered in a period of peace, order and the prospect of a bright future.

By orienting the Borssele square emphatically and unconventionally to the north – which was quite impractical relative to the polder grid – and by modeling it on the most important village of the old land in the southern part of Zuid-Beveland, namely Nisse, Soetwater, together with the mayor David van der Nisse and the surveyor Pieter van der Nisse were consciously anchoring the new village in the surrounding area. In addition, given its similarities with Kloetinge, which was destroyed during the Dutch Revolt against the Spanish, Borssele can be seen as a symbol of the recovery and resurgence of Zuid-Beveland after decades of warfare.

In short, in the form and orientation of the plan of Borssele, the best Zeeland traditions of embankment and village construction and the most striking old villages of Zuid-Beveland are combined and renewed: on the one hand building on what already existed, and on the other hand deviating from it with the central rectangular square combined with the entirely unique double symmetry. We will never know for sure, but mayor Cornelis Soetwater may have dreamed of Borssele as a symbol of a glorious future for Zeeland, and Goes and Zuid-Beveland in particular, within the young Dutch Republic.

Pieter van der Weele wrote a thesis on Borssele under the supervision of Reinout Rutte during his Master Studies in the Faculty of Architecture, Delft University of Technology. This thesis formed the basis for the present article, which Van der Weele and Rutte wrote together. Van der Weele is financially supported by a scholarship from the Nikos & Lydia Tricha Foundation for Education and European Culture.

REFERENCES

- 1 Cf.: A.P. de Klerk, 'Bewoningsvormen van het oude en van het nieuwe land. Dorpen in Zeeland', in: M.W. Heslinga et al., *Nederland in kaarten. Veranderingen van stad en land in vier eeuwen cartografie*, Ede 1985, 72-75; J. de Ruiter, *Borssele. Dorp bewesten de vijfzode*, Goes 1994; C. Steenbergen et al., *De Polderatlas van Nederland. Pantheon*

der Lage Landen, Bussum/Delft 2009, 282-295.

- 2 De Ruiter 1994 (note 1), 8.
- 3 De Ruiter 1994 (note 1), 18; M. Vrijlandt et al., *Borssele & polder. 400 jaar*, Borssele 2016, 15.
- 4 L.J. Abelmann, 'Cornelis Adriaenzoon Soetwater. Ontwerper van het grondplan van het dorp Borssele', *Zeeuws Tijdschrift* 21 (1971), 48-51, 51: 'dat het lant van Borssele, op gisteren, wesende den 10den deeser, geverscht was uit het zout, daer van Godt almachtigh moet geloof en gedantk zijn'.
- 5 The regions in the southwestern deltas of the Netherlands that had been cultivated before 1250 were called old land ('oudland'), while those from later years were called new land ('nieuwland'). See: A.P. de Klerk, 'Zuidwestelijk zee-kleilandschap', in: S. Barends et al. (eds.), *Het Nederlandse landschap. Een*

historisch-geografische benadering, Utrecht 2010, 32-45.

- 6 Vrijlandt et al. 2016 (note 3).
- 7 Abelman 1971 (note 4), 48.
- 8 Abelman 1971 (note 4), 49.
- 9 Abelman 1971 (note 4), 49: 'Gedelibereert zijnde waer dat men het dorp inden lande van Borssele zal leggen (...) ende aldaer te doen afsteecken op en omtrent de plaetse van Monster het dorp, op zulken forme als zij onderling zullen goetvinden, ten naeste bij volgens zeker concept gemaekt bij den dijkgraef Soetwater, en in 't Collegie [bedoeld worden Soetwater en zijn medebedijkers] geleezen zijnde'.
- 10 A.P. de Klerk, 'Dorpen in soorten. De Zeeuwse dorpen, onderscheiden naar hun plattegrondsvorm', in: K. Bos, J. van Damme and A. de Klerk (eds.), *Dorpen in Zeeland*, Middelburg 1991, 69-80.

- 11 De Klerk 1991 (note 10), 76-77.
- 12 Vrijlandt et al. 2016 (note 3), 16. The church was not completed before 1851.
- 13 R. Rutte, 'Wording en vorm van de dorpen in de bedijkingen van Voorne-Putten en de Hoekse Waard (13e-17e eeuw)', *Historisch-Geografisch Tijdschrift* 26 (2008), 53-66; R. Rutte, 'Nieuw land – nieuwe samenleving – knappe nederzetting. Dorpen in de vijftiende- en zestiende-eeuwse bedijkingen in de zuidwestelijke delta', in: H. Baas et al. (eds.), *Historisch cultuurlandschap in Nederland. Vijf bijdragen*, Utrecht 2010, 71-95.
- 14 P.J. 't Hooft, *Dorpen in Zeeland*, Amsterdam 1944.
- 15 De Ruiter 1994 (note 1), 25-26. The documents in question belong to the municipal archive of Goes, including the lists of ground rents paid for the building plots issued in Borssele, which are discussed in detail in De Ruiter's publication. For the documents themselves, see: H. Uil, *Inventaris van het archief van de stad Goes*, hoofdstuk v. C Rekeningen van ontvangsten en uitgaven door de rentmeesters van de heerlijkheid Borssele, inventarisnummer 1599 voor de rekeningen uit 1622 en inventarisnummer 1601 voor die uit 1627'.
- 16 The first houses along the north side of the square may not have been built until the eighteenth century. In this context, see: De Ruiter 1994 (note 1), 26.
- 17 De Ruiter 1994 (note 1), 25-26.
- 18 Cf.: R. Rutte and B. Vannieuwenhuyze, *Stedenatlas Jacob van Deventer. 226 stadsplattegronden uit 1545-1575. Schakels tussen verleden en heden*, Bussum/Tielt 2018, 24. Jacob van Deventer used a northerly orientation for his city maps, which were produced between 1545 and 1575. The North in his maps deviates roughly 9 to 12 degrees eastwards compared with the current north. See for instance page 433 of the above publication, where Van Deventer's map of Elburg is shown side by side with a recent image from Google Earth. Cf.: C.G. Langereis and H. Kars, 'Paleomagnetische datering van de kalkoven te Nijmegen', in: *Nederlandse Archeologische Rapporten 9*, Amersfoort 1990, 6369, in particular page 65, where there is a deviation of 9 degrees.
- 19 Cf.: Steenbergen et al. 2009 (note 1), 498.
- 20 A.P. de Klerk, *Het Zeeuwse monument. Het voorstraatdorp Colijnsplaat*, Goes 1998, 18.
- 21 H. Hollestelle, *Beschermde stads- en dorpsgezichten ingevolge artikel 35 van de Monumentenwet 1988. Colijnsplaat, gemeente Noord-Beveland*, The Hague 1988, 2.
- 22 Rutte 2010 (note 13), 73-75.
- 23 Rutte 2010 (note 13), 75-86.
- 24 Rutte 2010 (note 13), 86-89. Cf: Steenbergen et al. 2009 (note 1), 497-498.
- 25 Sometimes the rectilinear layout of Borssele is associated with Simon Stevin, the renowned mathematician and engineer who taught at the University of Leiden in the early seventeenth century; Cf.: De Klerk 1985 (note 1), 72. This assumes that Zeeland was a peripheral, isolated group of islands in the Dutch Republic, whose local inhabitants would not have been able to come up with such an extraordinary design as that of Borssele. A double misconception, since the waterways were in fact the transport network in that era and, moreover, the tradition and practice of village planning at that time (from the fifteenth to the seventeenth century) was more alive in the southwestern deltas than in the heart of Holland. In other words, it was this tradition – which in turn was closely connected with the embankment projects in the region – that formed the basis and inspiration for Zeelanders when it came to designing a new village, not the advice of a theoretician in Leiden. It has long been assumed that Stevin had a strong influence on urban practice in the seventeenth century; Cf., E. Taverne, 'Stevens koopmansstad', in: M. Jonker, L. Noordegraaf and M. Wagenaar (eds.), *Van stadskern tot stadsgewest. Stedebouwkundige geschiedenis van Amsterdam*, Amsterdam 1984, 89-100. However, the following recent publications demonstrate that this was not in fact the case: C. van den Heuvel, 'De Huysbou'. *A reconstruction of an unfinished treatise on architecture, town planning and civil engineering by Simon Stevin*, Amsterdam 2005, 51-59; R. Rutte and J.E. Abrahamse (eds.), *Atlas of the Dutch Urban Landscape. A Millennium of Spatial Development*, Bussum/Delft 2016, 197-211 and 260-262.
- 26 Rutte 2010 (note 13).
- 27 De Klerk 1998 (note 20), 11.
- 28 W. Boerefijn, 'De vorm van nieuwe steden uit de 13e en 14e eeuw', *Historisch-Geografisch Tijdschrift* 31 (2013), 3-15.
- 29 W. Boerefijn, 'Geometry and medieval town planning. A contribution to the discussion', *Urban Morphology* 4 (2000), 25-28, 26-27.
- 30 Rutte 2010 (note 13), 86.
- 31 J. de Ruiter, *De geschiedenis van Nisse*, Borssele 1987, 5.
- 32 De Klerk 2010 (note 5).
- 33 M. van der Jagt, 'Kludurp blijft een rijk dorp', *Provinciale Zeeuwse Courant* 29 August 2001, 25.
- 34 L.J. Abelmann, 'Cornelis Adriaensz. Soetwater', in: *Encyclopedie van Zeeland*, Middelburg 1982-84 https://encyclopedievanzeeland.nl/Cornelis_Adriaensz._Soetwater.
- 35 For information about Zeeland during the Dutch Golden Age, see: P. Brusse and W. Mijnhardt (eds.), *Geschiedenis van Zeeland. Deel II: 1550-1700*, Zwolle 2012.

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THE STORY BEHIND BORSSELE'S FORM AND ORIENTATION ORIGINS AND MEANING OF AN EARLY SEVENTEENTH-CENTURY ZEELAND VILLAGE PLAN

PIETER VAN DER WEELE AND REINOUT RUTTE

The village of Borssele was founded in 1616 in a polder of the same name on the island of Zuid-Beveland in the province of Zeeland. The driving force behind both the diking of the polder and the construction of the village during the Twelve Year Truce (1609-1621) in the young Dutch Republic was the mayor of the city of Goes, Cornelis Soetwater. This article argues that the unusual form and orientation of the Borssele village plan reflects a conscious decision by Soetwater to combine and improve on the best of the Zeeland's impoldering and village planning tradition, and on the most striking old Zuid-Beveland villages.

Soetwater's decision to give Borssele's main square a resolutely northern orientation and an unconventional, rotated positioning within the polder grid, and to model its plan on that of the most distinctive medieval villages on the islands of Zuid-Beveland, Nisse and Kloetinge, served to anchor the new village emphatically in its immediate surroundings.

Moreover, Borssele represents the culmination of an honourable tradition initiated during the fifteenth century by the Zeeland nobleman Adriaan van Borssele with the construction of *ringstraatdor-*

*pen*¹ such as Dirksland, Sommelsdijk and Middelharnis, in the large Flakkee polders. The marquises of Bergen op Zoom and the family of Orange continued this tradition during the sixteenth century in the construction of Willemstad and Colijnsplaat, among others.

Soetwater exploited the symbolic meaning of these new villages, which was as important to Adriaan van Borssele and his followers as their economic and administrative function, for his own purposes. By continuing a trend towards orthogonality and symmetry in the layout of sixteenth-century *ringstraatdorpen* in the double symmetry of the Borssele street plan, Soetwater was able to emphasize the victory of rationality over chaos. Not just in the sense that the wild water had been turned into orderly cultural landscape, but also in the sense that after many years of war, the Twelve Year Truce had ushered in a period of peace, order and the prospect of a bright future.

¹ The *ringstraatdorp* was a combination of two older types of Zeeland village plans, the *kerkringdorp* and the *voorstraadorp*. Its main street or front street (*voorstraat*) was perpendicular to the polder dike and its landward end terminated in a *kerkring* (church encircled by a street).